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Managing the Computer

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

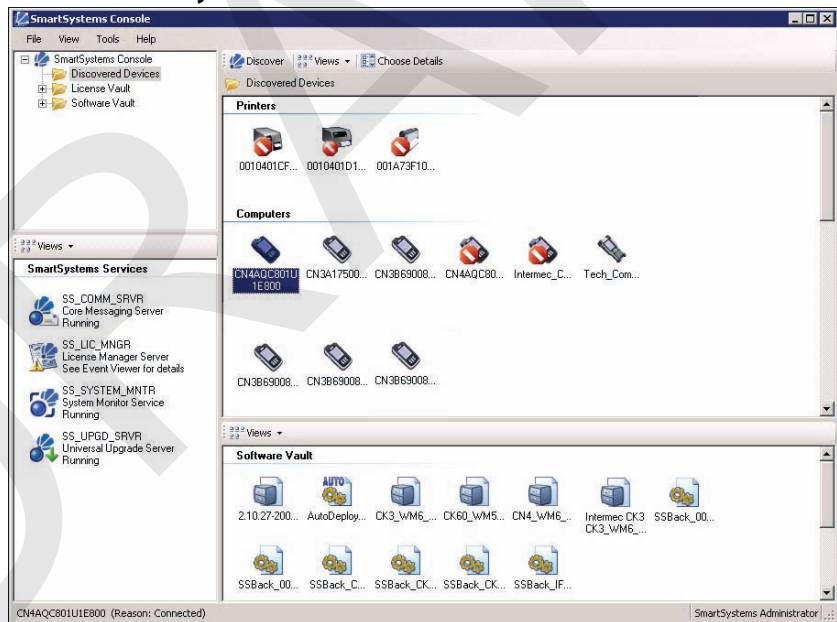
Managing the Computer in Your Network

When you have multiple mobile computers and peripherals in your network, it is essential to have an easy way to manage updates, configure all of the devices, and remotely troubleshoot problems. Intermec provides a free device management software platform called SmartSystems™ Foundation to help you manage your devices. You can also purchase third-party device management software through a vendor.

Managing the Computer Using SmartSystems

Intermec's SmartSystems Foundation is a software platform that lets you manage all of your SmartSystems-enabled devices simultaneously from a central server. The SmartSystems Foundation console displays all SmartSystems-enabled computers and peripherals in your network.

Intermec SmartSystems Foundation Console



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 SmartSystems-enabled computers and peripherals.

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

With a Provisioning license, SmartSystems Foundation can automatically push software, configuration settings, and other files to connected mobile computers. The license also enables ScanNGo, which makes connecting additional mobile computers to your wireless network as easy as reading bar codes. You can download SmartSystems Foundation from the Intermec web site at no charge. For more information, visit www.intermec.com/SmartSystems. To purchase a Provisioning license, contact your local Intermec sales representative.

Managing the Computer Using Third-Party Software

You can use third-party software such as Wavelink Avalanche to centrally manage your Intermec devices. Device management software enables you to update software, increase security, track your assets, and troubleshoot devices remotely. You can download the Wavelink Enabler for the mobile computer from the Wavelink web site. For more information, visit the Intermec web site and search for Wavelink Avalanche or visit www.wavelink.com to download the enabler.

Developing and Installing Applications

Use the Intermec Resource Kits to develop applications to run on the 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 are part of the Intermec Developer Library (IDL), and can be downloaded from the Intermec web site at www.intermec.com/idl.

For more information, see the *Intermec Developer Library Resource Kit Developer Guide*.

Packaging Your Application

For very simple applications, the executable file may be the only file you need to deploy. More typically, you will have a set of files to install.

Intermec recommends using .cab files to install your applications. The computer uses standard Windows Mobile .cab files and will install third-party .cab files.

Choosing a Target Location

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

- The ObjectStore.
- 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.
- The non-volatile Flash File Store. Applications and data in the Flash File Store will persist through a clean boot.



Note: The Flash File Store is erased if you reflash the operating system image.

Files copied to any of these locations are safe when you cold boot the computer as long as the AutoRun system is installed in the appropriate location. When AutoRun is installed on the computer, all .cab files in the CabFiles folder are automatically extracted after a cold boot. For more information about AutoRun, see the *Intermec Developer Library Resource Kit Developer Guide*.

Installing Applications Using SmartSystems Foundation Console

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

To install applications using SmartSystems Foundation Console:

- 1 Download your application file from the Intermec web site and unzip it 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.

Installing Applications Using Microsoft ActiveSync

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

- 1 Connect to the mobile computer via ActiveSync.
- 2 Copy the .cab files from your development PC to the 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.

Installing Applications Using a Storage Card

Use a storage card to install applications on one computer at a time or if you have no network connection.

To install applications using a storage card:

- 1 Copy your application file to the storage card.
- 2 Install the storage card in the mobile computer.
- 3 On the mobile computer, browse to the Storage Card folder and run your application.

Launching Applications Automatically

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

- Set up your .cab file to place a shortcut to the application in the `\Windows\StartUp` directory at install time.

- Use AutoRun.exe 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 how to use the AutoRun.exe feature, view the Readme.txt file located in the My Device\Flash File Store\2577 directory on your computer.

Updating the System Software

The mobile computer uses Image Update to update the operating system (OS) and the system software. Image Update uses incremental packages to allow for smaller and faster updates because the contents are stored in flash ROM.

Update packages persist through a cold or clean boot and cannot be removed by the end user. The Image Update process also provides strengthened security because all packages are signed. Image Update packages (.pkg or .pks files) may contain elements such as .dll, executable (.exe), and .cab files.

You can use either of these methods to update your mobile computer:

- You can update multiple computers at the same time using the SmartSystems Console. For help, see the next section, **“Updating Multiple Computers Using SmartSystems Console”**.
- You can update individual computers by transferring the packages to the mobile computer and then installing them from the mobile computer.

If you are using SmartSystems Foundation to update the computer, you can purchase a Provisioning License to send the Image Update silently. For more information, see **“Sending the Image Updates Silently” on page 100**.

Updating Multiple Computers Using SmartSystems Console

You can use the SmartSystems console to update the operating system or system software on your mobile computer. The console is part of SmartSystems Foundation and is available from the Intermec web site through the Intermec Developer Library (IDL). Before you can update your mobile computer, you need:

- SmartSystems Foundation. To download SmartSystems Foundation, go to www.intermec.com/SmartSystems and click the Downloads tab.
- the SmartSystems bundles you want to install. The SmartSystems bundle contains the Image Update package file. These SmartSystems bundles are available from the Intermec web site at www.intermec.com. Go to **Support > Downloads**.
- a Provisioning license.

To update the mobile computer using SmartSystems Foundation:

- 1 Open the SmartSystems console.
- 2 Make sure the SmartSystems console and the mobile computer are on the same subnet and they are connected wirelessly or through Ethernet.
- 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 bundles to install and drag them to each mobile computer (or group in a folder) you want to update. The SmartSystems console 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.

- 7 When a confirmation dialog box appears requesting user input, dismiss it.



Note: The SmartSystems console indicates that your mobile computer is offline, by displaying a red stop symbol, until the computer reboots and reconnects to the system.

Sending the Image Updates Silently

If you want to automatically download and send update packages to your mobile computers, you can purchase a Provisioning license. The silent updates do not require any user intervention and begin when you choose to have the update process start. SmartSystem Foundation users are notified when update packages are released so that they can download them and update their Intermec computers. For more information, see the SmartSystems Foundation Help.

Updating Individual Mobile Computers

You can download update packages from your PC to the mobile computer using Microsoft ActiveSync or any other file transfer method you choose. If you need to download ActiveSync or the Windows Mobile Device Center, go to www.windowsmobile.com/getstarted.

To update an individual mobile computer:

- 1 Download the Image Update packages you want to install from the Intermec web site at www.intermec.com. Go to **Support > Downloads**.
- 2 Transfer the Image Update package from your PC to the mobile computer.
- 3 On your mobile computer, tap **Start > Programs > File Explorer** and navigate to the location of the Image Update package.

- 4** Double-tap the package to start the installation. 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 mobile computer boots again.

- 5** When a confirmation dialog box appears requesting user input, dismiss it.

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Troubleshooting and Maintaining the Computer

If you encounter any problems while using the 70 Series computer, look in this chapter to find a possible solution. You will also find information on routine maintenance.

About the Intermec Dashboard

The Intermec Dashboard is designed to provide proactive monitoring of your mobile computers to prevent downtime. You can easily see the health of the device and can help pinpoint the source of a problem to determine if it is hardware or software related.

Intermec Dashboard displays information such as the status of network connections, battery usage, storage space, and internal devices. It also provides system information such as the operating system, firmware, and hardware configuration.

To launch the Intermec Dashboard:

- Press the Intermec Dashboard button (Ⓜ) on the computer keypad.

Intermec Dashboard Main Screen



Intermec Dashboard is highly integrated with SmartSystems Foundation. You can use SmartSystems Foundation to remotely monitor the health of your computers. For more information, refer to the SmartSystems online help.

Troubleshooting Your Mobile Computer

Use the troubleshooting 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.

If you send the computer in for service, it is your responsibility to save the computer data and configuration. Intermec is responsible only for ensuring that the hardware matches the original configuration when repairing or replacing the computer.

Troubleshooting the Wi-Fi Connection

Use this troubleshooting table to help solve problems with your 802.11 radio connection.

Problems With the Wi-Fi Connection

Problem	Solution
When you turn on the computer after it was suspended for a while (10 to 15 minutes or longer), it can no longer send or receive messages over the network.	Host may have deactivated or lost 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. Your computer now shows you are 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.
The computer appears to be connected to the network, but you cannot establish a terminal emulation session with the host computer.	There may be a problem with the host computer, or with the connection between the access point and the host computer. Check with the network administrator to make sure the host is running and allowing users to log in to the system.
The computer appears to be connected to the network, but the host computer is not receiving any information from the 70 Series computer.	There may be a problem with the connection between the access point and the host computer. Check with the network administrator or use your access point user’s manual.

Problem	Solution
A network connection icon appears in the toolbar, but then disappears.	<p>The computer may not be communicating with the intended access point. Make sure the network name matches the access point network name. Default network name is “INTERMEC.”</p> <p>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.</p>

Troubleshooting 802.1x Security

Use the following table to troubleshoot problems with your 802.1x security that will prevent you from connecting to your network, such as an incorrect password.

Problems With 802.1x Security

Problem	Solution
The computer indicates it is not authenticated.	<p>Make sure that:</p> <ul style="list-style-type: none">• the User Name and Password parameters on the computer must match the user name and password on authentication server. You may need to reenter the password on both the computer and authentication server.• 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.• the IP address and secret key for access point must match the IP address and secret key on the authentication server. You may need to reenter the IP address and secret key on both your access point and authentication server.• the authentication server software is running on the server PC.
You receive a message saying “The server certificate has expired or your system date is incorrect” after you perform a clean boot on the computer.	Date and time are not saved when you perform a clean boot. Reenter the date and time, and then save your changes.

Checking 802.11 Network Status

If you have trouble connecting to your 802.11 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 Intermec Product Support, this information can be helpful in troubleshooting wireless network connection issues.

To verify the network status:

1 Tap **Start** > **iSpyWiFi**. The iSpyWiFi application launches.

The iSpyWiFi tab shows:

- MAC address and IP address of the 802.11 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 802.11 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**. Intermec Settings launches for you to configure 802.11 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.

To run a ping test:

- 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 RSSI history.

This screen includes the 802.11 radio driver version and available radio modes.

To create a log file:

- a** Check the **Log to File** check box.
- b** (Optional) Change 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 to which the file will be saved, the content type (log or text), and the location.
- e** Tap **OK**.

Troubleshooting Reading Bar Codes

Use this section to troubleshoot problems that may prevent you from being able to read a bar code, such as the symbology not being enabled.

Problems Reading Bar Codes

Problem	Solution
<p>You cannot see the illumination beam or frame from the imager when you press the Scan button and aim the imager at a bar code label.</p>	<ul style="list-style-type: none"> • You may be too far away from the bar code label. Try moving closer to the bar code label and scan it again. • You may be reading the bar code label “straight on.” Change the reading angle and try again. • The imager hardware trigger might be disabled in Intermecc Settings. To check the setting go to Start > Settings > Systems > Data Collection > Scanner Settings. Hardware trigger should be checked.
<p>When you release a Scan button or handle trigger, the Good Read light does not turn off.</p>	<p>The Good Read light will remain on if you configure the computer to use continuous/edge triggering. If you configure the computer for level triggering and the Good Read light remains on, there may be a problem. Press one of the Scan buttons or pull the trigger again without scanning a bar code label. If the light is still on, contact your local Intermecc representative.</p>
<p>The scanner will not read the bar code label.</p>	<ul style="list-style-type: none"> • Aim the scanner beam to cross the entire bar code label in one pass. Vary the scanning angle. • Check the quality of the bar code label. Scan a bar code label that you know will scan. Compare the two bar code labels to see if the bar code quality is too low. You may need to replace the label that you cannot scan. • Make sure the bar code symbology is enabled and configured correctly. Use Intermecc Settings to check the symbologies. Expand Data Collection > Symbologies beneath devices listed (scanner, virtual wedge) to check and enable symbologies, then scan the bar code label again. • Make sure the computer application is expecting input from a bar code. You may need to type this information instead. • The scanner may not be turned on or the scanner may be unable to scan a specific bar code. Run the ScanDiagnostic application to help you troubleshoot the problem. For more information, see

Problem	Solution
The scanner does not read the bar code labels quickly, or the scanning beam seems to be faint or obscured.	The scanner window may be dirty. Clean the window with a solution of ammonia and water. Wipe dry. Do not allow abrasive material to touch the window.
You scan 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 a symbology other than the label's actual symbology. Try scanning 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. Check enabled bar code symbologies and enable only the symbologies being used.

Using ScanDiagnostic to Troubleshoot the Scanner

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

To run the ScanDiagnostic application:

- 1 From the Home menu, tap **Start > ScanDiagnostic**.
- 2 From the Scan Health screen, select the scanner you want to troubleshoot and then tap **Diagnose**.

The application checks to make sure the scanner is enabled and checks settings to make sure they are optimized.

- 3 From the Scan Test screen, press and hold the **Press to Scan** button while aiming at the bar code you want to read.

After the computer scans the bar code, it beeps and the label data, data length, and symbology appear on the screen.

- 4 Press the right arrow button to view any recommended settings.
- 5 To accept the recommended settings, tap **Apply**.
- 6 Tap **OK** to exit.

Troubleshooting Operating the Computer

Use this section to troubleshoot problems that may prevent you from being able to operate the computer.

Problems Operating the Computer

Problem	Solution
You press the Power button and nothing happens.	<p>Try the following solutions:</p> <ul style="list-style-type: none"> • Replace or charge the battery. The battery may be completely drained. • Remove the battery and press the Reset button to perform a cold boot. For help, see “Cold Booting the Computer” on page 113.
The computer appears to be locked up and you cannot enter data.	<ul style="list-style-type: none"> • Press the Power button and select Suspend from the Power Options menu. Press the Power button to turn the screen back on. • Press the Power button and select Reboot from the Power Options menu. • Remove the battery and press the Reset button to perform a cold boot. For help, see “Cold Booting the Computer” on page 113. • Try reloading the firmware. For help, see “Updating the System Software” on page 98. • If the computer does not boot or reset, contact your Intermec representative for help.
You tap the screen and nothing happens.	Align your screen. For help, see “ Aligning the Screen ” on page 43 .
You cannot type a character on the keypad or you can only type uppercase or lowercase letters.	You may have locked a modifier key on the keypad. Press the necessary key sequence to unlock the key. For help, see “ About the Keypad ” on page 16 .

Calling Product Support

If you cannot find the answer to your problem in the “Troubleshooting the Computer” section, you can visit the Intermec technical knowledge base (Knowledge Central) at intermec.custhelp.com to review technical information or to request technical support. If you still need help after visiting Knowledge Central, you may need to call Product Support.

To talk to an Intermec Product Support representative, call:

1-800-755-5505

Before you can call Intermec Product Support, make sure you have the following information ready:

- Configuration number
- Serial number
- Operating system version
- SmartSystems Platform Bundle (SSPB) version
- If you are using security, know the type (Funk or Microsoft) and the full set of parameters
- Power management settings
- If you are using Intermec terminal emulation (ITE), know the version and protocol. If you are not using ITE, know the language your custom application was written in and the tools you used to create it.

You can find most of the information listed above in Intermec Settings. Consult your application developer for information on your custom application.

Finding Your Configuration Number

Use the following procedure to help you find the configuration number of your computer.

- Look at the label on the back of the computer.

Finding Your Operating System Version

Use the following procedure to find the OS version of your mobile computer.

- 1 Press the **Intermec Dashboard** (📄) button to launch the Dashboard.
- 2 Tap the **Information** bar. The Information Details page appears and displays information such as the firmware version and the OS version.

Resetting the Computer

If the computer does not resume after pressing the **Power** button, or if the computer or an application locks up, you may need to reset the computer. The computer uses the configuration currently saved in flash memory during the boot process. There are three ways to reset the computer:

- Reboot
- Cold boot
- Clean boot

Rebooting the Computer

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

To reboot the computer:

- Press the **Power** button and select **Reboot** from the menu.

The computer systematically shuts down, restarts, and goes through the initialization process.

Cold Booting 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.

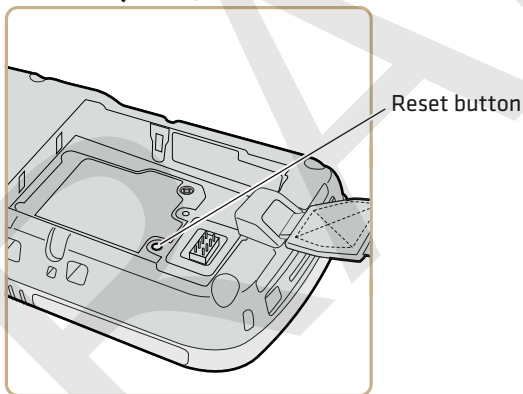


Note: Cold booting the computer does not guarantee that cached disk data will be saved, so transactional data may be lost during the reset. All other data, such as configuration and network settings, is preserved.

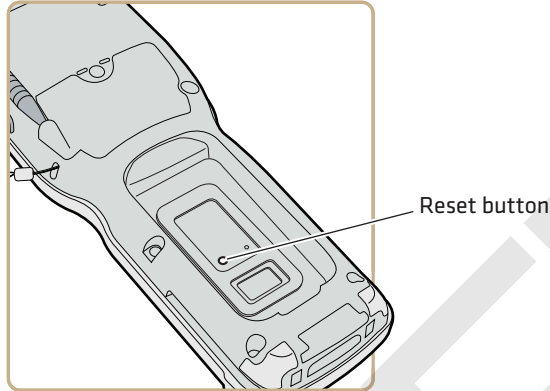
To cold boot the mobile computer:

- 1 Press the **Power** button to suspend the computer.
- 2 Remove the handstrap and the battery pack.
- 3 Press the **Reset** button in the battery compartment on the back of the computer.
- 4 Replace the battery and the handstrap.
- 5 Press **Power** and wait while the mobile computer boots. When the cold boot is complete, the Home screen appears.

Location of CN70/CN70e Reset Button



Location of CK70/CK71 Reset Button



Clean Booting the Computer



Caution

A clean boot 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 removeable storage.

If the computer seems to be locked up, try cold booting it. If this process does not work, use a clean boot to get the computer up and running for further troubleshooting. You can clean boot using the mobile computer, or you can clean boot using the SmartSystems Console:

To perform a clean boot using the mobile computer:

- 1 Remove the battery pack from the back of the computer.
- 2 With a stylus, press the **Reset** button in the battery cavity.
- 3 Insert the battery back into the computer, and immediately press and hold the **Power** button and **Volume Down** button (the lower button on the right side).
- 4 Continue to hold the **Power** button and the **Volume Down** button down until you are prompted to release them.
- 5 Press the **Volume Up** button on the right side to start the clean boot.
- 6 Wait for the computer to load files from its ROM.

To clean boot the computer using the SmartSystems Console:

- Right-click the 70 Series computer and select **Intermec Power Tools > Clean Boot Device**.

Cleaning 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 a solution of ammonia and water.



Caution

There are no user-serviceable parts inside the 70 Series computer. Opening the computer will void the warranty and may cause damage to the internal components.

To clean the image window, camera window, and touch screen:

- 1 Press the **Power** button and choose to suspend the computer.
- 2 Dip a clean cloth towel in the ammonia solution 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.

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Specifications and Default Settings

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Physical and Environmental Specifications

CN70 Physical Dimensions

Dimensions	16.9 x 8.0 x 3.4 cm (6.66 x 3.14 x 1.35 in)
Weight	450 g (15.2 oz) with battery

CN70e Physical Dimensions

Dimensions	19.5 x 8.0 x 3.4 cm (7.66 x 3.14 x 1.35 in)
Weight	491 g (16.6 oz) with battery

CK70 Physical Dimensions

Dimensions	23.7 x 8.0 x 4.3 cm (9.33 x 3.16 x 1.69 in)
Weight	562 g (19 oz) with battery

CK71 Physical Dimensions

Dimensions	23.7 x 8.0 x 5.0 cm (9.33 x 3.16 x 1.98 in)
Weight	584 g (19.75 oz) with battery

Environmental Specifications

Operating temperature	-20°C to 60°C (-4°F to 140°F)
Storage temperature	-30°C to 70°C (-22°F to 158°F)
Charging temperature	0°C to 45°C (32°F to 113°F)
Relative humidity (operating)	5% to 95% non-condensing
Environmental rating	IP67 compliant
Drop Specifications	All corners and sides from 1.8 m (6 ft) per MIL-STD 810F

Power and Electrical Specifications

Battery type	Rechargeable Lithium-ion (Li-ion) battery
Battery capacity	
CN70/CN70e:	3.7 V, 4000 mAh (14.8 Wh)
CK70/CK71:	3.7 V, 5200 mAh (19.2 Wh)
Electrical rating	≡ 4.37/4.8 V; 2/1,5 A

70 Series Non-Incendive Computer Specifications

The 70 Series 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
Maximum Ambient Temperature	T6 rating with a maximum temperature of 50°C

Operating System

Microsoft Windows Embedded Handheld.

Hardware

Main processor options	TI OMAP3, 1 GHz TI OMAP3, 600 MHz
Memory	512 MB RAM
Persistent storage	1 GB Flash
Removable storage	up to 32 GB user-accessible microSD card slot
Keypad	CN70: QWERTY, Numeric CN70e: QWERTY Numeric, Numeric CK70: Large Alpha, Alphanumeric CK71: Numeric Function, Alphanumeric

Appendix A – Specifications and Default Settings

Imaging options	5 megapixel color camera and EA30 area imager (all), EV12 (CK71 only), or EX25 (CK71 only)
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Back Accessory Interface Pin-outs

The back accessory interface provides power for peripheral devices out the back of the CK70 and CK71 computers.

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

Touch Screen Specifications

Transmissive VGA display with high-durability touch screen; 480 x 640 pixels; 8.9 cm (3.5 in) diagonal active area; LED backlight and ambient light sensor.

Standard Communications

- UMTS (not available on CK71)
- CDMA (not available on CK71)
- GPS (not available on CK71)
- 802.11a/b/g/n
- Bluetooth
- USB high speed 2.0 OTG©

Wireless LAN

Standards compliant	IEEE 802.11a/b/g/n (2.4 GHz and 5 GHz), Single Stream
Data rates	up to 72Mbps

Security	802.11i, WPA, WPA2, 802.1x (EAP-TLS, TTLS, LEAP, PEAP, EAP-FAST), WEP
Certifications	WPA2™ (Enterprise, Personal), WPA™ (Enterprise, Personal), Wi-Fi, WMM®, WMM Power Save, Cisco Compatible Extensions (CCX 4.0)

Regulatory Approvals

FCC, CE, cULus Listed, DEMKO

Bar Code Symbologies

The imagers support all of the bar code symbologies listed in the next table.

Supported Bar Code Symbologies

AustraliaPost*	GS1 DataBar Omni-Directional
Aztec*	Infomail*
BPO*	Interleaved 2 of 5
Canada Post*	Japan Post*
China Post*	KoreanPost*
Codabar	Matrix 2 of 5
Codablock A*	Maxicode*
Codablock F*	Micro PDF417*
Code 11	MSI
Code 39	PDF417*
Code 93	Planet*
Code 128/GS1-128	Plessey
DataMatrix*	Postnet*
Dutch Post*	QR Code*
EAN/UPC	Standard 2 of 5
GS1 Composite	SwedenPost*
GS1 DataBar Expanded	Telepen
GS1 DataBar Limited	TLC 39*

* These symbologies are not supported with the EV12 imager in the CK71.

Imager Reading Distances

Typical reading distances are done in an office environment using office lights (4 lux). Minimum distances are measured in the dark (0 lux). Both reading distances are provided in respective scan engine integration guides. Contact your local Intermec representative for more information.

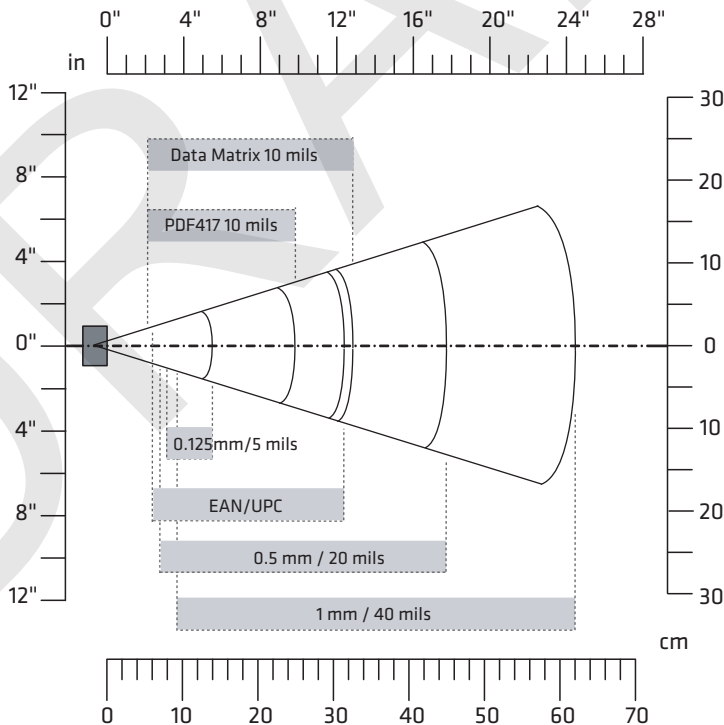
Below are the typical and minimum standard reading distances for the 70 Series computer built with an EA30 imager. Also included are typical and minimum standard reading distances for the CK71 with an EV12 or EX25 imager.



Note: Minimum distances depend on the length of the bar code.

EA30 Area Imager Minimum Reading Distances

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

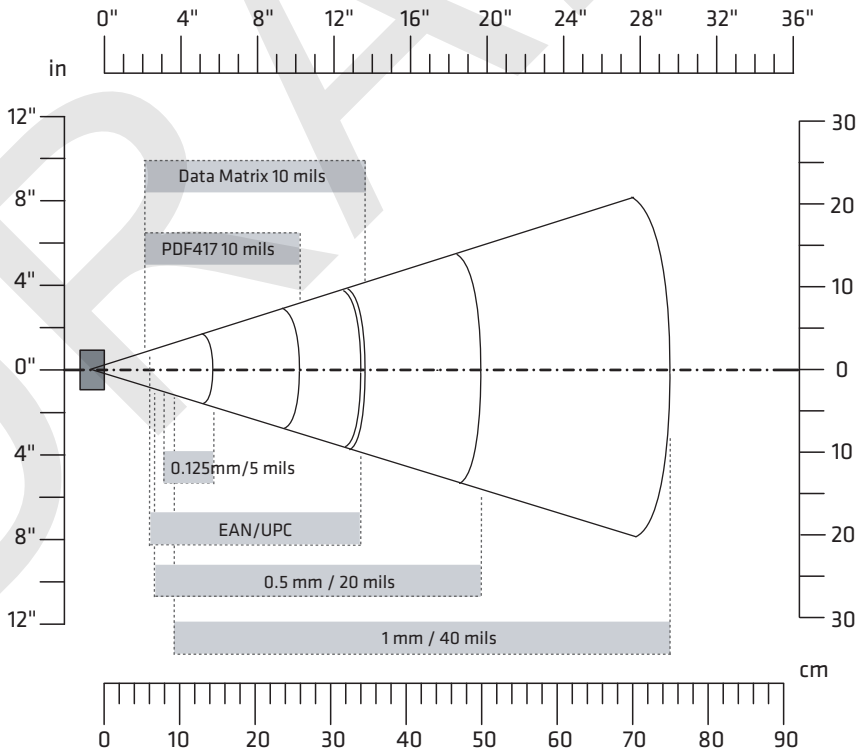


EA30 Minimum Reading Distances

Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.1 mm (4 mils)	9.5 cm (3.74 in)	10.5 cm (4.13 in)
	0.1250 mm (5 mils)	8 cm (3.15 in)	14 cm (5.51 in)
	0.5 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)
UPC/EAN 100%	0.33 mm (13.0 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)

EA30 Area Imager Typical Reading Distances

Typical distances are measured in an office environment (250 lux).



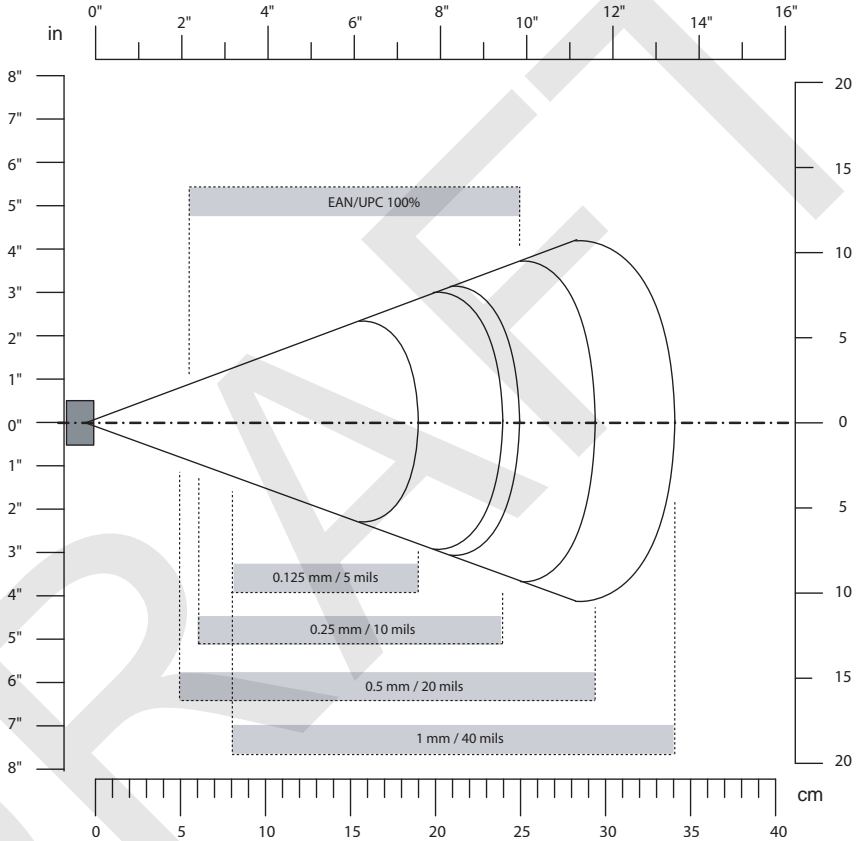
Appendix A – Specifications and Default Settings

EA30 Typical Reading Distances

Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.1 mm (4 mils)	9.5 cm (3.74 in)	11.5 cm (4.53 in)
	0.125 mm (5 mils)	8 cm (3.15 in)	14.5 cm (5.71 in)
	0.5 mm (20 mils)	6.5 cm (2.56 in)	50 cm (19.69 in)
	1 mm (40 mils)	9.5 cm (3.74 in)	75 cm (29.53 in)
UPC/EAN 100%	0.33 mm (13.0 mils)	6 cm (2.36 in)	34 cm (13.39 in)
Data Matrix	0.18 mm (7 mils)	7.5 cm (2.95 in)	16.5 cm (6.5 in)
	0.25 mm (10 mils)	6 cm (2.36 in)	23 cm (9.06 in)
	0.38 mm (15 mils)	5.5 cm (2.17 in)	34.5 cm (13.58 in)
PDF417	0.25 mm (10 mils)	5.5 cm (2.17 in)	26 cm (10.24 in)
	0.38 mm (15 mils)	6.5 cm (2.56 in)	37 cm (14.57 in)

EV12 Linear Imager Minimum Reading Distances

The illustration below does not include the 0.12 cm (0.05 in) setback for the CK71. Minimum reading distances are measured in the dark (0 lux).

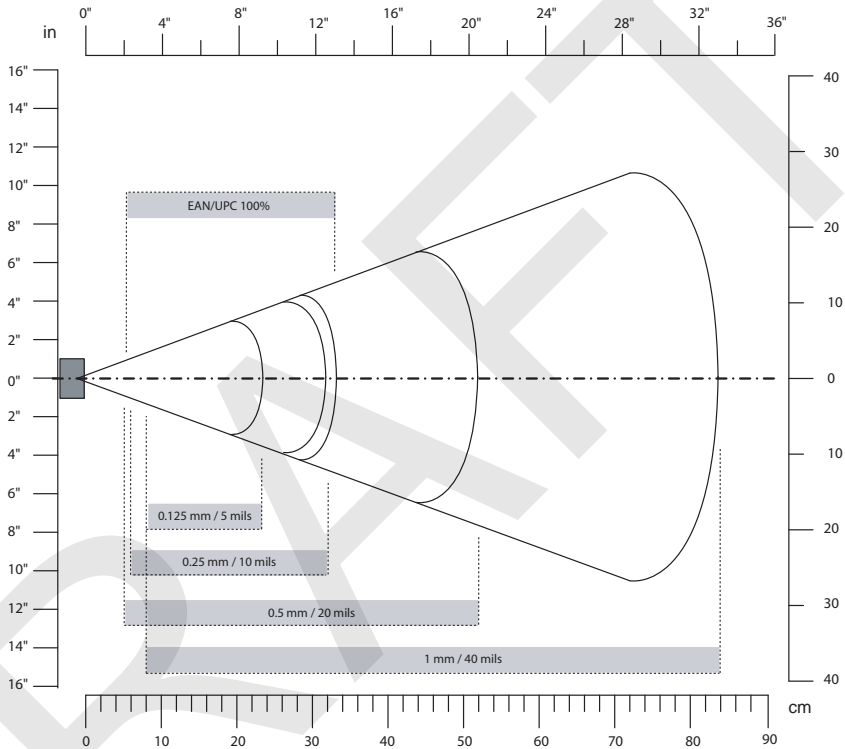


EV12 Minimum Reading Distances With 0.12 cm (0.05 in) Setback

Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.15 mm (6 mils)	9.6 cm (3.8 in)	17.9 cm (7.1 in)
	0.25 mm (10 mils)	7.1 cm (2.9 in)	20.9 cm (8.3 in)
	0.5 mm (20 mils)	6.1 cm (2.5 in)	26.9 cm (10.6 in)
	1 mm (40 mils)	8.1 cm (3.2 in)	33.9 cm (13.4 in)
EAN/UPC	0.33 mm (13 mils)	6.1 cm (2.5 in)	22.9 cm (9.1 in)

EV12 Linear Imager Typical Reading Distances

The illustration below does not include the 0.12 cm (0.05 in) setback for the CK71. Typical reading distances are measured in an office environment (200 lux).



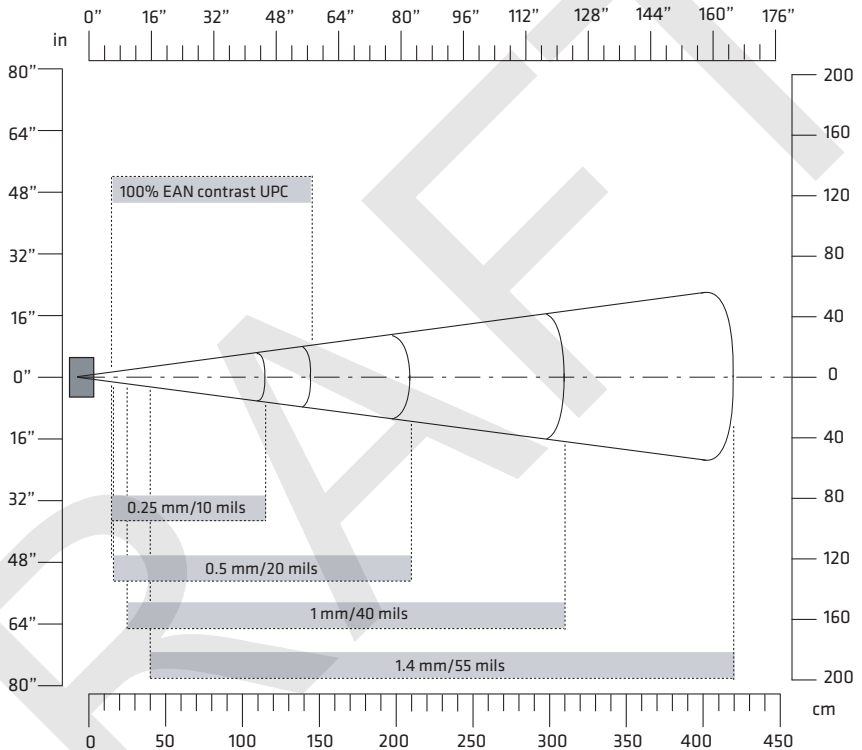
EV12 Typical Reading Distances With 0.12 cm (0.05 in) Setback

Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.15 mm (6 mils)	9.6 cm (3.8 in)	19.9 cm (7.9 in)
	0.25 mm (10 ils)	6.1 cm (2.5 in)	24.9 cm (9.8 in)
	0.5 mm (20 mils)	5.1 cm (2.1 in)	34.9 cm (13.8 in)
	1 mm (40 mils)	7.1 cm (2.9 in)**	50.9 cm (20.1 in)
EAN/UPC	0.33 mm (13 mils)	5.1 cm (2.1 in)	27.9 cm (11.0 in)

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

EX25 Near-Far Range Imager 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 CK71.



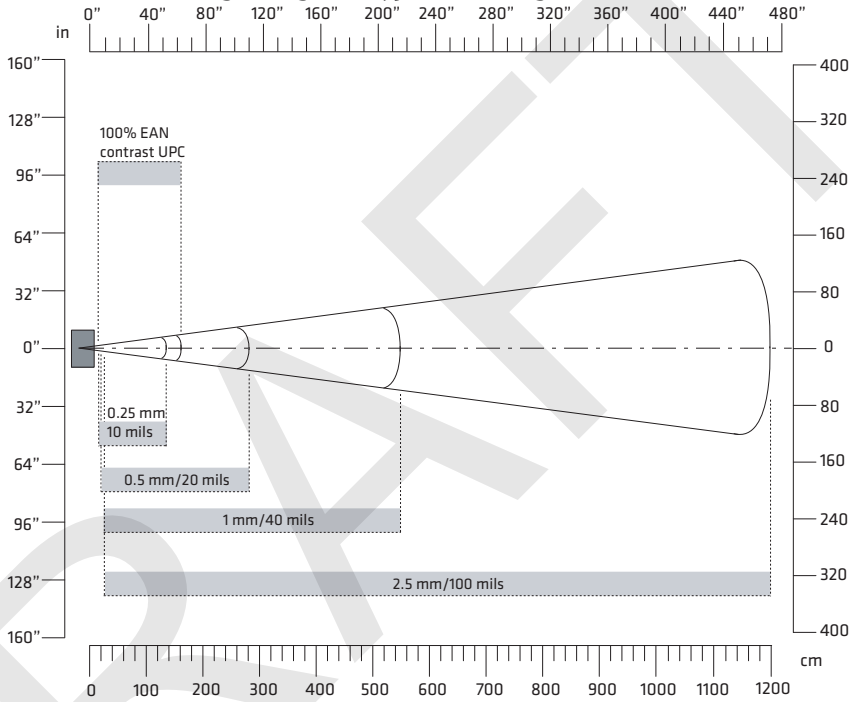
EX25 Minimum Reading Distances With 0.24 cm (0.09 in) Setback

Symbology	Density	Minimum Distance	Maximum Distance
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 Near-Far Range Imager Typical Reading Distance

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 CK71.

EX25 Near-Far Range Imager 1D Typical Reading Distances

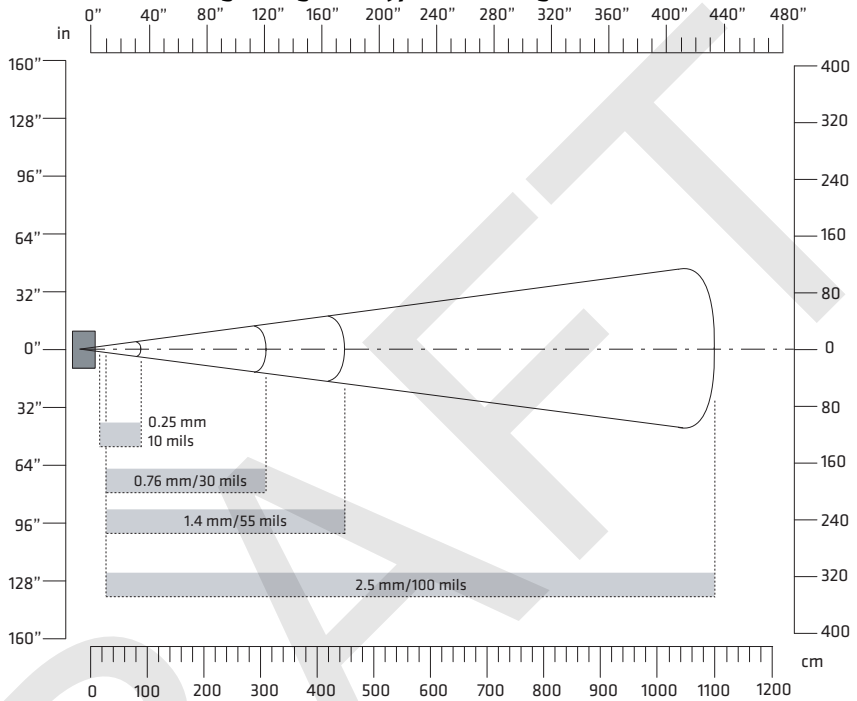


EX25 1D Symbologies Typical Reading Distances With 0.24 cm (0.09 in) Setback

Symbology	Density	Minimum Distance	Maximum Distance
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 Near-Far Range Imager 2D Typical Reading Distances



EX25 2D Symbologies Typical Reading Distances With 0.24 cm (0.09 in) Setback

Symbology	Density	Minimum Distance	Maximum Distance
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.

Default Configuration

The following tables list the default values of the configuration settings supported on the mobile computer. If you restore the mobile computer to factory default settings, the mobile computer uses these values.

The settings are grouped by function and reflect the organization of Intermec Settings. Not all of the configuration settings are listed in this appendix. For detailed information on most of the settings, see the *Intermec Settings Command Reference Manual*.

Data Collection Settings

Use data collection settings to configure the imager and to configure the bar codes that you want the imager to be able to read.

Data Collection Settings

Data Collection Setting	Default Value
Enable Scanner/Camera Port	On
BT-Configure On Connect	Overwrite with computer settings
Enable Magstripe Reader	Disable

Symbology Settings

Symbology	Default Value
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

Symbology	Default Value
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
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	Disable
Standard 2 of 5	Disable
SwedenPost	Disable
Telepen	Disable
TLC 39	Disable

Symbology Option Settings

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

Scanner Settings

Scanner Settings	Default Value
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

Imager Settings

Imager Settings	Default Value
Predefined Modes	1D and 2D Standard
Image File Location	\My Documents\MDI
Signature Image Capture	Disable
Document Imaging	Disable
Image Capture	
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 Settings	Default Value
Consecutive Data Validation	0
Identical Consecutive Timeout	300 ms
Different Consecutive Timeout	0
Center Decoding	Disable
Center Decoding Tolerance	0

Communications

Use communications settings to configure how the mobile computer communicates with the network.

Communications Settings

Communications Setting	Default Value
Device Name	IntermecCXXX (where XXX indicates the model of mobile computer)

802.11 Radio Settings

802.11 Radio Setting	Default Value
Security Choice	Funk
Allow Security Changes	Enabled
Active Profile	Profile 1
DHCP	Enabled
Import Root Certificates	False
Import User Certificates	False
Import Pac Files	False
Radio Bands	b/g (2.4 GHz)
Radio Enabled	Off

Ethernet Adapter Settings

Ethernet Adapter Setting	Default Value
DHCP	Enabled

Bluetooth Settings

Bluetooth Setting	Default Value
Bluetooth Power	Off

WWAN Radio Settings

WWAN Radio Setting	Default Value
WWAN Radio Enabled	Disable

Serial Port Switch

Serial Port Switch Setting	Default Value
Serial Port Switch	Standard Docking and IrDA

Device Settings

Use device settings to configure settings on the mobile computer.

Device Settings

Device Setting	Default Value
Date	N/A
Time	N/A
Beeper and Voice	Medium
Headset Beeper	Very Low
Vibrate Mode Intensity	1 Strong Pulse

Good Read Settings

Good Read Setting	Default Value
Internal Scanner Good Read Beep	One Beep
Dock Tethered Scanner	One Beep
Bluetooth Scanner Good Read Beep	One Beep

Backlight Settings

Backlight Setting	Default Value
Display Backlight Adjustment	Normal
Keypad Backlight	On Based on Light Level
Light Level	Low

Screen Settings

Screen Setting	Default Value
Screen Rotations	Portrait 0 Degrees

Keypad Settings

Keypad Setting	Default Value
Scan Button Remapping	Scanner

Power Management Settings

Power Management Setting	Default Value
Enable Power Button Screen	On
Screen Options Displayed	Hibernate, Suspend, Reboot
Screen Timeout (Seconds)	5
Power Button Behavior	Suspend
Device Turns Off After (Battery Power)	5 minutes
Screen Turns Off After (Battery Power)	Disabled
Device Turns Off After (External Power)	Disabled
Screen Turns Off After (External Power)	Disabled

Sensors Settings

Sensors Setting	Default Value
Screen Rotation	Disabled
Device Off	Disabled

Profiles Settings Application

Profiles Settings	Default Value
Camera	
Disable Camera Scan	Show Option in Profile Settings
Enable Camera Scan	Show Option in Profile Settings
Power	
Always On	Show Option in Profile Settings
Maximize Battery Life	Show Option in Profile Settings
Normal	Show Option in Profile Settings
Scanning	
1D Bar Codes Optimized	Show Option in Profile Settings
Bright Sunlight	Show Option in Profile Settings
Reflective Labels	Show Option in Profile Settings
Standard	Show Option in Profile Settings

GPS Settings

Use GPS settings to configure how the mobile computer communicates with the GPS network.

GPS

GPS Setting	Default Value
Enable Bread Crumbing	Disable

Core Messaging Service Settings

Use core messaging service settings to configure the message routers between client and server software applications.

Core Messaging Service

Core Messaging Service Setting	Default Value
Associated Server IP	Null
Broadcast Name	INTERMEC
Port	62241
Keep Alive Ping Interval	30 Seconds

Device Monitor Settings

Use device monitor settings to configure how the mobile computer monitors the network.

Device Health Controls

Device Health Setting	Default Value
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
System Device Health Refresh (seconds)	90
Network Device Health Refresh (seconds)	45

Device Health Screen Captures

Device Health Screen Captures Setting	Default Value
Directory	\\SmartSystems\\ScreenCapture
Screen Captures Allowed	3

Device Wipe

Device Wipe Setting	Default Value
Enable Wipe	Disabled
Interval (in days)	Null

Virtual Wedge Settings

Use virtual wedge settings to configure the virtual wedge.

Virtual Wedge Setting

Setting	Default Value
Virtual Wedge	Enable
Bar Code Scanner Grid	Null
Label Encoding (Code Page)	1252
Magstripe Reader Grid	Null

DRAFT

B

Keypads and Keystrokes
















DRAFT

Standard Characters

Use the following tables to learn how to enter standard and other available characters and functions with the keypad. If there is no sequence of keystrokes for a particular character or function, it is only available through the soft input panel (SIP), which you can access by tapping the keyboard icon on the touch screen.

CN70 Keypads and Keystrokes

CN70 Alphanumeric Characters

Character	Numeric Keypad	QWERTY Keypad
a	 2	A
b	 2 2	B
c	 2 2 2	C
d	 3	D
e	 3 3	E
f	 3 3 3	F
g	 4	G
h	 4 4	H
i	 4 4 4	I
j	 5	J
k	 5 5	K
l	 5 5 5	L
m	 6	M
n	 6 6	N
o	 6 6 6	O

Character	Numeric Keypad	QWERTY Keypad
P	7	P
q	7 7	Q
r	7 7 7	R
s	7 7 7 7	S
t	8	T
u	8 8	U
v	8 8 8	V
w	9	W
x	9 9	X
y	9 9 9	Y
z	9 9 9 9	Z
A	1 2	A
B	1 2 2	B
C	1 2 2 2	C
D	1 3	D
E	1 3 3	E
F	1 3 3 3	F
G	1 4	G
H	1 4 4	H
I	1 4 4 4	I
J	1 5	J

Appendix B – Keypads and Keystrokes












































Character	Numeric Keypad	QWERTY Keypad
K	1 5 5	K
L	1 5 5 5	L
M	1 6	M
N	1 6 6	N
O	1 6 6 6	O
P	1 7	P
Q	1 7 7	Q
R	1 7 7 7	R
S	1 7 7 7 7	S
T	1 8	T
U	1 8 8	U
V	1 8 8 8	V
W	1 9	W
X	1 9 9	X
Y	1 9 9 9	Y
Z	1 9 9 9 9	Z
0	0	,
1	1	Y
2	2	U
3	3	I
4	4	H

Character	Numeric Keypad	QWERTY Keypad
5		
6		
7		
8		
9		

CN70 Characters and Functions




















To Enter	Numeric Keypad	QWERTY Keypad
@ (at symbol)	N/A	
& (ampersand)	N/A	
* (asterisk)		
: (colon)	N/A	
, (comma)	N/A	
\$ (dollar)	N/A	
! (exclamation)	N/A	
- (hyphen)		
% (percent)	N/A	
. (period)		
+ (plus)		
# (pound)		
? (question mark)	N/A	
‘ (apostrophe)	N/A	

Appendix B – Keypads and Keystrokes

To Enter	Numeric Keypad	QWERTY Keypad
Forward Tab		
Backspace		
Up Arrow		
Down Arrow		
Left Arrow		
Right Arrow		
CapsLock	 	 
Enter		
ok	 	 
Shift	 or 	 or 
Space	 	
Start (Windows)	  or  	 
Esc		
Talk		
End Call		
Intermec Dashboard		

CN70e Keypads and Keystrokes

CN70e Alphanumeric Characters

Character	Numeric Keypad	QWERTY Numeric Keypad
a	 2	A
b	 2 2	B
c	 2 2 2	C
d	 3	D
e	 3 3	E
f	 3 3 3	F
g	 4	G
h	 4 4	H
i	 4 4 4	I
j	 5	J
k	 5 5	K
l	 5 5 5	L
m	 6	M
n	 6 6	N
o	 6 6 6	O
p	 7	P
q	 7 7	Q
r	 7 7 7	R
s	 7 7 7 7	S

Appendix B – Keypads and Keystrokes






































Character	Numeric Keypad	QWERTY Numeric Keypad
t	8	T
u	8 8	U
v	8 8 8	V
w	9	W
x	9 9	X
y	9 9 9	Y
z	9 9 9 9	Z
A	1 2	A
B	1 2 2	B
C	1 2 2 2	C
D	1 3	D
E	1 3 3	E
F	1 3 3 3	F
G	1 4	G
H	1 4 4	H
I	1 4 4 4	I
J	1 5	J
K	1 5 5	K
L	1 5 5 5	L
M	1 6	M
N	1 6 6	N

Character	Numeric Keypad	QWERTY Numeric Keypad
O	1 6 6 6	O
P	1 7	P
Q	1 7 7	Q
R	1 7 7 7	R
S	1 7 7 7 7	S
T	1 8	T
U	1 8 8	U
V	1 8 8 8	V
W	1 9	W
X	1 9 9	X
Y	1 9 9 9	Y
Z	1 9 9 9 9	Z
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8

Appendix B – Keypads and Keystrokes

Character	Numeric Keypad	QWERTY Numeric Keypad
9		

CN70e Characters and Functions

To Enter	Numeric Keypad	QWERTY Numeric Keypad
@ (at symbol)	N/A	 
& (ampersand)	N/A	 
* (asterisk)		
: (colon)	N/A	 
, (comma)	N/A	
\$ (dollar)	N/A	 
! (exclamation)	N/A	 
- (hyphen)		
% (percent)	N/A	 
. (period)		
+ (plus)	 	 
# (pound)		
? (question mark)	N/A	 
' (apostrophe)	N/A	 
Forward Tab		
Backspace		
Up Arrow		
Down Arrow		













































To Enter	Numeric Keypad	QWERTY Numeric Keypad
Left Arrow		
Right Arrow		
CapsLock		
Enter		
ok		
Shift	or	or
Space		
Start (Windows)	or	
Esc		
Talk		
End Call		
Intermec Dashboard		











































CK70 Keypads and Keystrokes

CK70 Alphanumeric Characters















































Character	Large Alpha Keypad	Alphanumeric Keypad
a		
b		
c		
d		
e		
f		

Appendix B – Keypads and Keystrokes



















Character	Large Alpha Keypad	Alphanumeric Keypad
g		
h		
i		
j		
k		
l		
m		
n		
o		
p		
q		
r		
s		
t		
u		
v		
w		
x		
y		
z		
A	 	 

Character	Large Alpha Keypad	Alphanumeric Keypad
B	 B	 B
C	 C	 C
D	 D	 D
E	 E	 E
F	 F	 F
G	 G	 G
H	 H	 H
I	 I	 I
J	 J	 J
K	 K	 K
L	 L	 L
M	 M	 M
N	 N	 N
O	 O	 O
P	 P	 P
Q	 Q	 Q
R	 R	 R
S	 S	 S
T	 T	 T
U	 U	 U
V	 V	 V

Appendix B – Keypads and Keystrokes

Character	Large Alpha Keypad	Alphanumeric Keypad
W	 	 
X	 	 
Y	 	 
Z	 	 
0	 	
1	 	
2	 	
3	 	
4	 	
5	 	
6	 	
7	 	
8	 	
9	 	

CK70 Characters and Functions

To Enter	Large Alpha Keypad	Alphanumeric Keypad
@ (at symbol)	 	N/A
& (ampersand)	 	 
* (asterisk)	 	 
: (colon)	 	 
;(semicolon)	 	 

To Enter	Large Alpha Keypad	Alphanumeric Keypad
, (comma)	T	X
\$ (dollar)	S	N/A
! (exclamation)	W	N/A
- (hyphen or minus)	X	Space
% (percent)	O	N/A
. (period)	.	.
+ (plus)	X	Space
# (pound)	Q	O
? (question mark)	Q	Y
' (apostrophe)	T	Y
= (equals)	Y	S
_ (underscore)	Y	X
> (greater than)	N	V
< (less than)	N	V
[(left square bracket)	V	T
] (right square bracket)	V	T
{ (left curly brace)	N/A	U
} (right curly brace)	N/A	U
~ (tilde)	N/A	W
\ (backslash)	U	8
/ (forward slash)	U	8

Appendix B – Keypads and Keystrokes










To Enter	Large Alpha Keypad	Alphanumeric Keypad
“ (quotes)	N/A	
((left parenthesis)		N/A
) (right parenthesis)		N/A
Insert		
Delete		
Sym		N/A
(broken vertical bar)	N/A	
` (grave)	N/A	
Forward Tab		
Backspace		
Up Arrow		
Down Arrow		
Left Arrow		
Right Arrow		
CapsLock		
Enter		
ok		
Shift		
Space		
Start (Windows)	or	or
Esc		

To Enter	Large Alpha Keypad	Alphanumeric Keypad
Alt	N/A	Alt
Ctrl	Ctrl	Ctrl
Send Call	A	1
End Call	C	3
Intermec Dashboard	?	?

CK70 Function Keys










To Enter	Large Alpha Keypad	Alphanumeric Keypad
F1	D	F1
F2	E	F2
F3	F	F3
F4	G	F4
F5	H	F5
F6	I	F1
F7	K	F2
F8	L	F3
F9	M	F4
F10	P	F5
F11	N/A	A
F12	N/A	B
F13	N/A	C
F14	N/A	D
F15	N/A	E








































































Appendix B – Keypads and Keystrokes

To Enter	Large Alpha Keypad	Alphanumeric Keypad
F16	N/A	 F
F17	N/A	 G
F18	N/A	 H
F19	N/A	 I
F20	N/A	 J
F21	N/A	 K
F22	N/A	 L
F23	N/A	 M
F24	N/A	 N

































































CK71 Keypads and Keystrokes

























CK71 Alphanumeric Characters

Character	Numeric With Function Keys Keypad	Alphanumeric Keypad
a	 7	A
b	 8	B
c	 9	C
d	 4	D
e	 5	E
f	 6	F
g	 1	G
h	 2	H
i	 3	I




















Character	Numeric With Function Keys Keypad	Alphanumeric Keypad
j	 	
k	 	
l	 	
m	 	
n	 	
o	 	
p	 	
q	 	
r	 	
s	 	
t	 	
u	 	
v	 	
w	 	
x	 	
y	 	
z	 	
A	  	 
B	  	 
C	  	 
D	  	 

Appendix B – Keypads and Keystrokes

Character	Numeric With Function Keys Keypad	Alphanumeric Keypad
E	  5	 E
F	  6	 F
G	  1	 G
H	  2	 H
I	  3	 I
J	  0	 J
K	  -	 K
L	  F1	 L
M	  F2	 M
N	  F3	 N
O	  F4	 O
P	  F5	 P
Q	  F6	 Q
R	  F7	 R
S	  F8	 S
T	  F9	 T
U	  F10	 U
V	  F11	 V
W	  F12	 W
X	  	 X
Y	  Ctrl	 Y

































Character	Numeric With Function Keys Keypad	Alphanumeric Keypad
Z	  Alt	 
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		

CK71 Characters and Functions

















To Enter	Numeric With Function Keys Keypad	Alphanumeric Keypad
: (colon)	 	 
;(semicolon)	N/A	 
, (comma)	N/A	 
\$ (dollar)	 	N/A
! (exclamation)	 	N/A
- (hyphen or minus)		 
. (period)		
+ (plus)	N/A	 

Appendix B – Keypads and Keystrokes
































































To Enter	Numeric With Function Keys Keypad	Alphanumeric Keypad
‘ (apostrophe)	N/A	
= (equals)	N/A	
_ (underscore)		
> (greater than)	N/A	
< (less than)	N/A	
[(left square bracket)	N/A	
] (right square bracket)	N/A	
{ (left curly brace)	N/A	
} (right curly brace)	N/A	
~ (tilde)	N/A	
\ (backslash)	Alt	
/ (forward slash)	Ctrl	
“ (quotes)	N/A	
Insert		
Delete		
‡ (broken vertical bar)	N/A	
˘ (grave)	N/A	
Forward Tab		
Backspace		
Up Arrow		
Down Arrow		

To Enter	Numeric With Function Keys Keypad	Alphanumeric Keypad
Left Arrow		
Right Arrow		
CapsLock	 	 
Enter		
ok	 	 
Shift		
Space		
Start (Windows)	  or  	  or  
Esc		
Alt	Alt	 
Ctrl	Ctrl	Ctrl
Intermec Dashboard		





























CK71 Function Keys

To Enter	Numeric With Function Keys Keypad	Alphanumeric Keypad
F1		
F2		
F3		
F4		
F5		
F6		 
F7		 




























Appendix B – Keypads and Keystrokes

To Enter	Numeric With Function Keys Keypad	Alphanumeric Keypad
F8		 
F9		 
F10		 
F11		 
F12		 
F13	 	 
F14	 	 
F15	 	 
F16	 	 
F17	 	 
F18	 	 
F19	 	 
F20	 	 
F21	 	 
F22	 	 
F23	 	 
F24	 	 

CK71 Intermecc Terminal Emulation (ITE) Keys

To Enter	Numeric With Function Keys Keypad	Alphanumeric Keypad
Attention	 0	 A
Autolog	N/A	 F4
Clear	 6	 6
Duplicate	N/A	 D
EEOF	N/A	 F5
Erase	N/A	 E
Find	N/A	 F
Field +	 FldExit	 1
Field -	 FldExit	 1
Fieldmark	N/A	 G
Help	N/A	 3
Hex	N/A	 I
Home	 .	 H
Keypad	N/A	 K
Menu	N/A	 M
Mode	N/A	 O
New Line	N/A	 N
Next Screen	 9	 9
PA1	 1	 F1
PA2	 2	 F2

Appendix B – Keypads and Keystrokes

To Enter	Numeric With Function Keys Keypad	Alphanumeric Keypad
PA3	 3	 F3
Page	 	 
Print	N/A	 P
Previous Screen	 7	 7
Remove	N/A	 R
Reset	 Esc	 Esc
Return	 Enter	 Enter
Roll Down	 5	 5
Roll Up	 8	 8
System Request	 	 Q
View	N/A	 
View Down	 	N/A
View Up	 	N/A

C

ScanNGo Wi-Fi Configuration Bar Codes

You can use the ScanNGo Wi-Fi configuration bar codes to quickly configure the 802.11 radio in your computer.

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Radio Configuration Bar Codes

Use the following ScanNGo bar codes to enable the 802.11 radio and set the defaults for either Funk or Microsoft Wireless Zero Configuration security. After you scan the bar codes, you will still need to use Intermec Settings or another configuration program to set network-specific settings on your computer and to configure the wireless security.

The CN70, CN70e, and CK70 are available with the EA30 imager only. The CK71 has three imager options: the EA30, EX25, or EV12 imager. If your CK71 has an EA30 or EX25 imager, use the 2D configuration bar codes to configure the radio. If your CK71 has an EV12 imager, use the 1D configuration bar codes to configure the radio. You can find out what imager is in your CK71 by opening Intermec Settings and tapping **Data Collection > Internal Scanner > Scanner Settings**.

The following ScanNGo bar codes were created using SmartSystems Foundation. For more information on SmartSystems Foundation, see [“Managing the Computer Using SmartSystems” on page 94](#).

2D Configuration Bar Codes

Follow these directions to configure the computer with a 2D imager (EA30 or EX25):

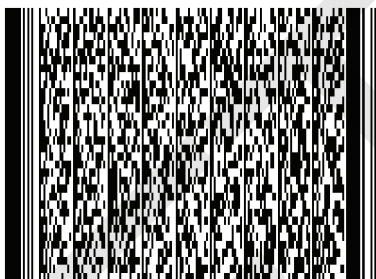
- 1 Scan the appropriate bar code from the table and wait for the program to start.
- 2 Follow any instructions on the device.

2D Imager Radio Configuration Bar Codes

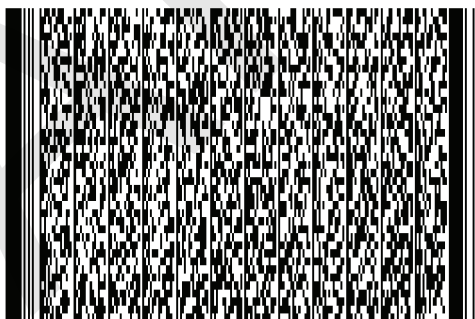
To Configure These Settings:

Scan This Bar Code

Enable Wi-Fi - set Funk defaults



Enable Wi-Fi radio - set Microsoft WZC defaults



1D Configuration Bar Codes

Follow these directions to configure the computer with a 1D imager (EV12):

- 1 Scan the **START HERE** bar code from the table and wait for the program to start.
- 2 Scan the bar code labeled **1/13** or **1/20** depending of the wireless security you want to use.
- 3 Scan the rest of the bar codes in any order.
- 4 Follow any instructions on the device.

1D Imager Radio Configuration Bar Codes

To Configure These Settings:	Scan This Bar Code
------------------------------	--------------------

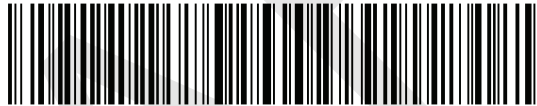
Enable Wi-Fi - set Funk defaults



START HERE



1/13



2/13



3/13



4/13



5/13

To Configure These Settings:

Scan This Bar Code

Enable Wi-Fi - set Funk defaults
(continued)



6/13



7/13



8/13



9/13



10/13



11/13

Appendix C – ScanNGo Wi-Fi Configuration Bar Codes

To Configure These Settings:

Scan This Bar Code

Enable Wi-Fi - set Funk defaults
(continued)



12/13



13/13

Enable Wi-Fi radio - set Microsoft
WZC defaults



START HERE



1/20



2/20



3/20

To Configure These Settings:

Scan This Bar Code

Enable Wi-Fi radio - set Microsoft
WZC defaults (continued)



4/20



5/20



6/20



7/20



8/20



9/20

Appendix C – ScanNGo Wi-Fi Configuration Bar Codes

To Configure These Settings:

Scan This Bar Code

Enable Wi-Fi radio - set Microsoft
WZC defaults (continued)



10/20



11/20



12/20



13/20



14/20



15/20

To Configure These Settings:

Scan This Bar Code

Enable Wi-Fi radio - set Microsoft
WZC defaults (continued)



16/20



17/20



18/20



19/20



20/20

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70 Series Mobile Computer User Manual



P/N 935-038-002