70 Series

Mobile Computer

CK70, CK70NI, CK71, CK71NI, CN70, CN70NI, CN70e, CN70eNI

User Manual

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Document Change Record

This page records changes to this document. The document was originally released as Revision 001.

Version Number	Date	Description of Change
005	11/2012	Added information to support firmware version 1.50: • CloneNGo application • New camera settings • SceneEditor application • EA30 imager extended reading range
004	2/2012	Revised information on ScanNGo bar codes.
003	12/2011	Added information on: • the flashlight feature. • the Carrier Selection application. Revised information on: • the Intermec Settings menus. • upgrading the system software and the operating system. • GPS procedures. • ScanNGo bar codes.
002	06/2011	Revised to add information on non-incendive (NI) versions of the computer, provisioning the computer, the new ScanDiagnostics application, and how to use the 70 Series as a USB mass storage device. Also corrected the cold boot procedure and removed the compass.

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Before You Begin

This section provides you with safety information, technical support information, and sources for additional product information.

Safety Information

Your safety is extremely important. Read and follow cautions in this document before handling and operating Intermec equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the safety cautions.

This section explains how to identify and understand cautions and notes that are in this document.

A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.

Note: Notes either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.

Global Services and Support

Warranty Information

To understand the warranty for your Intermec product, visit the Intermec website at **www.intermec.com** and click **Support** > **Returns and Repairs** > **Warranty**.

Disclaimer of warranties: The sample code included in this document is presented for reference only. The code does not necessarily represent complete, tested programs. The code is provided "as is with all faults." All warranties are expressly disclaimed, including the implied warranties of merchantability and fitness for a particular purpose.

Web Support

Visit the Intermec website at **www.intermec.com** to download our current manuals (in PDF).

Visit the Intermec technical knowledge base (Knowledge Central) at **www.intermec.com** and click **Support** > **Knowledge Central** to review technical information or to request technical support for your Intermec product.

Send Feedback

Your feedback is crucial to the continual improvement of our documentation. To provide feedback about this manual, please contact the Intermec Technical Communications department directly at **TechnicalCommunications@intermec.com.**

Telephone Support

In the U.S.A. and Canada, call **1-800-755-5505**.

Outside the U.S.A. and Canada, contact your local Intermec representative. To search for your local representative, from the Intermec website, click **About Us** > **Contact Us**.

Who Should Read This Manual

This manual is written for the person who is responsible for installing, configuring, and maintaining the 70 Series Mobile Computer.

This manual provides you with information about the features of the 70 Series mobile computer, and how to install, configure, operate, maintain, and troubleshoot it.

Before you work with the 70 Series mobile computer, you should be familiar with your network and general networking terms, such as IP address.

Related Documents

This is a list of related Intermec documents.

- ***Intermec Settings Command Reference Manual***
- ***Intermec Developer Library (IDL) Resource Kit Developer's Guide***

The Intermec website at **www.intermec.com** contains our documents (as PDF files) that you can download for free.

To download documents

1. Visit the Intermec website at **www.intermec.com**.
2. Click the **Products** tab.
3. Using the **Products** menu, navigate to your product page. For example, to find the CN70 computer product page, click **Computers** > **Handheld Computers** > **CN70**.
4. Click the **Manuals** tab.

If your product does not have its own product page, click **Support** > **Manuals**. Use the **Product Category**, the **Product Family**, and **Product** to find your documentation.

Patent Information

Product is covered by one or more of the following patents:

4882476; 4894523; 4953113; 4961043; 4970379; 4988852; 5019699; 5021642; 5038024; 5081343; 5095197; 5144119; 5144121; 5182441; 5187355; 5187356; 5195183; 5216233; 5216550; 5195183; 5195183; 5218191; 5227614; 5233172; 5241488; 5243602; 5258606; 5278487; 5288985; 5308966; 5322991; 5331136; 5331580; 5342210; 5349678; 5359185; 5371858; 5373478; 5389770; 5397885; 5410141; 5414251; 5416463; 5442167; 5464972; 5468947; 5468950; 5477044; 5486689; 5488575; 5500516; 5502297; 5504367; 5508599; 5514858; 5530619; 5534684; 5536924; 5539191; 5541419; 5548108; 5550362; 5550364; 5565669; 5567925; 5568645; 5572007; 5576529; 5592512; 5594230; 5598007; 5608578; 5616909; 5619027; 5627360; 5640001; 5657317; 5659431; 5671436; 5672860; 5684290; 5719678; 5729003; 5742041; 5761219; 5764798; 5777308; 5777309; 5777310; 5786583; 5793604; 5798509; 5798513; 5804805; 5805807; 5811776; 5811777; 5818027; 5821523; 5828052; 5831819; 5834753; 5834749; 5837987; 5841121; 5842070; 5844222; 5854478; 5862267; 5869840; 5873070; 5877486; 5878395; 5883492; 5883493; 5886338; 5889386; 5892971; 5895906; 5898162; 5902987; 5902988; 5912452; 5923022; 5936224; 5949056; 5969321; 5969326; 5969328; 5979768; 5986435; 5987192; 5987499; 5992750; 6003775; 6012640; 6016960; 6018597; 6024289; 6034379; 6036093; 6039252; 6064763; 6075340; 6095422; 6097839; 6102289; 6102295; 6109528; 6119941; 6128414; 6138915; 6149061; 6149063;

6152370; 6155490; 6158661; 6164542; 6164545; 6173893; 6195053; 6234393; 6234395; 6244512; 6249008; 6328214; 6330975; 6345765; 6356949; 6367699; 6375075; 6375076; 6375344; 6431451; 6435411; 6484944; 6488209; 6497368; 6532152; 6538413; 6539422; 6621942; 6641046; 6681994; 6687403; 6688523; 6732930

There may be other U.S. and foreign patents pending.

1

About the Computer Features

This chapter introduces the 70 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.

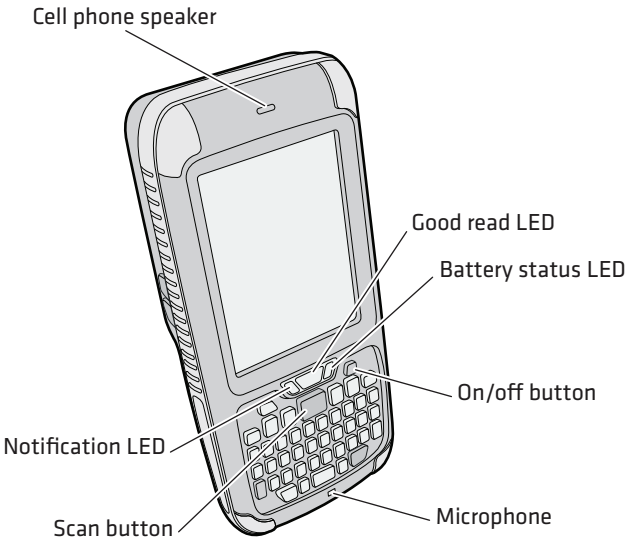
About the 70 Series Mobile Computers

The ergonomically designed Intermec 70 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 platform, including standalone, client-server, and browser-based applications.

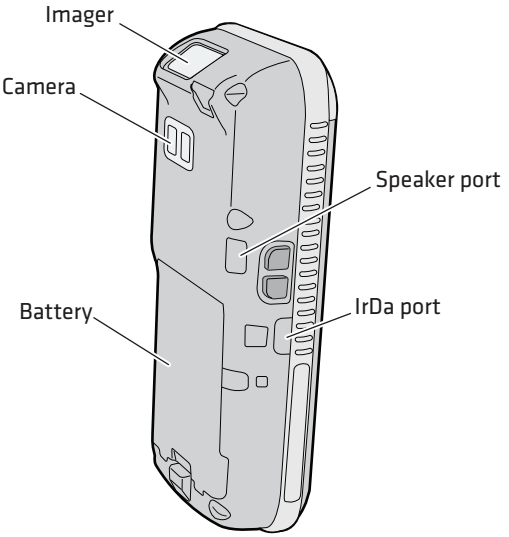
The 70 Series family of computers consists of four different models: the CN70, CN70e, CK70 and CK71. The CN70 and CN70e have the same features except that the CN70e offers a larger keypad for data-input intensive applications. The CK70 and CK71 have most of the same features, but the CK71 offers a choice of imager options and does not offer a WWAN radio option (phone). For hazardous environments, Intermec offers non-incendive (NI) models of each 70 Series computer. Throughout this manual, all versions of the mobile computer are referred to as 70 Series unless information is specific to a particular model of computer.

In most of the user manual, pictures of the CN70 and CK70 represent the four models of the 70 Series computers.

CN70 Front View

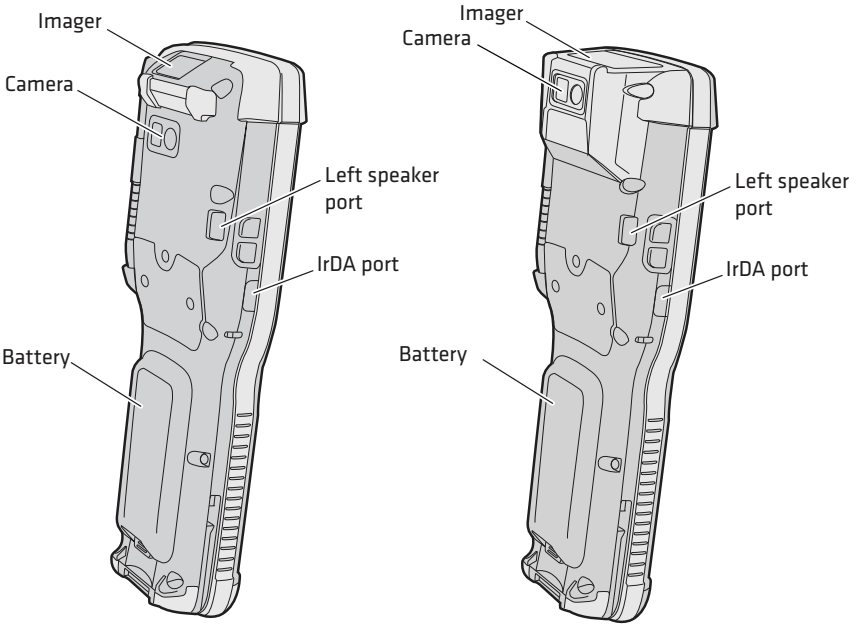


CN70 Back View



CK70 and CK71 Front View

CK70 and CK71 Back View



What's New in This Release

This version of the user manual supports firmware version 1.50 and includes information about these new features:

- Intermec CloneNGo is a peer-to-peer device management application that ships on every computer and simplifies the process of configuring multiple computers. For more information, see **"Manage the Computer Using CloneNGo" on page 106**.
- Optimized camera settings make it easier to take good pictures. For more information, see **"About the Camera Settings" on page 62** and **"Configure the Camera" on page 65**.
- The SceneEditor application lets you modify or create your own predefined camera scenes.**"Configure Camera Scenes" on page 65**.
- The EA30 imager provides an extended reading range. For more information, see **"EA30 Typical Reading Distances - Extended Reading Range" on page 134**.

Overview of 70 Series Features

The 70 Series includes these standard features:

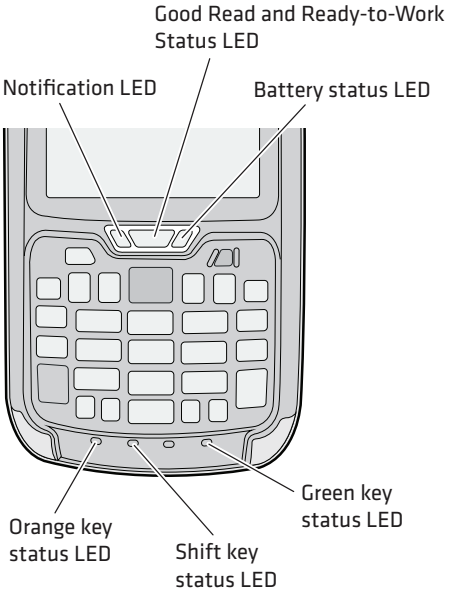
- EA30 area imager that can read bar codes and capture images
- (CK71 only) Choice of EA30, EX25, or EV12 imagers
- Multi-processor architecture with 512 MB DRAM and 1G Flash
- CDMA, UMTS, or Flexible Network Radio capability (not available on CK71)
- 802.11a/b/g/n and Bluetooth® radios
- GPS radio on CDMA, UMTS, or Flexible Network Radio computers (not available on CK71)
- 5-megapixel auto-focus color camera
- Customer-accessible microSD slot for memory cards up to 32 GB
- Customer-accessible SIM card slot
- IrDA port with speeds up to 4 Mbps

The 70 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.

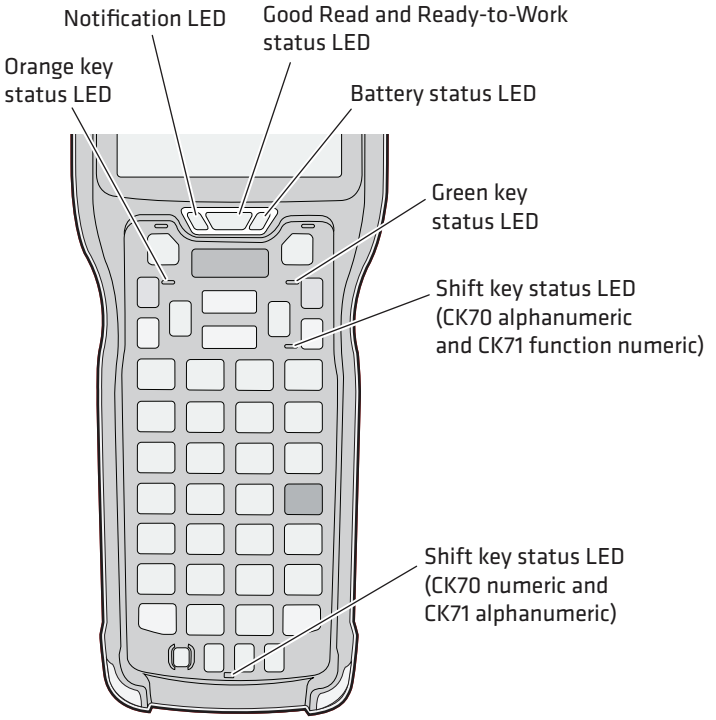
About the Status LEDs

Use the following illustrations and table to understand the status LEDs on your computer. All six status LEDS are not available on every 70 Series computer. For example, the QWERTY versions of the CN70 and CN70e do not have a Green key status LED.

Location of the CN70 Status LEDs



Location of the CK70 and CK71 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 Intermec Terminal Emulator (ITE), the application is running and connected to the host. If you do not have ITE, you can configure the Ready-to-Work indicator to turn on or off to indicate a healthy state.
	Blinking blue	ITE is running but not connected to the host. The computer is unhealthy.
	Off	ITE is not installed or not running. The computer is healthy.
Battery		See **"About Battery Status" on page 13**.

LED	Color	Description
Key Status	Green	The Green function key is enabled.
	Orange	The Orange function key is enabled.
Shift	Red	The Shift key is enabled.

70 Series Accessories

The 70 Series computer ships with a battery. All other accessories are sold and ordered separately. For help, contact your local Intermec sales representative.

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 CK70 and CK71.
CK70/CK71 Battery	This battery provides main power to the CK70 and CK71.
CK70/CK71 Magstripe Reader Adapter	Use the magnetic stripe reader to be able to read magnetic cards with the CK70 and CK71 computer.
CN70/CN70e Battery	This battery provides main power to the CN70 and CN70e.
CN70/CN70e Magstripe Reader Snap-On Adapter	Use the magnetic stripe reader to be able to read magnetic cards with the CN70 and CN70e computer.
Desktop Stand	Use the desktop stand to hold the 70 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: • Computer cup to charge the battery while it is installed in the computer. • Battery cup to charge the battery.

Accessory	Description
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: • Computer cup to charge batteries while they are installed in the computer. • Battery cup to charge two batteries.
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 CN70, CN70e, and CK70/CK71. 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 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 Language Provisioning

If your 70 Series computer includes language provisioning, you are prompted to select a language provision when the computer starts for the first time. It may take up to 15 minutes to load your language.

These languages are available:

- Chinese Simplified (CHS)
- Chinese Traditional (CHT)
- Spanish (ESN)
- French (FRA)
- German (GER)
- Italian (ITA)
- Japanese (JPN)
- Korean (KOR)
- Russian (RUS)
- World Wide English (WWE)

Make sure you select the correct language before you tap **Provision**. If you want to change the language provisioning, you need to send your computer to an Intermec Global Repair Center.

About the Battery

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.

The computers use these rechargeable Lithium-ion battery pack as the main power source:

- 3.7 V, 4000 mAH (14.8 Wh) battery for the CN70 and CN70e
- 3.7 V, 5200 mAH (19.2 Wh) battery for the CK70 and CK71

Charge the Battery

You need to fully charge the battery before using your computer for the first time. Use one of the charging accessories listed in the next table to charge the battery.

70 Series Charging Accessories

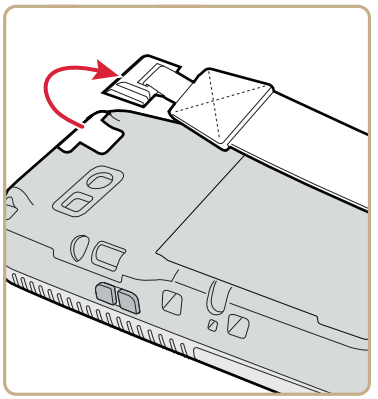
Charging Accessory	Charging Time
Snap-on adapters	Up to 6 hours
DX1, DX2, or DX4 dock	Up to 6 hours
CN70, CN70e, CK70, and CK71 Vehicle Power Adapter	Up to 6 hours

Change the Battery

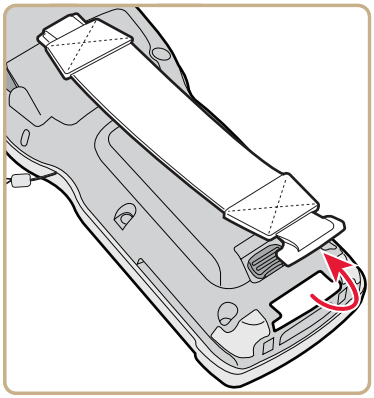
If your battery power is low, you need to either charge the battery in the computer, or replace it with a charged battery.

1. Save your files and close any open applications.
2. Press the **Power** button and choose **Hibernate** from the menu to suspend the computer.
3. Detach the handstrap from the computer.

Detach the Handstrap From a CN70 or CN70e



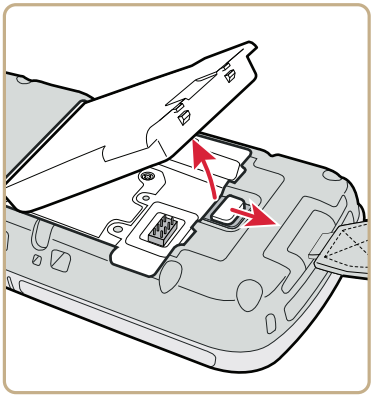
Detach the Handstrap From a CK70 or CK71



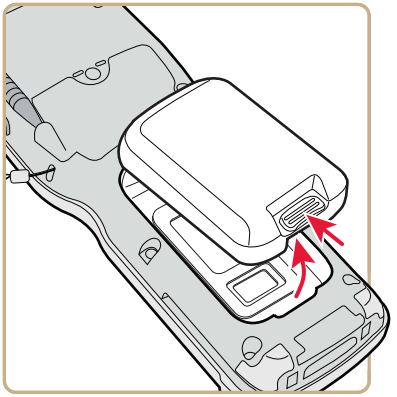
4 Make sure the computer is in hibernate mode and the screen is off.

5 Remove the battery.

- On the CN70 or CN70e, push the battery release toward the bottom of the computer until the battery releases and then lift it away from the computer.



- On the CK70 or CK71, push the battery release toward the top of the computer until the battery releases and then lift it away from the computer.



6 Insert the top end of a fully charged battery into the computer, and press down firmly on the bottom of the battery. Make sure that the battery release is fully engaged.

About Battery Status

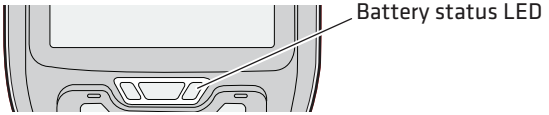
Use the battery icon on the Title bar to see the power status of your battery. If you want more detailed information on your battery such as usage time or voltage, use the Intermec Dashboard. For more information on the Dashboard, see **"About the Intermec Dashboard" on page 114**.

Battery Icon Status Descriptions

Battery Icon	Status
	Battery is fully charged.
	Battery has a high charge.
	Battery has a medium charge. You should be able to work for several more hours before changing batteries.
	Battery is low. You need to charge or replace the battery soon.

Battery Icon	Status
	Battery is critically low. You need to replace the battery now.
	Battery is charging.
	The battery is not installed.

You can also use the battery status LED to see the charging status of your battery.



Battery Status LED Descriptions

LED State	Description
Steady green	The computer is connected to a charger and the battery is more than 95% charged.
Blinking red	The battery is very low. The computer will soon go into Suspend mode. Charge or replace the battery.
Steady red	The computer is connected to a charger and the battery is charging.
Blinking red-amber	The battery charging system has encountered an error. The battery is not charging.
Steady amber	The battery is outside of the allowable charging temperature range. Charging will resume when the battery temperature is back in the acceptable range of 5 °C to 35 °C (41 °F to 95 °F).
Off	The computer is not on external power and the battery is operating normally.

About Battery Life and Conservation

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

Battery Conservation Tips

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 and press the **Power** button and select **Hibernate**. 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 **Power** button and choose **Suspend** to suspend the computer.
Store the computer for more than a day.	If you are storing the computer for a few days, like over the weekend, install a charged battery or connect the computer to a power source. 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. If you store the battery for several months, recharge the battery to keep it at peak performance.
Store the battery outside the computer.	Store the batteries in a charger.

About the Keypad

The CN70 comes with either a QWERTY keypad or a numeric keypad. The CN70e comes with either a QWERTY numeric keypad, a phone-style numeric keypad (1-2-3 digits across the top), or a calculator-style numeric keypad (7-8-9 digits across the top). The computer has an ambient light sensor that detects low light and turns on the keypad backlight. By default, the keypad backlight is enabled in low light conditions. You can disable the keypad backlight to conserve power. Use Intermec Settings to configure the backlight. For help, see **"Use Intermec Settings on the Computer" on page 74**.

CN70 QWERTY Keypad

CN70 Numeric Keypad

CN70e QWERTY Numeric Keypad

CN70e Calculator-Style Numeric Keypad

CN70e Numeric Keypad

The CK70 comes with either a large alpha or an alphanumeric keypad. The CK71 comes with either a numeric function keypad or an alphanumeric keypad. The computer has an ambient light sensor that detects low light and turns on the keypad backlight. By default, the keypad backlight is enabled in low light conditions. You can disable the keypad backlight to conserve power. Use Intermec Settings to configure the backlight. For help, see **"Use Intermec Settings on the Computer" on page 74**.

CK70 Large Alpha Keypad

CK70 Alphanumeric Keypad

CK71 Numeric Function Keypad

CK71 Alphanumeric 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 twice 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 on the overlay:

- 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 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 2 key there are the letters "ABC":

- To type "c", press blue 2 2 2.
- To type "C," press blue 1 and then press blue 2 2 2.

Note: On the calculator-style keypad, the 2 is replaced by the 8.

To only type letters:

- Press blue blue 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 1 to toggle between only uppercase and lowercase letters.

To unlock the green modifier key, press blue.

Note: If uppercase letters are enabled and you unlock the green modifier key, you may need to press blue 1 to type lowercase letters.

Enter Characters on the CK70 and CK71 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 orange 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 blue and then press the key for the character or function.

To type a single uppercase letter:

- Press Shift and then the letter key.

To type all uppercase letters:

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

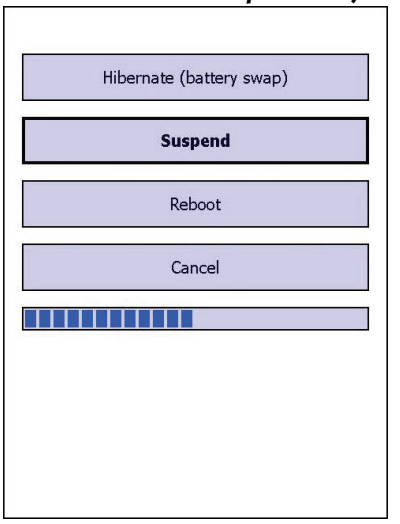
You can still type orange or green modifier characters by pressing orange or blue and then the key for that character.

To turn off Caps Lock, press Shift.

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 a power options setting, the currently selected action (the button outlined in bold) occurs after the timeout.

The Intermec Power Options Default Screen



Note: The Real Time Clock (RTC) persists through all of the power options as long as it receives power from the Real Time Clock battery.

Intermec Power Options

Option	Description
Hibernate (battery swap)	High power saving mode. 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 **Power** button or connecting the computer to external power.

Option	Description
Suspend	Medium power saving mode. The computer powers off all radios and internal devices not involved in saving the system state, but the phone stays on to receive calls. This option is the default setting. You can wake the computer by pressing the **Power** button, pulling the scanner trigger, receiving a call, scheduling an event such as an alarm, or by connecting external power.
Reboot	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.
Cancel	The Power Options menu is cancelled.
Screen Off	Lowest power saving mode. The screen turns off, but the phone, all radios, and internal devices stay on. Tap the screen to turn the screen back on.
Shutdown	Very high power saving mode. The computer turns off everything. You must press **Power** or apply external power to restart the computer.

The Intermec Power Options screen is customizable. You can use Intermec Settings to determine which options are available to end users, the timeout until the default choice is selected, the default action if no option is selected, or to disable the Power Options screen. For more information on customizing the screen using Intermec Settings, see **"Use Intermec Settings on the Computer" on page 74** or see the ***Intermec Settings Command Reference Manual***.

About the Intermec Dashboard Button

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

You can press the button at any time to bring up the Intermec 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 Intermec Dashboard" on page 114**.

Configure the Screen Backlight

The display has an ambient light sensor that automatically adjusts the backlight intensity to conserve power and ensure the display is readable.

By default, the screen turns off when there is no activity with the computer. Press a key or tap the screen to resume activity.

You can configure the screen backlight to turn off.

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 external power.

Configure the Screen Brightness

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

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

Adjust the Volume

You can adjust the computer volume for your needs and your environment. The volume includes sounds you hear when you tap the screen or read bar codes with the imager. You can set the volume to off, very low, low, medium, high, very high (default), or vibrate.

You can also use the buttons on the right side of the computer to adjust the volume:

- The upper button increases the volume.
- The lower button decreases the volume.

You can adjust the volume settings using Intermec Settings or the horizontal scroll menu.

1. Tap the Volume icon at the top of the screen, and then tap the volume icon on the horizontal scroll menu.
2. Use your stylus or the ▲ and ▼ keys to adjust the volume slider to the volume you want, select **Vibrate**, or select **Off**.

About the Imager

The computer ships with an internal imager. You can use the imager as a flashlight or to read bar codes.

Note: When the Pictures & Videos application is running, you cannot use the imager.

Use the Imager as a Flashlight

You can use the EA30 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 Intermec Settings on the mobile computer by tapping **Start > Settings > System > Intermec Settings**.
2. From the Intermec Settings main menu, tap **Device Settings > Keypad**.
3. From the Keypad menu, tap **Button Remapping**.
4. From the **Left side lower button** menu, select **Flashlight**.
5. From the **Flashlight timeout** drop-down menu, select how long to leave the flashlight on before it automatically turns off.
6. Tap **OK**.

Read Bar Codes

Depending on the imager model in your computer, you can read 1D and 2D bar code symbologies, composite symbologies, and postal codes.

You can also connect the computer to cordless scanners (like the SF51 and SR61) through Bluetooth communications or tethered scanners (like the SR30 and SR61T) through the RS-232 adapter. For help, see **"Connect to a Bluetooth Scanner" on page 85** and **"Connect to a Tethered Scanner" on page 89**, respectively.

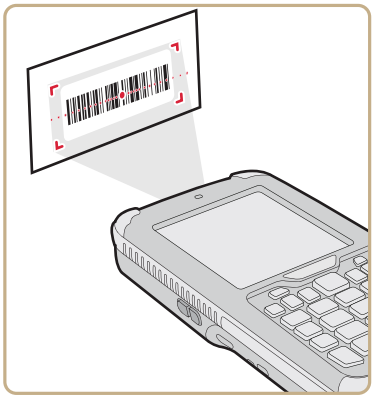
1. Enable only the bar code symbologies that you need.
2. Use Intermec Settings to select the predefined imager mode that best suits your environment:

Predefined Mode	For Scanning
1D	Only 1D labels.
1D and 2D Standard	(Default) All types of bar code labels.
1D and 2D Bright Environment	In high ambient light, such as outdoors in the sunshine.
1D and 2D Reflective Surface	Glossy labels.

Note: You can also select the imager predefined mode in Profile Settings by tapping **Start > Profile Settings > Scanning**.

3. Point the imager window at the bar code label, and hold the computer steady a few inches from the label.
4. Press the **Scan** button. The laser pointer and illumination beam or frame appear.

Scanning With the EA30 Imager



5 Use the laser pointer as a guide and aim toward the middle of the bar code. Make sure that the illumination beam or frame covers the bar code you are trying to decode.

   When the computer successfully reads a bar code label, you hear a high beep, and the Good Read LED turns on briefly.

6 Release the **Scan** button.

Insert a MicroSD Card

You can use a microSD™ card to increase file storage and install software. The computers support an optional 32 GB maximum capacity microSD card.

Note: The computer resets when you open the card access door to insert the microSD card. Make sure you completely close the card access door before you use your computer.

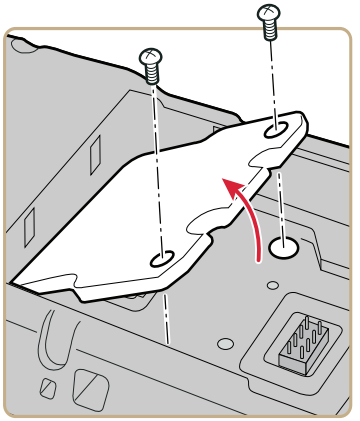
Install a MicroSD Card in a CN70 or CN70e

You need a Phillips screwdriver to install the microSD card.

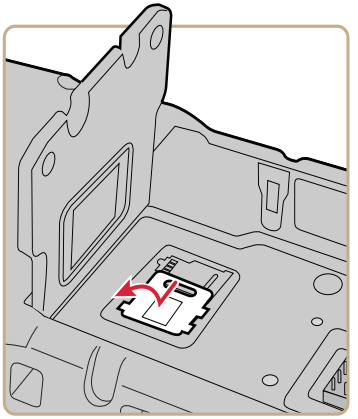
1 Press the Power button to turn off the computer.

2 Remove the handstrap and the battery.

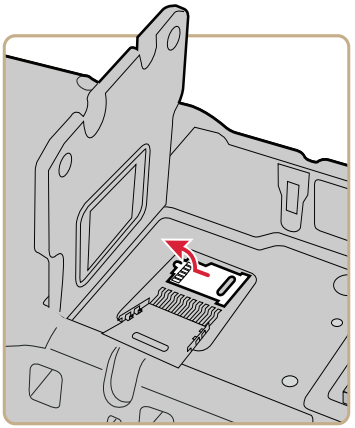
3 Remove the two Phillips screws and open the card access door.



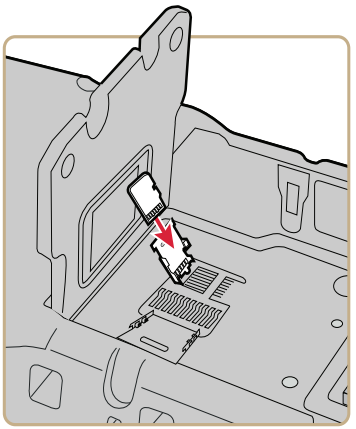
4 Slide the SIM card door to the left to unlock it and open the door.



5 Slide the microSD card door towards the top of the computer to unlock it and open the door.



6 Slide the microSD card into place.



7 Close the microSD card door and slide it towards the bottom of the computer to lock it in place.

8 Close the SIM card door and slide it to the right to lock it in place.

9 Close the card access door and replace the two screws.

10 Install the battery. Press down firmly on the bottom of the battery, and make sure that the battery release tab is fully engaged.

11 Attach the handstrap.

12 Press the **Power** button. The computer cold boots.

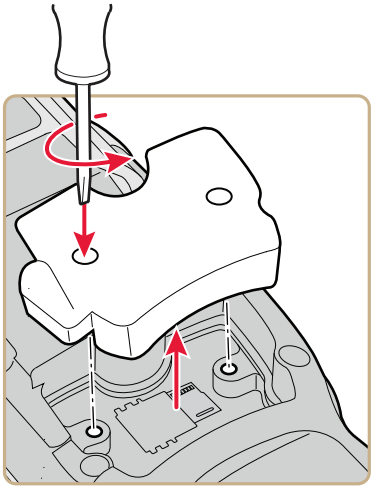
Install a MicroSD Card in a CK70 or CK71

You need a Phillips screwdriver to install the microSD card.

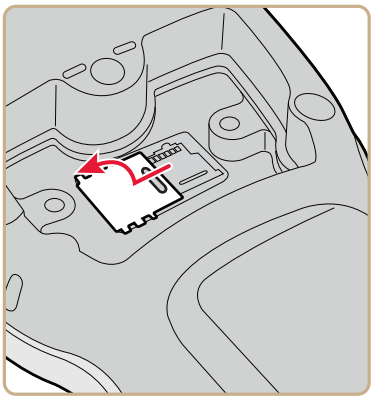
1 Press the **Power** button to turn off the computer.

2 Remove the handstrap.

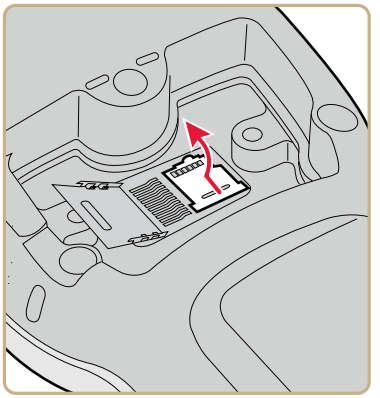
3 Remove the two screws that attach the interface adapter cover to the back of the computer.



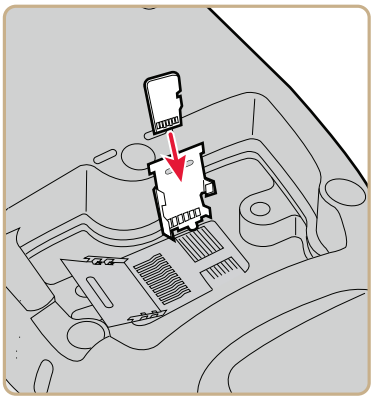
4 Slide the SIM card door to the left to unlock it and open the door.



5 Slide the microSD card door towards the top of the computer to unlock it and open the door.



6 Slide the microSD card into place.



7 Close the microSD card door and slide it towards the bottom of the computer to lock it in place.

8 Close the SIM card door and slide it to the right to lock it in place.

9 Replace the interface adapter cover and attach with the two screws removed in Step 2.

10 Install the battery. Press down firmly on the bottom of the battery, and make sure that the battery release tab is fully engaged.

11 Reattach the handstrap.

12 Press the **Power** button. The computer cold boots.

Transfer Files To and From Your PC

The 70 Series computer supports these two methods for transferring files to and from your PC:

- Using Microsoft ActiveSync or Windows Mobile Device Center.
- Using the 70 Series computer as a mass storage device.

Use Microsoft ActiveSync to Transfer Files

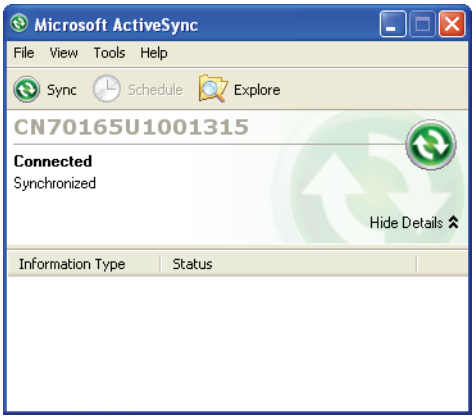
You can use Microsoft ActiveSync (Windows XP or earlier) or Windows Mobile Device Center (Windows Vista or Windows 7) to establish a connection between your computer and a PC. After you connect to your PC, you can transfer files, synchronize files, remotely debug, and perform other device management activities. ActiveSync and Windows Mobile Device Center are free applications available from the Microsoft website at **www.windowsmobile.com/getstarted**.

To establish a partnership between your computer and a PC, you need to physically connect your computer to your PC using these accessories:

- USB snap-on adapter (Model 1000AA07)
- USB cable

Using these accessories, you can transfer files to and from your PC using ActiveSync.

1. Connect your mobile computer to your desktop PC using the adapter and USB cable.
2. Download ActiveSync from the Microsoft website and install ActiveSync on your PC.
3. Follow the onscreen instructions to establish a partnership. When the partnership is established, the Microsoft ActiveSync screen appears on your PC.



Use the Computer as a Mass Storage Device

You can connect the 70 Series computer as a mass storage device to your desktop PC. When connected as a mass storage device, you can easily copy files to and from the mobile computer.

1. Go to **www.datalight.com** and download the Reliance Nitro Windows Driver (RNWD). You need to login before you can download the driver.
2. Connect the mobile computer to your desktop PC using a USB cable.
3. On the mobile computer, tap **Start > Settings > System > Intermec Settings**.
4. From the Intermec Settings Main Menu, tap **Device Settings > USB**.
5. From the USB function driver menu, select **Mass storage - Flash File Store** and tap **OK**.
6. Copy files to and from your desktop PC to the mobile computer.

2

About the User Interface and Intermec Applications

Use this chapter to 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 Intermec applications on your computer, as well as additional Intermec applications you can download.

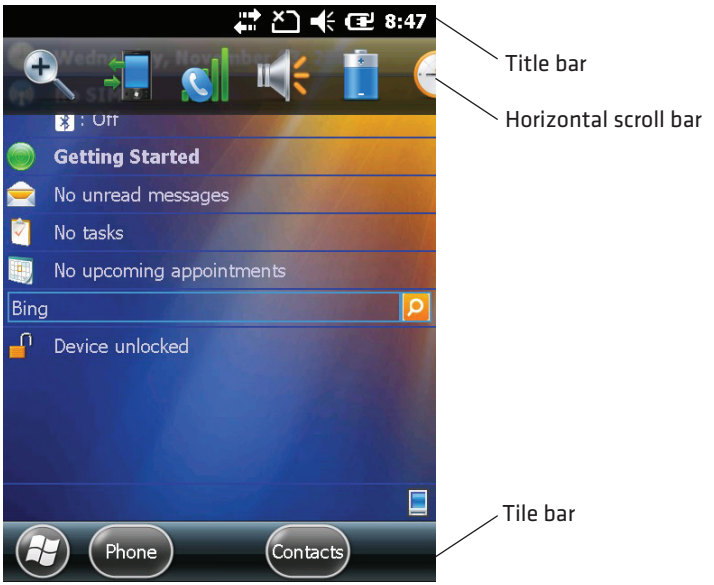
About the User Interface

The user interface for the Windows Embedded Handheld 6.5 operating system is different from previous versions of Windows Mobile. The interface is touch-friendly and easy to navigate. Use the following sections to understand how to interact with Windows Embedded Handheld 6.5.

About the Home Screen

When you turn on your mobile computer, the Home screen is the first screen that appears. The Home screen contains three navigation bars: the Title bar, the horizontal scroll bar, and the Tile bar.

The Windows Embedded Handheld 6.5 Home Screen

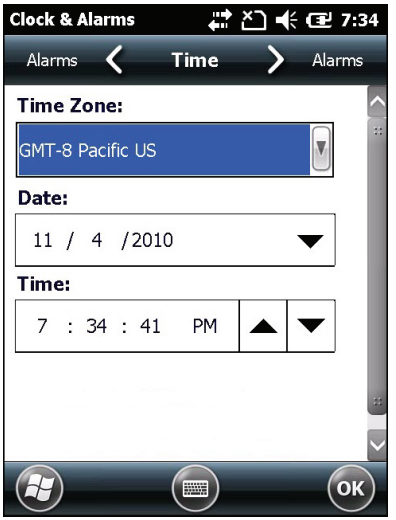


Use the Title bar icons to view the current status of information such as signal strength and battery power remaining. For more information on the Title bar icons, see **"Title Bar Status Icons" on page 42**.

A horizontal scroll bar appears when you tap an icon in the Title bar. This horizontal scroll bar makes it easy to access the applications associated with the Tile bar icons. The horizontal scroll bar also contains a magnifier which improves the touch experience by making parts of the screen large enough to tap with your finger.

The horizontal scroll bar also replaces tabs within Windows screens and allows for easier navigation.

Clock & Alarms Screen With Horizontal Scroll Bar



Use the Tile bar to navigate between screens and within applications. The icons available on the Tile bar change depending on the application you are using.

Interact with the Screen

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

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.

Title Bar Status Icons

Tappable 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.

Title Bar Status Icon Descriptions

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.
	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.

Icon	Description
	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.
	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.

Icon	Description
	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.

Align the Screen

You may need to align your screen if you tap on one area and it registers in a different part of the screen. Make sure you only use the stylus to complete the alignment process.

1. Tap **Start (⊞) > Settings > System > Screen**.
2. Follow the prompts on the screen to complete the alignment process.

About Intermec Applications

Intermec provides many useful applications to help you configure, troubleshoot, and connect your computer to other devices and networks. You can also download additional applications from the Intermec website to help you use all of the features of your computer.

Applications Available on the Mobile Computer

Use this table to understand some of the Intermec applications available on your computer.

Intermec Applications Available on the Mobile Computer

Icon	Application	Description
	Bluetooth Audio	Use the Bluetooth Audio application to connect to a Bluetooth headset or hands-free device. For more information, see **"Connect to a Bluetooth Audio Device" on page 88**.
	Carrier Selection	Use the Carrier Selection application to quickly change your network carrier. For more information, see **"About Network Carriers" on page 56**.
	CloneNGo	Use CloneNGo to configure basic device settings on multiple client computers from one master computer. For more information, see **"Manage the Computer Using CloneNGo" on page 106**.
	iGPS	Use the iGPS application to improve the performance of GPS on your computer. For more information, see **"Improve GPS Performance on the Computer" on page 72**. iGPS is only available on computers with phone capability.
	Intermec Settings	Use Intermec Settings to configure your computer. You can use Intermec Settings to individually configure a computer or you can use it through SmartSystems to configure all of your computers. For more information, see **"Use Intermec Settings on the Computer" on page 74**.
	ISpyWiFi	Use ISpyWiFi to check your 802.11 status and diagnose issues with the connection. For more information, see **"Check 802.11 Network Status" on page 117**.
	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. • Tap the Profile Setting you want to use. You will see a message that changes are saved and a check mark appears next to your choice. For more information on modifying Profile Settings options, see **"Configure Profile Settings with Intermec Settings" on page 80**.

Icon	Application	Description
	ScanDiagnostic	Use the ScanDiagnostic application to troubleshoot problems with the internal or external scanner. For more information, see **"Use ScanDiagnostic to Troubleshoot the Scanner" on page 120**.
	SceneEditor	Use the SceneEditor application to modify predefined camera scenes or create new scenes. For more information, see **"Configure Camera Scenes" on page 65**.
	Wireless Center	Use the Wireless Center to turn radios (Wi-Fi, Bluetooth, phone) 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 **"Connect to a Bluetooth Printer" on page 87**.
	Wireless Scanning	Use the Wireless Scanning application to connect to a Bluetooth scanner. For more information, see **"Connect to a Bluetooth Scanner" on page 85**.

Applications You Can Download to the Mobile Computer

You can download several Intermec applications from the website that extend the capabilities of your 70 Series computer. All of the applications listed below are available from the Intermec website. Some of the applications require the purchase of a license to run. To find the application you want, go to **www.intermec.com** > **Support** > **Downloads** and then enter the information to find your 70 Series computer.

About eMDI

Intermec Enhanced Mobile Document Imaging Application (eMDI) is a professional document capture application that enables you to capture images of full page documents (8.5 x 11 or A4 paper sizes) with the camera. You can transfer the images from your mobile computer to a PC or server. For more information, see the ***Intermec Enhanced Mobile Document Imaging User Guide***. You can download and use eMDI for a 30-day evaluation period. After the evaluation period expires, you will need to purchase a license.

About Features Demo

Intermec Features Demo provides a simple way to explore the key features of your mobile computer. You will find applications that demonstrate scanning, document imaging, image capture, printing, and GPS 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.

About Image Capture

The Intermec Image Capture application is provided for use on the 70 Series computers with an EA30 imager. Image capture provides a way for users to capture a high quality grayscale image with a mobile computer. Image Capture also allows you to change settings to provide the best image possible for the conditions present. You do not need to license Image Capture.

About Intermec Browser

Intermec Browser is a locked-down web application for your computer that is compatible with Internet Explorer 6.0. You can configure Intermec Browser for your specific application requirements and design your own web pages. You can download and use Intermec Browser for a 60-day evaluation period. After the evaluation period expires, you will need to purchase a license.

About Intermec Connection Manager

Intermec Connection Manager is a software application and API interface that provides seamless network roaming for Intermec mobile computers configured with one or more wired or wireless technologies (Ethernet, 802.11, GPRS, CDMA). Intermec Connection Manager works in the background to automatically establish and maintain connections. You can download and use Intermec Connection Manager for a 60-day evaluation period. the evaluation period expires, you will need to purchase a license.

About Intermec Launcher

Intermec Launcher is a Microsoft Windows application, designed for Intermec mobile computers, that provides a platform from which other applications may be launched while attempting to provide a locked-down environment. You can configure Intermec Launcher for your specific application requirements. You can download and use Intermec Launcher for a 60-day evaluation period. After the evaluation period expires, you will need to purchase a license.

About Intermec Terminal Emulator (ITE)

Intermec Terminal Emulator (ITE), part of Intermec Client Pack (ICP), is the next generation of Intermec's popular terminal emulation client designed for enterprise-level data collection. It provides a consistent user interface and a common menu structure to simplify the use and management of applications running on Intermec mobile and wireless computers.

ITE is packed with enhancements that improve productivity, reduce errors, and deliver fast return on investment. It supports multiple emulation protocols in a single client and has new features such as session persistence, remote management and configuration, and offers a maintenance plan to keep you up-to-date with the latest releases and upgrades. You can download and use ITE for a 60-day evaluation period. After the evaluation period expires, you will need to purchase a license and maintenance plan.

About SmartSystems

SmartSystems™ is an easy-to-use software platform that provides IT Administrators and Integrators a single, integrated portal for hands-free provisioning, deployment, and management of Intermec devices minimizing the effort spent on software upgrades, equipment monitoring, maintenance and troubleshooting.

SmartSystems provides a consistent way to manage Intermec devices including mobile computers, RFID readers, printers and bar code scanners, located on-site or remote, to make the most of limited IT resources, and lower the total cost of ownership for Intermec data collection equipment. SmartSystems can be downloaded at no charge from the Intermec website. For more information, visit **www.intermec.com/SmartSystems**.

3

Use the Phone

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

About the Phone

The 70 Series mobile computer supports two types of cellular technology:

- CDMA
- UMTS

Note: Your Flexible Network Radio mobile computer supports both CDMA and UMTS technology. Your Flexible Network Radio does not support Network Information and Time Zone (NITZ) messages to automatically set the system time.

Phone features on the computer include a speaker and a microphone. You can also use a Bluetooth headset or hands-free kit. The phone feature is enabled by default on WWAN-equipped mobile computers.

After you turn on the phone and activate service with your wireless carrier, you can customize the phone features and network settings. For more information, see the online help on your mobile computer.

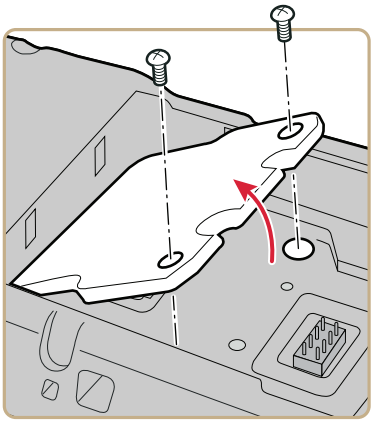
Activate the UMTS Phone

You use a SIM card to activate the UMTS phone on your computer. You can purchase the SIM card from your network provider.

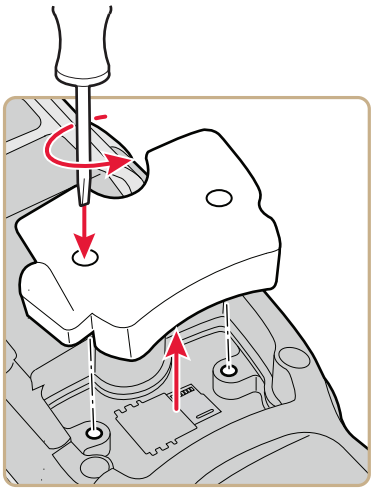
1 Press the **Power** button to turn off the computer.

2 On the CN70 or CN70e:

   a Push the battery release tab forward until the battery releases, and lift the battery away from the computer.
   b Remove the two Phillips screws and open the card access door.

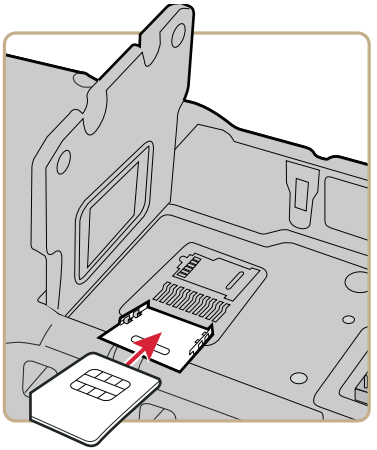


3 On the CK70, remove the two screws and lift the card access door away from the computer.



4 Slide the SIM card door to the left to unlock it and open the door.

5 Slide the SIM card into the slot in the card access door.



6 Close the SIM card door and slide it to the right to lock it in place.

7 Close the card access door and replace the two screws.

8 Install the battery. Press down firmly on the bottom of the battery, and make sure that the battery release tab is fully engaged.

9 Press the **Power** button. The computer cold boots.

Activate the CDMA Phone

To activate the CDMA radio module in your mobile computer, you need to contact your wireless carrier and set up an account for each mobile computer. The following table lists the carriers that Intermec currently supports. If your carrier is not listed in the table, please contact Intermec product support to see if it is now supported.

Currently Supported Carriers

Country	Carriers
United States	Sprint, Verizon

The carrier requires the Mobile Equipment Identifier (MEID) to start the activation process. You can find the MEID:

- on a label located in the upper right corner of the battery compartment.
- on the outside of the computer shipping box.
- in the Version Information menu. Tap **Start > Settings > Personal > Phone > Version Information** tab.

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

After you supply the MEID to your carrier, they will respond with values that you must enter using the Windows Mobile Activation Wizard (if required). Some of the supported carriers do not require you to enter any values. The following table shows the carriers, the correct activation method to use, and the values that you need to activate your phone.

Values Required for CDMA Phone

Carrier	Activation Method	Activation Values You Need
Sprint	Activation Wizard	• Master Subsidy Lock (MSL) or activation code • MDN • MEID
Verizon	• Dial *22899 • Activation Wizard	None. All parameters are automatically transferred wirelessly.

After activation, the settings are permanently stored in the CDMA module. Changing the OS loads will not affect any of the settings or activation parameters stored in the WAN modem.

Start the Activation Wizard

Depending on your wireless carrier, you may need to use the Windows Mobile Activation Wizard to activate your phone.

1. Tap **Start > Phone**, or tap the **Phone** button on the Tile bar.

   The phone application starts.
2. Tap **Menu > Activation Wizard**.

Turn the Phone On and Off

Before you can start using your phone, you need to enable it. You can use Wireless Center to enable and disable your phone, as well as Bluetooth and Wi-Fi communications.

1. Tap **Start > Settings > Connections > Wireless Center**.
2. Tap **Phone** to turn on the Phone
3. (Optional) To configure the phone, tap **Menu** in the tile bar at the bottom of the screen.
4. Tap **OK** when you are done configuring the options.
5. Tap **OK** to close Wireless Center.

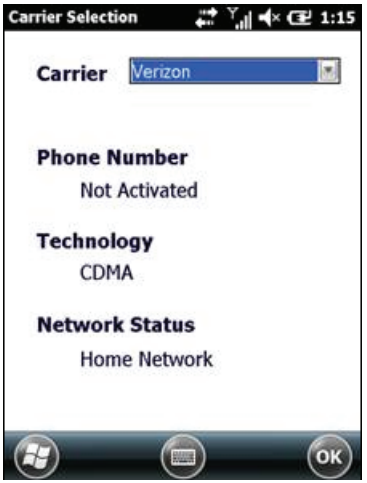
About Network Carriers

Your Flexible Network Radio-enabled CN70, CN70e, or CK70 mobile computer contains a highly configurable WWAN platform. When you switch network carriers, or perform a clean boot, the cellular network connection is automatically configured.

Switch Network Carriers

Use the Carrier Selection application to quickly change your WWAN radio network carrier on your Flexible Network Radio-enabled CN70, CN70e, or CK70 mobile computer.

1 Tap **Start > Settings > Personal > 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.

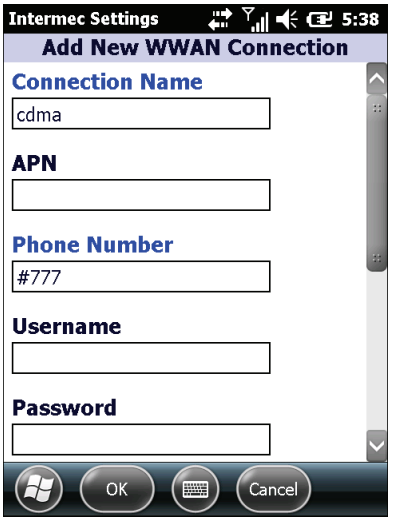
If the update is successful, the Carrier Selection screen appears and displays the updated carrier information.

If the update is unsuccessful, a message box appears. Tap **Ok** to return to the Carrier Selection screen.

Add the WWAN Connection

If you are switching to a CDMA network, or switching from a CDMA network to a UMTS network, you must add the WWAN connection in Intermec Settings.

1. Tap **Start > Settings > System > Intermec Settings > Communications > WWAN Radio**.
2. Select **Add New WWAN Connection**.
3. Enter a **Connection Name**. In the Phone Number field, enter **#777** and tap **OK**. The Manage WWAN Radio State screen appears.



4 From Active Connection, select your **Connection Name** and **Connect Now** and tap **OK.**

About the Network Connection

Note: When you perform a clean boot, the selected carrier will default to generic UMTS.

When you perform a clean boot, all user-created network connection entries are deleted, and only the generic UMTS remains. After you perform a clean boot, you can find more information about generic UMTS by tapping **Start** > **Settings** > **Connections** > **Connections** > **Tasks** tab > **Manage Existing Connections** > **Modem** tab.

Make a Phone Call

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

Note: Your Flexible Network Radio mobile computer is data only. You cannot make phone calls from the Flexible Network Radio.

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

Make an Emergency Phone Call

You can use the UMTS phone to make an emergency phone call even if the SIM card is missing. When the SIM card is not installed, the phone will show that you have no service. However, if you dial certain emergency numbers (such as 112, 911, 000, 08, 118, 119, and 999) the call will go through.

Note: Your Flexible Network Radio mobile computer is data only. You cannot make phone calls from the Flexible Network Radio.

4

Use the Camera

You can use the color camera to take pictures and record videos.

About the Color Camera

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

Note: While the Pictures & Videos application is running, you cannot use the imager.

In the Pictures & Videos application, you can:

- configure camera settings.
- 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.

You can send pictures and video clips to others or save an image as the background on the Home screen. If you download the eMDI application, it uses the camera to capture images.

About the Camera Settings

You can configure camera settings to meet the needs of your operating environment:

- Basic camera settings are available from the main menu of the Pictures & Videos application.
- Advanced camera settings are available from the Settings menu option from the main menu of the Pictures & Videos application.

Basic Camera Settings

Setting	Description
Mode	Determines the camera operating mode: • Normal: Takes one picture. • Burst: Takes a series of three pictures. • Timer: Waits 10 seconds before taking the picture.
Resolution	Determines the resolution of the image. You can select values for image resolution or screen resolution.
Zoom	Determines the amount of zoom: from 1x to 4x.

Setting	Description
Scenes	Predefined scenes that optimize the camera settings for a specific environment: • DocCap: Intermec document capture. • Check: Capture images of paper checks. • Night: Low light conditions. • Cloudy: Cloudy or overcast conditions. • Daylight: Bright sun. • Van Interior: Dimly lit vehicle interior. • Warehouse: Warehouse environment. • Office Store: Office or store environment. • Manual: Manually configure a specific set of camera settings. • Auto: The camera automatically configures the settings.
Settings	Advanced camera settings that you can configure. See the next table, **"Advanced Camera Settings"**.
Torch	The state of the camera flash depending on the lighting conditions: on, off, or automatic.
Flash	The state of the camera flash when you take a picture: on, off, or automatic.
Focus	Determines if the focus is continuous, single shot, or manual. If you select manual focus, you need to set the Focus Distance.
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 would be in focus).

Advanced Camera Settings

Setting	Description
Exposure Metering	The area of the image the camera uses to determine optimal exposure: • Whole Avg.: Uses the image as a whole. • Whole Center Weight: Uses the entire image but places emphasis on the center quarter of the image. • Center 1/4 Avg.: Uses the center quarter of the image. • Lower 1/4 Avg.: Uses the lower quarter of the image. • Upper 1/4 Avg.: Uses the upper quarter of the image. • Lower 1/2 Avg.: Uses the lower half of the image. • Upper 1/2 Avg.: Uses the upper half of the image. Default is Center 1/4 Avg.

Setting	Description
Exposure	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.
Brightness	Brightness level of the image. Manual settings are from -4 (very dark) to +4 (very light) in increments of 1. Default is Auto.
Contrast	Amount of contrast in the image. Manual settings are from -4 (least contrast) to +4 (most contrast) in increments of 1. Default is Auto.
Saturation	Color saturation level. Manual settings are from -4 (black and white) to +4 (maximum color) in increments of 1. Default is Auto.
Sharpness	Sharpness of the image. Manual settings are from -4 (very soft) to +4 (very sharp) in increments of 1. Default is Auto.
White Balance	Compensates for specific lighting conditions to produce true color images: • Auto: Automatic White Balance (AWB) control. • Sunny: Outdoors in bright, midday sunny conditions. • Cloudy: Outdoors with a completely overcast cloudy sky. • Tungsten: Indoors lit with tungsten light bulbs. • Office: Indoors lit with fluorescent light bulbs. Default is Auto.
Flash Profile	Controls the amount of flash for a specific condition: • 0: This profile is reserved. • 1: Document imaging in light to moderately light ambient conditions. • 2: Dark, semi-reflective environments, such as a vehicle interior or dimly lit room. • 3: Dark, non-reflective large or outdoor environments. Provides very long flash durations. • 4: This profile is reserved. Default is 1.
DeNoise	Controls the amount of noise, or graininess, in the image: • Disabled: Disable noise reduction. • Normal: Use normal noise reduction. • Enhanced: Enhance the noise reduction.

Configure the Camera

Use the Pictures & Videos application to configure the camera.

Note: You can also use Intermec Settings to configure some camera options.

1. Tap **Start > Pictures & Video**.
2. To enter Still mode, tap the **Camera** icon in the grid or the **Camera** button on the Tile bar.
3. Tap **Menu**.
4. Select a setting to configure.

Configure Camera Scenes

You can modify predefined camera scenes or create new scenes to further accommodate your specific needs.

1. Tap **Start > SceneEditor**.
2. Select a **Scene** to configure.

   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.

Take a Picture

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 in the grid or the **Camera** button on the Tile bar, or press **Enter**.
3. Using the screen as a viewfinder, move the camera until you have the image you want to take a picture of.
4. Hold the camera as still as possible, and press **Enter** to take and save the picture.

   If you choose to save your pictures to Main memory, they are saved to permanent storage on your mobile computer.

Record a Video

You need to switch to video mode to record video. When you record video, the video is saved as an .mp4 file and 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, or press **Enter**.
3. Tap **Menu > Video**.
4. Using the screen as a viewfinder, move the video camera until you see the scene you want to video record.
5. Press **Enter** to start recording.
6. When you are done, tap **Stop** or press **Enter** to stop recording and save the video.

   If you choose to save your videos to Main memory, they are saved to permanent storage on the computer.

Save Pictures and Videos to a microSD Card

Pictures and videos are automatically saved to the main memory on your computer. You can save your pictures and video to a microSD card to easily transport them to another device.

1. Install a microSD card. For help, see **"Insert a MicroSD Card" on page 30**.
2. Tap **Start** > **Pictures & Videos**.
3. Tap the camera icon.
4. Tap **Menu > Options**.
5. From the **Save files to** list, select **SD card**, and tap **OK**.

5
Use GPS

The 70 Series computer comes equipped with an integrated Global Positioning System (GPS) receiver if your computer has phone capability (WWAN radio). The GPS receiver can deliver standards-based National Marine Electronics Association (NMEA) data strings to GPS applications.

About the Integrated GPS on Your Computer

Intermec 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.

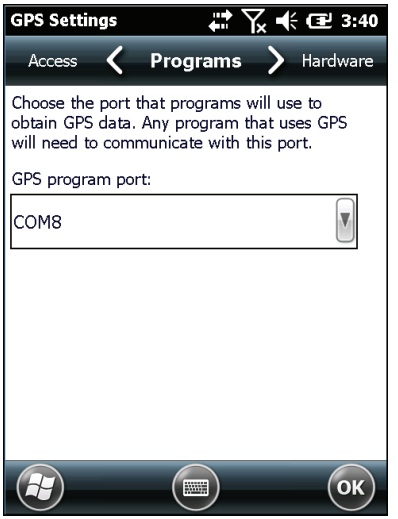
As a Microsoft software component, the GPSID:

- 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

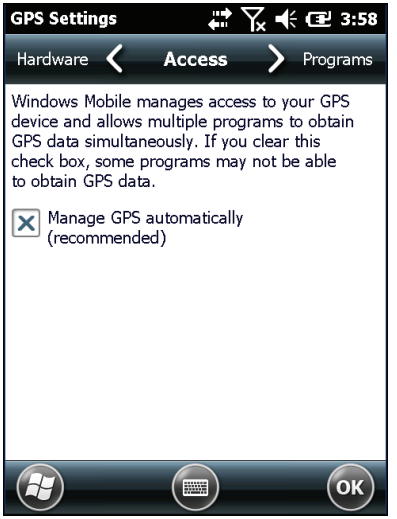
To use the GPSID installed on your mobile computer, you need to configure the GPSID settings.

1 Tap **Start > Settings > System > External GPS**. The GPS Settings screen appears with **Programs** selected.



2 Select the COM port that you want your programs to use to get GPS data from your computer.

3 Tap **Access** in the horizontal scroll bar and select the **Manage GPS automatically** check box.



4 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.

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 WAN 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 default for fix interval, in seconds, is 4. 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 CN70, CN70e, or CK70 computer.

Note: Anytime you change the GPS settings, the phone module 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 and select one of these options: Standalone (**1**), MS assisted (**2**), or **Enable gpsOneXTRA** (check box).
4. Tap **OK**.