

**Honeywell**

THE POWER OF **CONNECTED**

# 75 Series

Mobile Computer with Windows® Embedded Handheld 6.5  
CN75, CN75e, CN75 NI, CN75e NI, CK75



---

**User Guide**

---



# Disclaimer

Honeywell International Inc. ("HII") reserves the right to make changes in specifications and other information contained in this document without prior notice, and the reader should in all cases consult HII to determine whether any such changes have been made. The information in this publication does not represent a commitment on the part of HII.

HII shall not be liable for technical or editorial errors or omissions contained herein; nor for incidental or consequential damages resulting from the furnishing, performance, or use of this material. HII disclaims all responsibility for the selection and use of software and/or hardware to achieve intended results.

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of HII.

Copyright © 2017 Honeywell International Inc. All rights reserved.

Web Address: [www.honeywellaidc.com](http://www.honeywellaidc.com)

Wi-Fi is a registered certification mark of the Wi-Fi Alliance.

Microsoft, Windows, Windows Embedded Handheld, Excel and the Windows logo are either registered trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

microSD and microSDHC are trademarks or registered trademarks of SD-3C, LLC in the United States and/or other countries.

Bluetooth is a trademark of Bluetooth SIG, Inc., U.S.A.

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit ([www.openssl.org](http://www.openssl.org)).

This product includes cryptographic software written by Eric Young ([EAY@cryptsoft.com](mailto:EAY@cryptsoft.com)).

This product uses Regex++, Index software during its operational phases. The owner of Regex++ has granted use of the software to anyone provided such use is accompanied by the following copyright and permission notice:

Regex++, Index. (Version 3.31, 16th Dec 2001)

Other product names or marks mentioned in this document may be trademarks or registered trademarks of other companies and are the property of their respective owners.

For patent information, refer to [www.hsmrats.com](http://www.hsmrats.com).



# TABLE OF CONTENTS

Customer Support .....	vii
Technical Assistance .....	vii
Product Service and Repair .....	vii
Limited Warranty .....	vii
Send Feedback .....	vii

## **Chapter 1 - About the Computer Features..... 1**

About the 75 Series Mobile Computers .....	1
Overview of 75 Series Features .....	1
About Language Provisioning .....	5
About the Battery .....	5
Charge the Battery .....	5
How to Replace the I/O Cover on Non-Incendive Models .....	7
About Battery Replacement .....	8
About Battery Status .....	10
Set the Battery Status LED Activity .....	12
About Battery Life and Conservation .....	12
About the Status LEDs .....	13
About the Keypad .....	14
Configure the Keypad Backlight .....	16
About the Color-Coded Keys .....	17
Enter Characters on the QWERTY Keypad .....	17
Enter Characters on the Numeric Keypad .....	18
Enter Characters on the CK75 Keypads .....	18
About the Power Button.....	19
Power Options Screen.....	19

About the Dashboard Button .....	21
About the Screen Backlight and Brightness .....	21
Configure the Screen Backlight .....	21
Configure the Screen Brightness.....	21
About the CK75 Cold Storage Model Heater .....	22
How Automatic Mode Works.....	22
How Preemptive Mode Works .....	23
How to Manually Turn the Heaters On/Off.....	23
Configure the Heater Feature .....	24
About Audio Features.....	25
Adjust the Speaker Volume.....	26
About the Imager .....	26
Use the Imager as a Flashlight.....	26
Scan Bar Codes .....	26
Connect a Bluetooth Scanner .....	27
Insert a MicroSD Card.....	28
Install a MicroSD Card in a CN75 or CN75e .....	28
Install a MicroSD Card in a CK75 .....	30
How to Transfer Files.....	32
Option 1: Set Up the Computer to Sync Data with a PC .....	32
Option 2: Set Up the Computer as a Mass Storage Device .....	33
70 Series Accessories.....	33

## **Chapter 2 - About the User Interface and Applications .....** 35

About the User Interface.....	35
About the Home Screen.....	35
Title Bar Status Icons.....	36
About Screen Gestures .....	39
Align the Screen.....	40
About Honeywell Applications.....	40
Applications Available on the Computer .....	40
Applications You Can Download to the Mobile Computer.....	41

## **Chapter 3 - Use the Phone .....** 45

About the Phone.....	45
----------------------	----

How to Add and Switch Between Network Carriers .....	45
Enable Automatic Configuration of Carrier Settings .....	46
Switch Carriers.....	46
Activate the UMTS Phone.....	46
Activate the CDMA Phone .....	48
Make a Phone Call .....	49
Make an Emergency Phone Call.....	49
Configure Phone Sounds.....	49

## **Chapter 4 - Use the Camera .....51**

About the Color Camera .....	51
How to Take Pictures and Record Videos .....	51
Take a Picture .....	52
Record a Video .....	52
Save Pictures and Videos to a microSD Card.....	52
Configure or Create Camera Scenes .....	53
Scene Settings .....	53
Configure Camera Settings for Pictures and Videos .....	55
About the Camera Settings for Pictures and Videos .....	56
How to Read Bar Codes with the Camera.....	64
Enable or Disable Reading Bar Codes with the Camera .....	65
Read Bar Codes with the Camera.....	65
How to Perform Document Capture with the Camera .....	67
Enable or Disable Document Capture with the Camera.....	68
Perform Document Capture with the Camera .....	68

## **Chapter 5 - Use GPS.....71**

About the Integrated GPS on Your Computer.....	71
Use the GPSID Installed on the Computer .....	71
About the GPS Module Operating Modes .....	72
Improve GPS Performance on the Computer.....	73

## **Chapter 6 - Configure the Computer..... 75**

How to Configure the Computer.....	75
About Enterprise Settings on the Computer .....	75
Start Enterprise Settings.....	76
About the Structure of Enterprise Settings .....	76
How to Navigate in Enterprise Settings .....	81
Enable Enterprise Settings Password.....	81
How to Restore Enterprise Setting Defaults.....	81
How to Hide Menu Items in Enterprise Settings .....	82
Configure the Computer Remotely with SmartSystems .....	83
About Network Communications .....	83
Configure 802.11 Radio Communications .....	83
About Bluetooth Communications .....	84
About Serial and USB Communications .....	87
About Wireless Security.....	87
Load a Certificate.....	88
How to Make Your Security Choice .....	88
Select a Funk Security Profile.....	89
Select Microsoft as Your Security Choice.....	92

## **Chapter 7 - Manage the Computer ..... 97**

How to Manage the Computer in Your Network.....	97
Manage the Computer Using CloneNGo.....	97
Manage the Computer Using SmartSystems .....	98
How to Develop and Install Applications.....	98
Package Your Application .....	99
Install Applications with SmartSystems .....	99
Install Applications with Microsoft Synchronization Software.....	100
Install Applications Using a microSD Card.....	100
Launch Applications Automatically.....	100
How to Update the System Software .....	100
Update the Computer with SmartSystems .....	101
Update the Computer with a microSD Card .....	101



## Chapter 8 - Troubleshoot and Maintain the Computer.....105

About the Dashboard .....	105
About Troubleshoot the Computer.....	106
Wi-Fi Connection Problems .....	106
Check Wi-Fi Network Status.....	106
802.1x Security Problems .....	108
Troubleshoot the Scanner with Scan Diagnostic.....	109
Problems Reading Bar Codes .....	109
Problems Using the Computer.....	110
Online Technical Support .....	111
How to Restart the Computer.....	112
Reboot the Computer.....	112
Cold Boot the Computer .....	112
Clean Boot (Factory Reset) the Computer.....	113
Clean the Computer .....	113

## Chapter A - Specifications.....115

Computer Agency Information .....	115
Label Locations.....	115
Physical and Environmental Specifications .....	116
CN75/CN75e .....	116
CN75/CN75e Non-Incendive (NI) .....	117
CK75 .....	118
Back Accessory Interface Pin-outs.....	119
Imager Specifications .....	120
Bar Code Symbologies .....	120
EA30 Extended Reading Range.....	121
EA30 Minimum Reading Distances.....	122
EX25 Minimum Reading Distance .....	123
EX25 Typical Reading Distance (1D).....	124
EX25 Typical Reading Distance (2D).....	125
N5603 Extended Range Reading Distances .....	126

**Chapter B - Default Settings - Enterprise Settings App.....129**

- Data Collection Settings ..... 129
  - Internal Scanner Settings ..... 129
  - Bluetooth Scanner Settings ..... 133
  - Camera Settings ..... 133
  - Magstripe Reader Settings..... 138
- Communications Settings ..... 138
  - 802.11 Radio Settings..... 138
  - Ethernet Adapter Settings ..... 140
  - Bluetooth Radio Settings ..... 140
  - WWAN Radio Settings ..... 140
  - Serial Port Switch Setting ..... 140
- Device Settings ..... 141
- GPS Settings..... 144
- Core Messaging Service Settings ..... 144
- SmartSystems Information ..... 144
- Device Monitor Settings..... 145
  - Device Health Controls ..... 145
  - Device Health Screen Captures..... 145
  - Disabled Executables ..... 145
  - Device Wipe ..... 146
- Virtual Wedge ..... 146
- Location Services ..... 146

**Appendix C - Open Source License Information .....147**

# Customer Support

## Technical Assistance

To search our knowledge base for a solution or to log in to the Technical Support portal and report a problem, go to [www.hsmcontactsupport.com](http://www.hsmcontactsupport.com).

For our latest contact information, see [www.honeywellaidc.com/locations](http://www.honeywellaidc.com/locations).

## Product Service and Repair

Honeywell International Inc. provides service for all of its products through service centers throughout the world. To find your service center, go to [www.honeywellaidc.com](http://www.honeywellaidc.com) and select Support. Contact your service center to obtain a Return Material Authorization number (RMA #) before you return the product.

To obtain warranty or non-warranty service, return your product to Honeywell (postage paid) with a copy of the dated purchase record. To learn more, go to [www.honeywellaidc.com](http://www.honeywellaidc.com) and select **Service & Repair** at the bottom of the page.

## Limited Warranty

For warranty information, go to [www.honeywellaidc.com](http://www.honeywellaidc.com) and click **Get Resources > Product Warranty**.

## Send Feedback

Your feedback is crucial to the continual improvement of our documentation. To provide feedback about this manual, contact the Honeywell Technical Communications department at [ACSHSMTechnicalCommunications@honeywell.com](mailto:ACSHSMTechnicalCommunications@honeywell.com).



# ABOUT THE COMPUTER FEATURES

This chapter introduces the 75 Series Mobile Computers with Windows® Embedded Handheld operating system. Use this chapter to learn about the basic features and functions of each computer, as well as the available accessories for it.

## About the 75 Series Mobile Computers

The ergonomically-designed Honeywell 75 Series Mobile Computers are built on the Microsoft Windows Embedded Handheld operating system. They are lightweight, easy-to-use, and run most software developed for the Windows Embedded 6.5 platform, including standalone, client-server, and browser-based applications.

The 75 Series consists of three different models: CN75, CN75e and CK75. The CN75 and CN75e computers have the same features except that the CN75e offers a larger keypad for data-input intensive applications. The CK75 has most of the same features as the CN75, but the CK75 offers a choice of imager options and does not offer WWAN or GPS radio versions. Honeywell offers heater-equipped cold storage CK75 versions to extend the use of the CK75 in cold storage and freezer environments. Non-incendive (NI) versions for hazardous environments are offered of the CN75 and CN75e.

Throughout this manual, all versions of the mobile computer are referred to as 75 Series unless information is specific to a particular model of computer. Pictures of the CN75 and CK75 represent the three models of the 75 Series computers. Non-incendive models can be identified by the device label verifying non-incendive certification and a teal colored label on the front/top of the computer.

## Overview of 75 Series Features

The 75 Series includes these standard features:

Standard Features	CK75	CN75	CN75e
EA30 high-performance 2D imager		x	x
Choice of EX25 or N5603ER high-performance 2D imager	x		

Standard Features	CK75	CN75	CN75e
1.5 GHz dual-core, multi-engine processor with 2 GB RAM and 16 GB Flash	x	x	x
802.11a/b/g/n and Bluetooth® radios	x	x	x
Customer-accessible microSD slot for memory cards up to 32 GB	x	x	x

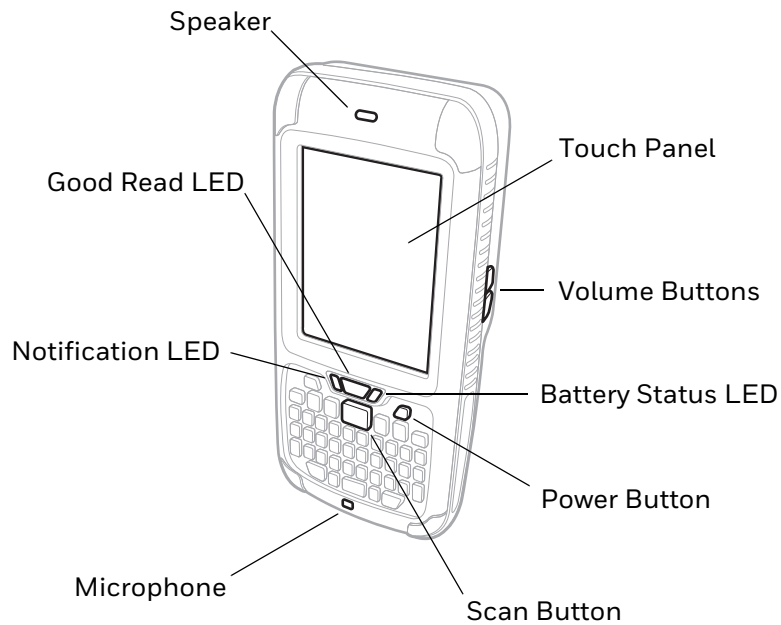
The 75 Series offers the following optional features:

Optional Features	CK75	CN75	CN75e
CDMA, UMTS Flexible Network Radio capability		x	x
GPS radio on CDMA, UMTS Flexible Network Radio computers		x	x
5-megapixel auto-focus color camera with LED flash*	x*	x	x
Customer-accessible SIM card slot		x	x
* Camera feature is not available in CK75 Cold Storage models.			

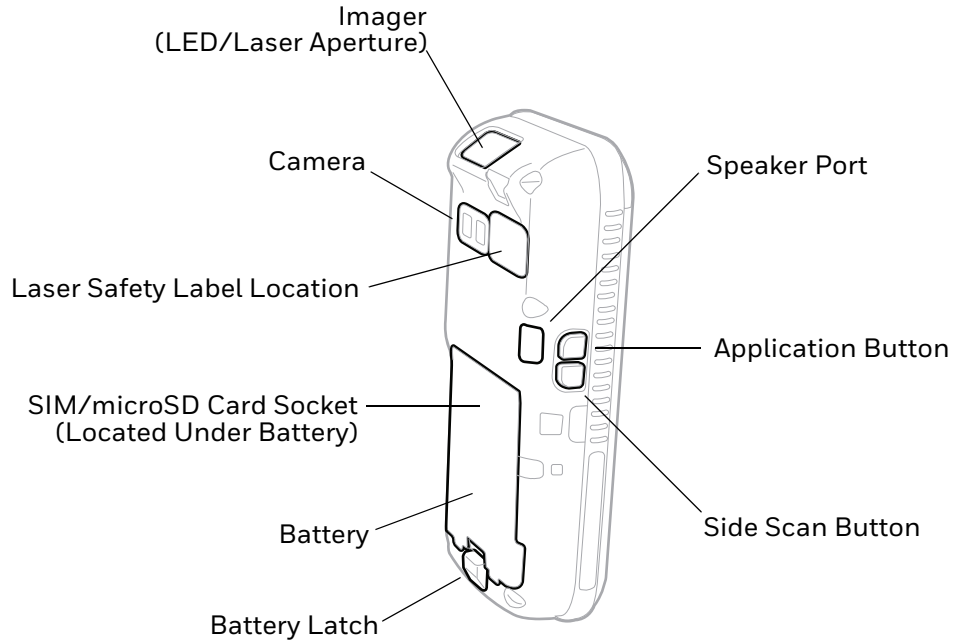


The 75 Series Mobile Computer with an IEEE 802.11a/b/g/n radio installed is Wi-Fi® certified for interoperability with other 802.11a/b/g/n wireless LAN devices.

## CN75 Front and Right Side View



## CN75 Back and Left Side View



**Note:** Hand strap not shown.

## CN75 and CN75e Non-Incendive I/O Cover

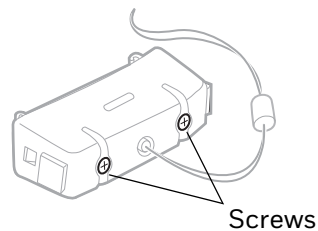
An I/O cover is supplied with non-incendive versions of the CN75 and CN75e computers. Non-incendive models can be identified by the device label verifying non-incendive certification and a teal colored label on the front/top of the computer.



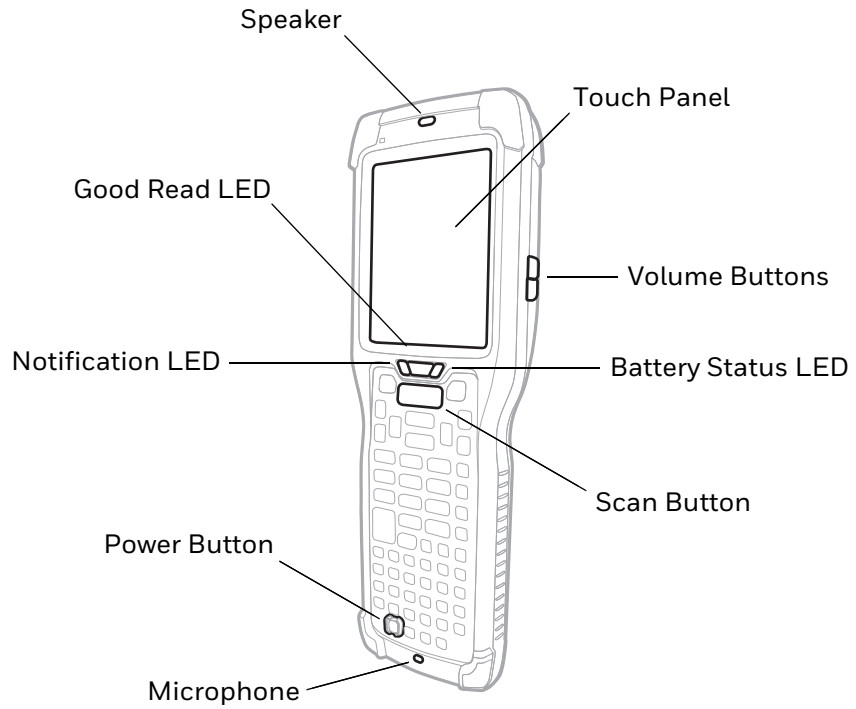
**Warning:** The I/O cover must be attached when using the CN75/CN75e NI in a dangerous environment.



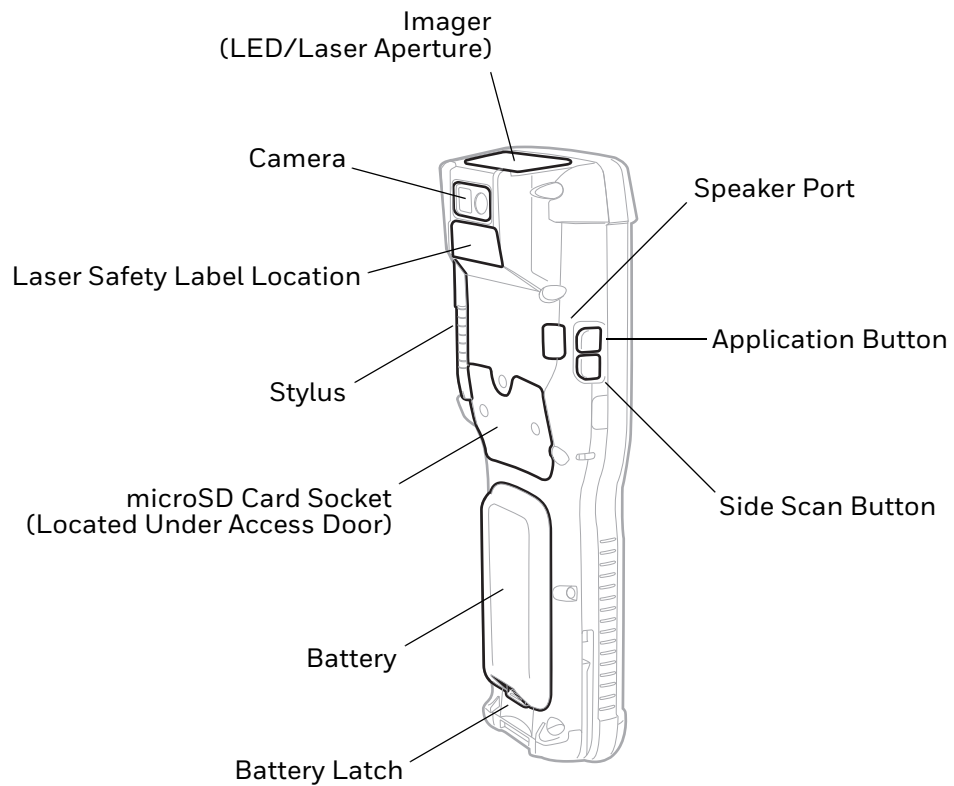
**Avertissement :** Le couvercle entrée-sortie doit être fixé lorsque le CN75/CN75e NI est utilisé dans un environnement incendiaire.



## CK75 Front and Right Side View



## CK75 Back and Left Side View



**Note:** Hand strap not shown.



# About Language Provisioning

You are prompted to select a language provision when the computer starts for the first time. It may take as little as three minutes to load your language. Once loaded, your selected language persists through all boot scenarios (warm, cold, or clean).

Make sure you select the correct language before you tap **Provision**. If you need to change the language provisioning, you must reinstall the operating system and restart the computer. When the computer restarts, select your new language.

# About the Battery

The computers use the following rechargeable Lithium-ion battery packs as their main power source:

Computer	Battery Model	Part Number	Description
CN75	1000AB02	318-043-033	3.7 V, 4000 mAh (14.8 Wh)
CN75e	1000AB02	318-043-033	3.7 V, 4000 mAh (14.8 Wh)
CK75	1001AB01	318-046-031	3.7 V, 5200 mAh (19.2 Wh)
CK75 (Cold Storage)	1001AB01	318-046-032	3.7 V, 5200 mAh (19.2 Wh)

We recommend use of Honeywell Li-ion battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.



**Caution:** The battery used in this device may present a fire or chemical burn hazard if it is mistreated. Do not disassemble it, heat it above 100 °C (212 °F) or incinerate it. Dispose of used batteries promptly. Keep away from children.

## About CN75 NI and CN75e NI models



**Warning:** Explosion Hazard - Batteries must only be changed or charged in an area known to be non-hazardous. Use ONLY Honeywell CN75 NI battery part number 1000AB02.



**Avertissement :** Risqué d'explosion-Les batteries doivent uniquement être remplacées ou rechargées dans un endroit non dangereux. Utilisez UNIQUEMENT Honeywell CN75 NI batterie P/N 1000AB02.

## Charge the Battery

Fully charge the battery before using your computer for the first time. You can charge the battery before or after you install it in the computer. A fully discharged battery charges in approximately 6 hours.

You can charge the **1000AB02** battery with these accessories:

- DX1 Desktop Base (Model 1002UU01) with Battery Cup Model 1002UC01 and power supply
- DX2 Dual Base (Model 1002UU02, 1002UU03) with Battery Cup Model 1002UC01 and power supply
- DX4 Quad Base (Model 1002UU04, 1002UU05) with Battery Cup Model 1002UC01 and power supply

You can charge the **1001AB01** battery with these accessories:

- Desktop Base (Model 1002UU01) with Battery Cup Model 1002UC02 and power supply
- Dual Base (Model 1002UU02, 1002UU03) with Battery Cup Model 1002UC02 and power supply
- Quad Base (Model 1002UU04, 1002UU05) with Battery Cup Model 1002UC02 and power supply

You can charge a **1000AB02** battery installed in a CN75 or CN75e with these accessories:

- DX1 Desktop Base (Model 1002UU01) with Computer Cup Model 1002UD01 and power supply
- DX2 Dual Base (Model 1002UU02, 1002UU03) with Computer Cup Model 1002UD01 and power supply
- DX4 Quad Base (Model 1002UU04, 1002UU05) with Computer Cup Model 1002UD01 and power supply
- Snap-On Adapters (Model 1000AA01, 1000AA02, 1000AA03, 1000AA04, 1000AA05, 1000AA06) and power supply
- Vehicle Power Adapter

You can charge a **1001AB01** battery installed in a CK75 with these accessories:

- DX1 Desktop Base (Model 1002UU01) with Computer Cup Model 1002UD02 and power supply
- DX2 Dual Base (Model 1002UU02, 1002UU03) with Computer Cup Model 1002UD02 and power supply
- DX4 Quad Base (Model 1002UU04, 1002UU05) with Computer Cup Model 1002UD02 and power supply
- Snap-On Adapters (Model 1000AA01, 1000AA02, 1000AA03, 1000AA04, 1000AA05, 1000AA06)

# How to Replace the I/O Cover on Non-Incendive Models

An I/O cover is supplied with non-incendive versions of the CN75 and CN75e computers. After charging the battery, always immediately install the I/O cover.

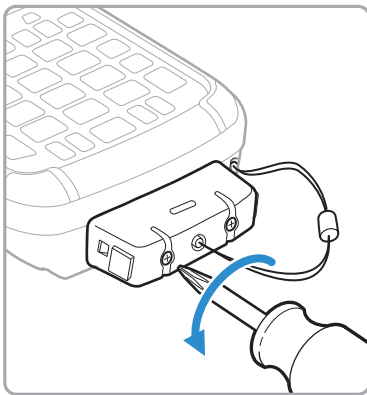


**Warning: Warning: The I/O cover must be attached when using the CN75/CN75e NI in a dangerous environment.**

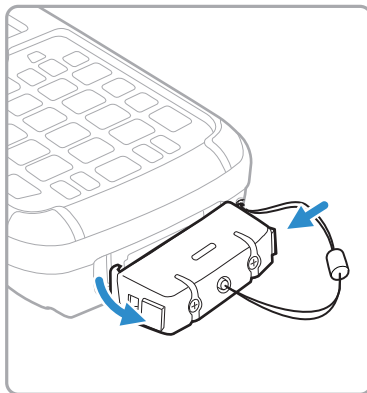


**Avertissement : Avertissement : Le couvercle entrée-sortie doit être fixé lorsque le CN75/CN75e NI est utilisé dans un environnement incendiaire.**

1. Loosen the screws securing the I/O cover to the computer.

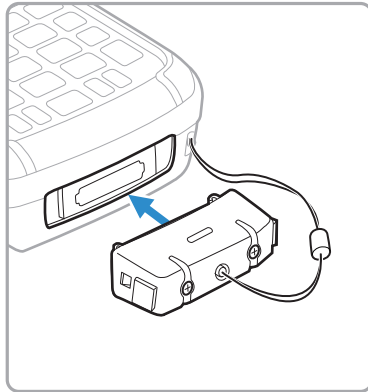


2. Press the release buttons on the sides of the cover, and remove the cover.

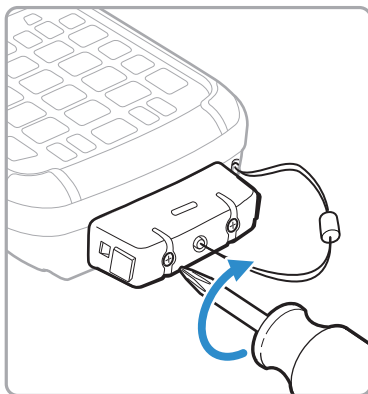


3. Detach the security tether.
4. Attach the security tether on the replacement I/O cover to the computer.

5. Snap the new cover into place.



6. Tighten the screws to secure the I/O cover to the computer.



## About Battery Replacement

When the battery in the computer has a low charge, replace it with a charged battery.

You should always place the computer in Hibernate mode before removing the battery. Hibernate mode places the computer in a low power state so that the battery can be removed for a short period of time.

**Note:** *When you remove a battery from the computer, Honeywell recommends that you install a charged battery within one minute to maintain your network connections.*

We recommend use of Honeywell Li-ion battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

**Ensure all components are dry prior to placing the battery in the computer. Mating wet components may cause damage not covered by the warranty.**

## About Non-Incendive Model Battery Replacement



**Warning: CN75 NI and CN75e NI Models**

**Explosion Hazard - Batteries must only be changed or charged in an area known to be non-hazardous. Use ONLY Honeywell CN75 NI battery part number 1000AB02.**

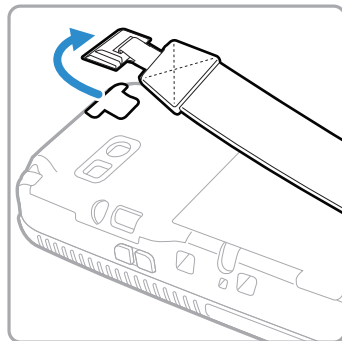


**Avertissement : Modèles CN75 NI and CN75e NI**

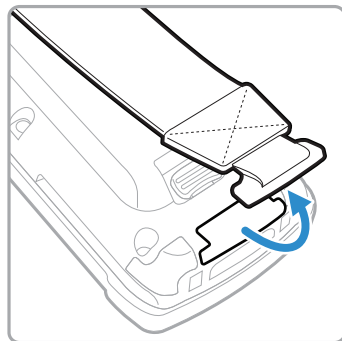
**Risqué d'explosion - Les batteries doivent uniquement être remplacées ou rechargées dans un endroit non dangereux. Utilisez UNIQUEMENT Honeywell CN75 NI batterie P/N 1000AB02.**

## How to Replace the Battery

1. Save your files and close all open applications.
2. Press the Power button, and then select **Hibernate** from the menu.
3. Detach one end of the hand strap from the computer.
  - Detach the Hand Strap From a CN75 or CN75e

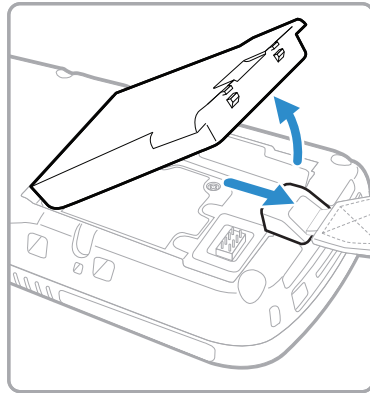


- Detach the Hand Strap From a CK75

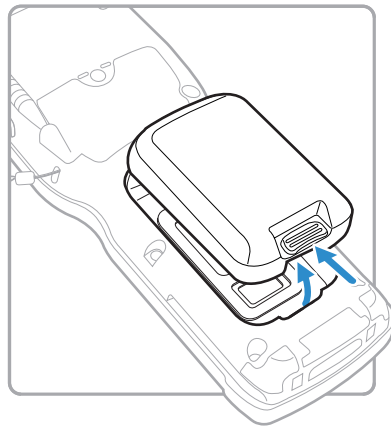


4. Remove the battery.

- On the CN75 or CN75e, push the battery latch toward the bottom of the computer until the battery releases, and then lift the battery away from the computer.



- On the CK75, push the battery latch toward the top of the computer until the battery releases, and then lift it away from the computer.








5. Insert the top end of a fully charged battery into the computer, and press down firmly on the bottom until the battery clicks into place. Make sure that the battery latch is fully engaged.
6. Attach the hand strap.
7. Press the **Power** button.

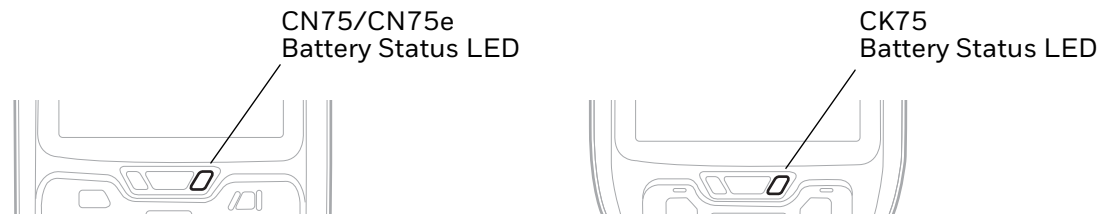
## About Battery Status

Use the battery icon on the Title bar to view the power status of your battery. If you want more detailed information on your battery such as usage time or voltage, use the dashboard. For more information on the dashboard, see [About the Dashboard](#) on page 105.

## Battery Icon Status Descriptions

Battery Icon	Status
	Battery is fully charged.
	Battery has a medium charge.
	Battery is low. You need to charge or replace the battery soon.
	Battery is critically low. You need to replace the battery now or immediately connect the computer to a charging accessory.
	Battery is charging. Computer is connected to an external power source.

The battery status LED below the computer screen indicates the charging status of the battery.



## Battery LED States

LED State	Description
Steady green	The computer is connected to a charger and the battery is more than 95% charged.
Pulsing green	The computer is connected to a charger and the battery is between 60% and 95% charged. The pulsing green LED appears only if the Battery LED setting has been set to 3 charging states in Enterprise Settings.
Steady red	The computer is connected to a charger and the battery is less than 95% charged (when Battery LED is set to 2 charging states). The computer is connected to a charger and the battery is less than 60% charged (when Battery LED is set to 3 charging states).
Blinking red	The battery is very low. The computer will soon go into Suspend mode. Charge or replace the battery.
Amber	There is a battery error. The battery is not charging because it is missing, faulty, or outside the allowable charging temperature range. If it is outside the charging temperature range, charging will resume when the battery temperature returns to the acceptable range of 0 °C to 45 °C (32 °F to 113 °F).
Off	No battery is installed or the battery is not critically low, and the computer is not connected to an external power source. The computer does not turn on if no battery is installed.

## Set the Battery Status LED Activity

You can change the way the battery status LED indicates the current charge level. When the computer is connected to external power (such as in a dock), by default, the LED appears as either steady green when the battery is fully charged, or steady red when the battery is not fully charged. You can set the LED to pulse green when the battery charge level is between 60% and 95% charged.

LED State	2 Charging States (default)	3 Charging States
Steady green	Battery charge level is more than 95%.	Battery charge level is more than 95%.
Pulsing green	Does not appear.	Battery charge level is between 60% and 95%.
Steady red	Battery charge level is less than 95%.	Battery charge level is less than 60%.

To modify the battery status LED setting:

1. Select **Start > Settings > System > Enterprise Settings**.
2. Select **Device Settings > Power Management > Battery LED**.
3. Choose either **2 charging states** (default setting) or **3 charging states (pulsing)**.
4. Tap **OK**.

## About Battery Life and Conservation

Batteries that are stored outside the computer for long periods of time slowly discharge. Honeywell recommends storing the battery in a charger to maintain battery performance.

When you want to:	Do this to save battery power:
Use the computer and the Low Battery status icon appears or the Battery light comes on.	Connect the computer to an external power source or save your data, press the <b>Power</b> button, and then select <b>Hibernate</b> . After the computer turns off, remove the battery and insert a fully charged battery.
Stop using the computer for 5 minutes or longer.	Make sure that the low battery icon is not on the screen and the Battery LED is not on. Press the <b>Power</b> button and choose <b>Suspend</b> to suspend the computer.
Store the computer for more than a day.	<p>If you are storing the computer for a few days, like over the weekend, install a fully charged battery or connect the computer to a power source.</p> <p>If you are storing the computer for longer, remove and charge the battery, and then store both the battery and computer in a cool location. Do not place the charged battery in the computer, which runs the battery down over time even when the computer is not in use.</p> <p>If you store the battery for several months, recharge the battery to keep it at peak performance.</p>

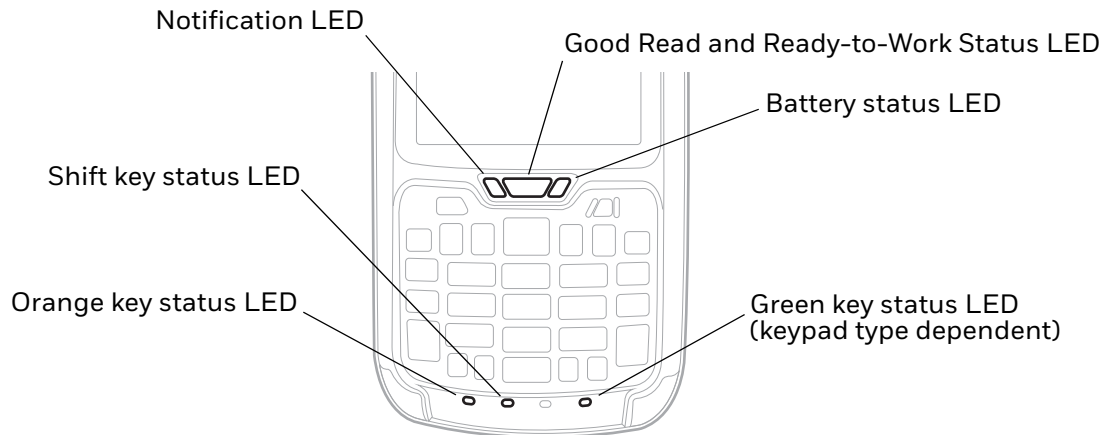


When you want to:	Do this to save battery power:
Store the battery outside the computer.	Store the batteries in a charger.

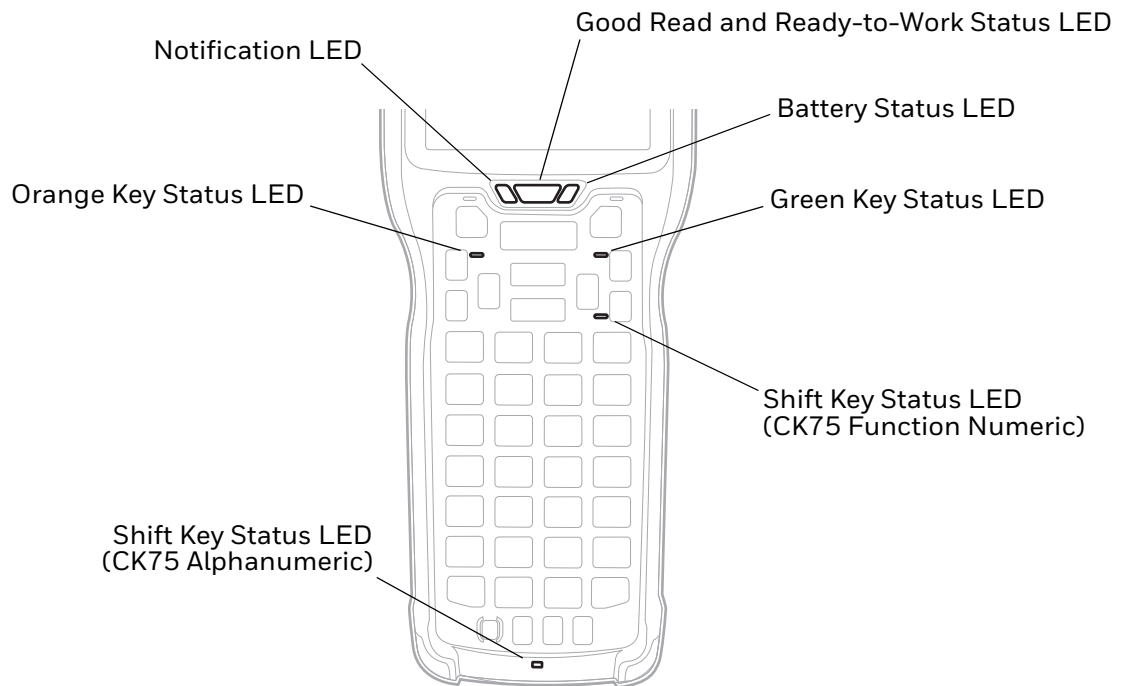
## About the Status LEDs

Use the following illustrations and table to understand the status LEDs on your computer. All six status LEDs are not available on every 75 Series computer. For example, the QWERTY versions of the CN75 and CN75e do not have a Green key status LED.

### Location of the CN75 Status LEDs



### Location of the CK75 Status LEDs



## Status LED Descriptions

LED	Color	Description
Notification	Amber	This LED is user-programmable.
Good Read	Green	The computer successfully decoded a bar code.
Ready-to-Work	Blue	If you have Honeywell Enterprise Terminal Emulator (TE), the application is running and connected to the host. If you do not have Enterprise TE, you can configure the Ready-to-Work indicator to turn on or off to indicate a healthy state.
	Blinking blue	Enterprise TE is running but not connected to the host. The computer is unhealthy.
	Off	Enterprise TE is not installed or not running. The computer is healthy.
Battery		See <a href="#">About Battery Status</a> on page 10.
Key Status	Green	The Green function key is enabled.
	Orange	The Orange function key is enabled.
Shift	Red	The Shift key is enabled.

## About the Keypad

The 75 Series is available in these keypad configurations:

- The QWERTY keypad is available for both the CN75 and CN75e but the CN75e also includes a larger keypad with numeric keys (phone-style with 1-2-3 digits across the top). The QWERTY keypad is designed for applications that require primarily alphabetic data. This keypad also lets you enter special characters by pressing color-coded key sequences.
- The numeric keypad is available for both the CN75 and CN75e but the CN75e also includes a larger keypad with a row of function keys. The numeric keypad is for applications that require mainly numeric data. This keypad also lets you enter special characters, including the alphabet, by pressing color-coded key sequences.
- The full numeric and function keypad is available for the CK75. The calculator-style (7-8-9 digits across the top) numeric key layout with additional function keys (F1-F12) is designed for applications that require mainly numeric data. This keypad also lets you enter special characters, including the alphabet, by pressing color-coded key sequences.
- The alphanumeric keypad is available for the CK75. The alphanumeric keypad is designed for a wider range of applications that require both numeric and alphabetic data. The layout includes calculator-style (7-8-9 digits across the top) numeric keys, alphabetical keys, and function keys. This keypad also lets you enter special characters and alternate functions by pressing color-coded key sequences.

## CN75 QWERTY Keypad / CN75 Numeric Keypad



## CN75e QWERTY Numeric Keypad / CN75e Numeric Keypad



## CK75 Alphanumeric Keypad /CK75 Numeric Function Keypad



## Configure the Keypad Backlight



You can configure the keypad backlight to always turn on, always stay off, or turn on depending on the lighting level of your work environment. You can also set different values for the brightness of the backlight depending on the computer power source (battery power or external power).

1. Select **Start > Settings > System > Enterprise Settings**.
2. Tap **Device Settings > Backlight > Keypad**.
3. Select the options you want for the keypad backlight:
  - Select **Always off** to prevent the keypad backlight from turning on.
  - Select **Automatic (Ambient)** to turn on the keypad backlight automatically based on the ambient light level.
  - Select **On with the display** to turn on the keypad backlight only when the display is on. When the CN51 suspends, the keypad backlight turns off to save power.
  - Select **Always on** to turn the keypad backlight on all the time.

- To set the brightness level for the keypad backlight depending on the computer power source, select a setting from the **Brightness (Battery power)** or the **Brightness (External power)** list.
- Tap **OK**.

## About the Color-Coded Keys

**Note:** The QWERTY keypads on the CN75 and CN75e do not include a green key.

Use the orange  key and the green  key to access additional characters, symbols, and functions printed on the keypad overlay. After you understand how to use the color-coded keys and key sequences, you can access all of the additional features printed on the keypad overlay.

Press the Green or Orange key twice to lock it. When the key is locked, the LED turns on. Press the key once to unlock it.

The default setting for the Green/Orange keys is **Press twice to lock**. You can also set the keys to **Press once to lock** if you do not want the Green/Orange keys to lock after pressing them twice. The information in this section assumes that you are using the default setting for the Green/Orange keys lock options.

To change the setting for the Green/Orange keys, go to **Start > Settings > System > Enterprise Settings > Device Settings > Keypad**.

## Enter Characters on the QWERTY Keypad

You need to use the orange modifier key  and the shift key  to access all characters and functions on the QWERTY keypad.



To type a character:

- Press the key for that character.


To type a character or access a function on the overlay:

- Press  and then press the key for the character or function.



To only type characters or access functions on the overlay:


- Press   to lock the orange modifier key to stay on, and then press the keys for the characters or functions.

To type a single uppercase letter:

- Press  and then the letter key.



To type all uppercase letters:

- Press   to turn on Caps Lock, and then press the letter keys.



You can still type orange modifier characters by pressing  and then the key for that character.

To turn off Caps Lock, press .


## Enter Characters on the Numeric Keypad


You need to use the orange modifier key  and the green modifier key  to access all characters and functions on the Numeric keypad.











To type a character or access a function printed in orange or green on the overlay:

- Press  or , and then press the key for the character or function.

To type letters in the upper right corner of a key:



- Press  and then press the key one to three times depending on the position of the letter.


For example, in the upper right corner of the  key there are the letters “ABC”:


- To type “c”, press    .
- To type “C,” press   and then press    .



**Note:** *On the calculator-style keypad, the  is replaced by the .*

To only type letters:




- Press   to lock the green modifier key, and then press the key one to four times depending on the position of the letter.

While the green modifier key is locked, press  to toggle between only uppercase and lowercase letters.


To unlock the green modifier key, press .

**Note:** *If uppercase letters are enabled and you unlock the green modifier key, you may need to press   to type lowercase letters.*


## Enter Characters on the CK75 Keypads

You need to use the orange modifier key , the green modifier key , and the Shift or Caps Lock key  to access all characters and functions on the Alpha, Alphanumeric, and Numeric Function keypads.


To type a character or access a function printed in orange on the overlay or in the upper left corner of a key:

- Press  and then press the key for the character or function.



To type a character or access a function printed in green on the overlay:



- Press  and then press the key for the character or function.

To type a single uppercase letter:

- Press  and then the letter key.

To type all uppercase letters:

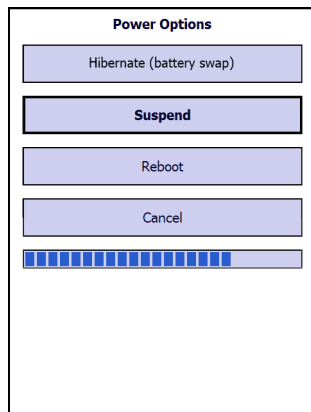
- Press   to turn on Caps Lock, and then press the letter keys.

You can still type orange or green modifier characters by pressing  or  and then the key for that character.

To turn off Caps Lock, press .

## About the Power Button

When you press the Power button, a dialog box with a list of Power Options appears. If you do not select an option from the list, the currently selected action (the button outlined in bold) occurs after the timeout is exceeded. The status bar under the options list shows indicates the timeout progress.



## Power Options Screen


The Power Options screen is customizable. You can use Enterprise Settings to determine which options appear on the screen, the timeout length until the default choice is selected, the default action if no option is selected, or disable the Power Options screen. For more information on customizing the screen using Enterprise Settings, see [About Enterprise Settings on the Computer](#) on page 75.


Use the following table to understand the Power Options and what settings are available for your computer.

Power Options	Description	Enabled by Default
Hibernate (battery swap)	<p>High power saving mode.</p> <p>Use this setting only for swapping the battery. The computer saves the current system state, registry, and file system and then powers off all radios and internal devices. You can wake the computer by pressing the <b>Power</b> button or connecting the computer to external power.</p> <p>Hibernate does not appear as an option if the computer is connected to external power.</p>	Enabled
Suspend	<p>Medium power saving mode.</p> <p>When on battery power, Suspend mode saves the current system state and then turns off most radios and internal devices. The WWAN radio remains in a lower power state and can still receive calls. When the computer is connected to external power, Suspend mode turns off the screen but leaves all radios on. You can wake the computer by pressing the <b>Power</b> button, pulling the scanner trigger, or scheduling an event such as an alarm. If the computer is on battery power during Suspend mode, you can also wake the computer by connecting it to external power.</p>	Enabled
Reboot	<p>The computer does not save the current system state, but the registry and file systems are saved. The computer shuts down all running processes and restarts.</p>	Enabled
Cancel	<p>The Power Options menu is canceled.</p>	Enabled
Screen Off	<p>Lowest power saving mode.</p> <p>The screen turns off, but the radios and internal devices stay on. Press the <b>Power</b> button to turn it back on.</p> <p>This option is not visible by default. Use Enterprise Settings to enable.</p>	Disabled
Shutdown	<p>Very high power saving mode. The computer turns off everything. You must press <b>Power</b> or apply external power to restart the computer.</p> <p>This option is not visible by default. Use Enterprise Settings to enable.</p>	Disabled



## About the Dashboard Button

If the [Ready-to-Work](#) LED blinks, your computer may be experiencing a problem. Press information button  to launch the Dashboard application and view troubleshooting and status information.

You can press the  button at any time to bring up the Dashboard. If the computer is not healthy, the current issues are displayed at the top of the screen. If the device is healthy, you can use the Dashboard to view device information. For more information, see [About the Dashboard](#) on page 105.

## About the Screen Backlight and Brightness

The display has an ambient light sensor that automatically adjusts the backlight intensity to conserve power and ensure the display is readable. You can set the backlight intensity levels as needed for your environment. By default, the screen turns off when there is no activity with the computer. Press the Scan key or Power key to resume activity. You can set the backlight timeout length.

### Configure the Screen Backlight

You can configure when or if the screen backlight turns off to save power.

1. Tap **Start > Settings > Power**.
2. Tap **Advanced** on the horizontal scroll bar.
3. Select the screen power off settings for when the computer is **On battery power** or **On external power**.
4. Tap **OK**.

### Configure the Screen Brightness

You can configure the screen brightness using from the Start menu or the Enterprise Settings menu.

1. Tap **Start > Settings > System > Backlight**.
2. Adjust the slider to the desired brightness level.
3. Tap **OK**.

# About the CK75 Cold Storage Model Heater

CK75 Cold Storage (CS) models come equipped with touch screen and scan window heaters to support extended use in freezers as well as transitions into and out of freezer areas.

CK75 cold storage models have external **Temperature Monitoring** enabled by default to determine when the computer enters a cold storage environment. Once the ambient temperature drops below the **Heater Enable Temperature**, the system starts a **Heater enabled delay timer**.

Once the **Heater enabled delay timer** expires, the system operates in one of two configurable modes:

- Automatic mode for maximizing battery life in cold storage environments and average window defrost times. **In freezer heater activation is disabled.**
- Preemptive mode (Pre-heat) for minimizing window defrost times with average battery life in cold storage environments. **In freezer heater activation is enabled.**

## How Automatic Mode Works

Automatic mode maximizes the cold storage battery life by only turning the heater on once the following conditions are met in the order listed:

1. The computer detects the ambient temperature has lowered below the set **Heater enable temperature**.
2. The **Heater enabled delay timer** expires. A snowflake ❄️ icon appears in the status bar.
3. The computer detects a quick rise in the ambient temperature indicating an exit from cold storage.

If you remove the computer from cold storage before the **Heater enabled delay timer** expires, the system does not turn on the heater, saving battery power.

**Note:** *When the heaters turn on in Automatic Mode, the icon changes from a snowflake ❄️ to a heater 🔥.*

In Automatic mode, cold storage battery life may exceed 6 hours (scanning a bar code every ten seconds). Window defrost times should be a minute or less with factory default settings implemented.

You can configure the heater operation for your individual environment in Enterprise Settings or by editing the computer registry values. To learn more, see [Configure the Heater Feature](#) on page 24.

## How Preemptive Mode Works

Preemptive mode minimizes screen defrosting time but slightly reduces cold storage battery life since the heaters enter a low power pre-heat stage before the computer detects a rise in the ambient temperature.

The heater only enters the low power pre-heat stage once the following conditions are met in the order listed:

1. The computer detects the ambient temperature has lowered below the set **Heater enable temperature**.
2. The **Heater enabled delay timer** expires. A snowflake ❄️ icon appears in the status bar.
3. The **Pre-heat enabled delay** timer expires.

**Note:** *Once the computer enters the pre-heat stage, the icon changes from a snowflake ❄️ to a heater 🔥.*

Pre-heating keeps the windows warm to minimize condensation and frost when the computer is removed from cold storage allowing for quicker defrost times. The heaters switch to full power to defrost the windows when the computer detects a quick rise in the ambient temperature.

In Preemptive mode, the cold storage battery life ranges from a maximum of 6 hours to a minimum of 1.5 hours depending on the **Pre-heat enabled delay** time set. The window defrost times range from zero to a maximum of one minute with factory default settings.

You can configure the heater operation for your individual environment in Enterprise Settings or by editing the computer registry values. To learn more, see [Configure the Heater Feature](#).

## How to Manually Turn the Heaters On/Off

If you want to manually turn the heaters on or off while in cold storage, tap the snowflake ❄️ or heater icon 🔥 in the status bar.

If the **In freezer heater activation** setting is enabled (Preemptive mode), the **Pre-heat enabled delay** timer is not stopped if the icons are used to turn the heater on or off. The timer continues to run and the heaters still turn on when the timer expires.

If the **In freezer heater activation** setting is disabled, the **Pre-heat enabled delay** timer is not used and pre-heating does not automatically start, but the snowflake icon ❄️ can still be tapped to turn on the heaters for pre-heating.

## Configure the Heater Feature

You can configure the following parameters in **Enterprise Settings** or the computer registry to optimize the operation of the heaters to fit your specific application environment.

Heater Setting	Description
Temperature monitoring Registry Key: TempMonitoring	Enable or Disable the heater feature and temperature monitoring.
In freezer heater activation Registry Key: PreemptiveHeating	Enable or Disable the automatic pre-heat feature. When enabled, modify the following parameters: <ul style="list-style-type: none"> <li>• <b>Pre-heat enable delay timer</b></li> <li>• <b>Pre-heat power level</b></li> </ul>
Heater enabled temperature Registry Key: EnableT	Set the temperature (°C) that the computer must fall to before the heaters turn on. The <b>Heater enabled temperature</b> is used to identify cold storage entry. Once this temperature is detected, the <b>Heater enabled delay</b> timer starts.
Heater enabled delay (minutes) Registry Key: ChillTime	Set the time limit (minutes) for how long the computer must remain at or below the defined <b>Heater enable temperature</b> before: <ul style="list-style-type: none"> <li>• the heaters turn on if in Automatic mode, or</li> <li>• the <b>Pre-heat enabled delay</b> timer starts when <b>In freezer activation</b> (Preemptive mode) is enabled.</li> </ul> <p><i>Note: If you remove the computer from cold storage before the timer expires, the system does not turn on the heaters, saving battery power.</i></p>
Exit freezer temperature change trigger Registry Key: DeltaT	Set the sensitivity of the cold storage exit trigger. To detect a cold storage exit, the computer looks for a quick rise in temperature (°C), defined by the <b>Exit freezer temperature change trigger</b> value, over a brief period of time.
Exit freezer heater on duration Registry Key: DurationHeater	Set the length of time (minutes) the heaters stay on at full power (100%) once the computer detects a quick rise in temperature, defined by the <b>Exit freezer temperature change trigger</b> value (°C). <p><i>Note: The heaters may turn off before the timer has expired if a temperature reading indicates the computer is warm enough or you manually turn off the heaters by tapping the heater icon once.</i></p>
Pre-heat enabled delay (minutes) Registry Key: PreemptiveDelay	Set the length of time (minutes) that the computer waits after the <b>Heater enabled delay</b> timer has expired before activating the low power pre-heat window feature.
Pre-heat power level (%) Registry Key: DutyCycle	Set the power level (%) of the heaters used during the pre-heat cycle.

Heater Setting	Description
Heater Cycle Time	<p>When the heaters are activated, the computer cycles power between the scanner window heater and the display window heater. You can independently adjust the cycle time for each heater.</p> <p><i>Note: During pre-heating, there is a buffer time between heater cycles when both heaters are turned off. The length of the buffer is controlled by the Pre-heat power level (%) setting.</i></p> <p><i>Example: The default setting is 50% for the Pre-heat power level setting so the total buffer time when the heaters are off is 30 seconds.</i></p> <p><i>The heaters would cycle in this order:</i></p> <ol style="list-style-type: none"> <li><i>1. Scanner heater on 20 secs.</i></li> <li><i>2. Both heaters off 20 secs.</i></li> <li><i>3. Screen heater on 10 secs.</i></li> <li><i>4. Both heaters off 10 secs.</i></li> </ol>
Scanner heater cycle time (seconds) Registry Key: DurationScanner	Set the length of time (seconds) that the scanner heater is cycled on.
Screen heater cycle time (seconds) Registry Key: DurationLCD	Set the length of time (seconds) that the screen heater is cycled on.
Heater off at battery level (%) Registry Key: LowBatThreshold	Set a low charge battery threshold (%) that triggers the computer to turn off the heaters to conserve battery power.

## Use Enterprise Settings to Configure the Heater

1. Tap **Start > System > Enterprise Settings > Heater**.
2. Modify the heater parameters.
3. Tap **OK**.

**Note:** You can also configure the heater by modifying the registry keys for the heater settings. Download the free [RegEditor](#) application to make editing the computer registry easy.


## About Audio Features

Your mobile computer has a speaker, a microphone, and several software tools to configure sound volume or enable vibration feedback. The volume buttons on the right side of the computer allow you to make quick volume adjustments.

- The top button raises the volume of the active speaker.
- The bottom button lowers the volume of the active speaker.

# Adjust the Speaker Volume

The computer volume includes sounds you hear when you tap the screen or scan bar codes. You can modify the volume level, switch to vibrate mode or turn both sound and vibration off.

1. Tap the Title bar at the top of the screen.
2. Tap the Volume icon .
3. Use your stylus to adjust the volume slider, or use the side volume buttons to change the volume setting.
4. Tap **OK**.

# About the Imager

The internal imager can read 1D and 2D bar code symbologies, composite symbologies, and postal codes. You can also use the internal imager to take pictures as if it were a camera or use the integrated flash as a flashlight.

You can also use Bluetooth communications to connect the computer to cordless scanners, such as the Granit™ 1981i and 1911i.

# Use the Imager as a Flashlight

By default, the imager is set to read bar codes. To use the imager as a flashlight, you must remap the Left side lower button.

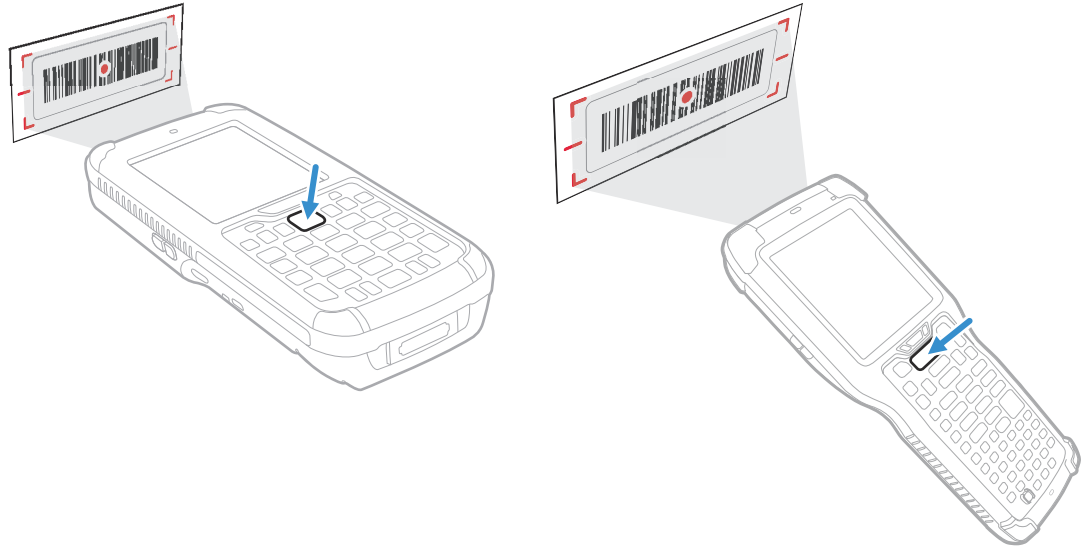
1. Open Enterprise Settings on the mobile computer by tapping **Start > Settings > System > Enterprise Settings**.
2. Tap **Device Settings > Keypad > Button Remapping**.
3. Select **Flashlight** under “Left side lower button”.
4. From the Flashlight timeout drop-down menu, select how long to leave the flashlight on before it automatically turns off.
5. Tap **OK**.

# Scan Bar Codes

The internal imager supports omni-directional (360°) bar code scanning. An aiming beam is provided to help assist with targeting when scanning bar codes.

**Note:** *Before you start scanning bar codes, use the Settings app to enable only the bar code symbologies that you need. By reducing the active symbology list, you can increase the scan speed.*

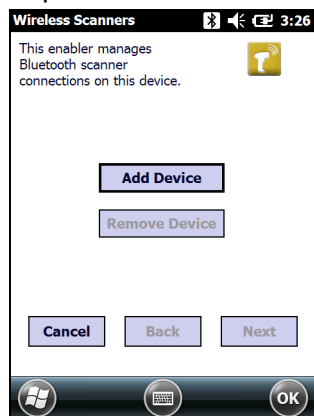
1. Point the computer at the bar code. For optimum performance, avoid reflections by scanning the bar code at a slight angle.
2. Touch and hold the Scan button.
3. Center the aiming beam over the bar code. When the scanner successfully reads the bar code, the computer beeps, and the Good Read LED turns on briefly. The bar code information is entered into the application in use.
4. Release the Scan button.



## Connect a Bluetooth Scanner

You can connect the computer to a Honeywell Bluetooth scanner, such as the Granit™ 1981i and 1911i. Make sure that the Bluetooth radio in the computer is turned on before you try to connect to a scanner. To learn how, see [About Bluetooth Communications](#) on page 84

1. Tap Start > Settings > System > Wireless Scanning.
2. Tap Add Device.



3. Select **Quick Connect**, **Search**, or **Manual**. Follow the instructions on the screen to add a Bluetooth scanner.
4. After you add a Bluetooth scanner, you can configure scanner settings and parameters in Enterprise Settings (see [page 75](#)).

## Insert a MicroSD Card

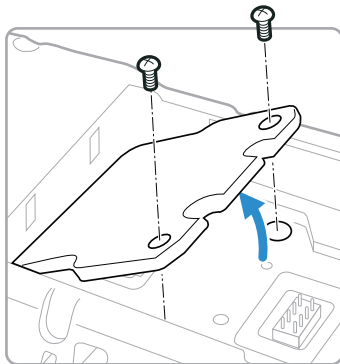
You can use a micro Secure Digital (SD) card to increase file storage capacity or to install software. The 75 Series computers support an optional microSD™ card (up to 32 GB maximum capacity).

**Note:** Always place the computer in hibernate mode and remove the battery before attempting to install or remove a card.

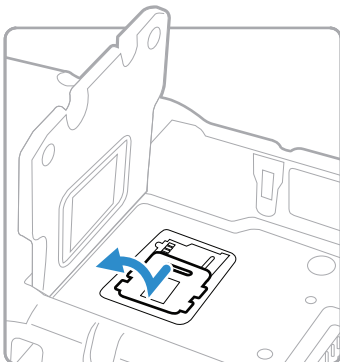
## Install a MicroSD Card in a CN75 or CN75e

You need a Phillips screwdriver to install the microSD card. Format the microSD card before initial use.

1. Press the **Power** button, and then select **Hibernate**.
2. Release the handstrap and remove the battery (see [page 8](#)).
3. Remove the two screws and open the card access door.

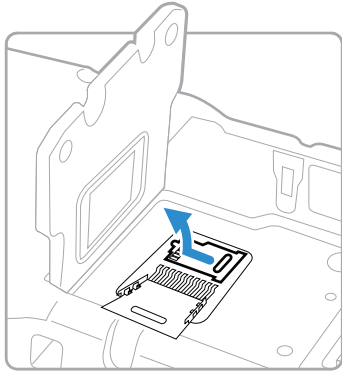


4. Slide the SIM card holder to the left and up to reveal the microSD card holder.

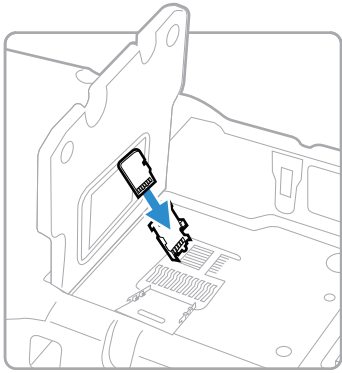




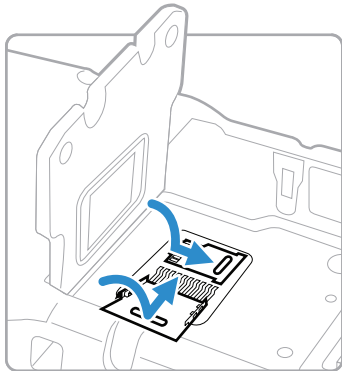
- Slide the microSD card holder towards the top of the computer, and then lift up to reveal the microSD card socket.



- Place the microSD card in the holder with the contacts facing away from the holder.



- Close and latch the microSD card holder and SIM card holder.

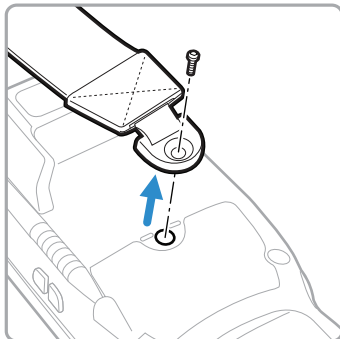
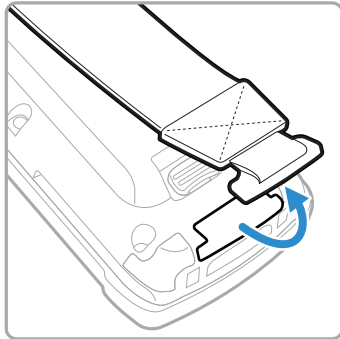


- Close the card access door and install the two screws.
- Install the battery. Press down firmly on the bottom of the battery, and make sure that the battery release tab is fully engaged.
- Attach the handstrap.
- Press the **Power** button.

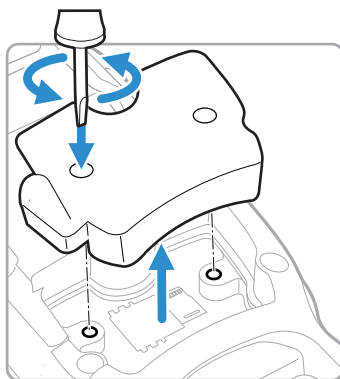
## Install a MicroSD Card in a CK75

You need a slotted screwdriver to install the microSD card. Format the microSD card before initial use.

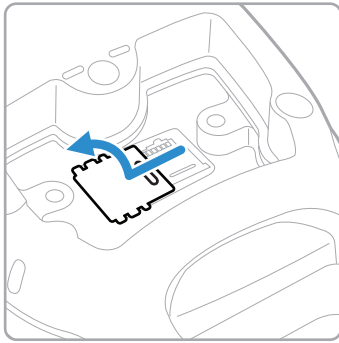
1. Press the **Power** button, and then select **Hibernate**.
2. Remove both ends of the handstrap.



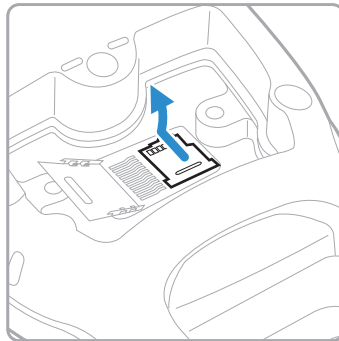
3. Remove the battery (see page [10](#)).
4. Remove the two screws that attach the card access door to the back of the computer.



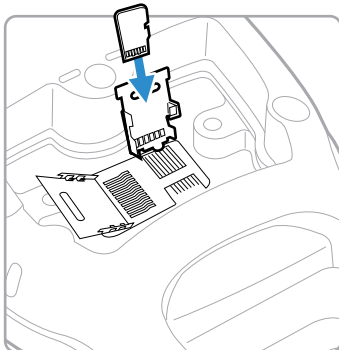
5. Slide the SIM card holder to the left and up to reveal the microSD card holder.



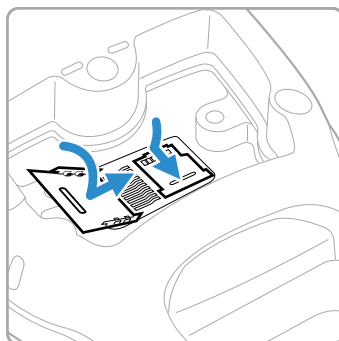
6. Slide the microSD card holder towards the top of the computer, and then up to reveal the microSD card socket.



7. Place the microSD card in the holder with the contacts facing away from the holder.



8. Close and latch the microSD card holder and SIM card holder.



9. Replace the door and secure it with the two screws removed in Step 4.
10. Install the battery. Press down firmly on the bottom of the battery, and make sure that the battery release latch is fully engaged.
11. Attach the handstrap.
12. Press the **Power** button.

## How to Transfer Files

The 75 Series supports these two methods for transferring files to and from your desktop PC:

- Using a Microsoft connection/syncing app (e.g., Windows Mobile Device Center, Windows Phone®, Phone Companion app).
- Using the 75 Series as a mass storage device.

### Option 1: Set Up the Computer to Sync Data with a PC

To sync data, you can use a USB connection between the mobile computer and your PC. Depending on the PC operating system, you may need to download and install one of these applications available from the Microsoft web site, [www.microsoft.com](http://www.microsoft.com).

- Microsoft ActiveSync (Windows XP or earlier)
- Windows Mobile Device Center (Windows Vista or Windows 7)
- Windows Phone app (Windows 8 or Windows 8.1)
- Phone Companion (Windows 10)

You can use these accessories to connect your mobile computer to your PC:

- USB snap-on adapter with power supply and USB cable
- Desktop Base with battery cup, power supply and USB cable

**Note:** To learn more about accessories available for 75 Series computers, go to [www.honeywellaidc.com](http://www.honeywellaidc.com) or contact your local Honeywell sales representative.

To sync data with a PC:

1. Connect the mobile computer to your PC using a USB charge/communication accessory.
  - If you have a computer running Windows® 10, open the Phone Companion app from **Start > All Apps**.
  - If you have a computer running Windows 8 or Windows 8.1, the Windows Phone® app automatically opens when you connect the mobile computer to the PC.

- If you have a computer running Windows 7 or Mac, go to the [Microsoft Downloads Center \(http://download.microsoft.com\)](http://download.microsoft.com) to download and install the Windows Phone app for desktop or Mac. Once installed, the app automatically opens when you connect the mobile computer to the PC.
2. Set your preferences.
    - In the Phone Companion app, select Windows as your terminal platform, and then set your sync preferences.
    - In the Windows Phone app, set your phone name and sync preferences. You can always modify your preferences later by selecting **Settings**.

## Option 2: Set Up the Computer as a Mass Storage Device

You can easily transfer files between computers, when connect the 75 Series mobile computer as a mass storage device to your desktop PC.

1. Connect the mobile computer to your PC using a USB charge/communication accessory.
2. On the mobile computer, tap **Start > Settings > System > Enterprise Settings**.
3. Tap **Device Settings > USB**.
4. Select **Mass storage - Flash File Store** and tap **OK**.
5. Copy files to and from your desktop PC to the mobile computer.

## 70 Series Accessories

The mobile computer ships with a battery, a stylus and hand strap. Non-Incendive models also ship with an I/O cover. All other accessories are sold and ordered separately. For help, contact your local Honeywell sales representative.

**Note:** *All 75 Series mobile computers are compatible with 70 Series accessories.*

Accessory	Description
Audio Snap-On Adapter	Use the audio adapter to connect the computer to a headset.
Back Accessory Interface	Use the back accessory interface to attach accessories such as the magstripe reader adapter to the CK75.
Battery Model 1001AB01	This battery provides main power to the CK75. <ul style="list-style-type: none"> <li>• Standard Rechargeable Li-ion battery (Model 1001AB01/PN 318-046-031)</li> <li>• Cold Storage Rechargeable Li-ion battery (Model 1001AB01/PN 318-046-032)</li> </ul>
Battery Model 1000AB02	This battery provides main power to the CN75 and CN75e. Standard Rechargeable Li-ion battery (Model 1000AB02/PN 318-043-033).

<b>Accessory</b>	<b>Description</b>
CK70/CK71 Magstripe Reader Adapter	Use the magnetic stripe reader to be able to read magnetic cards with the CK75 computer.
CN70/CN70e Magstripe Reader Snap-On Adapter	Use the magnetic stripe reader to be able to read magnetic cards with the CN75 and CN75e computers.
Desktop Stand	Use the desktop stand to hold the 75 Series computer on your desk or a stable surface.
DEX/UCS Snap-On Adapter	Use this adapter to receive and send serial communications through a DEX/UCS connection.
DX1 Desktop Dock with USB connectivity	Use the desktop dock with the: <ul style="list-style-type: none"> <li>• Computer cup to charge the battery while it is installed in the computer.</li> <li>• Battery cup to charge the battery.</li> </ul>
DX2 Dual Dock and DX4 Quad Dock. The DX2 and DX4 are available in charge-only and Ethernet configurations.	Use these charger bases with the: <ul style="list-style-type: none"> <li>• Computer cup to charge batteries while they are installed in the computer.</li> <li>• Battery cup to charge two batteries.</li> </ul>
Ethernet Snap-On Adapter	Use the Ethernet adapter to be able to connect the computer to an Ethernet network.
Handstrap Replacement Kit	You can order and install a replacement handstrap for the CN75, CN75e, and CK75. Each kit contains 5 handstraps.
Holster	Use the holster to store the computer when you need your hands free.
RS-232 Snap-On Adapter	Use the RS-232 adapter to convert the connector on the bottom of the computer to a serial connector.
Scan Handle	Use the scan handle to provide better ergonomics to the computer for high-volume scanning applications.
Tethered Stylus Replacement Kit	You can order and install a replacement stylus.
USB Snap-On Adapter	Use this adapter to convert the bottom connector of the computer to a USB connector.
Vehicle Dock	Use the vehicle dock to provide power and hold your computer while you are using it in a vehicle.
Vehicle Holder	Use the vehicle holder to hold your computer while you are using it in a vehicle.
Vehicle Power Adapter	Use the vehicle power cable adapter to provide power to the computer from your vehicle.
Vocollect® Snap-On Adapter	Use this adapter to be able to use the Vocollect voice solution in your warehouse.

# ABOUT THE USER INTERFACE AND APPLICATIONS

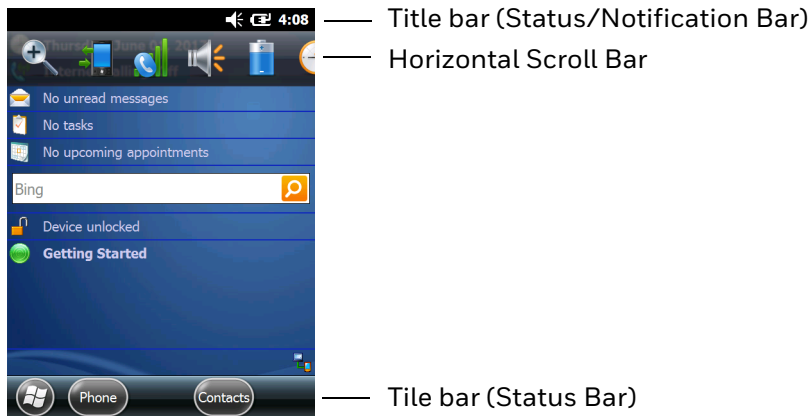
Learn about the Windows Embedded Handheld user interface and how to interact with the screen. You can also use this chapter to learn about the Honeywell applications on your computer, as well as additional applications available for download from [www.honeywellaidc.com](http://www.honeywellaidc.com).

## About the User Interface

The Windows Embedded Handheld 6.5 operating system provides a touch-friendly and easy to navigate user interface.

## About the Home Screen

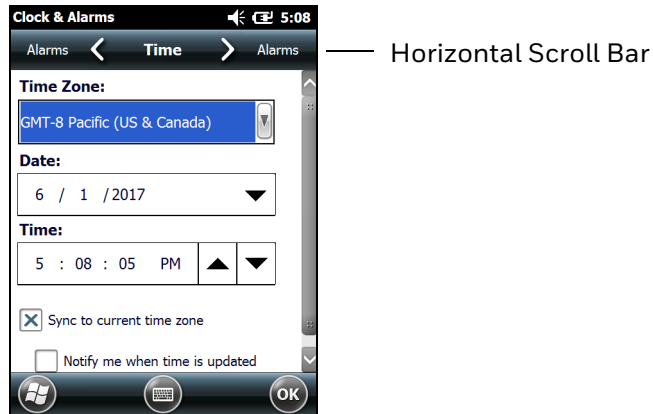
When you turn on your mobile computer, the Home screen is the first screen that appears after language provisioning and screen calibration is complete.



Navigation Bar	Description
Title bar (Status/Notification Bar)	Use the Title bar icons at the top of the screen to quickly view current status information such as signal strength and battery power remaining.









Navigation Bar	Description
Horizontal scroll bar	A horizontal scroll bar appears when you tap the Title bar. The scroll bar makes it easy to access the applications associated with the Tile bar icons. You can select the magnifier icon on the horizontal bar to make parts of the screen large enough to tap with your finger. When an application is open, the horizontal scroll bar provides access to additional screens and settings.
Tile bar	Use the Tile bar at the bottom of the screen to access the <b>Start</b> menu, navigate within applications, and open the SIP keyboard.

The Clock & Alarms screen shows how the horizontal scroll bar appears in an open application.

















































## Title Bar Status Icons











Icons in the Title bar immediately show you the status of your network, your phone, the volume, the battery, and the time. Use the following table to understand what the icons mean.

Icon	Description
	You have a new notification.
	You have a new text message.
	You have a new email message.
	You have a new instant message.
	You missed a call.
	The speakerphone is on.
	The phone is roaming.
	An alarm is set.



Icon	Description
	The microphone is on.
	An internet call is in progress.
	A Bluetooth headset is detected.
	An ActiveSync connection has been established.
	There is a problem with the ActiveSync synchronization.
	An ActiveSync synchronization is in progress over USB.
	A CDMA connection is active.
	A CDMA connection is available, but not transferring data.
	A UMTS network is available.
	Connecting to a UMTS network.
	A UMTS connection is active.
	A 3G+ network is available.
	An EDGE network is available.
	Connecting to an EDGE network.
	An EDGE connection is active.
	A GPRS network is available.
	Connecting to a GPRS network.
	A GPRS connection is active.
	An HSDPA network is available.
	Connecting to an HSDPA network.
	An HSDPA connection is active.
	Bluetooth is on.
	Wi-Fi is on but not connected, and no networks are detected.

Icon	Description
	Wi-Fi is not connected to a network, and other networks are detected.
	Other wireless networks are detected.
	Connected to a wireless network.
	Synchronizing through a Wi-Fi connection.
	Connected to a wireless network, and other networks are detected.
	Information about a new wireless network is available.
	A network connection is active.
	A network connection is inactive.
	The phone has maximum signal strength.
	The phone has no signal.
	The phone capability is off.
	The phone has no service.
	The phone is searching for service.
	Data is being transferred.
	A voice call is in progress.
	A voice call is on hold.
	There is no SIM card present in the computer.
	The volume is off and the phone is set to vibrate.
	The volume is on.
	The volume is off.
	The battery has a full charge.
	The battery has a high charge.
	The battery has a medium charge.

Icon	Description
	The battery has a low charge.
	The battery has a very low charge.
	The battery is attached to external power and is charging.
	No battery is installed in the computer.
	Call forwarding is on.
	Voice mail is off.
	GPS locator is off.
	GPS locator is on.
	The <b>Heater enabled delay</b> timer has expired and computer is cold enough the heaters can be turned on. For more information, see <a href="#">About the CK75 Cold Storage Model Heater</a> (page 22).
	Heaters are turned on. For more information, see <a href="#">About the CK75 Cold Storage Model Heater</a> (page 22).

## About Screen Gestures

The Windows Embedded Handheld 6.5 interface supports the use of gestures with the finger or stylus to move around the screen.

Gesture	Description
Tap	Represents the left click of a mouse.
Double-tap	Represents the left double-click of a mouse.
Hold	Represents the right click of a mouse when you press and hold on the screen and a context menu appears.
Flick	Initiates scrolling in the direction (horizontal or vertical) the finger or stylus moves across the screen.
Pan	Press and hold on the screen, and then drag in any direction.

## Align the Screen

If the touch screen does not respond as expected when you tap it with the stylus, you may need to calibrate the screen.

1. Tap **Start**.
2. Use the keypad to navigate to **Settings > System > Screen**.

Navigation Keys: **^** (up), **v** (down), **<** (left), **>** (right) and **ENTER** (select)







3. Select **Align Screen** and follow the instructions to align the screen.
4. Tap **OK**.








## About Honeywell Applications

Honeywell provides several useful applications to help you configure, troubleshoot, and connect your computer to other devices and networks. You can also download additional applications from the Honeywell website at [www.honeywellaidc.com](http://www.honeywellaidc.com) to help you use all of the features of your computer.

## Applications Available on the Computer

Honeywell applications help you configure, troubleshoot, and connect your computer to other devices and networks.

Icon	Application	Description
	Bluetooth Audio	Use the Bluetooth Audio application to connect to a Bluetooth headset or hands-free device. To learn more, see <a href="#">Connect to a Bluetooth Audio Device</a> on page 87.
	Carrier Selection	Use the Carrier Selection application to quickly change your network carrier. To learn more, see <a href="#">How to Add and Switch Between Network Carriers</a> on page 45.
	CloneNGo	Use CloneNGo to configure basic device settings on multiple client computers from one master computer. To learn more, see <a href="#">Manage the Computer Using CloneNGo</a> on page 97.
	iGPS	Use the iGPS application to improve the performance of GPS on your computer. This application is only available on computers with phone capability. To learn more, see <a href="#">Improve GPS Performance on the Computer</a> on page 73.
	Enterprise Settings	Use Enterprise Settings to configure your computer. You can use Enterprise Settings to individually configure a computer or you can use it through SmartSystems™ to configure all of your computers. To learn more, see <a href="#">About Enterprise Settings on the Computer</a> on page 75.
	ISpyWiFi	Use ISpyWiFi to check your 802.11 network status and diagnose issues with the connection. To learn more, see <a href="#">Check Wi-Fi Network Status</a> on page 106

Icon	Application	Description
	Profile Settings	Use Profile Settings to easily configure the computer for a specific use. You can choose predefined values for the Camera, Power, and Scanning settings. To learn more, see <a href="#">About Enterprise Settings on the Computer</a> on page 75.
	ScanDiagnostic	Use the ScanDiagnostic application to troubleshoot problems with the internal or external scanner. To learn more, see <a href="#">Troubleshoot the Scanner with Scan Diagnostic</a> on page 109.
	Sensor Calibration	Use the Sensor Calibration application to demonstrate the accelerometer.
	SceneEditor	Use the SceneEditor application to modify predefined camera scenes or create new scenes. For more information, see <a href="#">Configure or Create Camera Scenes</a> on page 53.
	Wireless Center	Use the Wireless Center to turn the phone and radios (Wi-Fi, Bluetooth) on and off and configure settings for each radio.
	Wireless Printing	Use the Wireless Printing application to connect to a Bluetooth printer. For more information, see <a href="#">Connect to a Bluetooth Printer</a> on page 86.
	Wireless Scanning	Use the Wireless Scanning application to connect to a Bluetooth scanner. For more information, see <a href="#">Connect to a Bluetooth Scanner Using the Wireless Scanning Application</a> on page 84.

## Applications You Can Download to the Mobile Computer

You can download Honeywell applications to extend the capabilities of the computer. You may need to purchase a license to run some applications. To learn more about the applications described in this section and other Honeywell software solutions, go to [www.honeywellaidc.com](http://www.honeywellaidc.com) > **Browse Products** > **Software**.

### About Features Demo

Features Demo applications demonstrate scanning, document imaging, image capture, and printing functionality. Many of the applications that are part of Features Demo also have separate full-featured versions that you can download and license for your computer.

Features Demo suite can be downloaded at no charge from the Honeywell website. For more information, visit [www.honeywellaidc.com](http://www.honeywellaidc.com).

### About Honeywell Enterprise Browser

Enterprise Browser for Microsoft® Internet Explorer® is a locked-down enterprise Web client application designed for Honeywell computers. It provides a controlled Web application environment that helps enterprises increase productivity and reduce IT management expenses. You can configure Enterprise Browser for your

specific application requirements and design custom web applications that run through the Enterprise Browser to provide your users with an easy-to-use yet controlled experience.

Download a trial version of Enterprise Browser to use for evaluation. After the evaluation period expires, you need to purchase a license. For more information on Enterprise Browser, visit [www.honeywellaidc.com](http://www.honeywellaidc.com).

## About Honeywell HTML5 Browser

HTML5 Browser is an open platform HTML5 application environment for select Honeywell mobile computers. HTML5 Browser is free from licensing fees or licensing activation requirements and provides an easy way for developers to run cross-platform applications. Honeywell's HTML5 Browser supports applications designed to run on-line (connected to the web server), off-line (no connection to the web server) or a combination of the two. Data can be stored locally on the device until synchronization with the back-end server is available. HTML5 Browser includes a true web browser application that provides a URL bar, browsing history, favorites list and other elements common to typical web browsers.

HTML5 can be downloaded at no charge from the Honeywell website. For more information, visit [www.honeywellaidc.com](http://www.honeywellaidc.com).

## About Honeywell Launcher

Launcher is a configurable locked-down menu program designed for Honeywell computers that prevents end-users from accessing the start menu and other non-authorized applications. Use Launcher to provide a platform where your mobile computer users are limited to running only company-approved applications and prevent them from initiating unauthorized configuration changes. You can also use Honeywell Launcher together with Honeywell Enterprise Browser to create a single-purpose device configuration.

Download a trial version of Launcher to use for evaluation. After the evaluation period expires, you need to purchase a license. For more information on Launcher, visit [www.honeywellaidc.com](http://www.honeywellaidc.com).

## About Enterprise Terminal Emulator

Enterprise Terminal Emulator (TE) is a terminal emulation client designed for enterprise-level data collection. In a single client, Enterprise TE supports multiple emulation protocols. Its features include session persistence, remote management and configuration, and multiple security options. Enterprise TE provides a consistent user interface and a common menu structure (Enterprise Settings), simplifying the use and management of applications running on Honeywell mobile computers.

Download a trial version of Enterprise TE to use for evaluation. After the evaluation period expires, you need to purchase a license. For more information on Enterprise TE, visit [www.honeywellaidc.com](http://www.honeywellaidc.com).

## About Honeywell SmartSystems Foundation

SmartSystems™ is an easy-to-use centralized software platform. With SmartSystems, IT Administrators and Integrators can perform hands-free provisioning and deploy and manage Honeywell devices. SmartSystems provides a consistent way to manage devices located on-site or remotely to maximize IT resources and lower the total cost of ownership for data collection equipment.

SmartSystems Foundation can be downloaded at no charge from the Honeywell website. For more information, visit [www.honeywellaidc.com](http://www.honeywellaidc.com).





# USE THE PHONE

You can use the phone feature to make and receive telephone calls, as well as transmit data through wireless wide area networks (WWAN).

**Note:** Phone features are only supported on CN75 and CN75e WWAN models (CN75WAN).

## About the Phone

Phone features on the computer include a speaker and a microphone. You can also use a Bluetooth headset or hands-free kit.

On CN75 and CN75e WWAN models the phone feature is enabled by default and a flexible network radio provides the ability to connect to CDMA or UMTS networks in all regions that support these technologies. The flexible network radio is a software-defined radio (SDR) that can be configured for CDMA or UMTS depending on your wireless communication needs.

After you turn on the phone and activate service with your wireless carrier, you can customize the phone features and network settings in the Wireless & Networks section of the Settings app.

**Note:** The WWAN radio supports Network Information and Time Zone (NITZ) messages to automatically set the system time.

## How to Add and Switch Between Network Carriers

The SDR radio in CN75 and CN75e WWAN models makes it easy for you add carriers and switch between them as needed. When you enable automatic configuration of carrier settings through Enterprise Settings, you only need to select a different carrier to change networks.

If you plan to add a carrier, you should enable automatic configuration of carrier settings before you activate the phone for the new carrier. This feature is disabled by default.

## Enable Automatic Configuration of Carrier Settings

You should enable automatic configuration of carrier settings before you activate the phone for the new carrier.

**Note:** Phone features are only supported on CN75 and CN75e WWAN models (CN75WAN).

1. Tap **Start > Settings > System > Enterprise Settings**.
2. Tap **Communications > WWAN > Carrier Settings Auto Config**.
3. Select **Enabled** and tap **OK**.

## Switch Carriers

Use the Carrier Selection app to quickly change your WWAN radio network carrier.

**Note:** Phone features are only supported on CN75 and CN75e WWAN models (CN75WAN).

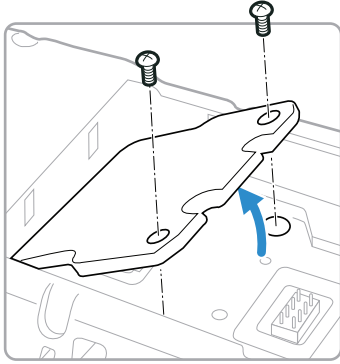
1. Tap **Start > Carrier Selection**.
2. Select a Carrier and tap **OK**. A dialog box appears asking if you want to switch carriers.
3. Tap **Yes** to switch carriers.
  - If the update is successful, the Carrier Selection screen appears and displays the updated carrier information.
  - If the update is unsuccessful, a message box appears. Tap **Ok** to return to the Carrier Selection screen.

## Activate the UMTS Phone

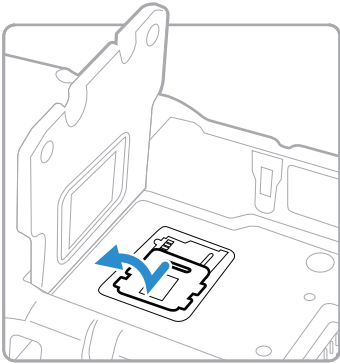
You use a SIM card to activate the UMTS phone on your CN75/CN75e WWAN model computer. You can purchase the SIM card from your network provider. A Phillips screwdriver is needed to install the SIM card.

1. Select a network carrier. For more information, see [How to Add and Switch Between Network Carriers](#) on page 45.
2. Press the **Power** button, and then select **Hibernate**.
3. Detach one end of the hand strap from the computer (see page 8).
4. Push the battery latch toward the bottom of the computer until the battery releases, and then lift the battery away from the computer.

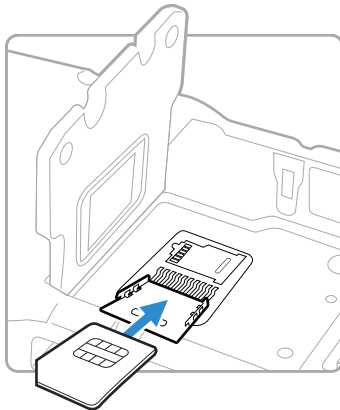
5. Remove the two Phillips screws and open the card access door.



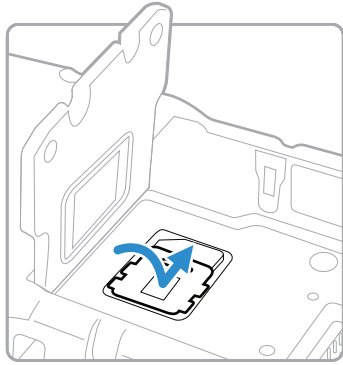
6. Slide the SIM card holder to the left and up.



7. Place the SIM card in the holder with the contacts facing away from the holder.



8. Close and latch the SIM card holder.



9. Close the card access door and install the two screws.
10. Insert the top end of a fully charged battery into the computer, and press down firmly on the bottom until the battery clicks into place. Make sure that the battery latch is fully engaged.
11. Attach the hand strap.
12. Press the Power button.

**Note:** AT&T network users, tap **Yes** if prompted to allow automatic connection selection for the SIM card. If you are using a custom APN, select **No**. You must manually configure the connection instead of using the automatic option. Connection charges may apply.

**Note:** Data connections are to the public domain on your network.

## Activate the CDMA Phone

To activate the CDMA radio module in your CN75/CN75e WWAN model computer, you need to contact your wireless carrier and set up an account.

You also need to provide the carrier with the Mobile Equipment Identifier (MEID) for the computer. You can find the MEID:

- on a label located in the battery compartment.
- on the outside of the computer shipping box.

**Note:** For the CDMA phone, settings are permanently stored in the WWAN radio after activation. CDMA settings persist through a cold reboot.

The activation process is slightly different for each CDMA carrier. Your carrier sales contact and or a Honeywell representative can guide you through the process.

1. Select a network carrier. For more information, see [How to Add and Switch Between Network Carriers](#) on page 45.
2. Contact your wireless provider and give the provider the MEID for the computer.

3. If your carrier is Sprint, reboot the computer. As soon as the Sprint network detects your phone, Hands-Free Activation (HFA) begins, and a series of notification messages appear. When activation is complete, a completion message appears and the WWAN radio reboots. The phone is ready to use.

If your carrier is Verizon, tap **Start > Phone**, enter **\*228** on the phone keypad, and press **Talk**. After a short wait, a message appears, confirming either success or failure of the activation. After successful activation, the phone is ready to use.

4. (Optional) If you plan to use the network for data connections (such as browsing the web), you should enable automatic configuration of carrier settings in Enterprise Settings.

**Note:** Data connections are to the public domain on your network.

## Make a Phone Call

After you activate your UMTS or CDMA phone, you are ready to start making phone calls.

**Note:** Phone features are only supported on CN75 and CN75e WWAN models (CN75WAN).


1. Press **Phone**.
2. Tap the keys to enter the telephone number you want to call, and then tap **Talk**.

## Make an Emergency Phone Call

You can use the phone to make an emergency phone call even if the SIM card is missing from your UMTS phone or if you do not have a valid CDMA account. The phone shows no service but the call still goes through if you dial certain emergency numbers (e.g., 112, 911, 000, 08, 118, 119, and 999).

## Configure Phone Sounds

You can customize the ringtone, keypad sounds, and voicemail notification sounds for the phone.

1. Tap **Start > Phone > Menu**  **> Options**.
2. Select options for the phone sounds:
  - Select a Ring tone from the list. To hear the selected ring tone, tap the **Play** button.
  - Select a Keypad sound from the list.
  - Enter the name of the sound you want to use for voicemail notifications in the Voicemail field.

3. Tap **OK**.

# USE THE CAMERA

Learn to use the color camera to take pictures and record videos, read bar codes, perform document capture, or perform signature capture.

## About the Color Camera

The camera lens and flash are located on the back of the computer. You run the Pictures & Videos application to access the camera features.

The camera and flash are located on the back of the computer. You can use the camera for several tasks, including:

- Taking pictures and videos
- Reading bar codes
- Signature capture
- Document imaging.

## How to Take Pictures and Record Videos

You use the Pictures & Videos application to use the camera for taking pictures or recording videos, and to configure the camera settings for still pictures and video.

**Note:** *While the Pictures & Videos camera application is running, you cannot use either the imager or the camera to read bar codes. If Windows Media Player is running when you start the Pictures & Videos camera application, Windows Media Player is automatically closed.*

In the Pictures & Videos application, you can:

- take, view, and edit pictures.
- switch between Still (camera) mode and Video mode.
- record and launch video clips stored on the computer or a microSD card.
- configure camera settings for taking pictures and videos.

**Note:** You must use Enterprise Settings to configure camera settings for reading bar codes, document imaging, or signature capture.

## Take a Picture

You run the Pictures & Videos application to use the camera for taking pictures. When you take a picture, the image is saved as a .jpg file and stored in the /My Documents/My Pictures folder.

1. Tap **Start > Pictures & Videos**.
2. Tap the **Camera** icon, or tap the **Camera** button on the Tile bar.
3. Using the screen as a viewfinder, move the computer until you see the image the screen you want to capture as a picture.
4. Press **Enter** to take and save the picture.
  - If you select to save pictures to the main memory, the pictures are saved to permanent storage on the computer.

## Record a Video

You run the Pictures & Videos application to use the camera for recording videos. Recorded video is stored in the /My Documents/My Pictures folder.

1. Tap **Start > Pictures & Videos**.
2. Tap the **Camera** icon in the grid or the **Camera** button on the Tile bar.
3. Tap **Menu > Video**.
4. Using the screen as a viewfinder, move the computer until you see the scene you want to record.
5. Press **Enter** to start recording.
6. When you are done, tap **Stop** or press **Enter** again to stop recording and save the video.
  - If you choose to save your videos to main memory, the videos are saved to permanent storage on the computer.

## Save Pictures and Videos to a microSD Card

By default, pictures and videos are saved to the /My Documents/My Pictures folder on the computer. You can save your pictures and video to a microSD card to easily transport them to another device.


1. Install a microSD card in the computer.
2. Tap **Start > Pictures & Videos**.
3. Tap the **Camera** icon.



4. Tap **Menu > Options**.
5. From the “Save file to” list, select **SD card** and tap **OK**.

## Configure or Create Camera Scenes

Camera scenes are sets of preset values for camera settings. You can select or create a scene to accommodate your specific needs.

1. Tap **Start > SceneEditor**.
2. Select a Scene to configure and then tap .
  - Or, to create a new scene, tap **New**.
3. Configure the necessary settings.
  - If you are creating a new scene, type a name in the Scene box.
4. Tap **Save**.
5. When you are prompted to save the settings, tap **Yes**.
  - The changes you made are saved.
6. Tap **OK** to close the message box.

## Scene Settings

When you use SceneEditor to create a scene for the camera, you can configure the these settings.

Setting	Description	Choices
Exposure Metering	Specifies the area of the image the camera uses to determine optimal exposure.	<ul style="list-style-type: none"> <li>• Whole screen avg: Uses the image as a whole.</li> <li>• Center weighted avg: Uses the entire image but places emphasis on the center quarter of the image.</li> <li>• Center 1/4 averaged (default): Uses the center quarter of the image.</li> <li>• Lower 1/4 averaged: Uses the lower quarter of the image.</li> <li>• Upper 1/4 averaged: Uses the upper quarter of the image.</li> <li>• Lower 1/2 averaged: Uses the lower half of the image.</li> <li>• Upper 1/2 averaged: Uses the upper half of the image.</li> </ul>
Exposure Compensation	Exposure level of the image.	Values are from -2.5 (darker, underexposed) to +2.5 (lighter, overexposed) in increments of 0.5. Default is 0.

Setting	Description	Choices
Focus	Determines the focus method.	<ul style="list-style-type: none"> <li>• Touch: Tap the screen to set the focal point.</li> <li>• Portrait: Uses a depth of field of 50 cm to the focal point.</li> <li>• Infinity: Uses a depth of field of greater than 4 m.</li> <li>• Extended: Uses a depth of field of 10 cm to infinity.</li> <li>• Macro: Uses a depth of field of 10 to 50 cm.</li> <li>• Auto: Focuses once within a depth of field range of 50 cm to infinity.</li> <li>• Continuous: Focuses when movement is detected in the scene.</li> <li>• Manual: You must enter a focus distance.</li> </ul>
Focus Distance	The distance at which the camera focuses.	Values are 2.5 in, 4.5 in, 7.5 in, 1-3 ft, 3-9 ft, and Infinity (focuses the lens so that an infinitely distant object is in focus).
Brightness	Brightness level of the image.	Manual settings are from -4 (very dark) to +4 (very light) in increments of 1. Default is 0.
Contrast	Amount of contrast in the image.	Manual settings are from -4 (least contrast) to +4 (most contrast) in increments of 1. Default is 0.
Sharpness	Sharpness of the image.	Manual settings are from -4 (very soft) to +4 (very sharp) in increments of 1. Default is 0.
Saturation	Color saturation level.	Manual settings are from -4 (black and white) to +4 (maximum color) in increments of 1. Default is 0.
White Balance	Compensates for specific lighting conditions to produce true color images.	<ul style="list-style-type: none"> <li>• Auto (default): Automatic White Balance (AWB) control.</li> <li>• Shade</li> <li>• Sunset</li> <li>• Face priority</li> <li>• Warm fluorescent</li> <li>• Twilight</li> <li>• Horizon</li> <li>• Incandescent</li> <li>• Office</li> <li>• Tungsten</li> <li>• Cloudy</li> <li>• Daylight</li> </ul>
Torch	Specifies LED behavior when streaming preview frames.	<ul style="list-style-type: none"> <li>• Off</li> <li>• On</li> <li>• Auto: Automatically controls LED on or off status when streaming preview frames.</li> </ul>

Setting	Description	Choices
Flash	Sets state of the camera flash when you take a picture.	<ul style="list-style-type: none"> <li>• Off</li> <li>• On</li> <li>• Auto</li> </ul>
Color Effects	Sets the color effect for pictures.	<ul style="list-style-type: none"> <li>• None</li> <li>• Negative</li> <li>• Solarize</li> <li>• Sepia</li> <li>• Gray</li> <li>• Natural</li> <li>• Vivid</li> <li>• Color Swap</li> <li>• Black Board</li> <li>• White Board</li> <li>• Aqua</li> <li>• Posterize</li> <li>• Black White</li> </ul>
ISO	Sets the equivalent ISO film speed.	<ul style="list-style-type: none"> <li>• Auto</li> <li>• 100</li> <li>• 200</li> <li>• 400</li> <li>• 800</li> </ul>
Noise Reduction		Controls the amount of noise or graininess in the image.

## Configure Camera Settings for Pictures and Videos

Use the Pictures & Videos application to configure the camera.

**Note:** You must use Enterprise Settings to configure camera settings for reading bar codes, document imaging, or signature capture.

1. Tap **Start > Pictures & Videos**.
2. Tap the **Camera** icon.
3. Tap **Menu**.
  - By default, all settings in the list apply to still pictures. To configure settings for taking videos, tap **Video** at the top of the list.
4. Select a setting to configure.

## About the Camera Settings for Pictures and Videos

You can configure camera settings to meet the needs of your operating environment. In the Pictures & Videos application, camera settings are available from the menu when the camera is operating. Certain settings are only available when taking either Video or Still pictures, but not for both.

**Note:** You must use Enterprise Settings to configure camera settings for reading bar codes, document imaging, or signature capture.

### Camera Settings (Still Pictures)

Setting	Description	Choices
Mode	Determines the camera operating mode.	<ul style="list-style-type: none"> <li>• Normal: Takes one picture.</li> <li>• Burst: Takes a series of five pictures. To change this value, in the Camera app tap Menu &gt; Options and enter a new value in the Burst Mode Num. of images field.</li> <li>• Timer: Waits 10 seconds before taking the picture. To change this value, in the Camera app tap Menu &gt; Options and enter a new value in the Timer mode Hold duration field.</li> </ul>
Zoom	Sets the amount of digital zoom.	<ul style="list-style-type: none"> <li>• 1.0x</li> <li>• 1.5x</li> <li>• 2.0x</li> <li>• 2.5x</li> <li>• 3.0x</li> <li>• 3.5x</li> <li>• 4.0x</li> <li>• 6.0x</li> <li>• 8.0x</li> <li>• Manual</li> </ul>
Scenes	Selects a Scene for the camera. Scenes are sets of preset values for the camera, optimized for different environments.	<ul style="list-style-type: none"> <li>• Auto</li> <li>• Manual</li> <li>• Van Interior</li> <li>• Office Store</li> <li>• Warehouse</li> <li>• Daylight</li> <li>• Night</li> <li>• Cloudy</li> <li>• Check</li> <li>• DocCap</li> </ul>

Setting	Description	Choices
Settings	Brightness	<ul style="list-style-type: none"> <li>• +100</li> <li>• +50</li> <li>• 0</li> <li>• Manual</li> </ul>
Settings	Contrast	<ul style="list-style-type: none"> <li>• +100</li> <li>• +50</li> <li>• 0</li> <li>• -50</li> <li>• -100</li> <li>• Manual</li> </ul>
Settings	Sharpness	<ul style="list-style-type: none"> <li>• +100</li> <li>• +50</li> <li>• 0</li> <li>• -50</li> <li>• -100</li> <li>• Manual</li> </ul>
Settings	Saturation	<ul style="list-style-type: none"> <li>• +100</li> <li>• +50</li> <li>• 0</li> <li>• -50</li> <li>• -100</li> <li>• Manual</li> </ul>
Settings	Color Effects	<ul style="list-style-type: none"> <li>• None</li> <li>• Negative</li> <li>• Solarize</li> <li>• Sepia</li> <li>• Gray</li> <li>• Natural</li> <li>• Vivid</li> <li>• Color Swap</li> <li>• Black Board</li> <li>• White Board</li> <li>• Aqua</li> <li>• Posterize</li> <li>• Black White</li> </ul>

Setting	Description	Choices
Settings	White Balance	<ul style="list-style-type: none"> <li>• Auto</li> <li>• DayLight</li> <li>• Cloudy</li> <li>• Shade</li> <li>• Tungsten</li> <li>• Fluorescent</li> <li>• Incandescent</li> <li>• Horizon</li> <li>• Twilight</li> <li>• Warm Fluorescent</li> <li>• Sunset</li> </ul>
Settings	Exposure Compensation	<ul style="list-style-type: none"> <li>• From +2.5 to -2.5 in .5 increments.</li> </ul>
Settings	ISO Speed	<ul style="list-style-type: none"> <li>• Auto</li> <li>• 100</li> <li>• 200</li> <li>• 400</li> <li>• 800</li> </ul>
Settings	Exposure - Auto Exposure	<ul style="list-style-type: none"> <li>• Auto Exposure:</li> <li>• Auto</li> <li>• Night</li> <li>• Spot Light</li> <li>• Sport</li> <li>• Snow</li> <li>• Beach</li> <li>• Aperture</li> <li>• Small Aperture</li> </ul>
Settings	Exposure - Manual Exposure	<ul style="list-style-type: none"> <li>• Manual Exposure:</li> <li>• 1/200</li> <li>• 1/100</li> <li>• 1/50</li> <li>• 1/33</li> <li>• 1/20</li> <li>• 1/8</li> </ul>

Setting	Description	Choices
Settings	Exposure - Metering	<ul style="list-style-type: none"> <li>• Metering:</li> <li>• Whole Average</li> <li>• Whole Center Weight</li> <li>• Center 1/4 Average</li> <li>• Lower 1/4 Average</li> <li>• Upper 1/4 Average</li> <li>• Lower 1/2 Average</li> <li>• Upper 1/2 Average</li> </ul>
Torch	Sets whether or not to use the lighting LED.	<ul style="list-style-type: none"> <li>• Off</li> <li>• On</li> <li>• Auto</li> </ul>
Flash	Sets when to use the flash.	<ul style="list-style-type: none"> <li>• Off</li> <li>• On</li> <li>• Auto</li> <li>• FillIn</li> <li>• RedEye</li> </ul>
Focus	Sets the focus mode for the camera when shooting video.	<ul style="list-style-type: none"> <li>• Auto (default)</li> <li>• Continuous</li> <li>• Touch</li> <li>• Macro</li> <li>• Potrait</li> <li>• Extended</li> <li>• Infinite</li> </ul>
Full Screen	When enabled, this setting hides the task bar. To view the task bar, double-tap the bottom of the screen.	
Options > Camera	Image filename prefix	Default is img.
Options > Camera	Location for saved still picture files	<ul style="list-style-type: none"> <li>• Main Memory (default)</li> <li>• Flash File Store</li> <li>• RAM Drive</li> </ul>
Options > Camera	Flicker	<p>To limit possible problems with light/dark exposures when recording video, select the value matching the fluorescent light flicker in the environment:</p> <ul style="list-style-type: none"> <li>• 50 Hz (typical in Europe)</li> <li>• 60 Hz (typical in North America)</li> </ul>

Setting	Description	Choices
Options > Camera	Resolution	<ul style="list-style-type: none"> <li>• 1936 x 2592 (5.0 mp)</li> <li>• 1536 x 2048 (3.2 mp)</li> <li>• 1200 x 1600 (2.0 mp)</li> <li>• 1072 x 1920 (2.2 mp)</li> <li>• 960 x 1280 (1.2 mp)</li> <li>• 720 x 1280 (0.9 mp)</li> <li>• 768 x 1024 (0.8 mp)</li> <li>• 592 x 800 (0.5 mp)</li> <li>• 480 x 800 (0.4 mp)</li> <li>• 480 x 640 (0.3 mp)</li> <li>• 288 x 352 (0.1 mp)</li> <li>• 240 x 320 (0.1 mp)</li> <li>• 144 x 176</li> <li>• 112 x 160</li> <li>• 96 x 128</li> </ul>
Options > Camera	JPEG quality	<ul style="list-style-type: none"> <li>• High quality</li> <li>• Normal quality (default)</li> <li>• Low quality</li> <li>• Custom quality. If you select Custom, enter a value in the Custom field.</li> </ul>
Options > Camera	Post processing	Enable or disable the noise filter.
Options > Camera	Burst mode number of pictures to take	Default is 5.
Options > Camera	Timer mode hold duration (in seconds)	Default is 5.
Options > Camera	Hold snapshot (seconds)	Amount of time that a snapshot remains in the viewfinder before the screen returns to showing preview frames.
Options > Camera	Variable frame rate	Enable variable frame rate to allow the camera to automatically adjust the frame rate for better exposure. This may result in slower preview start.

## Camera Settings (Video)

Setting	Description	Choices
Mode	Determines the camera operating mode.	<ul style="list-style-type: none"> <li>• Normal: Records video immediately.</li> <li>• Timer: Waits 10 seconds before starting video recording. To change this value, with the Camera app in Video mode, tap Menu &gt; Options and enter a new value in the Hold record field.</li> </ul>



Setting	Description	Choices
Zoom	Sets the amount of digital zoom.	<ul style="list-style-type: none"> <li>• 1.0x</li> <li>• 1.5x</li> <li>• 2.0x</li> <li>• 2.5x</li> <li>• 3.0x</li> <li>• 3.5x</li> <li>• 4.0x</li> <li>• 6.0x</li> <li>• 8.0x</li> <li>• Manual</li> </ul>
Scenes	Selects a Scene for the camera. Scenes are sets of preset values for the camera, optimized for different environments.	<ul style="list-style-type: none"> <li>• Auto</li> <li>• Manual</li> <li>• Van Interior</li> <li>• Office Store</li> <li>• Warehouse</li> <li>• Daylight</li> <li>• Night</li> <li>• Cloudy</li> <li>• Check</li> <li>• DocCap</li> </ul>
Settings	Brightness:	<ul style="list-style-type: none"> <li>• +100</li> <li>• +50</li> <li>• 0</li> <li>• Manual</li> </ul>
	Contrast	<ul style="list-style-type: none"> <li>• +100</li> <li>• +50</li> <li>• 0</li> <li>• -50</li> <li>• -100</li> <li>• Manual</li> </ul>
	Sharpness	<ul style="list-style-type: none"> <li>• +100</li> <li>• +50</li> <li>• 0</li> <li>• -50</li> <li>• -100</li> <li>• Manual</li> </ul>

Setting	Description	Choices
	Saturation	<ul style="list-style-type: none"> <li>• +100</li> <li>• +50</li> <li>• 0</li> <li>• -50</li> <li>• -100</li> <li>• Manual</li> </ul>
	Color Effects	<ul style="list-style-type: none"> <li>• None</li> <li>• Negative</li> <li>• Solarize</li> <li>• Sepia</li> <li>• Gray</li> <li>• Natural</li> <li>• Vivid</li> <li>• Color Swap</li> <li>• Black Board</li> <li>• White Board</li> <li>• Aqua</li> <li>• Posterize</li> <li>• Black White</li> </ul>
	White Balance	<ul style="list-style-type: none"> <li>• Auto</li> <li>• DayLight</li> <li>• Cloudy</li> <li>• Shade</li> <li>• Tungsten</li> <li>• Fluorescent</li> <li>• Incandescent</li> <li>• Horizon</li> <li>• Twilight</li> <li>• Warm Fluorescent</li> <li>• Sunset</li> </ul>
	Exposure Compensation	From +2.5 to -2.5 in .5 increments.
	ISO Speed	<ul style="list-style-type: none"> <li>• Auto</li> <li>• 100</li> <li>• 200</li> <li>• 400</li> <li>• 800</li> </ul>

Setting	Description	Choices
	Exposure - Auto Exposure	Auto Exposure: <ul style="list-style-type: none"> <li>• Auto</li> <li>• Night</li> <li>• Spot Light</li> <li>• Sport</li> <li>• Snow</li> <li>• Beach</li> <li>• Aperture</li> <li>• Small Aperture</li> </ul>
	Exposure - Manual Exposure	Manual Exposure: <ul style="list-style-type: none"> <li>• 1/200</li> <li>• 1/100</li> <li>• 1/50</li> <li>• 1/33</li> <li>• 1/20</li> <li>• 1/8</li> </ul>
	Exposure - Metering	Metering: <ul style="list-style-type: none"> <li>• Whole Average</li> <li>• Whole Center Weight</li> <li>• Center 1/4 Average</li> <li>• Lower 1/4 Average</li> <li>• Upper 1/4 Average</li> <li>• Lower 1/2 Average</li> <li>• Upper 1/2 Average</li> </ul>
Torch	Sets whether or not to use the lighting LED.	<ul style="list-style-type: none"> <li>• Off</li> <li>• On</li> <li>• Auto</li> </ul>
Full Screen	When enabled, this setting hides the task bar. To view the task bar, double-tap the bottom of the screen.	<ul style="list-style-type: none"> <li>•</li> </ul>
Options (Video tab)	Video filename prefix	Default is vid.
	Location for saved video files	<ul style="list-style-type: none"> <li>• Main Memory (default)</li> <li>• Flash File Store</li> <li>• RAM Drive</li> </ul>
	Include audio when encoding video files	<ul style="list-style-type: none"> <li>• Enable</li> <li>• Disable</li> </ul>

Setting	Description	Choices
	Video resolution	<ul style="list-style-type: none"> <li>720 x 1280 (720p) (Default)</li> <li>768 x 1024 (XGA)</li> <li>480 x 800 (WVGA)</li> <li>480 x 640 (VGA)</li> <li>288 x 352 (CIF)</li> <li>240 x 320 (QVGA)</li> </ul>
	Video encoder	<ul style="list-style-type: none"> <li>H263</li> <li>H264 (default)</li> <li>MPEG4</li> <li>WMV</li> </ul>
	Video file format	<ul style="list-style-type: none"> <li>*.3gp</li> <li>*mp4</li> </ul>
	Hold record	When Timer mode is enabled, this value is the delay in seconds before recording begins.
	Enable video stabilization	Check the box to enable video stabilization.
	Enable video noise filtering	Check the box to enable video noise filtering.
	Enable video noise filtering	Check the box to enable video noise filtering.
	Frame rate	<ul style="list-style-type: none"> <li>15 fps</li> <li>30 fps (default)</li> <li>Custom: Adjust the frame rate with the slider.</li> </ul>

## How to Read Bar Codes with the Camera

You can use the camera to read bar codes. When you read bar codes with the camera, the computer treats the camera as it would any input device, such as a Bluetooth scanner, and bar code data is sent to an application as if it came from a scanner or imager.

**Note:** To read bar codes using the camera, you must use Enterprise Settings to configure bar code symbology decode settings.

There are two ways to enable reading bar codes with the camera:

- You can use the Profile Settings application to enable bar code reading. The computer uses the current symbology decode settings to read bar code data.
- You can configure individual parameters in Enterprise Settings (Data Collection > Camera > Scanner Settings) to enable bar code reading.

**Note:** Parameters set in Data Collection > Internal Scanner > Scanner Settings are applied to the internal imager, not the camera.

## Enable or Disable Reading Bar Codes with the Camera

You use the Profile Settings application to enable or disable reading bar codes with the camera. Reading bar codes with the camera is disabled by default.

**Note:** You can also enable reading bar codes by setting parameters in Enterprise Settings.

1. Tap **Start > ProfileSettings**.
2. Tap **Camera**.
3. Tap **Enable bar code scan** or **Disable bar code scan**.
4. Tap **OK**.

## Read Bar Codes with the Camera

After you enable reading bar codes with the camera, the computer sends bar code data to applications as keyboard input.

**Note:** Before you use the camera to read bar codes, make sure the camera window is clean.

1. Start the application that is to receive the bar code data.
2. Position the computer about 20 cm (8 in) over the bar code you want to read. Make sure nothing is blocking the camera lens.
3. Press and hold the Scan button. The screen turns into a viewfinder with an aiming bar across the middle of the screen.
4. Center the aiming bar over the bar code. The bar code is read and the data appears in the active application.
  - If the computer does not read the bar code right away, release the Scan button and try again. You may need to move the computer closer to or further away from the bar code for best results. You may also need to select a different focus mode depending on your environment.

## Camera Settings for Reading Bar Codes

To use the camera for reading bar codes, you must use the Enterprise Settings application to configure the camera. From the main screen of **Enterprise Settings**, select **Data Collection > Camera > Camera Settings**.

### Optimized Imager Mode (Advanced) Settings and Descriptions

Setting	Description	Choices
Imager decode mode		<ul style="list-style-type: none"><li>• Linear imager emulation</li><li>• 2D imager</li></ul>
Lighting mode		<ul style="list-style-type: none"><li>• Illumination LED priority</li><li>• Aperture priority</li></ul>

Setting	Description	Choices
Lighting goal		Default is 30.
Illumination level		Default is 3.
Initial 1D search area		<ul style="list-style-type: none"> <li>Center</li> <li>Full</li> <li>Smart raster</li> </ul>
Damaged 1D codes		<ul style="list-style-type: none"> <li>Disable</li> <li>Enable</li> </ul>
Enable viewfinder		<ul style="list-style-type: none"> <li>Enable</li> <li>Disable</li> </ul>
Focus mode	Sets the focus mode for the camera when reading bar codes, document imaging, or capturing signatures.	<ul style="list-style-type: none"> <li>Manual</li> <li>Continuous autofocus</li> <li>Single shot autofocus</li> <li>Macro</li> <li>Extended (10 cm to infinity)</li> </ul>
Manual focus value	When Focus Mode is set to Manual, this value sets the manual focus level.	Default is 65. Set to 0 for infinity, or 255 for closeups.

## Viewfinder and Focus Settings and Descriptions

Setting	Description	Choices
Enable viewfinder		<ul style="list-style-type: none"> <li>Enable</li> <li>Disable</li> </ul>
Focus mode	Sets the focus mode for the camera when reading bar codes, document imaging, or capturing signatures.	<ul style="list-style-type: none"> <li>Manual</li> <li>Continuous autofocus</li> <li>Single shot autofocus</li> <li>Macro</li> <li>Extended (10 cm to infinity)</li> </ul>
Manual focus value	When Focus Mode is set to Manual, this value sets the manual focus level.	Default is 65. Set to 0 for infinity, or 255 for closeups.

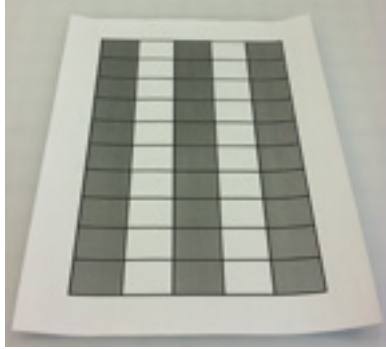
## Lighting Settings and Descriptions

Setting	Description	Choices
Torch	Sets whether or not to use the lighting LED.	<ul style="list-style-type: none"> <li>Off</li> <li>On</li> <li>Auto</li> </ul>

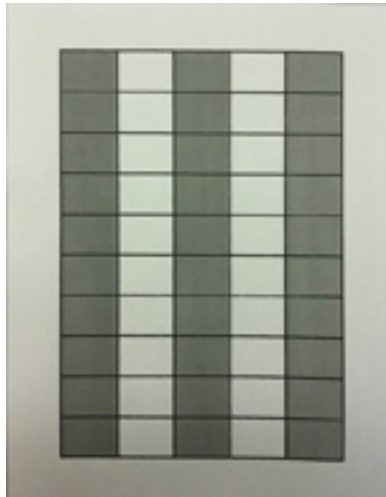
# How to Perform Document Capture with the Camera

You can use the camera to perform document capture. Document capture is a specialized feature for taking a picture of a document, and automatically applying perspective correction to the image so that only the document appears in the image.

## Document Capture Image with No Perspective Correction



## Document Capture Image with Perspective Correction



There are two ways to enable document imaging with the camera:

- You can use the Profile Settings application to enable document capture. The computer uses the current document capture settings to apply perspective correction (and other post-processing features if specified).
- You can configure individual parameters in Enterprise Settings to enable document capture.

**Note:** To perform document capture using the camera, you must use Enterprise Settings to configure all document capture settings.

# Enable or Disable Document Capture with the Camera

You use the Profile Settings application to enable or disable document capture with the camera. Performing document capture with the camera is disabled by default.

**Note:** You can also enable document capture by setting parameters in Enterprise Settings.

1. Tap **Start > ProfileSettings**.
2. Tap **Camera**.
3. Tap **Enable document image** to enable document capture.
  - To disable document capture, tap **Disable bar code scan**.
4. Tap **OK**.

# Perform Document Capture with the Camera

After you enable document capture with the camera, document capture images are saved to the MyDocuments\MDI directory on the computer by default.

1. Place your document on a flat surface.
2. Position the computer a few inches above the center of the document.
3. Press and hold the **Scan** button. The video preview and camera viewfinder frame appear.
  - When the viewfinder tries to detect the document edges, the viewfinder frame is red and pulses slightly.
4. Move the camera to align the document edges with the viewfinder. When the viewfinder detects the document edges, the viewfinder frame turns white and a red target appears. The camera tries to focus on the center of the document.
  - When the focus and distance are correct, the target turns white and the document image is captured.
5. To view the document capture image, you can browse to MyDocuments\MDI and tap the image file to view it.

# Settings for Document Imaging

To use the camera for document imaging, you must use the Enterprise Settings application to configure the camera. From the main screen of Enterprise Settings, select **Data Collection > Camera > Camera Settings > Document Imaging**.

Setting	Description	Choices
Enable document imaging	Enables or disables document imaging.	<ul style="list-style-type: none"><li>• Disable</li><li>• Enable without decode</li></ul>



Setting	Description	Choices
Focus check	Sets the acceptable focus level for document imaging.	<ul style="list-style-type: none"> <li>• Disable (no focus check)</li> <li>• Medium level</li> <li>• High level</li> </ul>
Image/area to capture ratio		Default is 30.
Output compression	Sets the image compression level.	<ul style="list-style-type: none"> <li>• Bitmap</li> <li>• JPEG</li> <li>• TIFFG4</li> </ul>
Output compression quality	Sets the output compression quality level.	Default is 60.
Perspective correction	Corrects the document image for perspective.	<ul style="list-style-type: none"> <li>• Enable (default)</li> <li>• Disable.</li> </ul>
Color conversion		<ul style="list-style-type: none"> <li>• None (default)</li> <li>• Monochrome</li> <li>• Enhanced monochrome (TIFF)</li> </ul>
Conversion threshold		<ul style="list-style-type: none"> <li>• Very dark (default)</li> <li>• Dark</li> <li>• Normal</li> <li>• Bright</li> <li>• Very bright</li> </ul>
Contrast enhancement		<ul style="list-style-type: none"> <li>• None (default)</li> <li>• Photo</li> <li>• Black on white</li> <li>• White on black</li> </ul>
Text enhancement		<ul style="list-style-type: none"> <li>• None</li> <li>• Low</li> <li>• Medium (default)</li> <li>• High</li> </ul>
Noise reduction	Sets the noise reduction level.	Default is 3.
Image rotation	Rotates the image counterclockwise by a set amount.	<ul style="list-style-type: none"> <li>• None (default)</li> <li>• 90 degrees</li> <li>• 180 degrees</li> <li>• 270 degrees</li> </ul>
Image lighting correction		Default is disabled.
Document file name	Name for the document image file.	Default is doc_\$(num).



CN75 and CN75e computers come equipped with an integrated Global Positioning System (GPS) receiver if the computer model has phone capability (WWAN radio). The GPS receiver can deliver standard National Marine Electronics Association (NMEA) data strings to GPS applications.

## About the Integrated GPS on Your Computer

Honeywell recommends that you use the GPS Intermediate Driver (GPSID) instead of directly accessing the GPS hardware. The GPSID is a Microsoft software component that interacts between applications and the GPS hardware.

As a Microsoft software component, the GPSID:

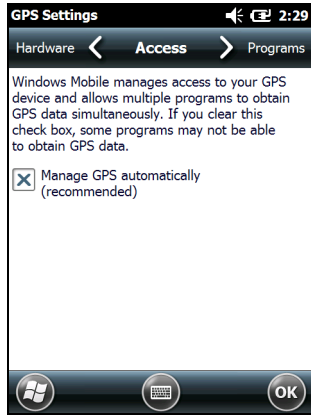
- allows multiple applications to simultaneously access the GPS data stream.
- provides access to GPS data without requiring applications to recognize and parse NMEA syntax.

## Use the GPSID Installed on the Computer

To use the GPSID installed on your mobile computer, you need to configure the GPSID settings.

1. Tap **Start > Settings > System > External GPS**.
  - The GPS Settings screen appears with **Programs** selected in the horizontal scroll bar at the top of the screen.
2. Select the COM port that you want your programs to use to get GPS data from your computer.
3. Tap **Access** on the horizontal scroll bar.

4. Select the Manage GPS automatically check box.



5. Tap OK.

## About the GPS Module Operating Modes

The integrated GPS module has three operating modes:

- Standalone
- MS Assisted (Mobile Station Assisted)
- gpsOneXTRA™ (UMTS computers only)

In Standalone mode, the GPS module relies solely on GPS satellites to determine position.

**Note:** *The CN75 and CN75e models with phone capability (WWAN radio) also support GLONASS.*

In MS Assisted mode, the computer can determine position without receiving GPS signals directly from satellites; instead, the computer receives GPS signals and information provided by the cellular network. Even when the computer can receive a satellite signal, MS Assisted can improve position accuracy and reduce the time to determine initial position (Time-To-First-Fix). Check with your cell phone carrier for availability and pricing for MS Assisted service.

Qualcomm's gpsOneXTRA Assistance technology provides enhanced operation for Standalone GPS. This option enables the UMTS-enabled computer to automatically download a small assistance data file from the XTRA servers through a brief internet access session. To use this option, you must have a valid and activated WWAN data connection.

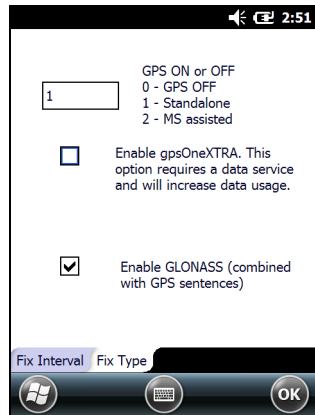
**Note:** *Internet connection fees may apply.*

Another option you can configure with iGPS is the fix interval. The fix interval defines how often the GPS should provide new information. Larger intervals use less power, but many applications require small intervals to work correctly. The Flexible Network Radio has a maximum interval of 4.

# Improve GPS Performance on the Computer

Use the iGPS application to improve the performance of the GPS on your computer. Any time you change the GPS settings, the phone automatically resets.

1. Go to **Start > Settings > System > iGPS**.
2. In the Fix Interval tab, enter a value for the fix interval.
  - The default setting is 4 and should be optimized for most applications.
3. Tap the **Fix Type** tab.
4. Select one of these options: **Standalone (1)**, **MS assisted (2)**, or **Enable gpsOneXTRA (check box)**.



5. Tap **OK**.

**Note:** Honeywell recommends that you enable GLONASS for better accuracy. To enable GLONASS, make sure the Enable GLONASS box is selected.



# CONFIGURE THE COMPUTER

Use this chapter to learn about the available methods for configuring your mobile computer and how to use Enterprise Settings. You can also use this chapter to learn how to configure network communications and wireless security.

## How to Configure the Computer

You can configure many parameters on the computer such as the bar code symbologies it decodes or the network settings. The values you set for these parameters determine how the computer operates.

There are several ways to configure the computer:

- Directly on the computer. You can use Enterprise Settings directly on the computer to change only the settings on that computer.
- Remotely using Honeywell SmartSystems™. With SmartSystems, you can remotely configure all of your mobile computers as well as other SmartSystems-enabled Honeywell devices and peripherals.
- Using a third-party device management product that supports the computer and Enterprise Settings, such as Soti MobiControl or Wavelink Avalanche.
- Using configuration bundles that you create with SmartSystems.

## About Enterprise Settings on the Computer

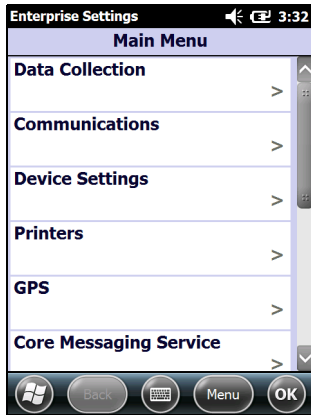
Use Enterprise Settings to configure parameters for Honeywell applications on the computer as well as some device-specific parameters like volume. You can configure parameters for important functions like data collection and communications. You can also password protect Enterprise Settings to prevent users from making changes to the configuration settings.

# Start Enterprise Settings

**Note:** After a reboot, to ensure all background tasks complete the initial setup, wait approximately 2 minutes once the home screen appears before starting the Enterprise Setting application.

Enterprise Settings is located on the System screen.

- Tap **Start > Settings > System > Enterprise Settings**. The Enterprise Settings Main Menu appears.



## About the Structure of Enterprise Settings

Use the following tables to help find the parameters in Enterprise Settings that you want to configure. Each table contains the parameters for one of the Enterprise Settings Main Menu options.

Most parameters are saved as soon as you tap OK. Some settings, such as Security Choice, require you to reboot the computer for the changes to take effect.

Data Collection Menu Item	Parameter You Can Configure
Internal Scanner	<ul style="list-style-type: none"><li>• Enable Scanner Port</li><li>• Symbologies</li><li>• Symbology Options</li><li>• Scanner Settings</li><li>• Imager Settings</li><li>• Decode Security</li></ul>
Tethered Scanner	<ul style="list-style-type: none"><li>• Tethered-Configure on Connect</li><li>• Dock Tethered Scanner</li></ul>



<b>Data Collection Menu Item</b>	<b>Parameter You Can Configure</b>
Bluetooth Scanners	BT-Configure on Connect  When a scanner is connected to the computer using Bluetooth technology, you can also configure: <ul style="list-style-type: none"> <li>• Enable Scanner Port</li> <li>• Symbologies</li> <li>• Symbology Options</li> <li>• Scanner Settings</li> <li>• Bluetooth Scanner Settings</li> <li>• Imager Settings</li> <li>• Decode Security</li> </ul>
Camera	<ul style="list-style-type: none"> <li>• Enable Camera Port</li> <li>• Symbologies</li> <li>• Symbology Options</li> <li>• Scanner Settings</li> <li>• Camera Settings</li> <li>• Decode Security</li> </ul>
Magstripe Reader (MSR)	<ul style="list-style-type: none"> <li>• Enable Magstripe Reader</li> <li>• Magstripe Reader Settings</li> </ul>

<b>Communications Menu Item</b>	<b>Parameter You Can Configure</b>
Device Name	Device Name
802.11 Radio	<ul style="list-style-type: none"> <li>• Radio Enabled</li> <li>• Security Choice</li> <li>• Security Settings (Funk, Microsoft or Reliable Access Client)</li> <li>• IP Settings</li> <li>• Certificates</li> <li>• Radio Bands</li> <li>• Allow Security Changes</li> </ul>
Ethernet Adapter	IP Settings
Bluetooth	Bluetooth Settings
WWAN	<ul style="list-style-type: none"> <li>• Radio State</li> <li>• Carrier Choice</li> <li>• Carrier Settings</li> <li>• Information</li> </ul>
Serial Port Switch	<ul style="list-style-type: none"> <li>• Standard docking</li> <li>• COM5 docking</li> </ul>

Device Settings Menu Item	Parameter You Can Configure
Backlight	Display and Keypad Backlight Settings
Date and Time	Date and Time Settings
Features Disabled by Policy	(Read-only) Lists systems disabled by policy.
Good Read	<ul style="list-style-type: none"> <li>• Internal Scanner</li> <li>• Bluetooth Scanner</li> </ul>
Heater (CK75 cold storage models only.)	Set heater parameters in cold storage CK75 models. <ul style="list-style-type: none"> <li>• Temperature monitoring</li> <li>• In freezer heater activation</li> <li>• Heater enabled temperature</li> <li>• Heater enabled delay (minutes)</li> <li>• Exit freezer temperature change trigger</li> <li>• Exit freezer heater on duration</li> <li>• Pre-heat enabled delay (minutes)</li> <li>• Pre-heat power level (%)</li> <li>• Scanner heater cycle time (seconds)</li> <li>• Screen heater cycle time (seconds)</li> <li>• Heater off at battery level (%)</li> </ul>
IDL Runtime Versions	(Read-only) IDL runtime file versions (ITC50, ITCScan)
Keypad	<ul style="list-style-type: none"> <li>• Button Remapping</li> <li>• Green/Orange keys lock option</li> </ul>
Language	Enable or disable saving the current language when updating the OS.
Power Management	<ul style="list-style-type: none"> <li>• Power Button</li> <li>• Battery Power</li> <li>• External Power</li> <li>• Device Off Sensor</li> </ul>
Profile Settings Application	Sets whether these parameter options appear in Profile Settings: <ul style="list-style-type: none"> <li>• Camera</li> <li>• Power</li> <li>• Scanning</li> </ul>
Screen	<ul style="list-style-type: none"> <li>• Screen Rotation</li> <li>• Screen Rotation Sensor</li> </ul>
Security	Enable or disable security protocol for: <ul style="list-style-type: none"> <li>• ActiveSync</li> <li>• SD Card</li> <li>• USB External Drive</li> <li>• All Image Capture</li> <li>• URL Barcode to Launch Browser</li> </ul>

Device Settings Menu Item	Parameter You Can Configure
Sounds	<ul style="list-style-type: none"> <li>Beeper and Voice</li> <li>Good Read Vibrate Intensity</li> <li>Headset Beeper</li> <li>Screen Taps</li> <li>Key Clicks</li> </ul>
System Component Versions	(Read-only) System component versions
USB	USB function driver
PrintPad	Enable or Disable

Printers Menu Item	Parameter You Can Configure
Printer	<ul style="list-style-type: none"> <li>Connect Printer and Refresh Set printer settings when printer is connected through Bluetooth technology.</li> <li>(Read Only) Information (printer configuration version)</li> </ul>

**Note:** The Printers menu displays settings for Bluetooth connected printers. The settings that appear in the menu are dependent on the printer that is paired with the device. The printer needs to be using the Wireless Printing application.

GPS Menu Item	Parameter You Can Configure
Bread Crumbing	Disable or Enable bread crumbing.
Fix Interval	Set Fixed Interval (seconds).
GPS On or Off	<ul style="list-style-type: none"> <li>GPS Off</li> <li>Standalone</li> <li>MS assisted</li> </ul>
gpsOneXTRA	Disable or Enable gpsOneXTRA.
GLONASS	Disable or Enable GLONASS.
WAAS	Disable or Enable WAAS.

**Note:** GPS feature is only available on computer models that have phone capability (WWAN radio).

Core Messaging Service Menu Item	Parameter You Can Configure
Server IP	Read-only
Associated Server IP	Associated Server IP
Broadcast Name	Broadcast name
Port	Read-only
Keep Alive Ping Interval	Keep Alive Ping Interval

<b>Smartsystems Information Menu Item</b>	<b>Parameter You Can Configure</b>
Identity	(Read-only) Identity Information (e.g., hardware version, firmware version, OS version)
Administrator	Administrator Settings (i.e., name, phone, and email)
Location	Location Settings (i.e., country, state, city, campus, and detail)
Information	(Read-only) Device Notes

<b>Device Monitor Menu Item</b>	<b>Parameter You Can Configure</b>
Device Health Controls	<ul style="list-style-type: none"> <li>• Enable Health Data Collection</li> <li>• Enable Device Health Application</li> <li>• Enable Blue Light (LED)</li> <li>• Set Rule File Location</li> <li>• Collect Abuse History</li> <li>• Set Data Refresh Periods</li> </ul>
Device Health Screen Captures	<ul style="list-style-type: none"> <li>• Directory</li> <li>• Screen Captures Allowed (number)</li> </ul>
Disabled Executables	Read-only information
Device Wipe	<ul style="list-style-type: none"> <li>• Enable Wipe</li> <li>• Interval (in days)</li> </ul>

<b>License Manager Menu Item</b>	<b>Parameter You Can Configure</b>
About	Read-only
License Vault	Read-only

<b>Virtual Wedge Menu Item</b>	<b>Parameter You Can Configure</b>
Enable Virtual Wedge	Enable Virtual Wedge
Virtual Wedge Method	Virtual Wedge Method (i.e., Adapt to application, Character mode, or Block mode)
Barcode Scanner Wedge	<ul style="list-style-type: none"> <li>• Barcode Scanner Grid</li> <li>• Label Encoding (Code Page)</li> </ul>
Magstripe Reader Wedge	Magstripe Reader Grid

<b>Location Services Menu Item</b>	<b>Parameter You Can Configure</b>
Server	<ul style="list-style-type: none"> <li>• Port</li> <li>• Enable Server (Enable or Disable)</li> </ul>

Location Services Menu Item	Parameter You Can Configure
Virtual GPS	Virtual GPS settings available if Server is set to Enable. <ul style="list-style-type: none"> <li>• Enable or Disable Output</li> <li>• COM Port</li> </ul>

## How to Navigate in Enterprise Settings

You can easily navigate through the screens in Enterprise Settings to find the parameters you need to configure. Three dots (...) or an arrow (>) next to a menu item indicates one or more configuration screens are available.

- Tap a menu item to access settings.
- Tap inside a text field to enable text entry.
- Tap a field (radio button or box) to toggle a selection on or off.
- Use the up and down arrow keys to move up and down the menu.
- To move back a level in the menu, tap **Back** or **Cancel** on the Tile bar.
- To exit Enterprise Settings, tap **Menu > Exit** or **OK**.

## Enable Enterprise Settings Password

You can protect Enterprise Settings from other users by enabling a password.

1. Start **Enterprise Settings**.
2. Tap **Menu > Enter Password**.
3. Select the **Enable password** check box.
4. Type your password in the **Enter:** text box.
5. Retype your password in the **Confirm:** text box.
6. (Optional) Select the **Use password to protect CAB Installation** if you want to restrict the installation of .cab files.
7. Tap **OK**.

## How to Restore Enterprise Setting Defaults

You can restore all default Enterprise settings on your computer or restore default settings for only a specific menu item in Enterprise Settings.

**Note:** *When you restore default settings, only the settings for visible menu items are restored. The settings for hidden menu items are not affected.*

## Restore Default Settings to a Single Menu

You can restore default settings for a specific menu item in Enterprise Settings.

1. Start **Enterprise Settings**.
2. Navigate to the menu that you want to restore to defaults.
3. Tap **Menu > Restore Menu Defaults**.
4. When prompted, tap **Yes** to restore the menu default settings.
5. If prompted to refresh the computer, tap **Yes**.

## Restore Default Settings to All Parameters

You can restore all Enterprise Settings parameters to their default settings.

1. Start Enterprise Settings.
2. Tap **Menu > Restore All Defaults**. The application asks if you are sure you want to restore all defaults.
3. When prompted, tap **Yes** to restore all default settings.  
After several minutes, all of the default settings are restored.
4. If prompted to refresh the computer, tap **Yes**.

## How to Hide Menu Items in Enterprise Settings

You can hide items in the Enterprise Settings menus if you do not want to have them available for other users to access. Hidden items are not saved when you back up your settings in the SmartSystems console.

**Note:** *When you restore default settings in Enterprise Settings, only the settings for visible items are restored to defaults. The settings for hidden menu items are not affected.*

### Hide Menu Item

1. Start **Enterprise Settings**.
2. Tap and hold the item you want to hide.
3. Select **Hide Menu Item** from the popup list.
4. Tap **Yes** to confirm.

### Restore All Hidden Menu Items

1. Start **Enterprise Settings**.
2. Tap **Menu > Unhide All Items**.

# Configure the Computer Remotely with SmartSystems

You can use Enterprise Settings from a SmartSystems console to remotely configure all the Honeywell computers. For help using Enterprise Settings, click **Help > Contents** in the SmartSystems console.

For more information about SmartSystems, see [Manage the Computer Using SmartSystems](#) on page 98.

1. In the SmartSystems console, select a mobile computer and right-click.
2. Select **Start Enterprise Settings**.
3. Configure the settings you want to change. As you select parameters, help for each parameter appears in the upper right pane.
4. When you are done making changes, select **File > Save Settings**.

## About Network Communications

You can easily add the mobile computer to your wireless or wired data collection network. You can connect your computer using:

- 802.11a/b/g/n radio communications.
- Ethernet communications.
- Bluetooth communications.
- USB and serial communications.

## Configure 802.11 Radio Communications

The mobile computer contains an 802.11a/b/g/n radio to transfer data using wireless communications. Before you configure radio communications, you need to have your wireless network set up including your access points.

By default, the 802.11 radio is disabled. Use the following procedure to enable the Wi-Fi radio using Enterprise Settings.

1. Tap **Start > Settings > System > Enterprise Settings**.
2. Tap **Communications > 802.11 Radio > Radio Enabled**.
3. Select the Radio Enabled check box and tap **OK**.

By default, the computer uses Funk security and enables DHCP.

4. (Optional) To enable both the 2.4 GHz and 5.0 GHz bands for the 802.11a/b/g/n radio, from the Enterprise Settings 802.11 Radio menu, tap **Radio Bands** and select a/b/g (2.4 and 5.0 GHz).
5. Use Enterprise Settings to configure any other parameters you need to use for communication with your network.

6. Configure 802.11 security. For help, see [About Wireless Security](#) on page 87.
7. Tap **OK** to exit Enterprise Settings.

## About Bluetooth Communications

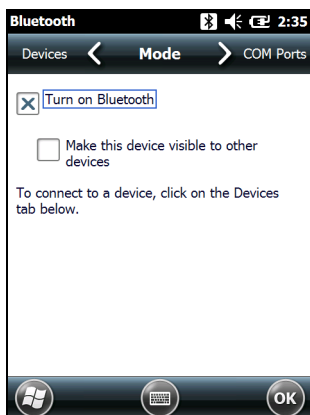
Your mobile computer is equipped to communicate with other devices using Bluetooth technology. You need to turn on the Bluetooth radio before you can discover and connect to other Bluetooth devices. By default, the radio is turned off. System bar icons indicate Bluetooth status.

**Note:** *The Bluetooth radio maintains its current state through a warm or cold boot and maintains virtual COM ports. If you clean boot the computer, you must recreate pairings to devices.*

### Turn On the Bluetooth Radio

You need to turn on the Bluetooth radio in the mobile computer before you can discover and connect to Bluetooth devices. By default the radio is turned off.

1. Tap **Start > Settings > Bluetooth**.
2. Tap **Mode** on the horizontal scroll bar.
3. Select the **Turn on Bluetooth**.



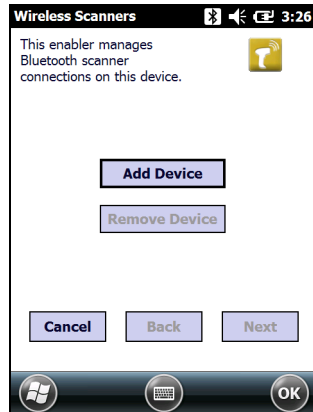
4. (Optional) If you want your computer to be visible to other Bluetooth devices, select **Make this device visible to other devices**.
5. Tap **OK**.

### Connect to a Bluetooth Scanner Using the Wireless Scanning Application

You can connect the computer to a Honeywell Bluetooth scanner, such as the Granit™ 1981i and 1911i using the Wireless Scanning application. Make sure that the Bluetooth radio in the computer is turned on before you try to connect to a scanner.



1. Tap Start > Settings > System > Wireless Scanning.
2. Tap Add Device.



3. Select **Quick Connect**, **Search**, or **Manual**. Follow the instructions on the screen to add a Bluetooth scanner.

After you add a Bluetooth scanner, you can configure scanner settings and parameters in Enterprise Settings.

## Connect to a Bluetooth Scanner with EasySet

You can connect a Bluetooth scanner to the computer, by scanning a configuration bar code created with the Honeywell EasySet software utility. Make sure that the Bluetooth radio in the computer is turned on before you try to connect to a scanner.

**Note:** To create the configuration bar code, you need the computer Bluetooth address. To be able to see the Bluetooth MAC address, the Bluetooth radio has to be enabled. Once the radio is enabled, open **Enterprise Settings > Communications > Bluetooth**. Scroll down to “Device Address” to find the Bluetooth MAC address.

1. Go to [www.honeywellaidc.com](http://www.honeywellaidc.com).
2. Select **Get Resources > Software**.
3. Click on the **Technical Support Downloads Portal** link, <https://hsmftp.honeywell.com>.
4. Create an account if you have not already created one. You must log in to download the software.
5. Install the Honeywell Download Manager tool on your PC prior to trying to download any files.
6. Locate EasySet in the Software directory (Barcode Scanners > Software > Tools and Utilities).
7. Select **Download**. Follow the prompts to download the application.
8. Open EasySet and select **Interface > Bluetooth > Connect/disconnect > Compose BT address**.

9. Enter the BT address of the computer.
10. Click **OK**.
11. Scan the bar code.

## Connect to a Bluetooth Printer

You can connect your 75 Series computer to a Honeywell Bluetooth-enabled printer, such as the PB21, PB50, or PR3 for wireless printing.

Honeywell offers two resource kits to assist with app development that supports wireless printing: Printing Resource Kit and Bluetooth Resource Kit.

You can use the API provided with the Printing Resource Kit for printing to printers with ESC/P printer language support. The Printing Resource Kit provides the following methods to connect to a wireless printer enabled for Bluetooth communication:

- Pair and connect the printer to the computer by specifying the Bluetooth MAC address of the printer.
- Pair the printer with the computer using the Wireless Printing app, and then specify a virtual COM port (COM6) to connect the printer.

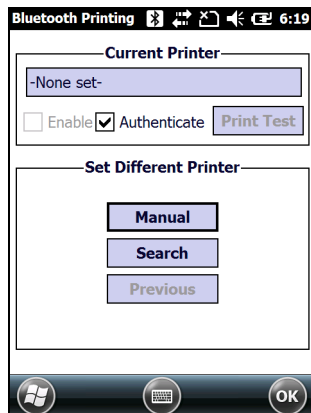
If the application needs to communicate with a Bluetooth printer not supported by the Printing Resource Kit, it may pair with the printer using the Bluetooth Resource Kit or the Wireless Printing app, and handle the printer protocol itself.

**Note:** To learn how to download resource kits for app development, see [How to Develop and Install Applications](#) on page 98.

## How to Use the Wireless Printer App to Pair the Printer and Computer

**Note:** Make sure that the Bluetooth radio in the mobile computer is turned on before you try to connect to the printer.

1. Tap **Start > Settings > System > Wireless Printing**.



2. Tap **Search** to find a printer, or tap **Manual** to enter a device address.

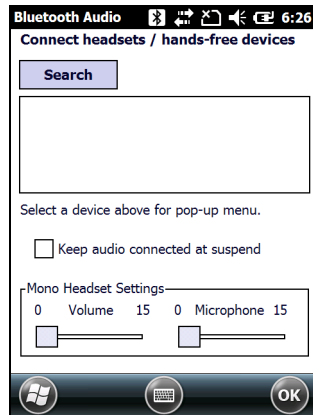
3. Follow the onscreen instructions to select the current wireless printer.
4. (Optional) Tap **Print Test Page**. The printer prints out a test page.

## Connect to a Bluetooth Audio Device

Use the Bluetooth Audio applet to discover, activate, and connect to Bluetooth audio devices such as a headset.

**Note:** *If a wired audio device such as a headset is already connected to the computer, Bluetooth audio receives priority when a Bluetooth audio device is connected.*

1. Tap **Start > Settings > System > Bluetooth Audio**.



2. Tap **Search** to find your Bluetooth headset or hands-free device.
3. Select your device from the list and configure any settings.
4. Click **OK** when you are done.

## About Serial and USB Communications

You can use these 75 Series accessories to transmit data to and receive data from another device through serial or USB communications:

- RS-232 Snap-On Adapter (Model 1000AA03)
- USB Snap-On Adapter (Model 1000AA07)

For information on these accessories, contact your local sales representative.

## About Wireless Security

The computer provides these security solutions for your wireless network:

- Wi-Fi Protected Access 2 (WPA2™)
- Wi-Fi Protected Access (WPA)
- 802.1x

- LEAP (Funk security only)
- WEP

You use either Funk, Microsoft or Reliable Access Client (RAC) security to implement your wireless security solution. Honeywell recommends using RAC security.

Before you set security, you need to enable the radio, set the date, and set the SSID on your computer. To use 802.1x security, you need to load a root certificate on your computer. To use transport layer security (TLS) with 802.1x security, you also need to load a user certificate.

## Load a Certificate

To use transport layer security (TLS) with 802.1x security, you need a unique client certificate on the computer and a trusted root certificate authority (CA) certificate.

1. Tap **Start > Settings > System > Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Certificates**.
3. Tap **Import Certificates**.
4. To import a certificate chain:
  - a. Tap the **Import PFX** tab.
  - b. Next to the **Select pfx to import** field, tap <<<.
  - c. Find and select the root certificate.
  - d. If required, enter the Password of pfx.
  - e. Tap **Import Certificate**.
5. To import user and root certificates from a Microsoft IAS server:
  - a. Tap **Web Enrollment**.
  - b. To log on to the server, enter the **User**, **Password**, and **Server** (IP Address).
  - c. Tap **OK**.
  - d. When you are prompted to load the root certificate, tap **OK**.
  - e. When the message box appears to let you know the certificate has been added, tap **OK**.

## How to Make Your Security Choice

The computer supports Funk security, Microsoft® security and Reliable Access Client (RAC) security. The option you choose depends on your network security needs. Honeywell recommends using RAC security.

- Choose Funk security if you use the computer in a static environment that requires a high level of security. Funk security provides CCX v4 compliance, support for LEAP and TTLS, and configuration for up to four profiles. Funk security is the default security setting on the computer.

- Choose Microsoft security if you primarily use the computer to connect to Wi-Fi hotspots.
- (Recommended) Choose Reliable Access Client (RAC) security if you need to connect to different WLAN networks without user intervention, similar to MS ZeroConfig. Using the Funk Security client only allows one WLAN network setup of four definitions being active, whereas RAC will switch between defined WLAN networks automatically (more than 10 possible profiles). RAC supports SHA-2 (Secure Hash Algorithm 2) encryption, which provides robust encryption and authentication mechanisms (112-bit security). RAC also supports FIPS 140-2. To learn how to configure and use RAC security, see the *Reliable Access Client (RAC) User Guide*, available for download from [www.honeywellaidc.com](http://www.honeywellaidc.com).

1. Tap **Start > Settings > System > Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Security Choice**.
3. Select **Microsoft Security, Funk Security or Reliable Access Client**.
4. Tap **Yes** to save your settings and reboot the computer.

The computer reboots and starts with the selected Security Choice.

## Select a Funk Security Profile

You can define up to four profiles for Funk security. Different profiles let your computer communicate in different networks without having to change all of your security settings. For example, you may want to set up one profile for the manufacturing floor and one for the warehouse.

By default, the active profile is Profile 1.

1. Tap **Start > Settings > System > Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Funk Security**.
3. Tap a profile to expand it.
4. (Optional) In the Profile Label text box, enter a meaningful name for your profile.
5. Configure your security settings. For help, see the next sections.
6. Select **OK** to save the profile settings.
7. Repeat Steps 3 through 6 for each profile you want to define.
8. To set the active profile, tap **Active Profile**, select a profile from the list, and then tap **OK**.
9. Tap **OK** to save your and exit Enterprise Settings.

## Configure WPA or WPA2 Enterprise (802.1x) Security with Funk Security

Before you set WPA-802.1x or WPA2-802.1x security with Funk security, you need to configure your authentication server and authenticators. To use TLS protocol, you also need to load a user and root certificate. On your computer, you need to enable the radio and set the date.

1. Start **Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Funk Security**.
3. Select a Funk security profile to configure.
4. Enter the SSID.
5. For Association, select **WPA** or **WPA2**.

The default encryption is TKIP for WPA or AES for WPA2.

6. For 8021x, select **PEAP**, **TLS**, **TTLS** or **EAP-FAST**.
7. If you selected TTLS, EAP-FAST, or PEAP:
  - a. For Prompt for Credentials, select **Enter credentials now**.
  - b. Enter a User Name and User Password.
8. If you selected TLS, enter a User Name and Subject Name.
9. Select **Yes** for Validate Server Certificate.
10. Tap **OK**.

## Configure WPA or WPA2 Personal (PSK) Security with Funk Security

Before you set WPA or WPA2 Personal (PSK) security with Funk Security, you need to know the pre-shared key for your access point or passphrase for your authenticator. On your computer, you need to enable the radio and set the date.

1. Start **Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Funk Security**.
3. Select a Funk security profile to configure.
4. Enter the SSID.
5. For Association, select **WPA** or **WPA2**.

The default encryption is TKIP for WPA or AES for WPA2.

6. For 8021x, select **None**.
7. For Pre-Shared Key, enter the pre-shared key or passphrase.
  - Enter the pre-shared key (0x followed by 32 hexadecimal pairs) for your access point.
  - Enter the passphrase (8 to 63 ASCII characters) for your authenticator. The computer internally converts the passphrase to a pre-shared key.
8. Tap **OK**.

## Configure 802.1x Security with Funk Security

Before you set 802.1x-WEP security with Funk security, you need to enable the radio on your computer and set the date. To use TLS protocol, you also need to load a user and root certificate. Honeywell recommends that you use WPA2-802.1x instead of 802.1x-WEP if possible.

1. Start **Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Funk Security**.
3. Select a Funk security profile to configure.
4. Enter the SSID.
5. For Association, select **Open**.
6. For Encryption, select WEP.
7. For 8021x, select TTLS, PEAP, or TLS.
8. If you selected TTLS or PEAP:
  - a. For Prompt for Credentials, select **Enter credentials now**.
  - b. Enter a User Name and User Password.
9. If you selected TLS, enter a User Name and Subject Name.
10. Select **Yes** for Validate Server Certificate.
11. Tap **OK**.

## Configure LEAP Security with Funk Security

Before you set LEAP security with Funk Security, you need to enable the radio and set the date on your computer.

1. Start **Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Funk Security**.
3. Select a Funk security profile to configure.
4. Enter the SSID.
5. For Association, select Open, WPA, WPA2, or Network EAP.

The default encryption is TKIP for WPA, AES for WPA2, and WEP for Open or Network EAP.
6. For 8021x, select LEAP.
7. For Prompt for Credentials, select **Enter credentials now**.
8. Enter a User Name and User Password.
9. Tap **OK**.

## Configure Static WEP Security with Funk Security

Before you set static WEP security with Funk security, you need to enable the radio on your computer and set the date. Honeywell recommends that you use WPA2-PSK instead of WEP if possible.

1. Start **Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Funk Security**.
3. Select a Funk security profile to configure.
4. Enter the SSID.
5. For Association, select **Open**.
6. For Encryption, select **WEP**.
7. For 8021x, select **None**.
8. Enter an ASCII key or hex key value for each key you want to use (Key 1 through Key 4):
  - For 64-bit WEP, enter a 5-byte value: 5 ASCII characters or 0x followed by 5 hexadecimal pairs.
  - For 128-bit WEP, enter a 13-byte value: 13 ASCII characters or 0x followed by 13 hexadecimal pairs.
9. Select the Transmit key you want to use to transmit data.
10. Tap **OK**.

## Use Open (No Security) Associations with Funk Security

To create an open network, you can set no security with Funk security.

1. Start **Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Funk Security**.
3. Select an active Funk security profile to configure.
4. Enter the SSID.
5. For Association, select **Open**.
6. For Encryption, select **WEP**.
7. Tap **OK**.

## Select Microsoft as Your Security Choice

The default security setting is Funk. If you want to use Microsoft Wireless Zero Configuration (WZC) security, you need to select it as your security choice.

1. Tap **Start > Settings > System > Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Security Choice**.



3. Select **Microsoft Security**.
4. Tap **Yes** to save your settings and reboot the computer.  
The computer reboots and starts with Microsoft Security as the Security Choice.

## Configure WPA or WPA2 Enterprise (802.1x) Security with Microsoft Security

Before you set WPA-802.1x or WPA2-802.1x security with Microsoft Security, you need to configure your authentication server and authenticators. To use TLS protocol, you also need to load a user and root certificate. On your computer, you need to enable the radio and set the date.

1. Start **Enterprise Settings**.
2. Select **Communications > 802.11 Radio > Microsoft Security**.
3. Enter the Network name (SSID).
4. For Infrastructure Mode, select **Infrastructure**.
5. For Network Authentication, select **WPA** or **WPA2**.  
The default encryption is TKIP for WPA or AES for WPA2.
6. For 802.1x Authentication, select either **TLS**, or **PEAP**.
7. Select **Hidden Network**.
8. Tap **OK**. The User Logon dialog box appears.
9. If you selected PEAP:
  - a. Enter a User Name, Password, and Domain.
  - b. If you want to save the password for future authentication sessions, select **Save Password**.
10. If you selected TLS, enter a User Name and Domain.
11. Tap **OK**.

## Enable WPA or WPA2 Personal (PSK) Security with Microsoft Security

Before you set WPA or WPA2 Personal (PSK) security with Microsoft Security, you need to know the pre-shared key for your access point or passphrase for your authenticator. On your computer, you need to enable the radio and set the date.

1. Start **Enterprise Settings**
2. Select **Communications > 802.11 Radio > Microsoft Security**.
3. Enter the Network name (SSID).
4. For Infrastructure Mode, select **Infrastructure**.
5. For Association, select **WPA-PSK** or **WPA2-PSK**.

The default encryption is TKIP for WPA-PSK or AES for WPA-PSK.

6. For Pre-Shared Key, enter the pre-shared key or passphrase:
  - Enter the pre-shared key (0x followed by 32 hexadecimal pairs) for your access point.
  - Enter the passphrase (8 to 63 ASCII characters) for your authenticator. The computer internally converts the passphrase to a pre-shared key.
7. Tap **OK**.

## Configure 802.1x Security with Microsoft Security

Before you set 802.1x-WEP security with Microsoft security, you need to enable the radio on your computer and set the date. To use TLS protocol, you also need to load a user and root certificate. Honeywell recommends that you use WPA2-802.1x instead of 802.1x-WEP if possible.

1. Start **Enterprise Settings**
2. Select **Communications > 802.11 Radio > Microsoft Security**.
3. Enter the Network name (SSID).
4. For Infrastructure Mode, select **Infrastructure**.
5. For Association, select **Open**.
6. For Data Encryption, select **WEP**.
7. For 802.1X Authentication, select **TLS** or **PEAP**.
8. Select **Hidden Network**.
9. Tap **OK**. The User Logon dialog box appears.
10. If you selected **PEAP**:
  - a. Enter a User Name, Password, and Domain.
  - b. If you want to save the password for future authentication sessions, select **Save Password**.
11. If you selected **TLS**, enter a User Name and Domain.
12. Tap **OK**.

## Configure Static WEP Security with Microsoft Security

Before you set static WEP security with Microsoft security, you need to enable the radio on your computer and set the date. Honeywell recommends that you use WPA2-PSK instead of WEP if possible.

1. Start **Enterprise Settings**
2. Select **Communications > 802.11 Radio > Microsoft Security**.
3. Enter the Network name (SSID).
4. For Network Authentication, select **Open**.
5. For Data Encryption, select **WEP**.

6. For 802.1X Authentication, select **Disabled**.
7. For Network Key Value, enter an ASCII key or a hex key.
  - For 64-bit WEP, enter a 5-byte value: 5 ASCII characters or 0x followed by 5 hexadecimal pairs.
  - For 128-bit WEP, enter a 13-byte value: 13 ASCII characters or 0x followed by 13 hexadecimal pairs.
8. For Network Key Index, select the key you want to use to transmit data.
9. Tap **OK**.

## **Use Open (No Security) Associations with Microsoft Security**

To create an open network, you can set no security with Microsoft security.

1. Start **Enterprise Settings**
2. Select **Communications > 802.11 Radio > Microsoft Security**.
3. Enter the Network name (SSID).
4. For Network Authentication, select **Open**.
5. For Data Encryption, select **Disabled**.
6. Tap **OK**.



# MANAGE THE COMPUTER

Use this chapter to learn how to remotely update, configure, and monitor your mobile computers. You will also find information on installing and developing software applications as well as how to upgrade the system software.

## How to Manage the Computer in Your Network

When you have multiple mobile computers and peripherals in your network, it is essential to have an easy way to manage updates, configure all the devices, and remotely troubleshoot problems. Honeywell provides two free software solutions for managing your computers:

- CloneNGo™ is a peer-to-peer license-free way to easily clone settings from one computer to another.
- SmartSystems™ is a device management software platform that helps you manage your devices. You can also purchase third-party device management software through a vendor.

Software downloads can be accessed through the Technical Support Downloads Portal at <https://hsmftp.honeywell.com>. Note that you will need to create an account to download any Honeywell software.

## Manage the Computer Using CloneNGo

CloneNGo is a software application that allows you to copy the settings and parameters from a master computer onto one or more client computers. Cloning reduces redundancy and errors by providing an efficient and accurate way to copy and transmit settings from a master computer to one or more client computers through an adhoc wireless network. For more information on using CloneNGo, see the *CloneNGo User Guide*.

## Manage the Computer Using SmartSystems

SmartSystems is a software platform that lets you manage all of your SmartSystems-enabled devices simultaneously from a central server.

The SmartSystems console displays all SmartSystems-enabled devices and peripherals in your network. Through the console, you can:

- drag-and-drop configuration bundles, operating system updates, and firmware upgrades to multiple computers.
- save configuration settings from a single device and deploy those settings to many devices simultaneously.
- remotely change settings on the computer and peripherals.

The SmartSystems console can report on asset locations and battery status, making it easier to manage your computers.

## How to Develop and Install Applications

Honeywell provides resource kits you can use to develop applications that run on the 75 Series mobile computer. The resource kits are a library of C++, .NET, Java, and web components grouped by functionality that you can use to create applications for the computer.

The resource kits can be accessed through the *Technical Support Downloads Portal* at <https://hsmftp.honeywell.com>. You will need to create an account to download any Honeywell software.

1. Go to [www.honeywellaidc.com](http://www.honeywellaidc.com).
2. Select **Get Resources > Software**.
3. Click on the **Technical Support Downloads Portal** link, <https://hsmftp.honeywell.com>.
4. Create an account if you have not already created one. You must log in to download the software.
5. Install the Honeywell Download Manager tool on your PC prior to trying to download any files.
6. Click on **Software > Software and Tools > Developer Library > SDKs for Windows > Intermec Resource Kits > Developer Tools**.
7. Select **Download** next to the resource kit.

The following resource kits support the 75 Series and are available for download.

- Communications Resource Kit
- Bluetooth Resource Kit
- Data Collection Resource Kit

- Device Resource Kit
- Device Management Resource Kit
- Location Services Resource Kit
- Multimedia Resource Kit (use v1.91.08.0121 or later)
- Printing Resource Kit
- RFID Resource Kit

## Package Your Application

After you develop your application, you need to package it for installation on your mobile computer. For very simple applications, the executable file may be the only file you need to deploy. Typically, you will have a set of files to install. Honeywell recommends using cabinet (.cab) files to install more complex applications. The computer uses standard Windows Mobile .cab files and will install third-party .cab files.

You can have your .cab file place the application in any of these memory locations on the computer:

- Object store (root directory)
- The non-volatile Flash File Store. Applications and data in the Flash File Store will persist through a clean boot or if you reflash the operating system image.
- The optional microSD card. Depending on available disk space, you may want to consider installing your application files on the microSD card. Using a card creates the Storage Card folder on the computer.

Files copied to any of these locations are safe when you cold boot the computer if the Autouser.dat file has been edited correctly. All .cab files in each CABFILES folder are automatically extracted after a cold boot.

## Install Applications with SmartSystems

You can use the SmartSystems console to drag-and-drop Honeywell applications onto your mobile computer. The console is part of SmartSystems.

1. Download your application file from the Honeywell website and unzip the file on your desktop PC.
2. Double-click the application file to install it. The application file should appear in the Software Vault.
3. From the SmartSystems console in the Software Vault, drag-and-drop the application onto each mobile computer in your network, or drop the application on a group of computers contained in a folder.

## Install Applications with Microsoft Synchronization Software

When you only have a few computers to update with applications, you can copy files using Microsoft synchronization software. This procedure assumes that Microsoft synchronization software is installed on your PC and is up and running.

1. Connect to the mobile computer through the synchronization software.
2. Copy the .cab files from your development PC to the mobile computer.
3. Reboot or cold boot the computer.
4. After the boot process is finished, browse to the .cab files and tap the files to install them.

## Install Applications Using a microSD Card

Use a microSD card to install applications on one computer at a time or if you do not have a network connection.

1. Copy your application file to the microSD card.
2. Insert the microSD card into the mobile computer. Note: You need to manually reset the computer after you install the storage card.
3. On the mobile computer, browse to the SD Card folder and run your application.

## Launch Applications Automatically

There are two ways to launch applications automatically on a cold boot:

- Set up your application .cab file to place a shortcut to the application in the \Windows\StartUp directory at install time.
- Use AutoRun to start your application at boot time. AutoRun ships on the computer and automates other operations. At boot time, AutoRun executes any commands found in its data file, Autouser.dat. For more information on using AutoRun, see the Readme.txt file located in the My Device\Flash File Store\2577 directory on the computer.

## How to Update the System Software

The mobile computer uses SmartSystems bundles to update the operating system (OS) and the system software.

You can use these methods to update your mobile computer:

- You can update individual computers, or multiple computers at the same time, using the SmartSystems console. For help, see the next section.
- You can update individual computers using a microSD card.



## Update the Computer with SmartSystems

You can use the SmartSystems console to update the operating system or system software on your mobile computer. Before you can update the computer using this method, you need to:

- Download and install the SmartSystems management tool.
- Download the SmartSystems bundles that include the system software you want to install.

**Note:** Software downloads can be accessed through the Technical Support Downloads Portal at <https://hsmftp.honeywell.com>. Note that you will need to create an account to download any Honeywell software.

After you have located these items, you can update your mobile computer using SmartSystems.

1. Open SmartSystems.
2. Make sure the mobile computer is discovered.
3. Make sure the mobile computer is in a powered dock or that power management is disabled.
4. Download the SmartSystems bundle to your PC.
5. Double-click the SmartSystems bundle on your PC to extract the update files to the software vault.
6. From the SmartSystems console, locate the bundle to install and drag the bundle to each mobile computer (or group in a folder) you want to update. SmartSystems installs the update on your mobile computers.

After the download is complete, your mobile computer begins the update process and automatically performs a cold boot. The computer then boots into a special Update Loader mode where the computer has no network connections and is completely unusable.

This process can take anywhere from 30 seconds to 15 minutes depending on the update. After the update is complete, the computer boots again.

**Note:** While your mobile computer is offline, SmartSystems displays a red stop symbol in the console until the computer reboots and connects to the system.

## Update the Computer with a microSD Card

You can update the computer using a microSD card. You need:

- a microSD card formatted to FAT32,
- a PC,
- a microSD adapter card,

- an SD card reader and
- the AutoFlash.img file that contains the update you want to install.

## Where to Find the AutoFlash.img File

Updates are available for download from the [Honeywell Technical Support Downloads Portal](#). The AutoFlash.img file is included in the SDCardFlash zip file you download from the portal.

1. Go to [www.honeywellaidc.com](http://www.honeywellaidc.com).
2. Select **Get Resources > Software**.
3. Click on the **Technical Support Downloads Portal** link, <https://hsmftp.honeywell.com>.
4. Create an account if you have not already created one. You must log in to download the software.
5. Install the Honeywell Download Manager tool on your PC prior to trying to download any files.
6. Locate your computer model in the directory (**Computer Devices > Handheld > CK75 CN75 CN75e**).
7. Choose the appropriate OS and navigate to the OS Images folder (**WEH6.5 > Current > OS Images**).
8. Locate the SDCardFlash file applicable for your computer model and radio type.
9. Click **Download** next to the file. Follow the prompts to download the file to your PC.
10. Extract (unzip) the SDCardFlash file on your PC to access the AutoFlash.img file needed for the upgrade.

## Upgrade the Computer

Once you have obtained the AutoFlash.img file, you need to transfer the file from the PC to the microSD card and install the card in the 75 series computer.

**Note:** To learn how to install a microSD card in the mobile computer, see [page 28](#) for CN75 and CN75e models or [page 30](#) for the CK75.

1. Insert the microSD card into a card adapter, and then place the adapter in the SD card reader connected to your PC.
2. Copy the AutoFlash.img file from the PC to the root directory of the microSD card.
3. Remove the microSD card from the PC and adapter.
4. Place the mobile computer in **Hibernate** mode, and then remove the battery.
5. Install the microSD card.

6. Install the battery and then press the **Power** button.

The update process begins. The computer may restart several times. When the update is complete, the Autoflash Complete message appears.

7. Place the mobile computer in **Hibernate** mode.

8. Remove the microSD card.

If you do not remove the microSD card, the update process repeats each time the computer restarts.

9. Install the battery and press the **Power** button. Follow any prompts to finish the upgrade process.




# TROUBLESHOOT AND MAINTAIN THE COMPUTER

Use this chapter to find answers to any problems you may encounter while using the 75 Series computer. You will also find information on routine maintenance.

## About the Dashboard

The dashboard is designed to provide proactive monitoring of your mobile computer to prevent downtime. If the [Ready-to-Work](#) LED blinks, your computer may be experiencing a problem. Using the dashboard, you can easily see the health of the computer and help pinpoint the source of a problem to determine if the issue is hardware or software related.

The dashboard displays information, such as the status of a network connection, battery usage and battery health, storage space, and internal devices. It also provides system information, such as the operating system, firmware, and hardware configuration.

- Press information button  on the computer keypad to launch the Dashboard application.



**Note:** The dashboard is highly integrated with SmartSystems. You can also use SmartSystems to remotely monitor the health of your computers. For more information how to use the dashboard with SmartSystems, see the SmartSystems application help.

# About Troubleshoot the Computer

The following troubleshooting sections may help you fix some common problems you may experience with your computer. These tables group solutions for the Wi-Fi connection, 802.1x security, the scanner, and general operation of the computer.

tables in this section to fix problems with the Wi-Fi connection, 802.1x security, the imager, or general problems with operating the mobile computer.

**Note:** *If you send the computer in for service, it is your responsibility to save the computer data and its configuration. Honeywell is only responsible for ensuring that the hardware matches the original configuration when repairing or replacing the computer. Computers are set to factory default settings and factory images during the repair process.*

## Wi-Fi Connection Problems

Use this section to find possible solutions to Wi-Fi connection problems.

Problem	Possible Solution
When you turn on the, mobile computer after it was suspended for 10 to 15 minutes or longer, the mobile computer can no longer send or receive messages over the network.	The host may have deactivated or lost the current terminal emulation session. In a TCP/IP direct connect network, turn off the "Keep Alive" message from host to maintain the TCP session while the computer is suspended.
The computer is connected to the network, and you move to a new site to collect data. Now, your mobile computer is not connected to the network.	Move closer to an access point or to a different location to reestablish communications until you reconnect with the network. Any data collected while out of range is transmitted over the network.
The mobile computer appears to be connected to the network, but you cannot establish a terminal emulation session with the host computer.	Move closer to an access point or to a different location to reestablish communications until you reconnect with the network. Any data collected while out of range is transmitted over the network.
The mobile computer appears to be connected to the network, but the host computer is not receiving any information from the mobile computer.	There may be a problem with the connection between the access point and the host computer. Check with network administrator or use your access point user manual.

## Check Wi-Fi Network Status

If you have trouble connecting to your Wi-Fi wireless network:

- Make sure you have correctly set network parameters on the computer.
- Check your wireless security settings.

Follow the next procedure to verify available access points and networks, check signal strength, and view other diagnostics. If you need to contact Honeywell Product Support, this information can be helpful in troubleshooting wireless network connection issues.

1. Tap **Start** > **ISpyWiFi** to launch the application.

The **ISpy** tab shows:

- MAC address and IP address of the Wi-Fi radio.
- network association status, including the SSID and MAC address of the access point.
- security configuration.
- radio transmit power and signal strength information.

2. Tap the **Scan** tab to view a list of available Wi-Fi networks.

The list includes the signal strength, channel, and MAC address for each network.

- Tap **SCAN** to refresh the screen.

3. Tap the **Supp** tab to view radio supplicant information, including a list of supplicant events and authentication status.

- To verify the settings for the currently active security profile, tap **Configure Profile**. The Enterprise Settings app launches for you to configure Wi-Fi radio settings.
- To try reconnecting to the network, tap **Reconnect**.
- To delete the events in the list, tap **Clear Events**.

4. Tap the **Ping** tab to run a ping test to the host.

- a. In the Host field, enter the IP address of the host.
- b. From the Repetitions list, choose the number of times the computer will ping the host.
- c. Tap **Ping**. The graph shows the amount of time it takes for the host to return the ping. Tap **List** to see this information in a list format.

5. Tap the **RSSI** tab to view the received signal strength of the host signal.

The information box includes the current signal strength, host SSID name, MAC address, data rate, and transmit power.

- Tap **Mark** to place an arrow marker above the graph.

6. Tap the **Conf** tab to set up a log file that lists the RSSI history.

This screen includes the Wi-Fi radio driver version and available radio modes.

- a. Check the **Log to File** check box.
- b. (Optional) Change to the sample period and number of samples displayed.
- c. Tap **Log file**. The Save As screen appears.

- d. (Optional) Change the name of the saved log file, the folder where you want the file saved, the content type (log or text), and the location.
- e. Tap OK.

## 802.1x Security Problems

Use this section to find possible solutions to 802.1x security problems.

Problem	Possible Solution
The mobile computer indicates that it is authenticated, but it does not communicate with the host.	Make sure the mobile computer IP address, host IP address, subnet mask, and default router are configured for the network.
The mobile computer does not appear to be authenticating and a network connection icon does not appear on the status bar.	<ul style="list-style-type: none"> <li>• The mobile computer may not be communicating with the access point. Make sure the mobile computer network name matches the access point network name (SSID).</li> <li>• The access point may not be communicating with the server. Ensure the access point is turned on, properly configured, and has 802.1x security enabled.</li> </ul>
A network connection icon appears in the status bar, but then disappears.	<ul style="list-style-type: none"> <li>• The mobile computer may not be communicating with the intended access point. Make sure that the network name matches the access point network name. The default network name is "INTERMEC."</li> <li>• The access point may not be communicating with the server. Ensure the access point is turned on, properly configured, and has 802.1x security enabled.</li> </ul>
You are setting up multiple access points in a network with different SSIDs, and the connection fails.	When you change the SSID, the WEP key values are not saved. Configure the WEP key values and save your changes.
The mobile computer indicates it is not authenticated.	<p>Make sure that:</p> <ul style="list-style-type: none"> <li>• the User Name and Password parameters on the mobile computer match the user name and password on the authentication server. You may need to configure the password on both the mobile computer and the authentication server.</li> <li>• on your authentication server, the user and group are allowed and the group policy is allowed to log into the server. For help, see the documentation that shipped with your authentication server software.</li> <li>• the IP address and secret key for the access point match the IP address and secret key on the authentication server. You may need to configure the IP address and secret key on both your access point and authentication server.</li> <li>• the authentication server software is running on the server PC.</li> </ul>
You clean boot the mobile computer and the following message appears: "The server certificate has expired or your system date is incorrect."	When you clean boot the computer, the date and time are not saved. Configure the date and time and save your changes.



## Troubleshoot the Scanner with Scan Diagnostic

The ScanDiagnostic application helps troubleshoot problems, such as the inability to read a bar code or a scanner or imager that does not turn on.

1. Tap **Start > ScanDiagnostic**.
2. Select the scanner or imager you want to troubleshoot and tap **Diagnose**.  
The application checks to make sure the scanner or imager is enabled and checks the settings to make sure they are optimized.
3. Aim the scanner or imager at a bar code and tap and hold **Press to Scan**.  
After the computer reads the bar code, the computer beeps and the label data, data length, and symbology appear on the screen.
4. To view recommended settings, press the right arrow button.
5. To accept recommended settings, tap **Apply**.
6. Tap **OK**.

## Problems Reading Bar Codes

You can troubleshoot problems that prevent you from reading bar codes, such as the appropriate symbology not being enabled. Before you call Honeywell Technical Support, look for your problem in the next table, and try the possible solutions.

Problem	Possible Solution
You cannot see the illumination beam or frame from the imager when you press the <b>Scan</b> button and aim the imager at a bar code label.	<ul style="list-style-type: none"><li>• You may be too far away from the bar code label. Try moving closer to the bar code label and scan it again.</li><li>• You may be reading the bar code label “straight on.” Change the reading angle and try again.</li><li>• The imager hardware trigger may be disabled. Start Enterprise Settings and tap <b>Data Collection &gt; Internal Scanner &gt; Scanner settings</b>. Make sure <b>Hardware trigger</b> is selected.</li></ul>
When you release the <b>Scan</b> button or scan handle trigger, the Good Read LED does not turn off.	If you configure the computer to use continuous/edge triggering, the Good Read LED stays on. If you configure the computer for level triggering and the Good Read LED stays on, there may be a problem. Press the <b>Scan</b> button or pull the trigger again without scanning a bar code label. If the LED is still on, contact Technical Support.

Problem	Possible Solution
The scanner or imager cannot read the bar code.	<ul style="list-style-type: none"> <li>Position the scanner beam so that it crosses the entire bar code label in one pass. Try to vary the scanning angle.</li> <li>Check the quality of the bar code label. Scan a bar code label that you know scans properly. Compare the quality of the two bar code labels. You may need to replace the label that you cannot scan.</li> <li>Make sure the bar code symbology is enabled and configured correctly. Start Enterprise Settings and go to Data Collection. Select the scanning device, for example, Internal Scanner. Check enable symbology settings.</li> <li>Make sure the computer application is expecting input from a bar code. You may need to type this information instead.</li> <li>The scanner may not be turned on or the scanner may be unable to scan a specific bar code. Run the ScanDiagnostic application.</li> </ul>
The scanner or imager cannot read the bar code quickly, or the scanning beam seems to be faint or obscured.	The scanner or imager window may be dirty. Clean the window with a solution of mild soap and water. Wipe dry. Do not allow abrasive material to touch the window.
You read a valid bar code label to enter data for your application. The data decoded by the scan module does not match the data encoded in the bar code label.	The computer may have decoded the bar code label in another symbology. Scan the bar code label again. Make sure you scan the entire label.
The input device attached to the computer does not work well or read bar code labels very quickly.	Set the Scanner Model command to the specific attached input device. Enable only the bar code symbologies being used.

## Problems Using the Computer

You can troubleshoot general problems while using the computer. Before you call Honeywell Technical Support, look for your problem in the next table, and try the possible solutions.

Problem	Possible Solution
You tap the screen and nothing happens.	Align the touch screen.
You press the <b>Power</b> button and nothing happens.	<ul style="list-style-type: none"> <li>The battery may be completely drained. Replace or charge the battery.</li> <li>Restart the computer.</li> </ul>
The computer appears to be locked up, and you cannot enter data.	<ul style="list-style-type: none"> <li>Press the Power button and select Suspend. Press the Power button again to turn the screen back on.</li> <li>Press the Power button and select Reboot.</li> <li>Cold boot the computer.</li> <li>Reload the firmware.</li> </ul>

Problem	Possible Solution
You rotate the computer and the screen does not respond properly.	Run the Sensor Calibration application to calibrate the accelerometer.
You cannot type a character on the keypad, or you can only type uppercase or lowercase letters.	The orange modifier or green modifier key may be locked.

## Online Technical Support

Additional troubleshooting resources are available on the Honeywell website.

1. Go to [www.honeywellaidc.com](http://www.honeywellaidc.com).
2. Select **Working With Us** and then **Technical Support**.
3. From the **Contact Technical Support** page, you can access our:
  - Technical Knowledge Database
  - Technical Support Portals
  - Technical Support Downloads Portal
  - Honeywell Product and Support Teams Information

**Note:** *Some Technical support portals require you to create an account to view content or download files.*


If you decide to contact our Technical Support team, have this information ready:

- Computer configuration number (CN) and serial number (SN), printed on a label inside the battery compartment or shown on the Dashboard app under **Information**.
- Operating system version
- Power management settings
- Wireless security settings
- If applicable:
  - SmartSystems Platform Bundle (SSPB) version.
  - Enterprise Terminal Emulation (ETE) version and protocol.
  - Programming language of your custom application and tools used to create it.

**Note:** *Most of this information is available in Enterprise Settings or the Dashboard app.*

## How to Locate Your Configuration Number and Operating System Version

Before you call Honeywell Technical Support, you need to know the configuration number and operating system version of your computer.

1. Press information button  on keypad to open the Dashboard.
2. Use the scroll bar to scroll down, and tap **Information**.
3. Scroll down to view the **Operating System** version and **Hardware Configuration** number.
4. Tap **Back** and then **Exit**.

## How to Restart the Computer

If the computer or an application locks up, or if the computer does not respond when you press the Power button, you may need to restart the computer.

The computer uses the configuration currently saved in flash memory during the boot process. Try these methods, in order, to restart the computer:

- **Reboot:** Restarts the computer and goes through the initialization process.
- **Cold boot:** Preserves configuration and network settings, but does not necessarily save cached disk data, which may result in data loss.
- **Clean boot (Factory Reset):** Completely erases the computer memory, including all applications and data files, except those in the Flash File Store or any removable storage.

## Reboot the Computer

You may need to restart the computer to correct conditions where an application stops responding to the system.

1. Press and hold the **Power** button for 2 seconds.
2. Select **Reboot** from the pop-up menu.

If the touch panel is unresponsive, use the **▲** (up), **▼** (down), and **ENTER** keys to select **Reboot**.

## Cold Boot the Computer

In some cases where the computer completely stops responding, it may be necessary to perform a cold boot or hard reset. Because cold booting may result in data loss, use this method only if all other recovery methods have failed.

**Note:** Cold booting the computer does not guarantee that cached disk data will be saved, so transactional data may be lost during the reset. All other data, such as configuration and network settings, is preserved.

- Press and hold the **Power** button for approximately 8 seconds until the screen goes black. The computer cold boots.

## Clean Boot (Factory Reset) the Computer



**Caution: A clean boot (factory reset) erases the memory in the mobile computer, including all applications and data files, with the exception of those found in the Flash File Store, or any removable storage.**

If the computer seems to be locked up, try cold booting the computer first. If a cold boot does not work, use a clean boot (factory reset) to get the computer up and running for further troubleshooting.

1. Press and hold the **Power** button.
2. Continue to press and hold the **Power** button when the **Cold Boot** starts.
3. When the “Release IO Button” message appears, release the **Power** button.
4. A prompt appears to enter the first key.
5. Press any two-key sequence.
6. Repeat pressing the same two-key sequence.
7. The computer performs a **Clean Boot (Factory Reset)**.

## Clean the Computer

To keep the computer in good working order, you may need to clean the imager window, color camera window, and the touch screen. Clean the windows and the touch screen as often as needed for the environment in which you are using the computer.

To clean the computer, use one of these recommended cleaning agents:

- Acetic acid, 10% in water
- Ethyl alcohol, 10% in water
- Mild soap solutions
- 5% to no more than 10% bleach or sodium hypochlorite in water



**Caution: There are no user-serviceable parts inside the computer. Opening the computer will void the warranty and may cause damage to the internal components.**

**Note:** *Honeywell recommends that you leave the battery installed when you clean the computer as described.*

1. Press the **Power** button and select **Suspend**.
2. Dip a clean cloth towel in the cleaning agent and wring out the excess.
3. Wipe off the imager window, camera lens, and flash area. Do not allow any abrasive material to touch these surfaces.
4. Wipe dry with a clean, soft, dry cloth.
5. Allow the computer to fully air dry before using again.

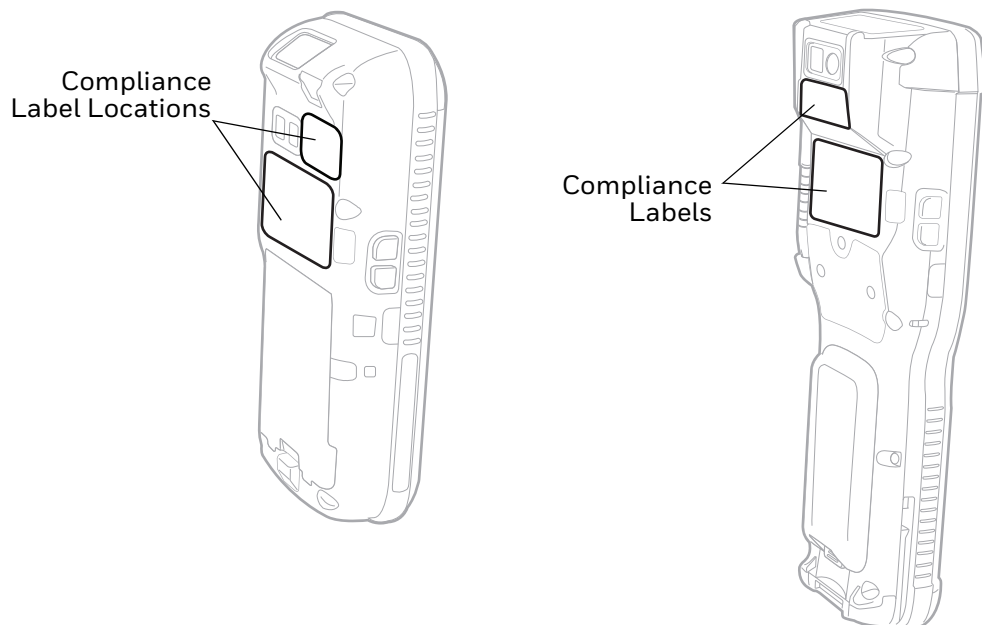
## SPECIFICATIONS

## Computer Agency Information

All 75 Series mobile computers meet or exceed the requirements of all applicable standards organizations for safe operation. The best way to ensure safe operation is to use the mobile computer according to the agency guidelines on the product regulatory sheet, quick start guide and in this user guide. Read all guidelines before using your computer.

Product documentation is available for download from [www.honeywellaidc.com](http://www.honeywellaidc.com). Public certificates are available for download from [www.honeywellaidc.com/compliance](http://www.honeywellaidc.com/compliance).

## Label Locations



# Physical and Environmental Specifications

This section lists the physical and environmental specifications for the computer.

**Note:** Product data sheets are available for download at [www.honeywellaidc.com](http://www.honeywellaidc.com).

## CN75/CN75e

Parameter	Specification
<b>Physical Dimensions (Battery Included)</b>	
Length (CN75)	16.9 cm (6.65 in)
Length (CN75e)	19.5 cm (7.66 in)
Width	8.0 cm (3.16 in)
Depth	3.4 cm (1.34 in)
Weight (CN75)	450 g (15.9 oz)
Weight (CN75e)	491 g (17.3 oz)
<b>Tumble and Drop</b>	
Tumble Specifications	2,000 (1 m) tumbles per IEC 60068-2-32 specification
Drop Specifications	2.4 m (8 ft) to concrete per MIL-STD 810G; 1.8 m (6 ft) to concrete across operating temperature range per MIL-STD 810G
<b>Power and Electrical</b>	
Rechargeable Li-ion battery pack	Model 1000AB02 (PN 318-043-033)
Battery configuration	1S2P (1 cell in series and 2 cells in parallel)
Nominal output and capacity	3.7 VDC, 4000 mAh (14.8 Wh)
<b>Environmental</b>	
Operating temperature	-20°C to 60°C (-4°F to 140°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Charging temperature	5°C to 35 °C (41°F to 95°F)
Relative humidity (operating)	5% to 95% non-condensing,
Electrostatic Discharge (ESD)	+/-15 kV air discharge, +/-8 kV direct discharge
Sealant rating	IP67
<b>Screen Specifications</b>	



Parameter	Specification
Touch screen	<ul style="list-style-type: none"> <li>• 480 x 640 pixels</li> <li>• 8.9 cm (3.5 in) Transmissive VGA</li> <li>• 65,536 (16-bit RGB) colors</li> <li>• Hardened Corning® Gorilla® Glass display</li> <li>• LED backlight</li> <li>• Ambient light sensor</li> </ul>
<b>Keypad Options</b>	
Keypad Options (CN75)	<ul style="list-style-type: none"> <li>• Numeric</li> <li>• Qwerty</li> </ul>
Keypad Options (CN75e)	<ul style="list-style-type: none"> <li>• Large Numeric</li> <li>• Qwerty Keypad</li> </ul>

## CN75/CN75e Non-Incendive (NI)

Parameter	Specification
<b>Physical Dimensions (includes Battery but excludes I/O cover)</b>	
Length (CN75 NI)	16.9 cm (6.65 in)
Length (CN75e NI)	19.5 cm (7.66 in)
Width	8.0 cm (3.16 in)
Depth	3.4 cm (1.34 in)
Weight (CN75 NI)	450 g (15.9 oz)
Weight (CN75e NI)	491 g (17.3 oz)
<b>Tumble and Drop</b>	
Tumble Specifications	2,000 (1 m) tumbles per IEC 60068-2-32 specification
Drop Specifications	2.4 m (8 ft) to concrete per MIL-STD 810G; 1.8 m (6 ft) to concrete across operating temperature range per MIL-STD 810G
<b>Power and Electrical</b>	
Rechargeable Li-ion battery pack	Model 1000AB02 (PN 318-043-033)
Battery configuration	1S2P (1 cell in series and 2 cells in parallel)
Nominal output and capacity	3.7 VDC, 4000 mAh (14.8 Wh)
<b>Environment</b>	
Operating temperature*	-20°C to 50°C (-4°F to 122°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Charging temperature	5°C to 35 °C (41°F to 95°F)
Relative humidity (operating)	5% to 95% non-condensing

Parameter	Specification
Electrostatic Discharge (ESD)	+/-15 kV air discharge, +/-8 kV direct discharge
Sealant rating	IP67
The CN75 and CN75e mobile computers with non-incendive (NI) certification comply with the following specifications for North America and Canada regions only.	
Location	Suitable for use in Division 2 locations
Safety	cULus Listing - ISA/ANSI 12.12.01
Gases	Class I - Groups A, B, C, D
Dusts	Class II - Groups F, G
Fibers and flyings	Class III
* Max. Ambient	T6 rating with a maximum temperature of 50 °C (122 °F)
<b>Screen Specifications</b>	
Touch screen	<ul style="list-style-type: none"> <li>• 480 x 640 pixels</li> <li>• 8.9 cm (3.5 in) Transmissive VGA</li> <li>• 65,536 (16-bit RGB) colors</li> <li>• Hardened Corning® Gorilla® Glass display</li> <li>• LED backlight</li> <li>• Ambient light sensor</li> </ul>
<b>Keypad Options</b>	
Keypad Options (CN75 NI)	<ul style="list-style-type: none"> <li>• Numeric</li> <li>• Qwerty</li> </ul>
Keypad Options (CN75e NI)	<ul style="list-style-type: none"> <li>• Large Numeric</li> <li>• Qwerty Keypad</li> </ul>

## CK75

Parameter	Specification
<b>Physical Dimensions (Includes Battery)</b>	
Length	23.7 cm (9.33 in)
Width	8.0 cm (3.16 in)
Depth	5.0 cm (1.98 in)
Weight	584 g (20.6 oz)
<b>Tumble and Drop</b>	
Tumble Specifications	2,000 (1 m) tumbles per IEC 60068-2-32 specification
Drop Specifications	2.4 m (8 ft) to concrete per MIL-STD 810G; 1.8 m (6 ft) to concrete across operating temperature range per MIL-STD 810G

Parameter	Specification
<b>Power and Electrical</b>	
Rechargeable Li-ion battery pack (Standard Model)	Model 1001AB01 (PN 318-046-031)
Rechargeable Li-ion battery pack (Cold Storage Model)	Model 1001AB01 (PN 318-046-032)
Nominal output and capacity	3.7 VDC, 5200 mAh (19.2 Wh)
<b>Environment</b>	
<b>Standard Model</b>	
Operating temperature	-20°C to 60°C (-4°F to 140°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Charging temperature	5°C to 35 °C (41°F to 95°F)
Sealant rating	IP67
<b>Cold Storage Model</b>	
Operating temperature	-30°C to 60°C (-22°F to 140°F)
Storage temperature	-30°C to 60°C (-22°F to 140°F)
Charging temperature	5°C to 35 °C (41°F to 95°F)
Sealant rating	IP65
Relative humidity (operating)	5% to 95% non-condensing
Electrostatic Discharge (ESD)	+/-15 kV air discharge, +/-8 kV direct discharge
<b>Screen Specifications</b>	
Touch screen	<ul style="list-style-type: none"> <li>• 480 x 640 pixels</li> <li>• 8.9 cm (3.5 in) Transmissive VGA</li> <li>• 65,536 (16-bit RGB) colors</li> <li>• Hardened Corning® Gorilla® Glass display</li> <li>• LED backlight</li> <li>• Ambient light sensor</li> </ul>
<b>Keypad Options</b>	
Keypad Options	<ul style="list-style-type: none"> <li>• Numeric with Function Keys</li> <li>• Alphanumeric</li> </ul>

## Back Accessory Interface Pin-outs

The back accessory interface provides power for peripheral devices out the back of the 75 Series computers.

Pin	Pin Name	I/O	Description
1	OTB_PWR	Output	Power supply for peripheral

Pin	Pin Name	I/O	Description
2	GND		
3	OTB_RX	Input	DTE Data Receive
4	OTB_TX	Output	DTE Data Transmit
5	OTB_I/O_Voltage	Input	I/O Voltage Level
6	OTB_ID	BiDir	One Wire Bus for ID
7	OTB_RTS	Output	DTE Ready to Send
8	OTB_CTS	Input	DTE Clear to Send

## Imager Specifications

The 75 Series offers these high-performance imager options.

Parameter	Specification
<b>Imager</b>	
EA30 (CN75/CN75e only)	EA30 High-Performance Motion-Tolerant 2D Imager with (up to 500 in/s) white LED illumination, red laser aimer and framer optimized for all lighting conditions. Capable of scanning all common 1D and 2D bar codes, including 1D as small as 4 mils and 2D as small as 6.6 mils.
EX25 (CK75 only)	Near/Far High-Performance 2D Imager Capable of scanning 1D and 2D bar codes from 15.2 cm to 16.2 m (6 in to 50 ft).
N5603ER (CK75 only)	High-Performance 2D Imager: Capable of scanning all common 1D and 2D bar codes, including 1D as small as 5 mil and standard UPC codes up to 53 cm (21 in).

## Bar Code Symbolologies

Supported Bar Code Symbolologies		
AustraliaPost	DataMatrix	Maxicode
Aztec	Dutch Post	Micro PDF417
BPO	EAN/UPC	MSI
Canada Post	GS1 Composite	PDF417
China Post	GS1 DataBar Expanded	Planet
Codabar	GS1 DataBar Limited	Plessey
Codablock A	HanXin	Postnet
Codablock F	Infomail	QR Code
Code 11	Interleaved 2 of 5	Standard 2 of 5
Code 39	Japan Post	SwedenPost
Code 93	KoreanPost	Telepen

**Supported Bar Code Symbologies**

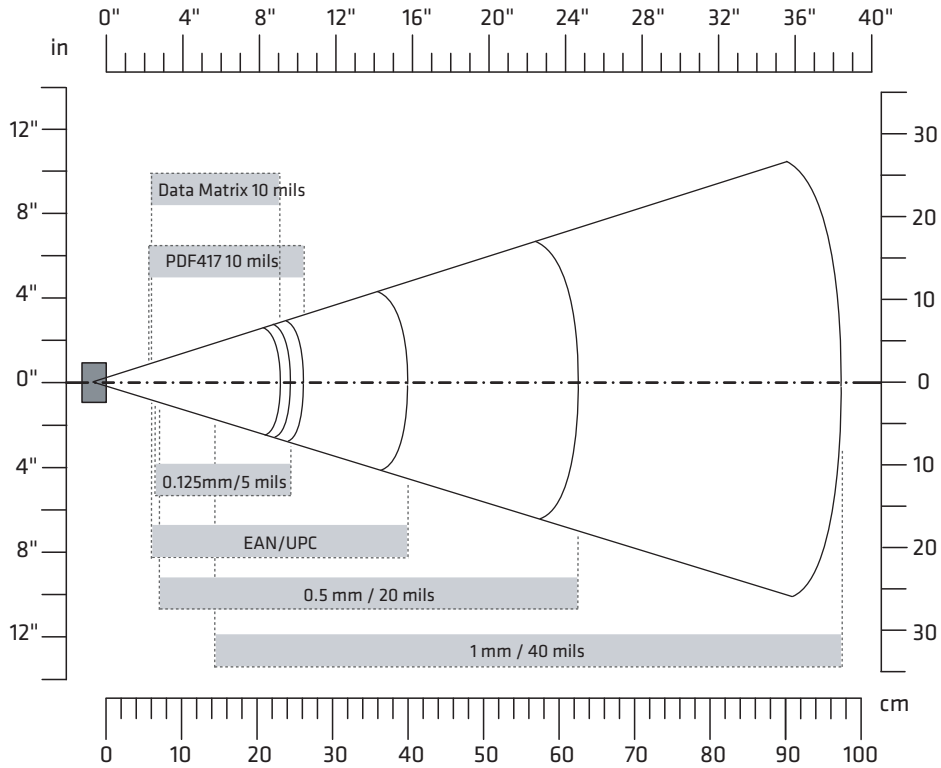
Code 128/GS1-128

Matrix 2 of 5

TLC 39

## EA30 Extended Reading Range

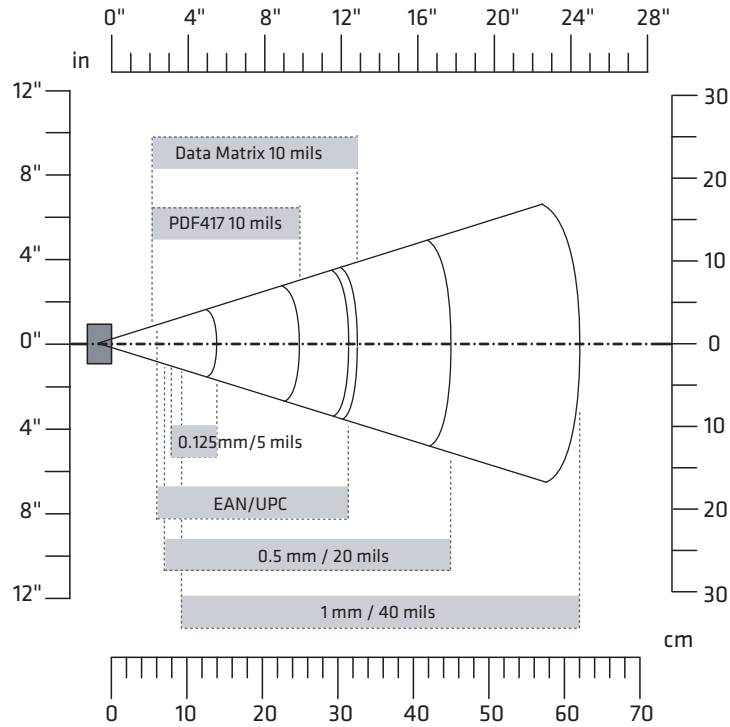
These typical reading distances are measured in an office environment (250 lux) for the EA30 standard model with Extended Reading Range activated. Extended Reading Range is enabled by default.



Symbology	Density	Distance	
		Minimum	Maximum
Code 39	0.125 mm/5 mils	6.50 cm/2.56 in	24.50 cm/9.65 in
	0.50 mm/20 mils	7 cm/ 2.76 in	62.50 cm/24.61 in
	1 mm/40 mils	14.50 cm/5.71 in	97.50 cm/38.39 in
EAN/UPC 100%	0.33 mm/13 mils	6 cm/2.36 in	40 cm/15.75 in

# EA30 Minimum Reading Distances

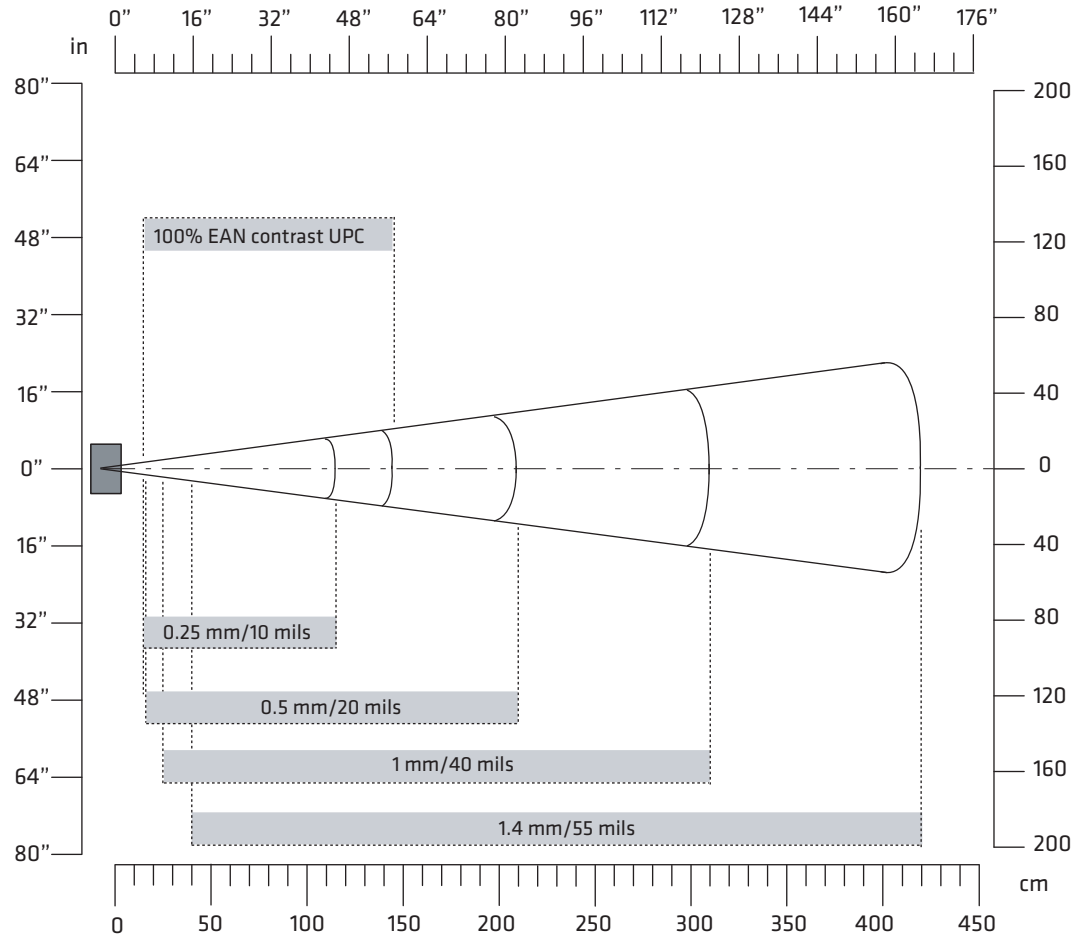
Minimum distances are measured in the dark (0 lux).



Symbology	Density	Distance	
		Minimum	Maximum
Code 39	0.10 mm (4 mils)	9.5 cm (3.74 in)	10.5 cm (4.13 in)
	0.13 mm (5 mils)	8 cm (3.15 in)	14 cm (5.51 in)
	0.50 mm (20 mils)	7 cm (2.76 in)	45 cm (17.72 in)
	1 mm (40 mils)	9.5 cm (3.74 in)	62 cm (24.41 in)
EAN/UPC 100%	0.33 mm/13 mils	6 cm/2.36 in	31.5 cm (12.4 in)
Data Matrix	0.18 mm (7 mils)	8 cm (3.15 in)	15.5 cm (6.1 in)
	0.25 mm (10 mils)	6.5 cm (2.56 in)	21.5 cm (8.46 in)
	0.38 mm (15 mils)	5.5 cm (2.17 in)	31.5 cm (12.4 in)
PDF417	0.25 mm (10 mils)	5.5 cm (2.17 in)	25 cm (9.84 in)
	038 mm (15 mils)	7 cm (2.76 in)	34 cm (13.39 in)

# EX25 Minimum Reading Distance

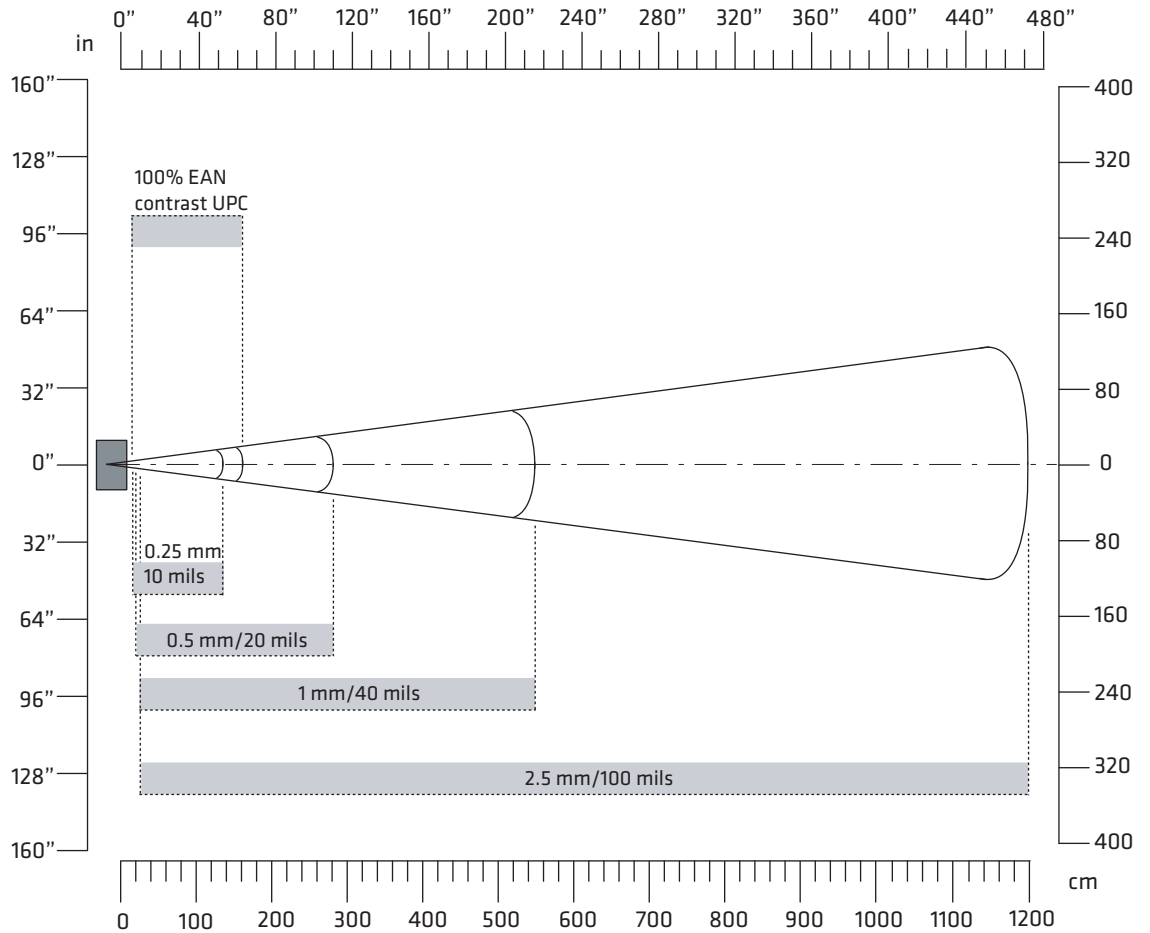
Minimum reading distances are measured in the dark (0 lux). The following graphic does not include the 0.24 cm (0.09 in) setback for the CK75.



EX25 Minimum Reading Distances with 0.24 cm (0.09 in) Setback			
Symbology	Density	Distance	
		Minimum	Maximum
Code 39	0.08 mm (3 mils)	15 cm (5.91 in)	35 cm (13.78 in)
	0.1 mm (2.8 mils)	15 cm (5.91 in)	45 cm (17.72 in)
	0.25 mm (10 mils)	15 cm (5.91 in)	115 cm (45.28 in)
	0.5 mm (20 mils)	16 cm (6.30 in)	210 cm (82.68 in)
	1 mm (40 mils)	25 cm (9.84 in)	310 cm (122.05 in)
	1.3 mm (51 mils)	40 cm (15.75 in)	310 cm (122.05 in)
EAN 100%	0.33 mm (13 mils)	15 cm (5.91 in)	145 cm (57.09 in)

# EX25 Typical Reading Distance (1D)

Typical reading distances are measured in an office environment (200 lux). The following graphics do not include the 0.24 cm (0.09 in) setback for the CK75.

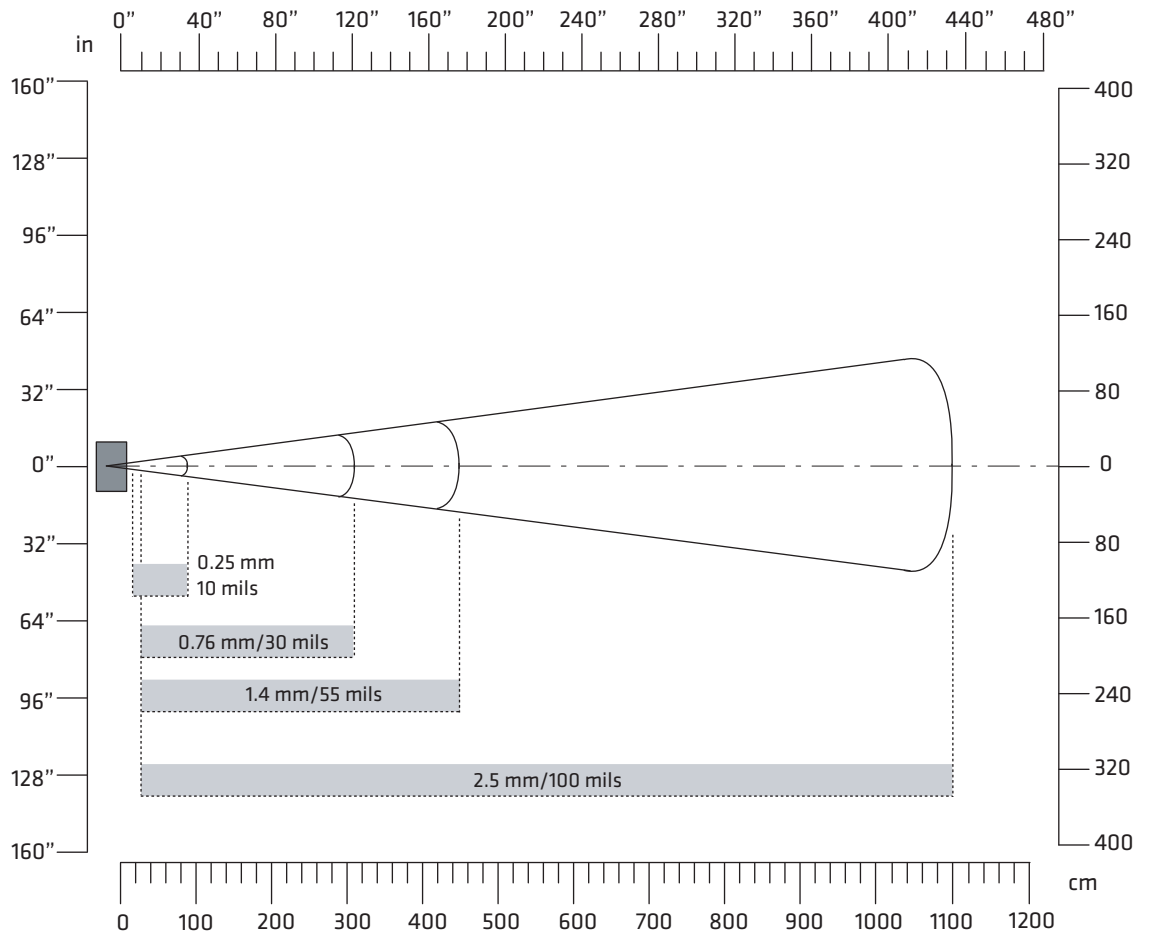


<b>EX25 1D Symbologies Typical Reading Distances with 0.24 cm (0.09 in) Setback</b>			
<b>Symbology</b>	<b>Density</b>	<b>Distance</b>	
		<b>Minimum</b>	<b>Maximum</b>
Code 39	0.25 mm (10 mils)	15 cm (5.91 in)	135 cm (53.15 in)
	0.5 mm (20 mils)	16 cm (6.30 in)	280 cm (110.24 in)
	1 mm (40 mils)	25 cm (9.84 in)	550 cm (216.54 in)
	1.4 mm (55 mils)	40 cm (15.75 in)	720 cm (283.46 in)
	2.5 mm (100 mils)	**	1200 cm (472.44 in)
Code 128 retro-reflective	2.5 mm (100 mils)	**	1300 cm (511.81 in)
EAN 100%	0.33 mm (13 mils)	15 cm (5.91 in)	160 cm (62.99 in)

\*\* Minimum distance depends on bar code width and scan angle.



# EX25 Typical Reading Distance (2D)



<b>EX25 2D Symbologies Typical Reading Distances with 0.24 cm (0.09 in) Setback</b>			
<b>Symbology</b>	<b>Density</b>	<b>Distance</b>	
		<b>Minimum</b>	<b>Maximum</b>
DataMatrix	0.25 mm (10 mils)	15 cm (5.91 in)	90 cm (35.43 in)
	0.76 mm (30 mils)	25 cm (9.84 in)	310 cm (122.05 in)
	1.4 mm (55 mils)	**	450 cm (177.17 in)
	2.5 mm (100 mils)	**	1100 cm (433.07 in)
	7.5 mm (300 mils)	20 cm (7.87 in)	1524 cm (600 in)

\*\* Minimum distance depends on bar code width and scan angle.

# N5603 Extended Range Reading Distances

<b>Red Illumination Monochrome and Monocolor Sensors - Guaranteed Specifications</b>			
Minimum reading distances are measured in the dark (0 lux).			
<b>Symbology</b>	<b>Near Distance</b>	<b>Far Distance</b>	<b>Delta</b>
5 mil Code39/128	14.7 cm/5.8 in	22.4 cm/8.8 in	7.6 cm/3.0 in
7.5 mil Code 39/128	11.2 cm/4.4 in	33.2 cm/13 in	21.8 cm/8.6 in
10 mil Code 39/128	8.1 cm/3.2 in	40.9 cm/16.1 in	32.8 cm/12.9 in
15 mil Code 39/128	5.1 cm/2.0 in	48.3 cm/19.0 in	43.2 cm/17.0 in
20 mil Code 39/128	7.9 cm/3.1 in	57.9 cm/22.8 in	50 cm/16.2 in
100% UPC	7.1 cm/2.8 in	48.3 cm/19.0 in	41.2 cm/16.2 in
5 mil PDF417	15.5 cm/6.1 in	18.8 cm/7.4 in	3.3 cm/1.3 in
6.7 mil PDF417	11.9 cm/4.7 in	24.9 cm/9.8 in	13.0 cm/5.1 in
10 mil PDF417	6.1 cm/2.4 in	37.8 cm/14.9 in	31.8 cm/12.5 in
10 mil DataMatrix/ Aztec	13.5 cm/5.3 in	25.4 cm/10.0 in	11.9 cm/4.7 in
20 mil DataMatrix	10.2 cm/4.0 in	40.6 cm/16.0 in	30.5 cm/12.0 in
10 mil QR Code	10.9 cm/4.3 in	26.4 cm/10.4 in	15.5 cm/6.1 in
20 mil QR Code	5.3 cm/2.1 in	45.0 cm/17.7 in	39.6 cm/15.6 in
32 mil Maxicode	10.7 cm/4.2 in	45.0 cm/17.7 in	34.3 cm/13.5 in

<b>White Illumination Monocolor Sensor Only - Guaranteed Specifications</b>			
Minimum reading distances are measured at 535 lux.			
<b>Symbology</b>	<b>Near Distance</b>	<b>Far Distance</b>	<b>Delta</b>
5 mil Code39/128	14.7 cm/5.8 in	21.6 cm/8.5 in	6.9 cm/2.7 in
7.5 mil Code 39/128	11.2 cm/4.4 in	31.0 cm/12.2 in	19.8 cm/7.8 in
10 mil Code 39/128	8.1 cm/3.2 in	38.9 cm/15.3 in	30.7 cm/12.1 in
15 mil Code 39/128	5.1 cm/2.0 in	46.5 cm/18.3 in	41.4 cm/16.3 in
20 mil Code 39/128	7.9 cm/3.1 in	53.3 cm/21.0 in	45.5 cm/17.9 in
100% UPC	7.1 cm/2.8 in	46.5 cm/18.3 in	39.4 cm/15.5 in
5 mil PDF417	15.5 cm/6.1 in	18.3 cm/7.2 in	2.8 cm/1.1 in
6.7 mil PDF417	11.9 cm/4.7 in	24.1 cm/9.5 in	12.2 cm/4.8 in
10 mil PDF417	6.1 cm/2.4 in	36.8 cm/14.5 in	30.7 cm/12.1 in
10 mil DataMatrix/ Aztec	13.5 cm/5.3 in	24.6 cm/9.7 in	11.2 cm/4.4 in
20 mil DataMatrix	10.2 cm/4.0 in	39.4 cm/15.5 in	29.2 cm/11.5 in
10 mil QR Code	10.9 cm/4.3 in	24.6 cm/9.7 in	13.7 cm/5.4 in
20 mil QR Code	5.3 cm/2.1 in	40.6 cm/16.0 in	37.8 cm/14.9 in
32 mil Maxicode	10.7 cm/4.2 in	43.7 cm/17.2 in	33.0 cm/13.0 in

**Red Illumination Monochrome and Monocolor Sensors - Typical Specifications**

Minimum reading distances are measured at 535 lux.

Symbology	Near Distance	Far Distance	Delta
10 mil Code 39/128	6.1 cm/2.4 in	44.2 cm/17.4 in	38.1 cm/15.0 in
15 mil Code 39/128	3.8 cm/1.5 in	54.9 cm/21.6 in	51.1 cm/20.1 in
100% UPC	6.1 cm/2.4 in	53.3 cm/21.0 in	47.2 cm/18.6 in
10 mil PDF417	5.6 cm/2.2 in	39.6 cm/15.6 in	34.0 cm/13.4 in
32 mil Maxicode	7.9 cm/3.1 in	52.8 cm/20.8 in	44.9 cm/17.7 in

**White Illumination Monocolor Sensor Only- Typical Specifications**

Minimum reading distances are measured at 535 lux.

Symbology	Near Distance	Far Distance	Delta
10 mil Code 39/128	6.1 cm/2.4 in	42.7 cm/16.8 in	36.6 cm/14.4 in
15 mil Code 39/128	3.8 cm/1.5 in	54.9 cm/21.6 in	51.1 cm/20.1 in
100% UPC	6.1 cm/2.4 in	53.3 cm/21.0 in	47.2 cm/18.6 in
10 mil PDF417	5.6 cm/2.2 in	39.6 cm/15.6 in	34.0 cm/13.4 in
32 mil Maxicode	7.9 cm/3.1 in	52.8 cm/20.8 in	44.9 cm/17.7 in

**Field of View/Resolution**

Focus	Extended Range (ER)
Horizontal Field Angle (degrees)	±15.8
Vertical Field Angle (degrees)	±12.2



# DEFAULT SETTINGS - ENTERPRISE SETTINGS APP

## Data Collection Settings

This section lists all default settings for the internal scanner and connected Bluetooth scanners, the camera, and the optional magnetic stripe reader.

**Note:** Camera settings in this section apply only if you are using the camera to read bar codes. To configure settings for taking pictures and videos, use the Pictures & Videos application.

## Internal Scanner Settings

This section lists the default settings for the integrated scanner.

### Scanner Port

Scanner Port	Default
Enable scanner port	On

### Symbologies

Symbology	Default
AustraliaPost	Disable
Aztec	Disable
BPO	Disable
CanadaPost	Disable
Codabar	Disable
Codablock A	Disable
Codablock F	Disable
Code 11	Disable
Code 39	Enable

<b>Symbology</b>	<b>Default</b>
Code 93	Disable
Code 128/GS1-128	Enable
DataMatrix	Enable
DutchPost	Disable
EAN/UPC	Enable UPC A, UPC E, EAN 8, EAN 13
GS1 Composite	Disable
GS1 DataBar Expanded	Disable
GS1 DataBar Limited	Disable
GS1 DataBar Omni-Directional	Disable
HanXin	Disable
Infomail	Disable
Intelligent Mail	Disable
Interleaved 2 of 5	Disable
JapanPost	Disable
Matrix 2 of 5	Disable
Maxicode	Disable
Micro PDF417	Disable
MSI	Disable
PDF417	Enable
Planet	Disable
Plessey	Disable
Postnet	Disable
QR Code	Enable
Standard 2 of 5	Disable
SwedenPost	Disable
Telepen	Disable
TLC 39	Disable

## Symbology Options

<b>Symbology Option</b>	<b>Default</b>
Preamble	None (Disabled)
Postamble	None (Disabled)
Symbology Identifier	Disable
Multicode	Disable

## Scanner Settings

Scanner Setting	Default
Trigger Predefined Modes	Level
Trigger Mode	Level
Aimer Mode	Typical aimer
Hardware Trigger	Enable
Trigger Timeout (sec)	2
Aiming Duration (msec)	500
Turn Off After Good Read	Enable/One-shot
Auto-Trigger delay (msec)	0

## Imager Settings - Optimized Imager Modes Settings (Advanced)

Optimized Imager Mode	Default
Predefined Modes	1D and 2D Standard
Imager decode mode	2D Imager
Lighting goal	128
Top position	0
Bottom position	479
Aimer flashing	Flashing (optimize for decode)
Illumination level	40
Maximum lighting and exposure	Enable
Initial 1D search area	Center
Damaged 1D codes	Disable

## Imager Settings - File Properties and Viewfinder Properties

File or ViewFinder Property	Default
Image File Location	\My Documents\MDI
Folder memory limit (MBytes)	13
Enable tagging location data	Disable
Viewfinder Properties	Disable

## Imager Settings - Signature Image Capture, Scenario Properties

Signature Image Capture, Scenario Property	Default
Enable scenario 1, 2, 3, or 4	Disable
Bar code identifier	None
Document Imaging	Disable (no focus check)

<b>Signature Image Capture, Scenario Property</b>	<b>Default</b>
Image ratio check	0
Contrast enhancement	None
Text enhancement	None
Image rotation	None
Noise reduction	0
Image lighting correction	Disable
Brightness	0
Color conversion	None
Conversion threshold	Very dark
Output compression	JPEG
Output compression quality	60
Projective mapping resolution	Disable
Bar code length	0
Bar code mask	None specified
Automatic correction	Horizontal and vertical
Horizontal offset	0
Vertical offset	0
Area width	0
Area height	0
Bar code width	0
Bar code height	0

## Imager Settings - Document Imaging Properties

<b>Document Imaging Property</b>	<b>Default</b>
Enable document imaging	Disable
Focus check	Disable
Image/area to capture ratio	30
Output compression	JPEG
Output compression quality	60
Perspective correction	Enable
Color conversion	None
Conversion threshold	Very dark
Contrast enhancement	None
Text enhancement	Medium
Noise reduction	3
Image rotation	None
Image lighting correction	Disable



Document Imaging Property	Default
Document file name	doc_\$(num)

## Imager Settings - Image Capture Properties

Image Capture Property	Default
Output Compression	Bitmap
Output compression quality	0
Edge Enhancement	None
Noise Reduction	0
Subsampling	None
Image Rotation	None
Image lighting correction	Disable

## Decode Security Settings

Decode Security Setting	Default
Consecutive data validation	0
Identical consecutive timeout	1000
Different consecutive timeout	0
Center decoding	Disable
Center decoding tolerance	0

## Bluetooth Scanner Settings

For connected Bluetooth scanners, determines whether the scanner settings are overwritten by the computer scanner settings, or if the computer uses the Bluetooth scanner settings already present.

Bluetooth Scanners	Default
BT_Configure on connect	Overwrite with computer settings

## Camera Settings

This section lists the camera default settings for reading bar codes, signature image capture, document imaging, and image capture.

**Note:** To configure settings for taking pictures and videos, use the *Pictures & Videos* application.

Camera Port	Default
Enable camera port	On

## Symbology Settings

Symbology	Default
AustraliaPost	Disable
Aztec	Disable
BPO	Disable
CanadaPost	Disable
Codabar	Disable
Codablock A	Disable
Codablock F	Disable
Code 11	Disable
Code 39	Enable
Code 93	Disable
Code 128/GS1-128	Enable
DataMatrix	Enable
DutchPost	Disable
EAN/UPC	Enable UPC A, UPC E, EAN 8, EAN 13
GS1 Composite	Disable
GS1 DataBar Expanded	Disable
GS1 DataBar Limited	Disable
GS1 DataBar Omni-Directional	Disable
HanXin	Disable
Infomail	Disable
Intelligent Mail	Disable
Interleaved 2 of 5	Disable
JapanPost	Disable
Matrix 2 of 5	Disable
Maxicode	Disable
Micro PDF417	Disable
MSI	Disable
PDF417	Enable
Planet	Disable
Plessey	Disable
Postnet	Disable
QR Code	Enable
Standard 2 of 5	Disable
SwedenPost	Disable
Telepen	Disable
TLC 39	Disable

## Symbology Options

Symbology Option	Default
Preamble	None (Disabled)
Postamble	None (Disabled)
Symbology Identifier	Disable
Multicode	Disable

## Scanner Settings

Scanner Setting	Default
Trigger Predefined Modes	Level
Trigger Mode	Level
Aimer Mode	Typical aimer
Hardware Trigger	Enable

## Camera Settings - Optimized Imager Modes Settings (Advanced)

Optimized Imager Mode	Default
Imager decode mode	2D Imager
Lighting mode	Illumination LED priority
Illumination level	30
Initial 1D search area	Center
Damaged 1D codes	Disable

## Camera Settings - File Properties

File Property	Default
Image File Location	\My Documents\MDI
Folder memory limit (MBytes)	13
Enable tagging location data	Disable

## Camera Settings - Viewfinder and Focus

Viewfinder and Focus Property	Default
Enable Viewfinder	Enable
Focus mode	Continuous autofocus

## Camera Settings - Lighting

<b>Lighting Property</b>	<b>Default</b>
Torch	Auto

## Camera Settings - Viewfinder and Focus

<b>Viewfinder and Focus Property</b>	<b>Default</b>
Enable Viewfinder	Enable
Focus mode	Continuous autofocus

## Camera Settings - Signature Image Capture, Scenario Properties

<b>Signature Image Capture, Scenario Property</b>	<b>Default</b>
Enable scenario 1, 2, 3, or 4	Disable
Bar code identifier	None
Document Imaging	Disable (no focus check)
Image ratio check	0
Contrast enhancement	None
Text enhancement	None
Image rotation	None
Noise reduction	0
Image lighting correction	Disable
Brightness	0
Color conversion	None
Conversion threshold	Very dark
Output compression	JPEG
Output compression quality	60
Projective mapping resolution	Disable
Bar code length	0
Bar code mask	None specified
Automatic correction	Horizontal and vertical
Horizontal offset	0
Vertical offset	0
Area width	0
Area height	0
Bar code width	0
Bar code height	0

## Camera Settings - Document Imaging

Document Imaging Property	Default
Enable document imaging	Disable
Focus check	Disable
Image/area to capture ratio	30
Output compression	JPEG
Output compression quality	60
Perspective correction	Enable
Color conversion	None
Conversion threshold	Very dark
Contrast enhancement	None
Text enhancement	Medium
Noise reduction	3
Image rotation	None
Image lighting correction	Disable
Document file name	doc_\$(num)

## Camera Settings - Image Capture

Image Capture Property	Default
Output Compression	Bitmap
Output compression quality	0
Edge Enhancement	None
Noise Reduction	0
Subsampling	None
Image Rotation	None
Image lighting correction	Disable

## Decode Security Settings

Decode Security Setting	Default
Consecutive data validation	0
Identical consecutive timeout	300
Different consecutive timeout	0
Center decoding	Disable
Center decoding tolerance	0

## Magstripe Reader Settings

This section lists the default settings used for an optional magnetic stripe reader accessory.

Magstripe Reader (MSR) Settings	Default
Enable Magstripe Reader	Off
Reader Model	MSR
Enable USB MSR autodetect	Disable

## Communications Settings

This section lists the default settings for the 802.11 and WWAN radios, the Ethernet adapter, and power for the Bluetooth radio.

### 802.11 Radio Settings

802.11 Radio Setting	Default
Radio Enabled	Off
Security Choice	Funk Security
Allow Security Changes	Enabled

### Funk Security - Active Profile Selection

Funk Security Setting	Default
Active Profile	Profile 1

### Funk Security - Profile Settings (Profile 1, 2, 3, or 4)

Profile Setting	Default
Hide password text	Enable
Profile Label	Profile_1
Network Type	Infrastructure
Channel	3
SSID	INTERMEC
Power Mode	Enabled (Fast PSP)
8021x	None
Association	Open
Encryption	None
Pre-Shared Key	None

<b>Profile Setting</b>	<b>Default</b>
Transmit Key	Key1
Key 1	None
Key 2	None
Key 3	None
Key 4	None
Prompt for Credentials	Disabled
User Name	anonymous
User Password	*****
Inner Authentication-TTLS	MS-Chapv2
Anonymous name	None
Inner EAP	EAP/MDS
Inner Authentication - PEAP	EAP/MS-Chapv2
InnerAuthenticationFAST	EAP/Token Card
Subject Name	None
Validate Server Certificate	No
Server 1 Common name	None
Server 2 Common name	None
Mixed Cell	On
CCKM	Off
Automatic PAC provisioning	On
Provisioning PAC Prompt	Off
Reprovisioning PAC Prompt	Off
Authenticate PAC provisioning server (by certificate)	Optional
Logging	Off

## IP Settings

<b>IP Setting</b>	<b>Default</b>
Current Device IP Address	0.0.0.0
DHCP	Enable
DHCP Client Identifier	None
IP Address	None
Subnet Mask	255.0.0.0
Default Router	None
Primary DNS	None
Secondary DNS	None
Primary WINS	None
Secondary WINS	None

## Certificates

<b>Certificate Setting</b>	<b>Default</b>
Import Root Certificates	False
Import User Certificates	False
Import Pac Files	False

## Ethernet Adapter Settings

<b>IP Setting</b>	<b>Default</b>
Current Device IP Address	0.0.0.0
DHCP	Enabled
DHCP Client Identifier	None
IP Address	None
Subnet Mask	255.0.0.0
Default Router	None
Primary DNS	None
Secondary DNS	None
Primary WINS	None
Secondary WINS	None

## Bluetooth Radio Settings

<b>Bluetooth</b>	<b>Default</b>
Power	Off

## WWAN Radio Settings

<b>WWAN Setting</b>	<b>Default</b>
Radio State	On
Carrier Choice	Worldwide UMTS
Carrier Settings Auto Config	Disabled
Carrier Settings	Unavailable

## Serial Port Switch Setting

<b>Serial Port Switch Setting</b>	<b>Default</b>
Serial Port Switch	Standard docking



# Device Settings

This section lists default settings for computer-specific features such as the backlight, good read behavior, or power management.

## Backlight

Display or Keypad Setting	Default
Display	
Brightness	+1
Dim backlight after (on power)	Never
Keypad	
Keypad backlight	Always off
Brightness (Battery power)	+2
Brightness (External power)	+2

## Features Disabled by Policy

Features Disabled by Policy State	Default
Features Disabled by Policy State	No systems disabled

## Good Read

Good Read Setting	Default
Internal Scanner > Beep or vibrate	One beep
Bluetooth Scanner > Beep or vibrate	One beep

## Heater (CK75 Cold Storage Models Only)

Heater Settings	Default
Temperature monitoring	Enable
In freezer heater activation	Disable
Heater enabled temperature	-10°C
Heater enabled delay (minutes)	0 minutes
Exit freezer temperature change trigger	0.5°C
Exit freezer heater on duration	5 minute
Pre-heat enabled delay (minutes)	30
Pre-heat power level (%)	50%
Scanner heater cycle time (seconds)	20 seconds
Screen heater cycle time (seconds)	10 seconds
Heater off at battery level (%)	25%

## Keypad

Keypad Setting	Default
Button Remapping	
Center scan button	Scanner
Left side upper button:	Notes
Left side lower button	Scanner
Flashlight timeout	1 minute
Right side upper button	Volume up
Right side lower button	Volume down
Green/Orange keys lock options	Press twice to lock

## Language

Language Setting	Default
Save current language when updating OS	Disable

## Power Management

Power Management Setting	Default
Power Button - Power Button Screen	
Enable power button screen	On
Screen Options Displayed	Hibernate
Screen Timeout (seconds)	(battery swap), Suspend, Reboot
Power Button - Power Button Behavior	Suspend
Battery Power	
Screen turns off after	Disabled
Device turns off after	5 minutes
External Power	
Screen turns off after	Disabled
Device turns off after	Disabled
Device Off Sensor	Sleep face down
Battery LED	2 charging states

## Profile Settings Application

Setting	Default
Camera	

Setting	Default
Disable bar code scan	Enable Show option in Profile Settings
Enable bar code scan	
Enable document image	
Power	
Always on	Enable Show option in Profile Settings
Maximize battery life	
Normal	
Scanning	
1D bar codes optimized	Enable Show option in Profile Settings
Bright sunlight	
Reflective labels	
Standard	

## Screen

Screen Setting	Default
Screen rotation	Portrait 0 degrees
Screen Rotation Sensor	
Enable screen rotation	Disable

## Security

Security Setting	Default
Enable ActiveSync	Enable
Enable SD card	Enable
Enable USB external drive	Enable
Enable all image capture	Enable
Enable URL barcode to launch browser	Disable

## Sounds

Sound Setting	Default
Beeper and Voice	Medium
Headset Beeper	Very Low
Good Read Vibrate Intensity	1 Strong Pulse
Screen Taps	Off
Key Clicks	Off

## USB

USB Setting	Default
USB function driver	ActiveSync RNDIS client

## PrintPad

PrintPad Setting	Default
PrintPad	Disable

## GPS Settings

This section lists default settings for the GPS feature.

GPS Setting	Default
Enable Bread Crumbing	Disable
Fixed Interval	0
GPS On or Off	GPS OFF
gpsOneXTRA	Disable
GLONASS	Disable

## Core Messaging Service Settings

This section lists default settings for the Core Messaging Service.

Core Messaging Service Setting	Default
Associated Server IP	None specified
Broadcast Name	INTERMEC
Port	62241
Keep Alive Ping Interval	30 Seconds

## SmartSystems Information

This section lists the default settings for SmartSystems information.

SmartSystems Information Setting	Default
Administrator	Name, Phone, Email: None specified
Location	Country, State, City, Campus, Detail: None specified

<b>SmartSystems Information Setting</b>	<b>Default</b>
Information	Device Notes: None specified

## Device Monitor Settings

This section lists the default settings for how the mobile computer monitors the network

## Device Health Controls

<b>Device Health Controls Setting</b>	<b>Default</b>
Enable Health Data Collection	On
Enable Device Health Application	On
Enable Blue Light	Off for Ready-to-Work
Set Rule File Location	\\SmartSystems\\HealthRules.txt
Collect Abuse History	Off
Set Data Refresh Periods	
Asset Message Send Period	0
System Device Health (seconds)	90
Network Device Health (seconds)	45
Printer Device Health (seconds)	300
WWAN Radio	300

## Device Health Screen Captures

<b>Device Health Screen Captures Setting</b>	<b>Default</b>
Directory	\\SmartSystems\\ScreenCapture
Screen Captures Allowed	3

## Disabled Executables

<b>Disabled Executables</b>	<b>Default</b>
Disabled Executables	None

## Device Wipe

Device Wipe Setting	Default
Enable Wipe	Disabled
Interval (in days)	3

## Virtual Wedge

This section lists default settings for the virtual wedge. The virtual wedge sends scanned data to your application as keyboard input.

Virtual Wedge Setting	Default
Enable Virtual Wedge	Enabled
Virtual Wedge Method	Adapt to Application
Bar Code Scanner Wedge	
Bar Code Scanner Grid	None
Label Encoding (Code Page)	0-OS ANSI Default
Magstripe Reader Wedge	None
Magstripe Reader Grid	None

## Location Services

This section lists the default settings for location services, including the server and virtual GPS ports and output.

Location Services Setting	Default
Server	None
Port	9569 (unavailable unless the server is enabled)
Enable Server	Disable
Virtual GPS	Unavailable unless the server is enabled
Output	Disable
COM Port	8

# OPEN SOURCE LICENSE INFORMATION

## Licenses of Third Party Software

=====

This product contains software provided by third parties, which may include the below listed components. The Honeywell product that includes this file does not necessarily use all of the third party software components referred to below.

.. contents::

Package(s) using Jam STAPL Software license

=====

\* <Jam STAPL Byte-Code Player>

<Copyright (C) Altera Corporation 1997-2001>

License Text (Jam STAPL Software license)

-----

<<

Jam STAPL Software License

SOFTWARE DISTRIBUTION AGREEMENT

THE JAM SOFTWARE PROGRAM AND EXECUTABLE FILES, AND RELATED SPECIFICATION DOCUMENTATION (“PROGRAMS”) (AVAILABLE FOR DOWNLOADING FROM THIS WEB SITE OR ENCLOSED WITH THE COMPUTER DISK ACCOMPANYING THIS NOTICE), ARE MADE FREELY AVAILABLE FOR USE BY ANYONE, SUBJECT TO CERTAIN TERMS AND CONDITIONS SET FORTH BELOW. PLEASE READ THESE TERMS AND CONDITIONS CAREFULLY BEFORE DOWNLOADING OR USING THE PROGRAMS. BY DOWNLOADING OR USING THE PROGRAMS YOU INDICATE YOUR ACCEPTANCE OF THESE TERMS AND CONDITIONS, WHICH CONSTITUTE THE LICENSE AGREEMENT (the “AGREEMENT”) BETWEEN YOU AND ALTERA CORPORATION (“ALTERA”) WITH REGARD TO THE PROGRAMS. IN THE EVENT THAT YOU DO NOT AGREE WITH ANY OF THESE TERMS AND CONDITIONS, DO NOT DOWNLOAD THE PROGRAMS OR PROMPTLY RETURN THE PROGRAMS TO ALTERA UNUSED.

License Terms

Subject to the terms and conditions of this Agreement, Altera grants to you a worldwide, nonexclusive, perpetual license (with the right to grant sublicenses, and authorize sublicensees to sublicense further) to use, copy, prepare derivative works based on, and distribute the Programs and derivative works thereof, provided that any distribution or sublicense is subject to the same terms and conditions that you use for distribution of your own comparable software products. Any copies of the Programs or derivative works thereof will continue to be subject to the terms and conditions of this Agreement. You must include in any copies of the Programs or derivative works thereof any trademark, copyright, and other proprietary rights notices included in the Programs by Altera.

#### Disclaimer of Warranties and Remedies

NO WARRANTIES, EITHER EXPRESS OR IMPLIED, ARE MADE WITH RESPECT TO THE PROGRAMS, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NONINFRINGEMENT, AND ALTERA EXPRESSLY DISCLAIM ALL WARRANTIES NOT STATED HEREIN. YOU ASSUME THE ENTIRE RISK AS TO THE QUALITY, USE, AND PERFORMANCE OF THE PROGRAMS. SHOULD THE PROGRAMS PROVE DEFECTIVE OR FAIL TO PERFORM PROPERLY, YOU -- AND NOT ALTERA -- SHALL ASSUME THE ENTIRE COST AND RISK OF ANY REPAIR, SERVICE, CORRECTION, OR ANY OTHER LIABILITY OR DAMAGES CAUSED BY OR OTHERWISE ASSOCIATED WITH THE PROGRAMS. ALTERA DOES NOT WARRANT THAT THE PROGRAMS WILL MEET YOUR REQUIREMENTS, OR THAT THE OPERATION OF THE PROGRAMS WILL BE UNINTERRUPTED OR ERROR-FREE. YOU ALSO ASSUME RESPONSIBILITY FOR THE SELECTION, INSTALLATION, USE, AND RESULTS OF USING THE PROGRAMS. Some states do not allow the exclusion of implied warranties, so the above exclusion may not apply to you.

ALTERA SHALL NOT BE LIABLE TO YOU OR ANY OTHER PERSON FOR ANY DAMAGES, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EXPENSES, LOST PROFITS, LOST SAVINGS, OR OTHER DAMAGES ARISING OUT OF OR OTHERWISE ASSOCIATED WITH THE USE OF OR INABILITY TO USE THE PROGRAMS. IN ANY EVENT, ALTERA'S LIABILITY UNDER THIS AGREEMENT SHALL NOT EXCEED THE LARGER OF EITHER THE AMOUNT YOU PAID ALTERA FOR USE OF THE PROGRAMS, OR ONE HUNDRED DOLLARS (\$100). YOUR SOLE REMEDIES AND ALTERA'S ENTIRE LIABILITY ARE AS SET FORTH ABOVE. Some states do not allow the limitation or exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

To the extent that the Programs are derived from third-party software or other third-party materials, no such third-party provides any warranties with respect to the Programs, assumes any liability regarding use of the Programs, or undertakes to furnish you any support or information relating to the Programs.

#### General

You acknowledge that Altera is not responsible for and is not obligated to provide, any support, including email and telephone support, for any purpose with respect to the Programs.

You acknowledge that the Programs are made freely available in accordance with this Agreement as part of an effort to promote broad use of the Programs with minimum interference by you and Altera. Accordingly, you agree that, if you obtain



any patents relating to inventions or discoveries made through use of or access to the Programs or derivative works thereof, or that are necessary for the use of the Programs, you will not bring any claim for infringement thereof against Altera or any direct or indirect licensee of Altera in connection with or use of the Programs or derivative works thereof. The foregoing does not constitute a license of any copyright or trade secret.

You shall not export the Programs, or any product programmed by the Programs, without first obtaining any necessary U.S. or other governmental licenses and approvals.

This Agreement is entered into for the benefit of Altera and Altera's licensors and all rights granted to you and all obligations owed to Altera shall be enforceable by Altera and its licensors. This Agreement constitutes the entire understanding and agreement applicable to the Programs, superseding any prior or contemporaneous understandings or agreements. It may not be modified except in a writing executed by Altera.

This Agreement will be governed by the laws of the State of California. You agree to submit to the jurisdiction of the courts in the State of California for the resolution of any dispute or claim arising out of or relating to this Agreement.

The prevailing party in any legal action or arbitration arising out of this Agreement shall be entitled to reimbursement for its expenses, including court costs and reasonable attorneys' fees, in addition to any other rights and remedies such party may have.

BY USING THE PROGRAMS YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, UNDERSTAND IT, AND AGREE TO BE BOUND BY ITS TERMS AND CONDITIONS; YOU FURTHER AGREE THAT IT IS THE COMPLETE AND EXCLUSIVE STATEMENT OF THE AGREEMENT BETWEEN YOU AND ALTERA WHICH SUPERSEDES ANY PROPOSAL OR PRIOR AGREEMENT, ORAL OR WRITTEN, AND ANY OTHER COMMUNICATIONS BETWEEN YOU AND ALTERA RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT.

#### U.S. Government Restricted Rights

The Programs and any accompanying documentation are provided with RESTRICTED RIGHTS. Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of The Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 or subparagraphs (c)(1) and (2) of Commercial Computer Software--Restricted Rights at 48 CFR 52.227-19, as applicable. Contractor/manufacturer is Altera Corporation, 101 Innovation Drive, San Jose, CA 95134 and its licensors.

>>

Package(s) using MIT License

=====

\* <OpenNETCF Desktop Communication Library>

<Copyright (c) 2005-2009 OpenNETCF Consulting, LLC>

<rapi>

<Copyright (c) 2004-2010 Willem Jan Hengeveld>

License Text (MIT License)

-----

<<

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

>>

Package(s) using OpenSSL Combined License

=====

\* <OpenSSL>

<Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)>

License Text (OpenSSL Combined License)

-----

<<LICENSE ISSUES

=====

The OpenSSL toolkit stays under a double license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit.

See below for the actual license texts.

OpenSSL License

-----

/\* =====

\* Copyright (c) 1998-2017 The OpenSSL Project. All rights reserved.  
\*  
\* Redistribution and use in source and binary forms, with or without  
\* modification, are permitted provided that the following conditions  
\* are met:  
\*  
\* 1. Redistributions of source code must retain the above copyright  
\* notice, this list of conditions and the following disclaimer.  
\*  
\* 2. Redistributions in binary form must reproduce the above copyright  
\* notice, this list of conditions and the following disclaimer in  
\* the documentation and/or other materials provided with the  
\* distribution.  
\*  
\* 3. All advertising materials mentioning features or use of this  
\* software must display the following acknowledgment:  
\* “This product includes software developed by the OpenSSL Project  
\* for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)”  
\*  
\* 4. The names “OpenSSL Toolkit” and “OpenSSL Project” must not be used to  
\* endorse or promote products derived from this software without  
\* prior written permission. For written permission, please contact  
\* [openssl-core@openssl.org](mailto:openssl-core@openssl.org).  
\*  
\* 5. Products derived from this software may not be called “OpenSSL”  
\* nor may “OpenSSL” appear in their names without prior written  
\* permission of the OpenSSL Project.  
\*  
\* 6. Redistributions of any form whatsoever must retain the following  
\* acknowledgment:  
\* “This product includes software developed by the OpenSSL Project  
\* for use in the OpenSSL Toolkit (<http://www.openssl.org/>)”  
\*  
\* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ` ` AS IS” AND ANY  
\* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO,  
THE

\* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

\* =====

\*

\* This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

\*

\*/

Original SSLeay License

-----

/\* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)

\* All rights reserved.

\*

\* This package is an SSL implementation written

\* by Eric Young (eay@cryptsoft.com).

\* The implementation was written so as to conform with Netscape's SSL.

\*

\* This library is free for commercial and non-commercial use as long as

\* the following conditions are adhered to. The following conditions

\* apply to all code found in this distribution, be it the RC4, RSA,

\* lhash, DES, etc., code; not just the SSL code. The SSL documentation

\* included with this distribution is covered by the same copyright terms

\* except that the holder is Tim Hudson (tjh@cryptsoft.com).

- \*
    - \* Copyright remains Eric Young's, and as such any Copyright notices in
    - \* the code are not to be removed.
    - \* If this package is used in a product, Eric Young should be given attribution
    - \* as the author of the parts of the library used.
    - \* This can be in the form of a textual message at program startup or
    - \* in documentation (online or textual) provided with the package.
    - \*
      - \* Redistribution and use in source and binary forms, with or without
      - \* modification, are permitted provided that the following conditions
      - \* are met:
        - \* 1. Redistributions of source code must retain the copyright
        - \* notice, this list of conditions and the following disclaimer.
        - \* 2. Redistributions in binary form must reproduce the above copyright
        - \* notice, this list of conditions and the following disclaimer in the
        - \* documentation and/or other materials provided with the distribution.
        - \* 3. All advertising materials mentioning features or use of this software
        - \* must display the following acknowledgment:
          - \* "This product includes cryptographic software written by
          - \* Eric Young (eay@cryptsoft.com)"
          - \* The word 'cryptographic' can be left out if the routines from the library
          - \* being used are not cryptographic related :-).
        - \* 4. If you include any Windows specific code (or a derivative thereof) from
        - \* the apps directory (application code) you must include an acknowledgment:
          - \* "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
- \* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
- \* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO,
- THE
- \* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A
- PARTICULAR PURPOSE
- \* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE
- LIABLE
- \* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
- CONSEQUENTIAL
- \* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
- SUBSTITUTE GOODS

\* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)  
\* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.  
\*

\* The licence and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution licence [including the GNU Public Licence.]  
\*/

>>

Package(s) using BSD 3-clause "New" or "Revised" License

=====

\* <external\_wpa\_suppliment>  
<wpa\_suppliment - IEEE 802.1X, WPA, WPA2, RSN, IEEE 802.11i>  
<Copyright (c) 2003-2008, Jouni Malinen <j@w1.fi> and contributors>  
License Text (BSD 3-clause "New" or "Revised" License)

-----

<<WPA Suppliment

=====

Copyright (c) 2003-2008, Jouni Malinen <j@w1.fi> and contributors  
All Rights Reserved.

This program is dual-licensed under both the GPL version 2 and BSD license. Either license may be used at your option.

License

-----

GPL v2:

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License version 2 as published by the Free Software Foundation.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of

MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA (this copy of the license is in COPYING file)  
Alternatively, this software may be distributed, used, and modified under the terms of BSD license:

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name(s) of the above-listed copyright holder(s) nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

>>

## Licenses of Third Party Software

=====

This product contains software provided by third parties, which may include the below listed components. The Honeywell product that includes this file does not necessarily use all of the third party software components referred to below.

.. contents::

### Package(s) using Public Domain

=====

\* <Blowfish Encryption Algorithm - Jim Conger>

<No copyright provided. Header info:

```
// blowfish.cpp C++ class implementation of the BLOWFISH encryption algorithm
```

```
// _THE BLOWFISH ENCRYPTION ALGORITHM_
```

```
// by Bruce Schneier
```

```
// Revised code--3/20/94
```

```
// Converted to C++ class 5/96, Jim Conger>
```

\* <Code Project - XFileDialog - Customizing CFileDialog>

<Copyright (c) 2001-2002 Paul S. Vickery>

\* <XListCtrl - A custom-draw list control with subitem formatting>

<No copyright provided. Header info:

```
// Author: Hans Dietrich
```

```
// hdietrich2@hotmail.com
```

```
//
```

```
// This code is based on "Outlook 98-Style FlatHeader Control"
```

```
// by Maarten Hoeben.
```

```
//
```

```
// See http://www.codeguru.com/listview/FlatHeader.shtml
```

```
//
```

```
// This software is released into the public domain.
```

```
// You are free to use it in any way you like.
```

```
//
```

```
// This software is provided "as is" with no expressed
```



```
// or implied warranty. I accept no liability for any
// damage or loss of business that this software may cause.>
```

License Text (Public Domain)

-----

<<

Public domain code is not subject to any license.

>>

Package(s) using Favorites Multiview license

=====

\* <Code Project - Favorites MultiView>

<No copyright provided. Header info:

THIS CODE AND INFORMATION IS PROVIDED 'AS IS' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE.

Author: Barretto VN 7/2001>

License Text (Favorites Multiview license)

-----

<<

THIS CODE AND INFORMATION IS PROVIDED 'AS IS' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE. Author: Barretto VN 7/2001

>>

Package(s) using Joerg Koenig License

=====

\* <CGTetris>

<Copyright (C) 1998 by J?g K?ig>

License Text (Joerg Koenig License)

-----

<<

// Copyright (C) 1998 by J?g K?ig // All rights reserved // // This file is part of the completely free tetris clone "CGTetris". // // This is free software. // You may redistribute it by any means providing it is not sold for profit // without the authors written consent. // // No warrantee of any kind, expressed or implied, is included with this // software; use at your own risk, responsibility for damages (if any) to // anyone resulting from the use of this software rests entirely with the // user. // // Send bug reports, bug fixes, enhancements, requests, flames, etc., and // I'll try to keep a version up to date. I can be reached as follows: // J.Koenig@adg.de (company site) // Joerg.Koenig@rhein-neckar.de (private site)

>>

Package(s) using Boost Software License - Version 1.0

=====

\* <Boost C++ Libraries>

<Copyright (c) 2001, 2002 Peter Dimov and Multi Media Ltd.>

License Text (Boost Software License - Version 1.0)

-----

<<

August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR

IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF  
MERCHANTABILITY,  
FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO  
EVENT  
SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE  
BE LIABLE  
FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR  
OTHERWISE,  
ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE  
OR OTHER  
DEALINGS IN THE SOFTWARE.  
>>

Package(s) using PJ Naughter Freeware License

=====

\* <Code Project - CFTPTransferDlg v1.0 - The FTP Protocol>  
<Copyright (c) 2000 by PJ Naughter>

\* <Code Project - CHookWnd v1.02>  
<Copyright (c) 1999 by PJ Naughter>

\* <Code Project - CHttpDownloadDlg v1.03>  
<Copyright (c) 1999 - 2000 by PJ Naughter>

License Text (PJ Naughter Freeware License)

-----

<<

PJ Naughter Freeware License

You are allowed to include the source code in any product (commercial, shareware,  
freeware or otherwise) when your product is released in binary form.

You are allowed to modify the source code in any way you want except you cannot  
modify the copyright details at the top of each module.

If you want to distribute source code with your application, then you are only  
allowed to distribute versions released by the author. This is to maintain a single  
distribution point for the source code.

>>

Package(s) using Code Project Open License 1.02

=====

\* <Code Project - Fancy controls>

<No copyright provided. Header info:

created: 2001/10/25

author: Massimo Colurcio

homepage: <http://www.softbor.com/developmentarea>

email: [m.colurcio@softbor.com](mailto:m.colurcio@softbor.com)>

\* <Code Project - Transparent group box>

<No copyright provided>

License Text (Code Project Open License 1.02)

-----

<<

The Code Project Open License (CPOL) 1.02

Preamble

This License governs Your use of the Work. This License is intended to allow developers to use the Source Code and Executable Files provided as part of the Work in any application in any form.

The main points subject to the terms of the License are:

Source Code and Executable Files can be used in commercial applications;

Source Code and Executable Files can be redistributed; and

Source Code can be modified to create derivative works.

No claim of suitability, guarantee, or any warranty whatsoever is provided. The software is provided "as-is".

The Article accompanying the Work may not be distributed or republished without the Author's consent

This License is entered between You, the individual or other entity reading or otherwise making use of the Work licensed pursuant to this License and the individual or other entity which offers the Work under the terms of this License ("Author").

## License

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CODE PROJECT OPEN LICENSE ("LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE OR COPYRIGHT LAW IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HEREIN, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. THE AUTHOR GRANTS YOU THE RIGHTS CONTAINED HEREIN IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS. IF YOU DO NOT AGREE TO ACCEPT AND BE BOUND BY THE TERMS OF THIS LICENSE, YOU CANNOT MAKE ANY USE OF THE WORK.

### Definitions.

"Articles" means, collectively, all articles written by Author which describes how the Source Code and Executable Files for the Work may be used by a user.

"Author" means the individual or entity that offers the Work under the terms of this License.

"Derivative Work" means a work based upon the Work or upon the Work and other pre-existing works.

"Executable Files" refer to the executables, binary files, configuration and any required data files included in the Work.

"Publisher" means the provider of the website, magazine, CD-ROM, DVD or other medium from or by which the Work is obtained by You.

"Source Code" refers to the collection of source code and configuration files used to create the Executable Files.

"Standard Version" refers to such a Work if it has not been modified, or has been modified in accordance with the consent of the Author, such consent being in the full discretion of the Author.

"Work" refers to the collection of files distributed by the Publisher, including the Source Code, Executable Files, binaries, data files, documentation, whitepapers and the Articles.

"You" is you, an individual or entity wishing to use the Work and exercise your rights under this License.

Fair Use/Fair Use Rights. Nothing in this License is intended to reduce, limit, or restrict any rights arising from fair use, fair dealing, first sale or other limitations on the exclusive rights of the copyright owner under copyright law or other applicable laws.

License Grant. Subject to the terms and conditions of this License, the Author hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated below:

You may use the standard version of the Source Code or Executable Files in Your own applications.

You may apply bug fixes, portability fixes and other modifications obtained from the Public Domain or from the Author. A Work modified in such a way shall still be considered the standard version and will be subject to this License.

You may otherwise modify Your copy of this Work (excluding the Articles) in any way to create a Derivative Work, provided that You insert a prominent notice in each changed file stating how, when and where You changed that file.

You may distribute the standard version of the Executable Files and Source Code or Derivative Work in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution.

The Articles discussing the Work published in any form by the author may not be distributed or republished without the Author's consent. The author retains copyright to any such Articles. You may use the Executable Files and Source Code pursuant to this License but you may not repost or republish or otherwise distribute or make available the Articles, without the prior written consent of the Author.

Any subroutines or modules supplied by You and linked into the Source Code or Executable Files this Work shall not be considered part of this Work and will not be subject to the terms of this License.

Patent License. Subject to the terms and conditions of this License, each Author hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, import, and otherwise transfer the Work.

Restrictions. The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:

You agree not to remove any of the original copyright, patent, trademark, and attribution notices and associated disclaimers that may appear in the Source Code or Executable Files.

You agree not to advertise or in any way imply that this Work is a product of Your own.

The name of the Author may not be used to endorse or promote products derived from the Work without the prior written consent of the Author.

You agree not to sell, lease, or rent any part of the Work. This does not restrict you from including the Work or any part of the Work inside a larger software distribution that itself is being sold. The Work by itself, though, cannot be sold, leased or rented.

You may distribute the Executable Files and Source Code only under the terms of this License, and You must include a copy of, or the Uniform Resource Identifier for, this License with every copy of the Executable Files or Source Code You distribute

and ensure that anyone receiving such Executable Files and Source Code agrees that the terms of this License apply to such Executable Files and/or Source Code. You may not offer or impose any terms on the Work that alter or restrict the terms of this License or the recipients' exercise of the rights granted hereunder. You may not sublicense the Work. You must keep intact all notices that refer to this License and to the disclaimer of warranties. You may not distribute the Executable Files or Source Code with any technological measures that control access or use of the Work in a manner inconsistent with the terms of this License.

You agree not to use the Work for illegal, immoral or improper purposes, or on pages containing illegal, immoral or improper material. The Work is subject to applicable export laws. You agree to comply with all such laws and regulations that may apply to the Work after Your receipt of the Work.

Representations, Warranties and Disclaimer. THIS WORK IS PROVIDED "AS IS", "WHERE IS" AND "AS AVAILABLE", WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS OR GUARANTEES. YOU, THE USER, ASSUME ALL RISK IN ITS USE, INCLUDING COPYRIGHT INFRINGEMENT, PATENT INFRINGEMENT, SUITABILITY, ETC. AUTHOR EXPRESSLY DISCLAIMS ALL EXPRESS, IMPLIED OR STATUTORY WARRANTIES OR CONDITIONS, INCLUDING WITHOUT LIMITATION, WARRANTIES OR CONDITIONS OF MERCHANTABILITY, MERCHANTABLE QUALITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF TITLE OR NON-INFRINGEMENT, OR THAT THE WORK (OR ANY PORTION THEREOF) IS CORRECT, USEFUL, BUG-FREE OR FREE OF VIRUSES. YOU MUST PASS THIS DISCLAIMER ON WHENEVER YOU DISTRIBUTE THE WORK OR DERIVATIVE WORKS.

Indemnity. You agree to defend, indemnify and hold harmless the Author and the Publisher from and against any claims, suits, losses, damages, liabilities, costs, and expenses (including reasonable legal or attorneys' fees) resulting from or relating to any use of the Work by You.

Limitation on Liability. EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL THE AUTHOR OR THE PUBLISHER BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK OR OTHERWISE, EVEN IF THE AUTHOR OR THE PUBLISHER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Termination.

This License and the rights granted hereunder will terminate automatically upon any breach by You of any term of this License. Individuals or entities who have received Derivative Works from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 6, 7, 8, 9, 10 and 11 will survive any termination of this License.

If You bring a copyright, trademark, patent or any other infringement claim against any contributor over infringements You claim are made by the Work, your License from such contributor to the Work ends automatically.

Subject to the above terms and conditions, this License is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, the Author reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License), and this License will continue in full force and effect unless terminated as stated above.

**Publisher.** The parties hereby confirm that the Publisher shall not, under any circumstances, be responsible for and shall not have any liability in respect of the subject matter of this License. The Publisher makes no warranty whatsoever in connection with the Work and shall not be liable to You or any party on any legal theory for any damages whatsoever, including without limitation any general, special, incidental or consequential damages arising in connection to this license. The Publisher reserves the right to cease making the Work available to You at any time without notice

#### Miscellaneous

This License shall be governed by the laws of the location of the head office of the Author or if the Author is an individual, the laws of location of the principal place of residence of the Author.

If any provision of this License is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this License, and without further action by the parties to this License, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.

This License constitutes the entire agreement between the parties with respect to the Work licensed herein. There are no understandings, agreements or representations with respect to the Work not specified herein. The Author shall not be bound by any additional provisions that may appear in any communication from You. This License may not be modified without the mutual written agreement of the Author and You.

>>

Package(s) using Independent JPEG Group License

=====

\* <libjpeg>

<Copyright (C) 1994-1996, Thomas G. Lane>

License Text (Independent JPEG Group License)

-----



<<

The Independent JPEG Group's JPEG software

libjpeg this software is based in part on the work of the Independent JPEG Group.

README for release 6b of 27-Mar-1998

=====

This distribution contains the sixth public release of the Independent JPEG Group's free JPEG software. You are welcome to redistribute this software and to use it for any purpose, subject to the conditions under LEGAL ISSUES, below.

Serious users of this software (particularly those incorporating it into larger programs) should contact IJG at jpeg-info@uunet.uu.net to be added to our electronic mailing list. Mailing list members are notified of updates and have a chance to participate in technical discussions, etc.

This software is the work of Tom Lane, Philip Gladstone, Jim Boucher, Lee Crocker, Julian Minguillon, Luis Ortiz, George Phillips, Davide Rossi, Guido Vollbeding, Ge' Weijers, and other members of the Independent JPEG Group.

IJG is not affiliated with the official ISO JPEG standards committee.

LEGAL ISSUES

=====

In plain English:

We don't promise that this software works. (But if you find any bugs, please let us know!)

You can use this software for whatever you want. You don't have to pay us.

You may not pretend that you wrote this software. If you use it in a program, you must acknowledge somewhere in your documentation that you've used the IJG code.

In legalese:

The authors make NO WARRANTY or representation, either express or implied, with respect to this software, its quality, accuracy, merchantability, or fitness for a particular purpose. This software is provided "AS IS", and you, its user, assume the entire risk as to its quality and accuracy.

This software is copyright (C) 1991-1998, Thomas G. Lane. All Rights Reserved except as specified below.

Permission is hereby granted to use, copy, modify, and distribute this software (or portions thereof) for any purpose, without fee, subject to these conditions:

(1) If any part of the source code for this software is distributed, then this README file must be included, with this copyright and no-warranty notice unaltered; and any additions, deletions, or changes to the original files must be clearly indicated in accompanying documentation.

(2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group".

(3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as "the Independent JPEG Group's software".

We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

ansi2knr.c is included in this distribution by permission of L. Peter Deutsch, sole proprietor of its copyright holder, Aladdin Enterprises of Menlo Park, CA. ansi2knr.c is NOT covered by the above copyright and conditions, but instead by the usual distribution terms of the Free Software Foundation; principally, that you must include source code if you redistribute it. (See the file ansi2knr.c for full details.) However, since ansi2knr.c is not needed as part of any program generated from the IJG code, this does not limit you more than the foregoing paragraphs do.

The Unix configuration script "configure" was produced with GNU Autoconf. It is copyright by the Free Software Foundation but is freely distributable. The same holds for its supporting scripts (config.guess, config.sub, ltconfig, ltmain.sh). Another support script, install-sh, is copyright by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.) So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

We are required to state that

"The Graphics Interchange Format(c) is the Copyright property of CompuServe Incorporated. GIF(sm) is a Service Mark property of CompuServe Incorporated."

>>

Package(s) using MIT License

=====

\* <Expat XML Parser>

<Copyright (c) 1998, 1999 Thai Open Source Software Center Ltd>

\* <Khronos Group - OpenMAX>

<Copyright (c) 2008 The Khronos Group Inc.>

License Text (MIT License)

-----

<<

The MIT License

Copyright (c) <year> <copyright holders>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy,

modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

>>

Package(s) using Mozilla Public License 1.1

=====

\* <pdf417>

<Copyright 2003-2005 by Paulo Soares>

License Text (Mozilla Public License 1.1)

-----

<<

MOZILLA PUBLIC LICENSE

Version 1.1

1. Definitions.

1.0.1. "Commercial Use" means distribution or otherwise making the Covered Code available to a third party.

1.1. "Contributor" means each entity that creates or contributes to the creation of Modifications.

1.2. "Contributor Version" means the combination of the Original Code, prior Modifications used by a Contributor, and the Modifications made by that particular Contributor.

1.3. "Covered Code" means the Original Code or Modifications or the combination of the Original Code and Modifications, in each case including portions thereof.

1.4. "Electronic Distribution Mechanism" means a mechanism generally accepted in the software development community for the electronic transfer of data.

1.5. "Executable" means Covered Code in any form other than Source Code.

1.6. "Initial Developer" means the individual or entity identified as the Initial Developer in the Source Code notice required by Exhibit A.

1.7. "Larger Work" means a work which combines Covered Code or portions thereof with code not governed by the terms of this License.

1.8. "License" means this document.

1.8.1. "Licensable" means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.

1.9. "Modifications" means any addition to or deletion from the substance or structure of either the Original Code or any previous Modifications. When Covered Code is released as a series of files, a Modification is:

A. Any addition to or deletion from the contents of a file containing Original Code or previous Modifications.

B. Any new file that contains any part of the Original Code or previous Modifications.

1.10. "Original Code" means Source Code of computer software code which is described in the Source Code notice required by Exhibit A as Original Code, and which, at the time of its release under this License is not already Covered Code governed by this License.

1.10.1. "Patent Claims" means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent Licensable by grantor.

1.11. "Source Code" means the preferred form of the Covered Code for making modifications to it, including all modules it contains, plus any associated interface definition files, scripts used to control compilation and installation of an

Executable, or source code differential comparisons against either the Original Code or another well known, available Covered Code of the Contributor's choice. The Source Code can be in a compressed or archival form, provided the appropriate decompression or de-archiving software is widely available for no charge.

1.12. "You" (or "Your") means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License or a future version of this License issued under Section 6.1. For legal entities, "You" includes any entity which controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

## 2. Source Code License.

2.1. The Initial Developer Grant. The Initial Developer hereby grants You a world-wide, royalty-free, non-exclusive license, subject to third party intellectual property claims:

(a) under intellectual property rights (other than patent or trademark) Licensable by Initial Developer to use, reproduce, modify, display, perform, sublicense and distribute the Original Code (or portions thereof) with or without Modifications, and/or as part of a Larger Work; and

(b) under Patents Claims infringed by the making, using or selling of Original Code, to make, have made, use, practice, sell, and offer for sale, and/or otherwise dispose of the Original Code (or portions thereof).

(c) the licenses granted in this Section 2.1(a) and (b) are effective on the date Initial Developer first distributes Original Code under the terms of this License.

(d) Notwithstanding Section 2.1(b) above, no patent license is granted: 1) for code that You delete from the Original Code; 2) separate from the Original Code; or 3) for infringements caused by: i) the modification of the Original Code or ii) the combination of the Original Code with other software or devices.

2.2. Contributor Grant. Subject to third party intellectual property claims, each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license

(a) under intellectual property rights (other than patent or trademark) Licensable by Contributor, to use, reproduce, modify, display, perform, sublicense and distribute the Modifications created by such Contributor (or portions thereof) either on an unmodified basis, with other Modifications, as Covered Code and/or as part of a Larger Work; and

(b) under Patent Claims infringed by the making, using, or selling of Modifications made by that Contributor either alone and/or in combination with its Contributor Version (or portions of such combination), to make, use, sell, offer for sale, have

made, and/or otherwise dispose of: 1) Modifications made by that Contributor (or portions thereof); and 2) the combination of Modifications made by that Contributor with its Contributor Version (or portions of such combination).

(c) the licenses granted in Sections 2.2(a) and 2.2(b) are effective on the date Contributor first makes Commercial Use of the Covered Code.

(d) Notwithstanding Section 2.2(b) above, no patent license is granted: 1) for any code that Contributor has deleted from the Contributor Version; 2) separate from the Contributor Version; 3) for infringements caused by: i) third party modifications of Contributor Version or ii) the combination of Modifications made by that Contributor with other software (except as part of the Contributor Version) or other devices; or 4) under Patent Claims infringed by Covered Code in the absence of Modifications made by that Contributor.

### 3. Distribution Obligations.

3.1. Application of License. The Modifications which You create or to which You contribute are governed by the terms of this License, including without limitation Section 2.2. The Source Code version of Covered Code may be distributed only under the terms of this License or a future version of this License released under Section 6.1, and You must include a copy of this License with every copy of the Source Code You distribute. You may not offer or impose any terms on any Source Code version that alters or restricts the applicable version of this License or the recipients' rights hereunder. However, You may include an additional document offering the additional rights described in Section 3.5.

3.2. Availability of Source Code. Any Modification which You create or to which You contribute must be made available in Source Code form under the terms of this License either on the same media as an Executable version or via an accepted Electronic Distribution Mechanism to anyone to whom you made an Executable version available; and if made available via Electronic Distribution Mechanism, must remain available for at least twelve (12) months after the date it initially became available, or at least six (6) months after a subsequent version of that particular Modification has been made available to such recipients. You are responsible for ensuring that the Source Code version remains available even if the Electronic Distribution Mechanism is maintained by a third party.

3.3. Description of Modifications. You must cause all Covered Code to which You contribute to contain a file documenting the changes You made to create that Covered Code and the date of any change. You must include a prominent statement that the Modification is derived, directly or indirectly, from Original Code provided by the Initial Developer and including the name of the Initial Developer in (a) the Source Code, and (b) in any notice in an Executable version or related documentation in which You describe the origin or ownership of the Covered Code.

### 3.4. Intellectual Property Matters

(a) Third Party Claims. If Contributor has knowledge that a license under a third party's intellectual property rights is required to exercise the rights granted by such Contributor under Sections 2.1 or 2.2, Contributor must include a text file with the Source Code distribution titled "LEGAL" which describes the claim and the party making the claim in sufficient detail that a recipient will know whom to contact. If Contributor obtains such knowledge after the Modification is made available as described in Section 3.2, Contributor shall promptly modify the LEGAL file in all copies Contributor makes available thereafter and shall take other steps (such as notifying appropriate mailing lists or newsgroups) reasonably calculated to inform those who received the Covered Code that new knowledge has been obtained.

(b) Contributor APIs. If Contributor's Modifications include an application programming interface and Contributor has knowledge of patent licenses which are reasonably necessary to implement that API, Contributor must also include this information in the LEGAL file.

#### (c) Representations.

Contributor represents that, except as disclosed pursuant to Section 3.4(a) above, Contributor believes that Contributor's Modifications are Contributor's original creation(s) and/or Contributor has sufficient rights to grant the rights conveyed by this License.

3.5. Required Notices. You must duplicate the notice in Exhibit A in each file of the Source Code. If it is not possible to put such notice in a particular Source Code file due to its structure, then You must include such notice in a location (such as a relevant directory) where a user would be likely to look for such a notice. If You created one or more Modification(s) You may add your name as a Contributor to the notice described in Exhibit A. You must also duplicate this License in any documentation for the Source Code where You describe recipients' rights or ownership rights relating to Covered Code. You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Code. However, You may do so only on Your own behalf, and not on behalf of the Initial Developer or any Contributor. You must make it absolutely clear that any such warranty, support, indemnity or liability obligation is offered by You alone, and You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of warranty, support, indemnity or liability terms You offer.

3.6. Distribution of Executable Versions. You may distribute Covered Code in Executable form only if the requirements of Section 3.1-3.5 have been met for that Covered Code, and if You include a notice stating that the Source Code version of the Covered Code is available under the terms of this License, including a



description of how and where You have fulfilled the obligations of Section 3.2. The notice must be conspicuously included in any notice in an Executable version, related documentation or collateral in which You describe recipients' rights relating to the Covered Code. You may distribute the Executable version of Covered Code or ownership rights under a license of Your choice, which may contain terms different from this License, provided that You are in compliance with the terms of this License and that the license for the Executable version does not attempt to limit or alter the recipient's rights in the Source Code version from the rights set forth in this License. If You distribute the Executable version under a different license You must make it absolutely clear that any terms which differ from this License are offered by You alone, not by the Initial Developer or any Contributor. You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of any such terms You offer.

3.7. Larger Works. You may create a Larger Work by combining Covered Code with other code not governed by the terms of this License and distribute the Larger Work as a single product. In such a case, You must make sure the requirements of this License are fulfilled for the Covered Code.

#### 4. Inability to Comply Due to Statute or Regulation.

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Code due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be included in the LEGAL file described in Section 3.4 and must be included with all distributions of the Source Code. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

#### 5. Application of this License.

This License applies to code to which the Initial Developer has attached the notice in Exhibit A and to related Covered Code.

#### 6. Versions of the License.

6.1. New Versions. Netscape Communications Corporation ("Netscape") may publish revised and/or new versions of the License from time to time. Each version will be given a distinguishing version number.

6.2. Effect of New Versions. Once Covered Code has been published under a particular version of the License, You may always continue to use it under the terms of that version. You may also choose to use such Covered Code under the terms of any subsequent version of the License published by Netscape. No one other than Netscape has the right to modify the terms applicable to Covered Code created under this License.

6.3. Derivative Works. If You create or use a modified version of this License (which you may only do in order to apply it to code which is not already Covered Code governed by this License), You must (a) rename Your license so that the phrases "Mozilla", "MOZILLAPL", "MOZPL", "Netscape", "MPL", "NPL" or any confusingly similar phrase do not appear in your license (except to note that your license differs from this License) and (b) otherwise make it clear that Your version of the license contains terms which differ from the Mozilla Public License and Netscape Public License. (Filling in the name of the Initial Developer, Original Code or Contributor in the notice described in Exhibit A shall not of themselves be deemed to be modifications of this License.)

7. DISCLAIMER OF WARRANTY. COVERED CODE IS PROVIDED UNDER THIS LICENSE ON AN "AS IS" BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES THAT THE COVERED CODE IS FREE OF DEFECTS, MERCHANTABILITY, FIT FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE COVERED CODE IS WITH YOU. SHOULD ANY COVERED CODE PROVE DEFECTIVE IN ANY RESPECT, YOU (NOT THE INITIAL DEVELOPER OR ANY OTHER CONTRIBUTOR) ASSUME THE COST OF ANY NECESSARY SERVICING, REPAIR OR CORRECTION. THIS DISCLAIMER OF WARRANTY CONSTITUTES AN ESSENTIAL PART OF THIS LICENSE. NO USE OF ANY COVERED CODE IS AUTHORIZED HEREUNDER EXCEPT UNDER THIS DISCLAIMER. 8. TERMINATION.

8.1. This License and the rights granted hereunder will terminate automatically if You fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. All sublicenses to the Covered Code which are properly granted shall survive any termination of this License. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.

8.2. If You initiate litigation by asserting a patent infringement claim (excluding declaratory judgment actions) against Initial Developer or a Contributor (the Initial Developer or Contributor against whom You file such action is referred to as "Participant") alleging that:

(a) such Participant's Contributor Version directly or indirectly infringes any patent, then any and all rights granted by such Participant to You under Sections 2.1 and/or 2.2 of this License shall, upon 60 days notice from Participant terminate prospectively, unless if within 60 days after receipt of notice You either: (i) agree in writing to pay Participant a mutually agreeable reasonable royalty for Your past and future use of Modifications made by such Participant, or (ii) withdraw Your litigation claim with respect to the Contributor Version against such Participant. If within 60 days of notice, a reasonable royalty and payment arrangement are not mutually agreed upon in writing by the parties or the litigation claim is not withdrawn, the rights granted by Participant to You under Sections 2.1 and/or 2.2 automatically terminate at the expiration of the 60 day notice period specified above.

(b) any software, hardware, or device, other than such Participant's Contributor Version, directly or indirectly infringes any patent, then any rights granted to You by such Participant under Sections 2.1(b) and 2.2(b) are revoked effective as of the date You first made, used, sold, distributed, or had made, Modifications made by that Participant.

8.3. If You assert a patent infringement claim against Participant alleging that such Participant's Contributor Version directly or indirectly infringes any patent where such claim is resolved (such as by license or settlement) prior to the initiation of patent infringement litigation, then the reasonable value of the licenses granted by such Participant under Sections 2.1 or 2.2 shall be taken into account in determining the amount or value of any payment or license.

8.4. In the event of termination under Sections 8.1 or 8.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or any distributor hereunder prior to termination shall survive termination.

9. LIMITATION OF LIABILITY. UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL YOU, THE INITIAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DISTRIBUTOR OF COVERED CODE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF SUCH PARTY SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION OF LIABILITY SHALL NOT APPLY TO LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM SUCH PARTY'S NEGLIGENCE TO THE EXTENT APPLICABLE LAW PROHIBITS SUCH LIMITATION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS EXCLUSION AND LIMITATION MAY NOT APPLY TO YOU. 10. U.S. GOVERNMENT END USERS.

The Covered Code is a "commercial item," as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of "commercial computer software" and "commercial computer software documentation," as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Code with only those rights set forth herein.

#### 11. MISCELLANEOUS.

This License represents the complete agreement concerning subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. This License shall be governed by California law provisions (except to the extent applicable law, if any, provides otherwise), excluding its conflict-of-law provisions. With respect to disputes in which at least one party is a citizen of, or an entity chartered or

registered to do business in the United States of America, any litigation relating to this License shall be subject to the jurisdiction of the Federal Courts of the Northern District of California, with venue lying in Santa Clara County, California, with the losing party responsible for costs, including without limitation, court costs and reasonable attorneys' fees and expenses. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not apply to this License.

## 12. RESPONSIBILITY FOR CLAIMS.

As between Initial Developer and the Contributors, each party is responsible for claims and damages arising, directly or indirectly, out of its utilization of rights under this License and You agree to work with Initial Developer and Contributors to distribute such responsibility on an equitable basis. Nothing herein is intended or shall be deemed to constitute any admission of liability.

## 13. MULTIPLE-LICENSED CODE.

Initial Developer may designate portions of the Covered Code as Multiple-Licensed. Multiple-Licensed means that the Initial Developer permits you to utilize portions of the Covered Code under Your choice of the MPL or the alternative licenses, if any, specified by the Initial Developer in the file described in Exhibit A.

### EXHIBIT A -Mozilla Public License.

The contents of this file are subject to the Mozilla Public License Version 1.1 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.mozilla.org/MPL/>

Software distributed under the License is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY KIND, either express or implied. See the License for the specific language governing rights and limitations under the License.

The Original Code is \_\_\_\_\_.

The Initial Developer of the Original Code is \_\_\_\_\_. Portions created by \_\_\_\_\_ are Copyright (C) \_\_\_\_\_. All Rights Reserved.

Contributor(s): \_\_\_\_\_.

Alternatively, the contents of this file may be used under the terms of the \_\_\_\_\_ license (the [\_\_\_\_\_] License), in which case the provisions of [\_\_\_\_\_] License are applicable instead of those above. If you wish to allow use of your version of this file only under the terms of the [\_\_\_\_\_] License and not to allow others to use your version of this file under the MPL, indicate your decision by deleting the provisions above and replace them with the notice and other provisions required by the [\_\_\_\_\_] License. If you do not delete the provisions above, a recipient may use your version of this file under either the MPL or the [\_\_\_\_\_] License."

[NOTE: The text of this Exhibit A may differ slightly from the text of the notices in the Source Code files of the Original Code. You should use the text of this Exhibit A rather than the text found in the Original Code Source Code for Your Modifications.]

>>

Package(s) using Sun License for J2SDK

=====

\* <Sun Java Platform Standard Edition SDK (J2SDK) (JDK)>

<Copyright 1999, 2000 Sun Microsystems, Inc. All Rights Reserved.>

License Text (Sun License for J2SDK)

-----

<<

Sun Microsystems, Inc. Binary Code License Agreement for the JAVATM 2 SOFTWARE DEVELOPMENT KIT (J2SDK), STANDARD EDITION, VERSION 1.4.2\_X

SUN MICROSYSTEMS, INC. ("SUN") IS WILLING TO LICENSE THE SOFTWARE IDENTIFIED BELOW TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT CAREFULLY. BY DOWNLOADING OR INSTALLING THIS SOFTWARE, YOU ACCEPT THE TERMS OF THE AGREEMENT. INDICATE ACCEPTANCE BY SELECTING THE "ACCEPT" BUTTON AT THE BOTTOM OF THE AGREEMENT. IF YOU ARE NOT WILLING TO BE BOUND BY ALL THE TERMS, SELECT THE "DECLINE" BUTTON AT THE BOTTOM OF THE AGREEMENT AND THE DOWNLOAD OR INSTALL PROCESS WILL NOT CONTINUE.

1. DEFINITIONS. "Software" means the identified above in binary form, any other machine readable materials (including, but not limited to, libraries, source files, header files, and data files), any updates or error corrections provided by Sun, and any user manuals, programming guides and other documentation provided to you by Sun under this Agreement. "Programs" mean Java applets and applications intended to run on the Java 2 Platform, Standard Edition (J2SETM platform) platform on Java-enabled general purpose desktop computers and servers.

2. LICENSE TO USE. Subject to the terms and conditions of this Agreement, including, but not limited to the Java Technology Restrictions of the Supplemental License Terms, Sun grants you a non-exclusive, non-transferable, limited license without license fees to reproduce and use internally Software complete and unmodified for the sole purpose of running Programs. Additional licenses for developers and/or publishers are granted in the Supplemental License Terms.

3. RESTRICTIONS. Software is confidential and copyrighted. Title to Software and all associated intellectual property rights is retained by Sun and/or its licensors. Unless enforcement is prohibited by applicable law, you may not modify, decompile, or reverse engineer Software. You acknowledge that Licensed Software is not designed or intended for use in the design, construction, operation or maintenance of any nuclear facility. Sun Microsystems, Inc. disclaims any express or implied warranty of fitness for such uses. No right, title or interest in or to any trademark, service mark, logo or trade name of Sun or its licensors is granted under this Agreement. Additional restrictions for developers and/or publishers licenses are set forth in the Supplemental License Terms.

4. LIMITED WARRANTY. Sun warrants to you that for a period of ninety (90) days from the date of purchase, as evidenced by a copy of the receipt, the media on which Software is furnished (if any) will be free of defects in materials and workmanship under normal use. Except for the foregoing, Software is provided "AS IS". Your exclusive remedy and Sun's entire liability under this limited warranty will be at Sun's option to replace Software media or refund the fee paid for Software. Any implied warranties on the Software are limited to 90 days. Some states do not allow limitations on duration of an implied warranty, so the above may not apply to you. This limited warranty gives you specific legal rights. You may have others, which vary from state to state.

5. DISCLAIMER OF WARRANTY. UNLESS SPECIFIED IN THIS AGREEMENT, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT THESE DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

6. LIMITATION OF LIABILITY. TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL SUN OR ITS LICENSORS BE LIABLE FOR ANY LOST REVENUE, PROFIT OR DATA, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE SOFTWARE, EVEN IF SUN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In no event will Sun's liability to you, whether in contract, tort (including negligence), or otherwise, exceed the amount paid by you for Software under this Agreement. The foregoing limitations will apply even if the above stated warranty fails of its essential purpose. Some states do not allow the exclusion of incidental or consequential damages, so some of the terms above may not be applicable to you.

7. SOFTWARE UPDATES FROM SUN. You acknowledge that at your request or consent optional features of the Software may download, install, and execute applets, applications, software extensions, and updated versions of the Software from Sun ("Software Updates"), which may require you to accept updated terms

and conditions for installation. If additional terms and conditions are not presented on installation, the Software Updates will be considered part of the Software and subject to the terms and conditions of the Agreement.

8. SOFTWARE FROM SOURCES OTHER THAN SUN. You acknowledge that, by your use of optional features of the Software and/or by requesting services that require use of the optional features of the Software, the Software may automatically download, install, and execute software applications from sources other than Sun ("Other Software"). Sun makes no representations of a relationship of any kind to licensors of Other Software. TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL SUN OR ITS LICENSORS BE LIABLE FOR ANY LOST REVENUE, PROFIT OR DATA, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE OTHER SOFTWARE, EVEN IF SUN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Some states do not allow the exclusion of incidental or consequential damages, so some of the terms above may not be applicable to you.

9. TERMINATION. This Agreement is effective until terminated. You may terminate this Agreement at any time by destroying all copies of Software. This Agreement will terminate immediately without notice from Sun if you fail to comply with any provision of this Agreement. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right. Upon Termination, you must destroy all copies of Software.

10. EXPORT REGULATIONS. All Software and technical data delivered under this Agreement are subject to US export control laws and may be subject to export or import regulations in other countries. You agree to comply strictly with all such laws and regulations and acknowledge that you have the responsibility to obtain such licenses to export, re-export, or import as may be required after delivery to you.

11. TRADEMARKS AND LOGOS. You acknowledge and agree as between you and Sun that Sun owns the SUN, SOLARIS, JAVA, JINI, FORTE, and iPLANET trademarks and all SUN, SOLARIS, JAVA, JINI, FORTE, and iPLANET-related trademarks, service marks, logos and other brand designations ("Sun Marks"), and you agree to comply with the Sun Trademark and Logo Usage Requirements currently located at <http://www.sun.com/policies/trademarks>. Any use you make of the Sun Marks inures to Sun's benefit.

12. U.S. GOVERNMENT RESTRICTED RIGHTS. If Software is being acquired by or on behalf of the U.S. Government or by a U.S. Government prime contractor or subcontractor (at any tier), then the Government's rights in Software and accompanying documentation will be only as set forth in this Agreement; this is in

accordance with 48 CFR 227.7201 through 227.7202-4 (for Department of Defense (DOD) acquisitions) and with 48 CFR 2.101 and 12.212 (for non-DOD acquisitions).

13. GOVERNING LAW. Any action related to this Agreement will be governed by California law and controlling U.S. federal law. No choice of law rules of any jurisdiction will apply.

14. SEVERABILITY. If any provision of this Agreement is held to be unenforceable, this Agreement will remain in effect with the provision omitted, unless omission would frustrate the intent of the parties, in which case this Agreement will immediately terminate.

15. INTEGRATION. This Agreement is the entire agreement between you and Sun relating to its subject matter. It supersedes all prior or contemporaneous oral or written communications, proposals, representations and warranties and prevails over any conflicting or additional terms of any quote, order, acknowledgment, or other communication between the parties relating to its subject matter during the term of this Agreement. No modification of this Agreement will be binding, unless in writing and signed by an authorized representative of each party.

#### SUPPLEMENTAL LICENSE TERMS

These Supplemental License Terms add to or modify the terms of the Binary Code License Agreement. Capitalized terms not defined in these Supplemental Terms shall have the same meanings ascribed to them in the Binary Code License Agreement. These Supplemental Terms shall supersede any inconsistent or conflicting terms in the Binary Code License Agreement, or in any license contained within the Software.

A. Software Internal Use and Development License Grant. Subject to the terms and conditions of this Agreement, including, but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce internally and use internally the Software complete and unmodified (unless otherwise specified in the applicable README file) for the purpose of designing, developing, and testing your Programs.

B. License to Distribute Software. Subject to the terms and conditions of this Agreement, including, but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute the Software, provided that (i) you distribute the Software complete and unmodified (unless otherwise specified in the applicable README file) and only bundled as part of, and for the sole purpose



of running, your Programs, (ii) the Programs add significant and primary functionality to the Software, (iii) you do not distribute additional software intended to replace any component(s) of the Software (unless otherwise specified in the applicable README file), (iv) you do not remove or alter any proprietary legends or notices contained in the Software, (v) you only distribute the Software subject to a license agreement that protects Sun's interests consistent with the terms contained in this Agreement, and (vi) you agree to defend and indemnify Sun and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software.

C. License to Distribute Redistributables. Subject to the terms and conditions of this Agreement, including but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute those files specifically identified as redistributable in the Software "README" file ("Redistributables") provided that: (i) you distribute the Redistributables complete and unmodified (unless otherwise specified in the applicable README file), and only bundled as part of Programs, (ii) you do not distribute additional software intended to supersede any component(s) of the Redistributables (unless otherwise specified in the applicable README file), (iii) you do not remove or alter any proprietary legends or notices contained in or on the Redistributables, (iv) you only distribute the Redistributables pursuant to a license agreement that protects Sun's interests consistent with the terms contained in the Agreement, (v) you agree to defend and indemnify Sun and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software.

D. Java Technology Restrictions. You may not modify the Java Platform Interface ("JPI", identified as classes contained within the "java" package or any subpackages of the "java" package), by creating additional classes within the JPI or otherwise causing the addition to or modification of the classes in the JPI. In the event that you create an additional class and associated API(s) which (i) extends the functionality of the Java platform, and (ii) is exposed to third party software developers for the purpose of developing additional software which invokes such additional API, you must promptly publish broadly an accurate specification for such API for free use by all developers. You may not create, or authorize your licensees to create, additional classes, interfaces, or subpackages that are in any way identified as "java", "javax", "sun" or similar convention as specified by Sun in any naming convention designation.

E. Distribution by Publishers. This section pertains to your distribution of the Software with your printed book or magazine (as those terms are commonly used in the industry) relating to Java technology ("Publication"). Subject to and conditioned upon your compliance with the restrictions and obligations contained

in the Agreement, in addition to the license granted in Paragraph 1 above, Sun hereby grants to you a non-exclusive, nontransferable limited right to reproduce complete and unmodified copies of the Software on electronic media (the "Media") for the sole purpose of inclusion and distribution with your Publication(s), subject to the following terms: (i) You may not distribute the Software on a stand-alone basis; it must be distributed with your Publication(s); (ii) You are responsible for downloading the Software from the applicable Sun web site; (iii) You must refer to the Software as Java™ 2 Software Development Kit, Standard Edition, Version 1.4.2; (iv) The Software must be reproduced in its entirety and without any modification whatsoever (including, without limitation, the Binary Code License and Supplemental License Terms accompanying the Software and proprietary rights notices contained in the Software); (v) The Media label shall include the following information: Copyright 2003, Sun Microsystems, Inc. All rights reserved. Use is subject to license terms. Sun, Sun Microsystems, the Sun logo, Solaris, Java, the Java Coffee Cup logo, J2SE, and all trademarks and logos based on Java are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries. This information must be placed on the Media label in such a manner as to only apply to the Sun Software; (vi) You must clearly identify the Software as Sun's product on the Media holder or Media label, and you may not state or imply that Sun is responsible for any third-party software contained on the Media; (vii) You may not include any third party software on the Media which is intended to be a replacement or substitute for the Software; (viii) You shall indemnify Sun for all damages arising from your failure to comply with the requirements of this Agreement. In addition, you shall defend, at your expense, any and all claims brought against Sun by third parties, and shall pay all damages awarded by a court of competent jurisdiction, or such settlement amount negotiated by you, arising out of or in connection with your use, reproduction or distribution of the Software and/or the Publication. Your obligation to provide indemnification under this section shall arise provided that Sun: (i) provides you prompt notice of the claim; (ii) gives you sole control of the defense and settlement of the claim; (iii) provides you, at your expense, with all available information, assistance and authority to defend; and (iv) has not compromised or settled such claim without your prior written consent; and (ix) You shall provide Sun with a written notice for each Publication; such notice shall include the following information: (1) title of Publication, (2) author(s), (3) date of Publication, and (4) ISBN or ISSN numbers. Such notice shall be sent to Sun Microsystems, Inc., 4150 Network Circle, M/S USCA12-110, Santa Clara, California 95054, U.S.A, Attention: Contracts Administration.

F. Source Code. Software may contain source code that, unless expressly licensed for other purposes, is provided solely for reference purposes pursuant to the terms of this Agreement. Source code may not be redistributed unless expressly provided for in this Agreement.

G. Third Party Code. Additional copyright notices and license terms applicable to portions of the Software are set forth in the THIRDPARTYLICENSEREADME.txt file. In addition to any terms and conditions of any third party opensource/freeware

license identified in the THIRDPARTYLICENSEREADME.txt file, the disclaimer of warranty and limitation of liability provisions in paragraphs 5 and 6 of the Binary Code License Agreement shall apply to all Software in this distribution.

For inquiries please contact: Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A.

(LFI#135955/Form ID#011801)

>>

Package(s) using XMessageBox License

=====

\* <XMessageBox - A reverse-engineered MessageBox()>

<No copyright provided. Header info:

// Author: Hans Dietrich

// hdietrich2@hotmail.com

//

// Description:

// XMessageBox.cpp implements XMessageBox(), a drop-in replacement for

// MessageBox() that includes custom checkboxes, custom buttons, custom

// icon, and more. For more information see

// <http://www.codeproject.com/dialog/xmessagebox.asp>>

>

License Text (XMessageBox License)

-----

<<

XMessageBox License

XMessageBox.cpp

Author: Hans Dietrich

hdietrich2@hotmail.com

Some parts of this software are from information in the Microsoft SDK.

This software is released into the public domain. You are free to use it in any way you like.

This software is provided "as is" with no expressed or implied warranty. I accept no liability for any damage or loss of business that this software may cause.

>>

Package(s) using zlib License

=====

\* <Irrlicht Engine - irrXML SDK>

<Copyright (C) 2002-2005 Nikolaus Gebhardt>

License Text (zlib License)

-----

<<

The zlib/libpng License

Copyright (c) <year> <copyright holders>

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

>>

License Text (aesGladman.txt)

-----

<<

The Irrlicht Engine may be compiled to provide support for AES encrypted files. The implementation used by Irrlicht is provided by Dr Brian Gladman. The license for these files (including AES, a PRNG, SHA, and other algorithms) is as follows

/\*

-----

Copyright (c) 2002, Dr Brian Gladman < >, Worcester, UK.  
All rights reserved.

#### LICENSE TERMS

The free distribution and use of this software in both source and binary form is allowed (with or without changes) provided that:

1. distributions of this source code include the above copyright notice, this list of conditions and the following disclaimer;
2. distributions in binary form include the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other associated materials;
3. the copyright holder's name is not used to endorse products built using this software without specific written permission.

ALTERNATIVELY, provided that this notice is retained in full, this product may be distributed under the terms of the GNU General Public License (GPL), in which case the provisions of the GPL apply INSTEAD OF those given above.

#### DISCLAIMER

This software is provided 'as is' with no explicit or implied warranties in respect of its properties, including, but not limited to, correctness

and/or fitness for purpose.

\*/

>>

License Text (bzip2-license.txt)

<<

This program, "bzip2", the associated library "libbzip2", and all documentation, are copyright (C) 1996-2007 Julian R Seward. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
3. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
4. The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY

DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Julian Seward, [jseward@bzip.org](mailto:jseward@bzip.org)  
bzip2/libbzip2 version 1.0.5 of 10 December 2007

>>

License Text (irrlight-license.txt)

-----

<<

Copyright (C) 2002-2012 Nikolaus Gebhardt

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Please note that the Irrlicht Engine is based in part on the work of the Independent JPEG Group, the zlib, libPng and aesGladman. This means that if you use

the Irrlicht Engine in your product, you must acknowledge somewhere in your documentation that you've used the IJPG code. It would also be nice to mention that you use the Irrlicht Engine, the zlib, libPng and aesGladman. See the corresponding license files for further informations. It is also possible to disable usage of those additional libraries by defines in the IrrCompileConfig.h header and recompiling the engine.

>>

License Text (jpglib-license.txt)

-----

<<

LEGAL ISSUES

=====

In plain English:

1. We don't promise that this software works. (But if you find any bugs, please let us know!)
2. You can use this software for whatever you want. You don't have to pay us.
3. You may not pretend that you wrote this software. If you use it in a program, you must acknowledge somewhere in your documentation that you've used the IJG code.

In legalese:

The authors make NO WARRANTY or representation, either express or implied, with respect to this software, its quality, accuracy, merchantability, or fitness for a particular purpose. This software is provided "AS IS", and you, its user, assume the entire risk as to its quality and accuracy.

This software is copyright (C) 1991-2012, Thomas G. Lane, Guido Vollbeding. All Rights Reserved except as specified below.

Permission is hereby granted to use, copy, modify, and distribute this software (or portions thereof) for any purpose, without fee, subject to these



conditions:

(1) If any part of the source code for this software is distributed, then this README file must be included, with this copyright and no-warranty notice unaltered; and any additions, deletions, or changes to the original files must be clearly indicated in accompanying documentation.

(2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group".

(3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as "the Independent JPEG Group's software".

We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

ansi2knr.c is included in this distribution by permission of L. Peter Deutsch, sole proprietor of its copyright holder, Aladdin Enterprises of Menlo Park, CA. ansi2knr.c is NOT covered by the above copyright and conditions, but instead by the usual distribution terms of the Free Software Foundation; principally, that you must include source code if you redistribute it. (See the file ansi2knr.c for full details.) However, since ansi2knr.c is not needed as part of any program generated from the IJG code, this does not limit you more than the foregoing paragraphs do.

The Unix configuration script "configure" was produced with GNU Autoconf.

It is copyright by the Free Software Foundation but is freely distributable. The same holds for its supporting scripts (config.guess, config.sub, ltmain.sh). Another support script, install-sh, is copyright by X Consortium but is also freely distributable.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

We are required to state that

"The Graphics Interchange Format(c) is the Copyright property of CompuServe Incorporated. GIF(sm) is a Service Mark property of CompuServe Incorporated."

>>

License Text (libpng-license.txt)

-----

<<

This copy of the libpng notices is provided for your convenience. In case of any discrepancy between this copy and the notices in the file png.h that is included in the libpng distribution, the latter shall prevail.

COPYRIGHT NOTICE, DISCLAIMER, and LICENSE:

If you modify libpng you may insert additional notices immediately following this sentence.

This code is released under the libpng license.

libpng versions 1.2.6, August 15, 2004, through 1.5.9, February 18, 2012, are Copyright (c) 2004, 2006-2011 Glenn Randers-Pehrson, and are distributed according to the same disclaimer and license as libpng-1.2.5 with the following individual added to the list of Contributing Authors

Cosmin Truta

libpng versions 1.0.7, July 1, 2000, through 1.2.5 - October 3, 2002, are Copyright (c) 2000-2002 Glenn Randers-Pehrson, and are distributed according to the same disclaimer and license as libpng-1.0.6 with the following individuals added to the list of Contributing Authors

Simon-Pierre Cadieux

Eric S. Raymond

Gilles Vollant

and with the following additions to the disclaimer:

There is no warranty against interference with your enjoyment of the library or against infringement. There is no warranty that our efforts or the library will fulfill any of your particular purposes or needs. This library is provided with all faults, and the entire risk of satisfactory quality, performance, accuracy, and effort is with the user.

libpng versions 0.97, January 1998, through 1.0.6, March 20, 2000, are Copyright (c) 1998, 1999 Glenn Randers-Pehrson, and are distributed according to the same disclaimer and license as libpng-0.96, with the following individuals added to the list of Contributing Authors:

Tom Lane

Glenn Randers-Pehrson

Willem van Schaik

libpng versions 0.89, June 1996, through 0.96, May 1997, are Copyright (c) 1996, 1997 Andreas Dilger  
Distributed according to the same disclaimer and license as libpng-0.88, with the following individuals added to the list of Contributing Authors:

John Bowler

Kevin Bracey  
Sam Bushell  
Magnus Holmgren  
Greg Roelofs  
Tom Tanner

libpng versions 0.5, May 1995, through 0.88, January 1996, are  
Copyright (c) 1995, 1996 Guy Eric Schalnat, Group 42, Inc.

For the purposes of this copyright and license, "Contributing Authors"  
is defined as the following set of individuals:

Andreas Dilger  
Dave Martindale  
Guy Eric Schalnat  
Paul Schmidt  
Tim Wegner

The PNG Reference Library is supplied "AS IS". The Contributing Authors  
and Group 42, Inc. disclaim all warranties, expressed or implied,  
including, without limitation, the warranties of merchantability and of  
fitness for any purpose. The Contributing Authors and Group 42, Inc.  
assume no liability for direct, indirect, incidental, special, exemplary,  
or consequential damages, which may result from the use of the PNG  
Reference Library, even if advised of the possibility of such damage.

Permission is hereby granted to use, copy, modify, and distribute this  
source code, or portions hereof, for any purpose, without fee, subject  
to the following restrictions:

1. The origin of this source code must not be misrepresented.
2. Altered versions must be plainly marked as such and must not  
be misrepresented as being the original source.
3. This Copyright notice may not be removed or altered from any

source or altered source distribution.

The Contributing Authors and Group 42, Inc. specifically permit, without fee, and encourage the use of this source code as a component to supporting the PNG file format in commercial products. If you use this source code in a product, acknowledgment is not required but would be appreciated.

A "png\_get\_copyright" function is available, for convenient use in "about" boxes and the like:

```
printf("%s",png_get_copyright(NULL));
```

Also, the PNG logo (in PNG format, of course) is supplied in the files "pngbar.png" and "pngbar.jpg (88x31) and "pngnow.png" (98x31).

Libpng is OSI Certified Open Source Software. OSI Certified Open Source is a certification mark of the Open Source Initiative.

Glenn Randers-Pehrson

glennrp at users.sourceforge.net

February 18, 2012

>>

## Licenses of Third Party Software

=====

This product contains software provided by third parties, which may include the below listed components. The Honeywell product that includes this file does not necessarily use all of the third party software components referred to below.

.. contents::

### Package(s) using OpenSSL Combined License

=====

\* <OpenSSL>

<Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)>

### License Text (OpenSSL Combined License)

-----

<<LICENSE ISSUES

=====

The OpenSSL toolkit stays under a double license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts.

### OpenSSL License

-----

/\* =====

\* Copyright (c) 1998-2017 The OpenSSL Project. All rights reserved.

\*

\* Redistribution and use in source and binary forms, with or without

\* modification, are permitted provided that the following conditions

\* are met:

\*

\* 1. Redistributions of source code must retain the above copyright

\* notice, this list of conditions and the following disclaimer.

- \*
  - \* 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
  - \*
    - \* 3. All advertising materials mentioning features or use of this software must display the following acknowledgment:
      - \* “This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)”
    - \* 4. The names “OpenSSL Toolkit” and “OpenSSL Project” must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact [openssl-core@openssl.org](mailto:openssl-core@openssl.org).
    - \* 5. Products derived from this software may not be called “OpenSSL” nor may “OpenSSL” appear in their names without prior written permission of the OpenSSL Project.
    - \* 6. Redistributions of any form whatsoever must retain the following acknowledgment:
      - \* “This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)”
- \* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,

\* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)  
\* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED  
\* OF THE POSSIBILITY OF SUCH DAMAGE.

\* =====

\*

\* This product includes cryptographic software written by Eric Young  
\* (eay@cryptsoft.com). This product includes software written by Tim  
\* Hudson (tjh@cryptsoft.com).

\*

\*/

Original SSLeay License

-----

/\* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)

\* All rights reserved.

\*

\* This package is an SSL implementation written

\* by Eric Young (eay@cryptsoft.com).

\* The implementation was written so as to conform with Netscapes SSL.

\*

\* This library is free for commercial and non-commercial use as long as

\* the following conditions are aheared to. The following conditions

\* apply to all code found in this distribution, be it the RC4, RSA,

\* lhash, DES, etc., code; not just the SSL code. The SSL documentation

\* included with this distribution is covered by the same copyright terms

\* except that the holder is Tim Hudson (tjh@cryptsoft.com).

\*

\* Copyright remains Eric Young's, and as such any Copyright notices in

\* the code are not to be removed.

\* If this package is used in a product, Eric Young should be given attribution

\* as the author of the parts of the library used.

\* This can be in the form of a textual message at program startup or

\* in documentation (online or textual) provided with the package.

\*

\* Redistribution and use in source and binary forms, with or without



- \* modification, are permitted provided that the following conditions
- \* are met:
- \* 1. Redistributions of source code must retain the copyright
- \* notice, this list of conditions and the following disclaimer.
- \* 2. Redistributions in binary form must reproduce the above copyright
- \* notice, this list of conditions and the following disclaimer in the
- \* documentation and/or other materials provided with the distribution.
- \* 3. All advertising materials mentioning features or use of this software
- \* must display the following acknowledgement:
- \* “This product includes cryptographic software written by
- \* Eric Young (eay@cryptsoft.com)”
- \* The word ‘cryptographic’ can be left out if the routines from the library
- \* being used are not cryptographic related :-).
- \* 4. If you include any Windows specific code (or a derivative thereof) from
- \* the apps directory (application code) you must include an acknowledgement:
- \* “This product includes software written by Tim Hudson (tjh@cryptsoft.com)”
- \*
- \* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS’’ AND
- \* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
- \* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A
- \* PARTICULAR PURPOSE
- \* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE
- \* LIABLE
- \* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
- \* CONSEQUENTIAL
- \* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
- \* SUBSTITUTE GOODS
- \* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
- \* INTERRUPTION)
- \* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
- \* CONTRACT, STRICT
- \* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN
- \* ANY WAY
- \* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
- \* OF
- \* SUCH DAMAGE.
- \*

```
* The licence and distribution terms for any publically available version or
* derivative of this code cannot be changed. i.e. this code cannot simply be
* copied and put under another distribution licence
* [including the GNU Public Licence.]
*/
>>
```

Package(s) using BSD 3-clause "New" or "Revised" License

=====

```
* <hostapd - IEEE 802.11 AP & IEEE 802.1X/WPA/WPA2/EAP/RADIUS
Authenticator>
```

```
<Copyright (c) 2003-2008, Jouni Malinen <j@w1.fi> and contributors>
```

```
* <wpa_supplicant - IEEE 802.1X, WPA, WPA2, RSN, IEEE 802.11i >
```

```
<Copyright (c) 2003-2008, Jouni Malinen <j@w1.fi> and contributors>
```

License Text (BSD 3-clause "New" or "Revised" License)

-----

=====

```
Copyright (c) 2003-2008, Jouni Malinen <j@w1.fi> and contributors
All Rights Reserved.
```

This program is dual-licensed under both the GPL version 2 and BSD license. Either license may be used at your option.

License

-----

GPL v2:

This program is free software; you can redistribute it and/or modify

it under the terms of the GNU General Public License version 2 as published by the Free Software Foundation.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

(this copy of the license is in COPYING file)

Alternatively, this software may be distributed, used, and modified under the terms of BSD license:

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name(s) of the above-listed copyright holder(s) nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS

“AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT

LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.  
>>

Package(s) using Microsoft Windows Driver Kit 7 License

=====

\* <Microsoft Windows Driver Kit - WDK>

<Copyright (C) Microsoft Corporation, 2000 - 2001.>

License Text (Microsoft Windows Driver Kit 7 License )

-----

=====

## MICROSOFT SOFTWARE LICENSE TERMS

### MICROSOFT WINDOWS DRIVER KIT

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft• updates,

- supplements,
- Internet-based services, and

- support services

for this software, unless other terms accompany those items. If so, those terms apply.

By using the software, you accept these terms. If you do not accept them, do not use the software. If you comply with these license terms, you have the rights below.

1. INSTALLATION AND USE RIGHTS. a. Installation and Use. One user may install and use any number of copies of the software on your devices to design, develop and test your programs.

b. Included Microsoft Programs. The software contains other Microsoft programs. In some cases, those programs and the license terms that apply to your use of them are addressed specifically in these license terms. For all other included Microsoft programs, these license terms govern your use.

c. Device Simulation Framework. One user may install and use any number of copies of the Device Simulation Framework on your devices for the sole purpose of testing the interoperability of your devices, drivers and firmware with Windows. For the avoidance of doubt, the Device Simulation Framework shall not be used for testing software you have designed and developed using a software development kit other than the Windows Driver Kit.

d. Third Party Programs. The software contains third party programs. These license terms as well as any license terms accompanying the third party program files apply to your use of them.

2. ADDITIONAL LICENSING REQUIREMENTS AND/OR USE RIGHTS. a.

Distributable Code. The software contains code that you are permitted to distribute in programs you develop if you comply with the terms below. i. Right to Use and Distribute. The code and text files listed below are “Distributable Code.”• REDIST.TXT Files. You may copy and distribute the object code form of code listed in REDIST.TXT files.

- Sample Code. You may modify, copy and distribute only in object code form the sample code found in the SRC directory of the Windows Driver Kit, except that you may also modify, copy, and distribute in source code form the sample code listed in the SAMPLES.TXT file.

- Third Party Distribution. You may permit distributors of your programs to copy and distribute the Distributable Code as part of those programs.

ii. Distribution Requirements. For any Distributable Code you distribute, you must• add significant primary functionality to it in your programs;

- require distributors and external end users to agree to terms that protect it at least as much as this agreement;

- display your valid copyright notice on your programs; and

- indemnify, defend, and hold harmless Microsoft from any claims, including attorneys' fees, related to the distribution or use of your programs.

iii. Distribution Restrictions. You may not • alter any copyright, trademark or patent notice in the Distributable Code;

- use Microsoft's trademarks in your programs' names or in a way that suggests your programs come from or are endorsed by Microsoft;
- distribute Distributable Code to run on a platform other than the Windows platform;
- include Distributable Code in malicious, deceptive or unlawful programs; or
- modify or distribute the source code of any Distributable Code so that any part of it becomes subject to an Excluded License. An Excluded License is one that requires, as a condition of use, modification or distribution, that • the code be disclosed or distributed in source code form; or
- others have the right to modify it.

3. Scope of License. The software is licensed, not sold. This agreement only gives you some rights to use the software. Microsoft reserves all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that only allow you to use it in certain ways. You may not • work around any technical limitations in the software;

- reverse engineer, decompile or disassemble the software, except and only to the extent that applicable law expressly permits, despite this limitation;
- make more copies of the software than specified in this agreement or allowed by applicable law, despite this limitation;
- publish the software for others to copy;
- rent, lease or lend the software;
- transfer the software or this agreement to any third party; or
- use the software for commercial software hosting services.

4. BACKUP COPY. You may make one backup copy of the software. You may use it only to reinstall the software.

5. DOCUMENTATION. Any person that has valid access to your computer or internal network may copy and use the documentation for your internal, reference purposes.

6. Export Restrictions. The software is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the software. These laws include restrictions on destinations, end users and end use. For additional information, see [www.microsoft.com/exporting](http://www.microsoft.com/exporting).

7. SUPPORT SERVICES. Because this software is “as is,” we may not provide support services for it.

8. Entire Agreement. This agreement, and the terms for supplements, updates, Internet-based services and support services that you use, are the entire agreement for the software and support services.

9. Applicable Law. a. United States. If you acquired the software in the United States, Washington state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where you live govern all other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.

b. Outside the United States. If you acquired the software in any other country, the laws of that country apply.

10. Legal Effect. This agreement describes certain legal rights. You may have other rights under the laws of your country. You may also have rights with respect to the party from whom you acquired the software. This agreement does not change your rights under the laws of your country if the laws of your country do not permit it to do so.

11. Disclaimer of Warranty. The software is licensed “as-is.” You bear the risk of using it. Microsoft gives no express warranties, guarantees or conditions. You may have additional consumer rights under your local laws which this agreement cannot change. To the extent permitted under your local laws, Microsoft excludes the implied warranties of merchantability, fitness for a particular purpose and non-infringement.

12. Limitation on and Exclusion of Remedies and Damages. You can recover from Microsoft and its suppliers only direct damages up to U.S. \$5.00. You cannot recover any other damages, including consequential, lost profits, special, indirect or incidental damages.

This limitation applies to• anything related to the software, services, content (including code) on third party Internet sites, or third party programs; and

- claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft knew or should have known about the possibility of the damages. The above limitation or exclusion may not apply to you because your country may not allow the exclusion or limitation of incidental, consequential or other damages.

Please note: As this software is distributed in Quebec, Canada, some of the clauses in this agreement are provided below in French.

Remarque : Ce logiciel étant distribué au Québec, Canada, certaines des clauses dans ce contrat sont fournies ci-dessous en français.

EXONÉRATION DE GARANTIE. Le logiciel visé par une licence est offert « tel quel ». Toute utilisation de ce logiciel est à votre seule risque et péril. Microsoft n'accorde aucune autre garantie expresse. Vous pouvez bénéficier de droits additionnels en vertu du droit local sur la protection des consommateurs, que ce contrat ne peut modifier. La ou elles sont permises par le droit locale, les garanties implicites de qualité marchande, d'adéquation à un usage particulier et d'absence de contrefaçon sont exclues.

LIMITATION DES DOMMAGES-INTÉRÊTS ET EXCLUSION DE RESPONSABILITÉ POUR LES DOMMAGES. Vous pouvez obtenir de Microsoft et de ses fournisseurs une indemnisation en cas de dommages directs uniquement à hauteur de 5,00 \$ US. Vous ne pouvez prétendre à aucune indemnisation pour les autres dommages, y compris les dommages spéciaux, indirects ou accessoires et pertes de bénéfices.

Cette limitation concerne :



- tout ce qui est relié au logiciel, aux services ou au contenu (y compris le code) figurant sur des sites Internet tiers ou dans des programmes tiers ; et
- les réclamations au titre de violation de contrat ou de garantie, ou au titre de responsabilité stricte, de négligence ou d'une autre faute dans la limite autorisée par la loi en vigueur.

Elle s'applique également, même si Microsoft connaissait ou devrait connaître l'éventualité d'un tel dommage. Si votre pays n'autorise pas l'exclusion ou la limitation de responsabilité pour les dommages indirects, accessoires ou de quelque nature que ce soit, il se peut que la limitation ou l'exclusion ci-dessus ne s'appliquera pas à votre égard.

**EFFET JURIDIQUE.** Le présent contrat décrit certains droits juridiques. Vous pourriez avoir d'autres droits prévus par les lois de votre pays. Le présent contrat ne modifie pas les droits que vous confèrent les lois de votre pays si celles-ci ne le permettent pas.

## Licenses of Third Party Software

=====

This product contains software provided by third parties, which may include the below listed components. The Honeywell product that includes this file does not necessarily use all of the third party software components referred to below.

.. contents::

=====

\* IAIK PKCS#11 Wrapper 1.3

Copyright (c) 2002 Graz University of Technology. All rights reserved.

License Text : Apache License v1.1

-----

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

The end-user documentation included with the redistribution, if any, must include the following acknowledgment:

"This product includes software developed by IAIK of Graz University of Technology."

Alternately, this acknowledgment may appear in the software itself, if and wherever such third-party acknowledgments normally appear.

The names "Graz University of Technology" and "IAIK of Graz University of Technology" must not be used to endorse or promote products derived from this software without prior written permission.

Products derived from this software may not be called "IAIK PKCS Wrapper", nor may "IAIK" appear in their name, without prior written permission of Graz University of Technology.

THIS SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE

DISCLAIMED. IN NO EVENT SHALL THE LICENSOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====

\* Java Platform Standard Edition SDK (J2SDK) (JDK) 8u121

Copyright 1996-2000 Sun Microsystems, Inc. All Rights Reserved.

License Text : Oracle Binary Code License Agreement for the Java SE Platform Products and JavaFX

-----

ORACLE AMERICA, INC. ("ORACLE"), FOR AND ON BEHALF OF ITSELF AND ITS SUBSIDIARIES AND AFFILIATES UNDER COMMON CONTROL, IS WILLING TO LICENSE THE SOFTWARE TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT CAREFULLY. BY SELECTING THE "ACCEPT LICENSE AGREEMENT" (OR THE EQUIVALENT) BUTTON AND/OR BY USING THE SOFTWARE YOU ACKNOWLEDGE THAT YOU HAVE READ THE TERMS AND AGREE TO THEM. IF YOU ARE AGREEING TO THESE TERMS ON BEHALF OF A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT THAT YOU HAVE THE LEGAL AUTHORITY TO BIND THE LEGAL ENTITY TO THESE TERMS. IF YOU DO NOT HAVE SUCH AUTHORITY, OR IF YOU DO NOT WISH TO BE BOUND BY THE TERMS, THEN SELECT THE "DECLINE LICENSE AGREEMENT" (OR THE EQUIVALENT) BUTTON AND YOU MUST NOT USE THE SOFTWARE ON THIS SITE OR ANY OTHER MEDIA ON WHICH THE SOFTWARE IS CONTAINED.

1. DEFINITIONS. "Software" means the software identified above in binary form that you selected for download, install or use (in the version You selected for download, install or use) from Oracle or its authorized licensees, any other machine readable materials (including, but not limited to, libraries, source files, header files, and data files), any updates or error corrections provided by Oracle, and any user manuals, programming guides and other documentation provided to you by Oracle under this Agreement. "General Purpose Desktop Computers and Servers" means computers, including desktop and laptop computers, or servers, used for general computing functions under end user control (such as but not specifically limited to email, general purpose Internet browsing, and office suite productivity tools). The use of Software in systems and solutions that provide dedicated functionality (other than as mentioned above) or designed for use in

embedded or function-specific software applications, for example but not limited to: Software embedded in or bundled with industrial control systems, wireless mobile telephones, wireless handheld devices, kiosks, TV/STB, Blu-ray Disc devices, telematics and network control switching equipment, printers and storage management systems, and other related systems are excluded from this definition and not licensed under this Agreement. "Programs" means (a) Java technology applets and applications intended to run on the Java Platform, Standard Edition platform on Java-enabled General Purpose Desktop Computers and Servers; and (b) JavaFX technology applications intended to run on the JavaFX Runtime on JavaFX-enabled General Purpose Desktop Computers and Servers. "Commercial Features" means those features identified in Table 1-1 (Commercial Features In Java SE Product Editions) of the Java SE documentation accessible at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>. "README File" means the README file for the Software accessible at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>.

2. LICENSE TO USE. Subject to the terms and conditions of this Agreement including, but not limited to, the Java Technology Restrictions of the Supplemental License Terms, Oracle grants you a non-exclusive, non-transferable, limited license without license fees to reproduce and use internally the Software complete and unmodified for the sole purpose of running Programs. THE LICENSE SET FORTH IN THIS SECTION 2 DOES NOT EXTEND TO THE COMMERCIAL FEATURES. YOUR RIGHTS AND OBLIGATIONS RELATED TO THE COMMERCIAL FEATURES ARE AS SET FORTH IN THE SUPPLEMENTAL TERMS ALONG WITH ADDITIONAL LICENSES FOR DEVELOPERS AND PUBLISHERS.

3. RESTRICTIONS. Software is copyrighted. Title to Software and all associated intellectual property rights is retained by Oracle and/or its licensors. Unless enforcement is prohibited by applicable law, you may not modify, decompile, or reverse engineer Software. You acknowledge that the Software is developed for general use in a variety of information management applications; it is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use the Software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle disclaims any express or implied warranty of fitness for such uses. No right, title or interest in or to any trademark, service mark, logo or trade name of Oracle or its licensors is granted under this Agreement. Additional restrictions for developers and/or publishers licenses are set forth in the Supplemental License Terms.

4. DISCLAIMER OF WARRANTY. THE SOFTWARE IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. ORACLE FURTHER DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT.

5. LIMITATION OF LIABILITY. IN NO EVENT SHALL ORACLE BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, OR DAMAGES FOR LOSS OF PROFITS, REVENUE, DATA OR DATA USE, INCURRED BY YOU OR ANY THIRD PARTY, WHETHER IN AN ACTION IN CONTRACT OR TORT, EVEN IF ORACLE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. ORACLE'S ENTIRE LIABILITY FOR DAMAGES HEREUNDER SHALL IN NO EVENT EXCEED ONE THOUSAND DOLLARS (U.S. \$1,000).

6. TERMINATION. This Agreement is effective until terminated. You may terminate this Agreement at any time by destroying all copies of Software. This Agreement will terminate immediately without notice from Oracle if you fail to comply with any provision of this Agreement. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right. Upon termination, you must destroy all copies of Software.

7. EXPORT REGULATIONS. You agree that U.S. export control laws and other applicable export and import laws govern your use of the Software, including technical data; additional information can be found on Oracle's Global Trade Compliance web site (<http://www.oracle.com/us/products/export>). You agree that neither the Software nor any direct product thereof will be exported, directly, or indirectly, in violation of these laws, or will be used for any purpose prohibited by these laws including, without limitation, nuclear, chemical, or biological weapons proliferation.

8. TRADEMARKS AND LOGOS. You acknowledge and agree as between you and Oracle that Oracle owns the ORACLE and JAVA trademarks and all ORACLE- and JAVA-related trademarks, service marks, logos and other brand designations ("Oracle Marks"), and you agree to comply with the Third Party Usage Guidelines for Oracle Trademarks currently located at <http://www.oracle.com/us/legal/third-party-trademarks/index.html> . Any use you make of the Oracle Marks inures to Oracle's benefit.

9. U.S. GOVERNMENT LICENSE RIGHTS. If Software is being acquired by or on behalf of the U.S. Government or by a U.S. Government prime contractor or subcontractor (at any tier), then the Government's rights in Software and accompanying documentation shall be only those set forth in this Agreement.

10. GOVERNING LAW. This agreement is governed by the substantive and procedural laws of California. You and Oracle agree to submit to the exclusive jurisdiction of, and venue in, the courts of San Francisco, or Santa Clara counties in California in any dispute arising out of or relating to this agreement.

11. SEVERABILITY. If any provision of this Agreement is held to be unenforceable, this Agreement will remain in effect with the provision omitted, unless omission would frustrate the intent of the parties, in which case this Agreement will immediately terminate.

12. INTEGRATION. This Agreement is the entire agreement between you and Oracle relating to its subject matter. It supersedes all prior or contemporaneous oral or written communications, proposals, representations and warranties and prevails over any conflicting or additional terms of any quote, order, acknowledgment, or other communication between the parties relating to its subject matter during the term of this Agreement. No modification of this Agreement will be binding, unless in writing and signed by an authorized representative of each party.

## SUPPLEMENTAL LICENSE TERMS

These Supplemental License Terms add to or modify the terms of the Binary Code License Agreement. Capitalized terms not defined in these Supplemental Terms shall have the same meanings ascribed to them in the Binary Code License Agreement. These Supplemental Terms shall supersede any inconsistent or conflicting terms in the Binary Code License Agreement, or in any license contained within the Software.

A. COMMERCIAL FEATURES. You may not use the Commercial Features for running Programs, Java applets or applications in your internal business operations or for any commercial or production purpose, or for any purpose other than as set forth in Sections B, C, D and E of these Supplemental Terms. If You want to use the Commercial Features for any purpose other than as permitted in this Agreement, You must obtain a separate license from Oracle.

B. SOFTWARE INTERNAL USE FOR DEVELOPMENT LICENSE GRANT. Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the README File incorporated herein by reference, including, but not limited to the Java Technology Restrictions of these Supplemental Terms, Oracle grants you a non-exclusive, non-transferable, limited license without fees to reproduce internally and use internally the Software complete and unmodified for the purpose of designing, developing, and testing your Programs.

C. LICENSE TO DISTRIBUTE SOFTWARE. Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the README File, including, but not limited to the Java Technology Restrictions and Limitations on Redistribution of these Supplemental Terms, Oracle grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute the Software, provided that (i) you distribute the Software complete and unmodified and only bundled as part of, and for the sole purpose of running, your Programs, (ii)

the Programs add significant and primary functionality to the Software, (iii) you do not distribute additional software intended to replace any component(s) of the Software, (iv) you do not remove or alter any proprietary legends or notices contained in the Software, (v) you only distribute the Software subject to a license agreement that: (a) is a complete, unmodified reproduction of this Agreement; or (b) protects Oracle's interests consistent with the terms contained in this Agreement and that includes the notice set forth in Section H, and (vi) you agree to defend and indemnify Oracle and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software. The license set forth in this Section C does not extend to the Software identified in Section G.

D. LICENSE TO DISTRIBUTE REDISTRIBUTABLES. Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the README File, including but not limited to the Java Technology Restrictions and Limitations on Redistribution of these Supplemental Terms, Oracle grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute those files specifically identified as redistributable in the README File ("Redistributables") provided that: (i) you distribute the Redistributables complete and unmodified, and only bundled as part of Programs, (ii) the Programs add significant and primary functionality to the Redistributables, (iii) you do not distribute additional software intended to supersede any component(s) of the Redistributables (unless otherwise specified in the applicable README File), (iv) you do not remove or alter any proprietary legends or notices contained in or on the Redistributables, (v) you only distribute the Redistributables pursuant to a license agreement that: (a) is a complete, unmodified reproduction of this Agreement; or (b) protects Oracle's interests consistent with the terms contained in the Agreement and includes the notice set forth in Section H, (vi) you agree to defend and indemnify Oracle and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software. The license set forth in this Section D does not extend to the Software identified in Section G.

E. DISTRIBUTION BY PUBLISHERS. This section pertains to your distribution of the Java™ SE Development Kit Software ("JDK") with your printed book or magazine (as those terms are commonly used in the industry) relating to Java technology ("Publication"). Subject to and conditioned upon your compliance with the restrictions and obligations contained in the Agreement, Oracle hereby grants to you a non-exclusive, nontransferable limited right to reproduce complete and unmodified copies of the JDK on electronic media (the "Media") for the sole purpose of inclusion and distribution with your Publication(s), subject to the following terms: (i) You may not distribute the JDK on a stand-alone basis; it must be distributed with your Publication(s); (ii) You are responsible for downloading the JDK from the applicable Oracle web site; (iii) You must refer to the JDK as Java™

SE Development Kit; (iv) The JDK must be reproduced in its entirety and without any modification whatsoever (including with respect to all proprietary notices) and distributed with your Publication subject to a license agreement that is a complete, unmodified reproduction of this Agreement; (v) The Media label shall include the following information: "Copyright [YEAR], Oracle America, Inc. All rights reserved. Use is subject to license terms. ORACLE and JAVA trademarks and all ORACLE- and JAVA-related trademarks, service marks, logos and other brand designations are trademarks or registered trademarks of Oracle in the U.S. and other countries." [YEAR] is the year of Oracle's release of the Software; the year information can typically be found in the Software's "About" box or screen. This information must be placed on the Media label in such a manner as to only apply to the JDK; (vi) You must clearly identify the JDK as Oracle's product on the Media holder or Media label, and you may not state or imply that Oracle is responsible for any third-party software contained on the Media; (vii) You may not include any third party software on the Media which is intended to be a replacement or substitute for the JDK; (viii) You agree to defend and indemnify Oracle and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of the JDK and/or the Publication; ; and (ix) You shall provide Oracle with a written notice for each Publication; such notice shall include the following information: (1) title of Publication, (2) author(s), (3) date of Publication, and (4) ISBN or ISSN numbers. Such notice shall be sent to Oracle America, Inc., 500 Oracle Parkway, Redwood Shores, California 94065 U.S.A , Attention: General Counsel.

F. JAVA TECHNOLOGY RESTRICTIONS. You may not create, modify, or change the behavior of, or authorize your licensees to create, modify, or change the behavior of, classes, interfaces, or subpackages that are in any way identified as "java", "javax", "sun", "oracle" or similar convention as specified by Oracle in any naming convention designation.

G. LIMITATIONS ON REDISTRIBUTION. You may not redistribute or otherwise transfer patches, bug fixes or updates made available by Oracle through Oracle Premier Support, including those made available under Oracle's Java SE Support program.

H. COMMERCIAL FEATURES NOTICE. For purpose of complying with Supplemental Term Section C.(v)(b) and D.(v)(b), your license agreement shall include the following notice, where the notice is displayed in a manner that anyone using the Software will see the notice:

Use of the Commercial Features for any commercial or production purpose requires a separate license from Oracle. "Commercial Features" means those features identified Table 1-1 (Commercial Features In Java SE Product Editions) of the Java SE documentation accessible at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>



I. SOURCE CODE. Software may contain source code that, unless expressly licensed for other purposes, is provided solely for reference purposes pursuant to the terms of this Agreement. Source code may not be redistributed unless expressly provided for in this Agreement.

J. THIRD PARTY CODE. Additional copyright notices and license terms applicable to portions of the Software are set forth in the THIRDPARTYLICENSEREADME file accessible at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>. In addition to any terms and conditions of any third party opensource/freeware license identified in the THIRDPARTYLICENSEREADME file, the disclaimer of warranty and limitation of liability provisions in paragraphs 4 and 5 of the Binary Code License Agreement shall apply to all Software in this distribution.

K. TERMINATION FOR INFRINGEMENT. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right.

L. INSTALLATION AND AUTO-UPDATE. The Software's installation and auto-update processes transmit a limited amount of data to Oracle (or its service provider) about those specific processes to help Oracle understand and optimize them. Oracle does not associate the data with personally identifiable information. You can find more information about the data Oracle collects as a result of your Software download at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>.

For inquiries please contact: Oracle America, Inc., 500 Oracle Parkway,

Redwood Shores, California 94065, USA.

Last updated 02 April 2013

=====

\* DirectShow Sample Camera Application for WEC7&WEC2013  
DShowTest\_WEC2013

Copyright (c) Microsoft Corporation. All rights reserved.

\* USB Camera Driver for Windows Embedded Compact 2013&WEC 7  
USBCameraWEC2013

Copyright (c) Microsoft Corporation. All rights reserved.

\* GumstixIII SDK 1.1

Copyright (c) Microsoft Corporation. All rights reserved.

\* Exploring VMR Features on WEC7 2011-10-28

Copyright (c) Microsoft Corporation. All rights reserved.

License Text : Microsoft Public License (Ms-PL)

-----

This license governs use of the accompanying software. If you use the software, you accept this license. If you do not accept the license, do not use the software.

## 1. Definitions

The terms "reproduce," "reproduction," "derivative works," and "distribution" have the same meaning here as under U.S. copyright law.

A "contribution" is the original software, or any additions or changes to the software.

A "contributor" is any person that distributes its contribution under this license.

"Licensed patents" are a contributor's patent claims that read directly on its contribution.

## 2. Grant of Rights

(A) Copyright Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free copyright license to reproduce its contribution, prepare derivative works of its contribution, and distribute its contribution or any derivative works that you create.

(B) Patent Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free license under its licensed patents to make, have made, use, sell, offer for sale, import, and/or otherwise dispose of its contribution in the software or derivative works of the contribution in the software.

### 3. Conditions and Limitations

(A) No Trademark License- This license does not grant you rights to use any contributors' name, logo, or trademarks.

(B) If you bring a patent claim against any contributor over patents that you claim are infringed by the software, your patent license from such contributor to the software ends automatically.

(C) If you distribute any portion of the software, you must retain all copyright, patent, trademark, and attribution notices that are present in the software.

(D) If you distribute any portion of the software in source code form, you may do so only under this license by including a complete copy of this license with your distribution. If you distribute any portion of the software in compiled or object code form, you may only do so under a license that complies with this license.

(E) The software is licensed "as-is." You bear the risk of using it. The contributors give no express warranties, guarantees or conditions. You may have additional consumer rights under your local laws which this license cannot change. To the extent permitted under your local laws, the contributors exclude the implied warranties of merchantability, fitness for a particular purpose and non-infringement.

=====

\* libjpeg 1

Copyright (C) 1994-1996, Thomas G. Lane.

License Text : Independent JPEG Group License

-----

Permission is hereby granted to use, copy, modify, and distribute this software (or portions thereof) for any purpose, without fee, subject to these conditions:

(1) If any part of the source code for this software is distributed, then this README file must be included, with this copyright and no-warranty notice unaltered; and any additions, deletions, or changes to the original files must be clearly indicated in accompanying documentation.

(2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group".

(3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as "the Independent JPEG Group's software".

We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

- ITC\_JPEG.h

Copyright (c) 2002-\$Date:: 02 Apr 2003 \$

License Text : Lesser General Public License v2.1 or later

-----

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom

to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU

General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

#### TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)



These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it,

under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the

object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to

give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any

particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER

PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.  
END OF TERMS AND CONDITIONS

=====

\* Java RCX API pre-alpha-1

Copyright (c) 2002 Graz University of Technology. All rights reserved.

License Text : Q Public License 1.0

-----

Copyright (C) 1999 Trolltech AS, Norway.

Everyone is permitted to copy and distribute this license document.

The intent of this license is to establish freedom to share and change the software regulated by this license under the open source model.

This license applies to any software containing a notice placed by the copyright holder saying that it may be distributed under the terms of the Q Public License version 1.0. Such software is herein referred to as the Software. This license covers modification and distribution of the Software, use of third-party application programs based on the Software, and development of free software which uses the Software.

#### Granted Rights

1. You are granted the non-exclusive rights set forth in this license provided you agree to and comply with any and all conditions in this license. Whole or partial distribution of the Software, or software items that link with the Software, in any form signifies acceptance of this license.
2. You may copy and distribute the Software in unmodified form provided that the entire package, including - but not restricted to - copyright, trademark notices and disclaimers, as released by the initial developer of the Software, is distributed.
3. You may make modifications to the Software and distribute your modifications, in a form that is separate from the Software, such as patches. The following restrictions apply to modifications:
  - a. Modifications must not alter or remove any copyright notices in the Software.



b. When modifications to the Software are released under this license, a non-exclusive royalty-free right is granted to the initial developer of the Software to distribute your modification in future versions of the Software provided such versions remain available under these terms in addition to any other license(s) of the initial developer.

4. You may distribute machine-executable forms of the Software or machine-executable forms of modified versions of the Software, provided that you meet these restrictions:

a. You must include this license document in the distribution.

b. You must ensure that all recipients of the machine-executable forms are also able to receive the complete machine-readable source code to the distributed Software, including all modifications, without any charge beyond the costs of data transfer, and place prominent notices in the distribution explaining this.

c. You must ensure that all modifications included in the machine-executable forms are available under the terms of this license.

5. You may use the original or modified versions of the Software to compile, link and run application programs legally developed by you or by others.

6. You may develop application programs, reusable components and other software items that link with the original or modified versions of the Software. These items, when distributed, are subject to the following requirements:

a. You must ensure that all recipients of machine-executable forms of these items are also able to receive and use the complete machine-readable source code to the items without any charge beyond the costs of data transfer.

b. You must explicitly license all recipients of your items to use and re-distribute original and modified versions of the items in both machine-executable and source code forms. The recipients must be able to do so without any charges whatsoever, and they must be able to re-distribute to anyone they choose.

c. If the items are not available to the general public, and the initial developer of the Software requests a copy of the items, then you must supply one.

Limitations of Liability

In no event shall the initial developers or copyright holders be liable for any damages whatsoever, including - but not restricted to - lost revenue or profits or other direct, indirect, special, incidental or consequential damages, even if they have been advised of the possibility of such damages, except to the extent invariable law, if any, provides otherwise.

#### No Warranty

The Software and this license document are provided AS IS with NO WARRANTY OF ANY KIND, INCLUDING THE WARRANTY OF DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

#### Choice of Law

This license is governed by the Laws of Norway. Disputes shall be settled by Oslo City Court.

=====

\* jquery - jquery/jquery 3.0.0

Copyright jQuery Foundation and other contributors

License Text : MIT

-----

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND

NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE  
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN  
ACTION  
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN  
CONNECTION  
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

=====

\* WOSH Framework - Wide Open Smart Home 2009-10-31

Copyright (c) 2007-2011, WOSH - Wide Open Smart Home by Alessandro Polo -  
OpenSmartHome.com

License Text : Common Public Attribution License 1.0

-----

#### 1."Definitions"

1.0.1"Commercial Use" means distribution or otherwise making the Covered Code available to a third party.

1.1"Contributor" means each entity that creates or contributes to the creation of Modifications.

1.2"Contributor Version" means the combination of the Original Code, prior Modifications used by a Contributor, and the Modifications made by that particular Contributor.

1.3"Covered Code" means the Original Code or Modifications or the combination of the Original Code and Modifications, in each case including portions thereof.

1.4"Electronic Distribution Mechanism" means a mechanism generally accepted in the software development community for the electronic transfer of data.

1.5"Executable" means Covered Code in any form other than Source Code.

1.6"Initial Developer" means the individual or entity identified as the Initial Developer in the Source Code notice required by Exhibit A.

1.7"Larger Work" means a work which combines Covered Code or portions thereof with code not governed by the terms of this License.

1.8"License" means this document.

1.8.1"Licensable" means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.

1.9 "Modifications" means any addition to or deletion from the substance or structure of either the Original Code or any previous Modifications. When Covered Code is released as a series of files, a Modification is:

A. Any addition to or deletion from the contents of a file containing Original Code or previous Modifications.

B. Any new file that contains any part of the Original Code or previous Modifications.

1.10 "Original Code" means Source Code of computer software code which is described in the Source Code notice required by Exhibit A as Original Code, and which, at the time of its release under this License is not already Covered Code governed by this License.

1.10.1 "Patent Claims" means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent Licensable by grantor.

1.11 "Source Code" means the preferred form of the Covered Code for making modifications to it, including all modules it contains, plus any associated interface definition files, scripts used to control compilation and installation of an Executable, or source code differential comparisons against either the Original Code or another well known, available Covered Code of the Contributor's choice. The Source Code can be in a compressed or archival form, provided the appropriate decompression or de-archiving software is widely available for no charge.

1.12 "You" (or "Your") means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License or a future version of this License issued under Section 6.1. For legal entities, "You" includes any entity which controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

## 2. Source Code License.

### 2.1 The Initial Developer Grant.

The Initial Developer hereby grants You a world-wide, royalty-free, non-exclusive license, subject to third party intellectual property claims:

(a) under intellectual property rights (other than patent or trademark) Licensable by Initial Developer to use, reproduce, modify, display, perform, sublicense and distribute the Original Code (or portions thereof) with or without Modifications, and/or as part of a Larger Work; and

(b) under Patents Claims infringed by the making, using or selling of Original Code, to make, have made, use, practice, sell, and offer for sale, and/or otherwise dispose of the Original Code (or portions thereof).

(c) the licenses granted in this Section 2.1(a) and (b) are effective on the date Initial Developer first distributes Original Code under the terms of this License.

(d)Notwithstanding Section 2.1(b) above, no patent license is granted: 1) for code that You delete from the Original Code; 2) separate from the Original Code; or 3) for infringements caused by: i) the modification of the Original Code or ii) the combination of the Original Code with other software or devices.

## 2.2Contributor Grant.

Subject to third party intellectual property claims, each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license

(a)under intellectual property rights (other than patent or trademark) Licensable by Contributor, to use, reproduce, modify, display, perform, sublicense and distribute the Modifications created by such Contributor (or portions thereof) either on an unmodified basis, with other Modifications, as Covered Code and/or as part of a Larger Work; and

(b)under Patent Claims infringed by the making, using, or selling of Modifications made by that Contributor either alone and/or in combination with its Contributor Version (or portions of such combination), to make, use, sell, offer for sale, have made, and/or otherwise dispose of: 1) Modifications made by that Contributor (or portions thereof); and 2) the combination of Modifications made by that Contributor with its Contributor Version (or portions of such combination).

(c)the licenses granted in Sections 2.2(a) and 2.2(b) are effective on the date Contributor first makes Commercial Use of the Covered Code.

(d)Notwithstanding Section 2.2(b) above, no patent license is granted: 1) for any code that Contributor has deleted from the Contributor Version; 2) separate from the Contributor Version; 3) for infringements caused by: i) third party modifications of Contributor Version or ii) the combination of Modifications made by that Contributor with other software (except as part of the Contributor Version) or other devices; or 4) under Patent Claims infringed by Covered Code in the absence of Modifications made by that Contributor.

## 3.Distribution Obligations.

### 3.1Application of License.

The Modifications which You create or to which You contribute are governed by the terms of this License, including without limitation Section 2.2. The Source Code version of Covered Code may be distributed only under the terms of this License or a future version of this License released under Section 6.1, and You must include a copy of this License with every copy of the Source Code You distribute. You may not offer or impose any terms on any Source Code version that alters or restricts the applicable version of this License or the recipients' rights hereunder. However, You may include an additional document offering the additional rights described in Section 3.5.

### 3.2Availability of Source Code.

Any Modification which You create or to which You contribute must be made available in Source Code form under the terms of this License either on the same media as an Executable version or via an accepted Electronic Distribution Mechanism to anyone to whom you made an Executable version available; and if made available via Electronic Distribution Mechanism, must remain available for at least twelve (12) months after the date it initially became available, or at least six

(6) months after a subsequent version of that particular Modification has been made available to such recipients. You are responsible for ensuring that the Source Code version remains available even if the Electronic Distribution Mechanism is maintained by a third party.

### 3.3 Description of Modifications.

You must cause all Covered Code to which You contribute to contain a file documenting the changes You made to create that Covered Code and the date of any change. You must include a prominent statement that the Modification is derived, directly or indirectly, from Original Code provided by the Initial Developer and including the name of the Initial Developer in (a) the Source Code, and (b) in any notice in an Executable version or related documentation in which You describe the origin or ownership of the Covered Code.

### 3.4 Intellectual Property Matters

#### (a) Third Party Claims.

If Contributor has knowledge that a license under a third party's intellectual property rights is required to exercise the rights granted by such Contributor under Sections 2.1 or 2.2, Contributor must include a text file with the Source Code distribution titled "LEGAL" which describes the claim and the party making the claim in sufficient detail that a recipient will know whom to contact. If Contributor obtains such knowledge after the Modification is made available as described in Section 3.2, Contributor shall promptly modify the LEGAL file in all copies Contributor makes available thereafter and shall take other steps (such as notifying appropriate mailing lists or newsgroups) reasonably calculated to inform those who received the Covered Code that new knowledge has been obtained.

#### (b) Contributor APIs.

If Contributor's Modifications include an application programming interface and Contributor has knowledge of patent licenses which are reasonably necessary to implement that API, Contributor must also include this information in the LEGAL file.

#### (c) Representations.

Contributor represents that, except as disclosed pursuant to Section 3.4(a) above, Contributor believes that Contributor's Modifications are Contributor's original creation(s) and/or Contributor has sufficient rights to grant the rights conveyed by this License.

### 3.5 Required Notices.

You must duplicate the notice in Exhibit A in each file of the Source Code. If it is not possible to put such notice in a particular Source Code file due to its structure, then You must include such notice in a location (such as a relevant directory) where a user would be likely to look for such a notice. If You created one or more Modification(s) You may add your name as a Contributor to the notice described in Exhibit A. You must also duplicate this License in any documentation for the

Source Code where You describe recipients' rights or ownership rights relating to Covered Code. You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Code. However, You may do so only on Your own behalf, and not on behalf of the Initial Developer or any Contributor. You must make it absolutely clear than any such warranty, support, indemnity or liability obligation is offered by You alone, and You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of warranty, support, indemnity or liability terms You offer.

### 3.6 Distribution of Executable Versions.

You may distribute Covered Code in Executable form only if the requirements of Section 3.1-3.5 have been met for that Covered Code, and if You include a notice stating that the Source Code version of the Covered Code is available under the terms of this License, including a description of how and where You have fulfilled the obligations of Section 3.2. The notice must be conspicuously included in any notice in an Executable version, related documentation or collateral in which You describe recipients' rights relating to the Covered Code. You may distribute the Executable version of Covered Code or ownership rights under a license of Your choice, which may contain terms different from this License, provided that You are in compliance with the terms of this License and that the license for the Executable version does not attempt to limit or alter the recipient's rights in the Source Code version from the rights set forth in this License. If You distribute the Executable version under a different license You must make it absolutely clear that any terms which differ from this License are offered by You alone, not by the Initial Developer, Original Developer or any Contributor. You hereby agree to indemnify the Initial Developer, Original Developer and every Contributor for any liability incurred by the Initial Developer, Original Developer or such Contributor as a result of any such terms You offer.

### 3.7 Larger Works.

You may create a Larger Work by combining Covered Code with other code not governed by the terms of this License and distribute the Larger Work as a single product. In such a case, You must make sure the requirements of this License are fulfilled for the Covered Code.

### 4. Inability to Comply Due to Statute or Regulation.

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Code due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be included in the LEGAL file described in Section 3.4 and must be included with all distributions of the Source Code. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

### 5. Application of this License.

This License applies to code to which the Initial Developer has attached the notice in Exhibit A and to related Covered Code.

## 6. Versions of the License.

### 6.1 New Versions.

Socialtext, Inc. ("Socialtext") may publish revised and/or new versions of the License from time to time. Each version will be given a distinguishing version number.

### 6.2 Effect of New Versions.

Once Covered Code has been published under a particular version of the License, You may always continue to use it under the terms of that version. You may also choose to use such Covered Code under the terms of any subsequent version of the License published by Socialtext. No one other than Socialtext has the right to modify the terms applicable to Covered Code created under this License.

### 6.3 Derivative Works.

If You create or use a modified version of this License (which you may only do in order to apply it to code which is not already Covered Code governed by this License), You must (a) rename Your license so that the phrases "Socialtext", "CPAL" or any confusingly similar phrase do not appear in your license (except to note that your license differs from this License) and (b) otherwise make it clear that Your version of the license contains terms which differ from the CPAL. (Filling in the name of the Initial Developer, Original Developer, Original Code or Contributor in the notice described in Exhibit A shall not of themselves be deemed to be modifications of this License.)

## 7. DISCLAIMER OF WARRANTY.

COVERED CODE IS PROVIDED UNDER THIS LICENSE ON AN "AS IS" BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES THAT THE COVERED CODE IS FREE OF DEFECTS, MERCHANTABILITY, FIT FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE COVERED CODE IS WITH YOU. SHOULD ANY COVERED CODE PROVE DEFECTIVE IN ANY RESPECT, YOU (NOT THE INITIAL DEVELOPER, ORIGINAL DEVELOPER OR ANY OTHER CONTRIBUTOR) ASSUME THE COST OF ANY NECESSARY SERVICING, REPAIR OR CORRECTION. THIS DISCLAIMER OF WARRANTY CONSTITUTES AN ESSENTIAL PART OF THIS LICENSE. NO USE OF ANY COVERED CODE IS AUTHORIZED HEREUNDER EXCEPT UNDER THIS DISCLAIMER.

## 8. TERMINATION.



8.1 This License and the rights granted hereunder will terminate automatically if You fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. All sublicenses to the Covered Code which are properly granted shall survive any termination of this License. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.

8.2 If You initiate litigation by asserting a patent infringement claim (excluding declaratory judgment actions) against Initial Developer, Original Developer or a Contributor (the Initial Developer, Original Developer or Contributor against whom You file such action is referred to as "Participant") alleging that:

(a) such Participant's Contributor Version directly or indirectly infringes any patent, then any and all rights granted by such Participant to You under Sections 2.1 and/or 2.2 of this License shall, upon 60 days notice from Participant terminate prospectively, unless if within 60 days after receipt of notice You either: (i) agree in writing to pay Participant a mutually agreeable reasonable royalty for Your past and future use of Modifications made by such Participant, or (ii) withdraw Your litigation claim with respect to the Contributor Version against such Participant. If within 60 days of notice, a reasonable royalty and payment arrangement are not mutually agreed upon in writing by the parties or the litigation claim is not withdrawn, the rights granted by Participant to You under Sections 2.1 and/or 2.2 automatically terminate at the expiration of the 60 day notice period specified above.

(b) any software, hardware, or device, other than such Participant's Contributor Version, directly or indirectly infringes any patent, then any rights granted to You by such Participant under Sections 2.1(b) and 2.2(b) are revoked effective as of the date You first made, used, sold, distributed, or had made, Modifications made by that Participant.

8.3 If You assert a patent infringement claim against Participant alleging that such Participant's Contributor Version directly or indirectly infringes any patent where such claim is resolved (such as by license or settlement) prior to the initiation of patent infringement litigation, then the reasonable value of the licenses granted by such Participant under Sections 2.1 or 2.2 shall be taken into account in determining the amount or value of any payment or license.

8.4 In the event of termination under Sections 8.1 or 8.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or any distributor hereunder prior to termination shall survive termination.

## 9. LIMITATION OF LIABILITY.

UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL YOU, THE INITIAL DEVELOPER, ORIGINAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DISTRIBUTOR OF COVERED CODE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING,

WITHOUT LIMITATION, DAMAGES FOR LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF SUCH PARTY SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION OF LIABILITY SHALL NOT APPLY TO LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM SUCH PARTY'S NEGLIGENCE TO THE EXTENT APPLICABLE LAW PROHIBITS SUCH LIMITATION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS EXCLUSION AND LIMITATION MAY NOT APPLY TO YOU.

#### 10.U.S. GOVERNMENT END USERS.

The Covered Code is a "commercial item," as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of "commercial computer software" and "commercial computer software documentation," as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Code with only those rights set forth herein.

#### 11.MISCELLANEOUS.

This License represents the complete agreement concerning subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. This License shall be governed by California law provisions (except to the extent applicable law, if any, provides otherwise), excluding its conflict-of-law provisions. With respect to disputes in which at least one party is a citizen of, or an entity chartered or registered to do business in the United States of America, any litigation relating to this License shall be subject to the jurisdiction of the Federal Courts of the Northern District of California, with venue lying in Santa Clara County, California, with the losing party responsible for costs, including without limitation, court costs and reasonable attorneys' fees and expenses. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not apply to this License.

#### 12.RESPONSIBILITY FOR CLAIMS.

As between Initial Developer, Original Developer and the Contributors, each party is responsible for claims and damages arising, directly or indirectly, out of its utilization of rights under this License and You agree to work with Initial Developer, Original Developer and Contributors to distribute such responsibility on an equitable basis. Nothing herein is intended or shall be deemed to constitute any admission of liability.

#### 13.MULTIPLE-LICENSED CODE.

Initial Developer may designate portions of the Covered Code as Multiple-Licensed. Multiple-Licensed means that the Initial Developer permits you to utilize portions of the Covered Code under Your choice of the CPAL or the alternative licenses, if any, specified by the Initial Developer in the file described in Exhibit A.

#### 14.ADDITIONAL TERM: ATTRIBUTION

(a)As a modest attribution to the organizer of the development of the Original Code ("Original Developer"), in the hope that its promotional value may help justify the time, money and effort invested in writing the Original Code, the Original Developer may include in Exhibit B ("Attribution Information") a requirement that each time an Executable and Source Code or a Larger Work is launched or initially run (which includes initiating a session), a prominent display of the Original Developer's Attribution Information (as defined below) must occur on the graphic user interface employed by the end user to access such Covered Code (which may include display on a splash screen), if any. The size of the graphic image should be consistent with the size of the other elements of the Attribution Information. If the access by the end user to the Executable and Source Code does not create a graphic user interface for access to the Covered Code, this obligation shall not apply. If the Original Code displays such Attribution Information in a particular form (such as in the form of a splash screen, notice at login, an "about" display, or dedicated attribution area on user interface screens), continued use of such form for that Attribution Information is one way of meeting this requirement for notice.

(b)Attribution information may only include a copyright notice, a brief phrase, graphic image and a URL ("Attribution Information") and is subject to the Attribution Limits as defined below. For these purposes, prominent shall mean display for sufficient duration to give reasonable notice to the user of the identity of the Original Developer and that if You include Attribution Information or similar information for other parties, You must ensure that the Attribution Information for the Original Developer shall be no less prominent than such Attribution Information or similar information for the other party. For greater certainty, the Original Developer may choose to specify in Exhibit B below that the above attribution requirement only applies to an Executable and Source Code resulting from the Original Code or any Modification, but not a Larger Work. The intent is to provide for reasonably modest attribution, therefore the Original Developer cannot require that You display, at any time, more than the following information as Attribution Information: (a) a copyright notice including the name of the Original Developer; (b) a word or one phrase (not exceeding 10 words); (c) one graphic image provided by the Original Developer; and (d) a URL (collectively, the "Attribution Limits").

(c)If Exhibit B does not include any Attribution Information, then there are no requirements for You to display any Attribution Information of the Original Developer.

(d) You acknowledge that all trademarks, service marks and/or trade names contained within the Attribution Information distributed with the Covered Code are the exclusive property of their owners and may only be used with the permission of their owners, or under circumstances otherwise permitted by law or as expressly set out in this License.

#### 15. ADDITIONAL TERM: NETWORK USE.

The term "External Deployment" means the use, distribution, or communication of the Original Code or Modifications in any way such that the Original Code or Modifications may be used by anyone other than You, whether those works are distributed or communicated to those persons or made available as an application intended for use over a network. As an express condition for the grants of license hereunder, You must treat any External Deployment by You of the Original Code or Modifications as a distribution under section 3.1 and make Source Code available under Section 3.2.

#### EXHIBIT A. Common Public Attribution License Version 1.0.

"The contents of this file are subject to the Common Public Attribution License Version 1.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at \_\_\_\_\_. The License is based on the Mozilla Public License Version 1.1 but Sections 14 and 15 have been added to cover use of software over a computer network and provide for limited attribution for the Original Developer. In addition, Exhibit A has been modified to be consistent with Exhibit B.

Software distributed under the License is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY KIND, either express or implied. See the License for the specific language governing rights and limitations under the License.

The Original Code is \_\_\_\_\_.

The Original Developer is not the Initial Developer and is \_\_\_\_\_. If left blank, the Original Developer is the Initial Developer.

The Initial Developer of the Original Code is \_\_\_\_\_. All portions of the code written by \_\_\_\_\_ are Copyright (c) \_\_\_\_\_. All Rights Reserved.

Contributor \_\_\_\_\_.

Alternatively, the contents of this file may be used under the terms of the \_\_\_\_\_ license (the [\_\_\_\_\_] License), in which case the provisions of [\_\_\_\_\_] License are applicable instead of those above.

If you wish to allow use of your version of this file only under the terms of the [\_\_\_\_\_] License and not to allow others to use your version of this file under the CPAL, indicate your decision by deleting the provisions above and replace them with the notice and other provisions required by the [\_\_\_\_\_] License. If you do not delete the provisions above, a recipient may use your version of this file under either the CPAL or the [\_\_\_\_\_] License."

[NOTE: The text of this Exhibit A may differ slightly from the text of the notices in the Source Code files of the Original Code. You should use the text of this Exhibit A rather than the text found in the Original Code Source Code for Your Modifications.]

EXHIBIT B. Attribution Information

Attribution Copyright Notice: \_\_\_\_\_

Attribution Phrase (not exceeding 10 words): \_\_\_\_\_

Attribution URL: \_\_\_\_\_

Graphic Image as provided in the Covered Code, if any.

Display of Attribution Information is [required/not required] in Larger Works which are defined in the CPAL as a work which combines Covered Code or portions thereof with code not governed by the terms of the CPAL.





Honeywell  
9680 Old Bailes Road  
Fort Mill, SC 29707

[www.honeywellaidc.com](http://www.honeywellaidc.com)