

CV41

Vehicle Mount Computer (Windows Embedded Standard)

CV41W



User Manual

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There are U.S. and foreign patents as well as U.S. and foreign patents pending.

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Contents

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).

Before You Begin

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**.

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 CV41 computer product page, click **Computers** > **Fixed Vehicle Computers** > **CV41**.
- 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:

5,218,191; 5,233,172; 5,241,488; 5,243,602; 5,258,606; 5,288,985;
5,308,966; 5,342,210; 5,359,185; 5,389,770; 5,397,885; 5,414,251;
5,416,463; 5,442,167; 5,464,972; 5,468,947; 5,468,950; 5,477,044;
5,486,689; 5,500,516; 5,502,297; 5,504,367; 5,514,858; 5,534,684;
5,536,924; 5,539,191; 5,541,419; 5,548,108; 5,550,362; 5,550,364;
5,565,669; 5,572,007; 5,576,529; 5,594,230; 5,598,007; 5,608,578;
5,616,909; 5,619,027; 5,640,001; 5,659,431; 5,672,860; 5,684,290;
5,719,678; 5,729,003; 5,742,041; 5,761,219; 5,764,798; 5,777,308;
5,777,309; 5,777,310; 5,786,583; 5,798,509; 5,798,513; 5,804,805;
5,811,776; 5,811,777; 5,818,027; 5,821,523; 5,834,749; 5,837,987;
5,841,121; 5,842,070; 5,854,478; 5,862,267; 5,869,840; 5,873,070;
5,877,486; 5,878,395; 5,886,338; 5,895,906; 5,902,987; 5,902,988;
5,912,452; 5,923,022; 5,936,224; 5,949,056; 5,969,321; 5,969,326;
5,979,768; 5,987,192; 5,992,750; 6,003,775; 6,012,640; 6,016,960;
6,018,597; 6,024,289; 6,034,379; 6,036,093; 6,039,252; 6,064,763;
6,095,422; 6,097,839; 6,102,289; 6,102,295; 6,119,941; 6,128,414;
6,138,915; 6,149,061; 6,149,063; 6,152,370; 6,155,490; 6,158,661;
6,164,542; 6,164,545; 6,173,893; 6,195,053; 6,234,393; 6,234,395;
6,249,008; 6,328,214; 6,330,975; 6,345,765; 6,356,949; 6,367,699;
6,375,075; 6,375,076; 6,435,411; 6,484,944; 6,641,046; 6,669,087;
6,681,994; 6,688,523; 6,732,930; 6,879,428; 6,889,903; 6,974,085;
7,035,466; 7,143,941; 7,185,819; 7,190,835; 7,232,072; 7,322,526;
6,847,620; 6,857,013; 6,944,446; 6,970,459; 6,976,062; 7,125,743;
7,139,870; 7,159,764; 7,206,338; 7,208,916; 7,210,633; 7,271,679;
7,298,791; 7,325,741; 7,327,988; 7,336,853; 7,451,441; 7,564,799;
7,572,990; 7,580,395; 7,590,425; 7,633,550; 7,669,201; 7,761,864;
7,888,913; 7,895,267; 7,924,346; 7,962,104; 8,002,173; 8,014,354;
8,064,924.

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

1

About the Computer

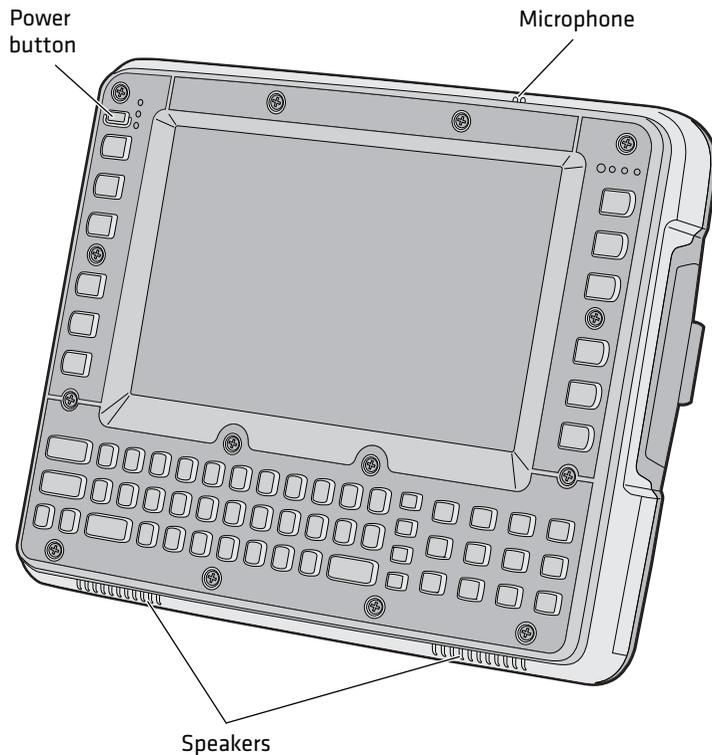
This chapter introduces the CV41 Vehicle Mount Computer with Windows® Embedded Standard operating system. Use this chapter to learn about the basic features and available accessories.

About the CV41 Vehicle Mount Computer

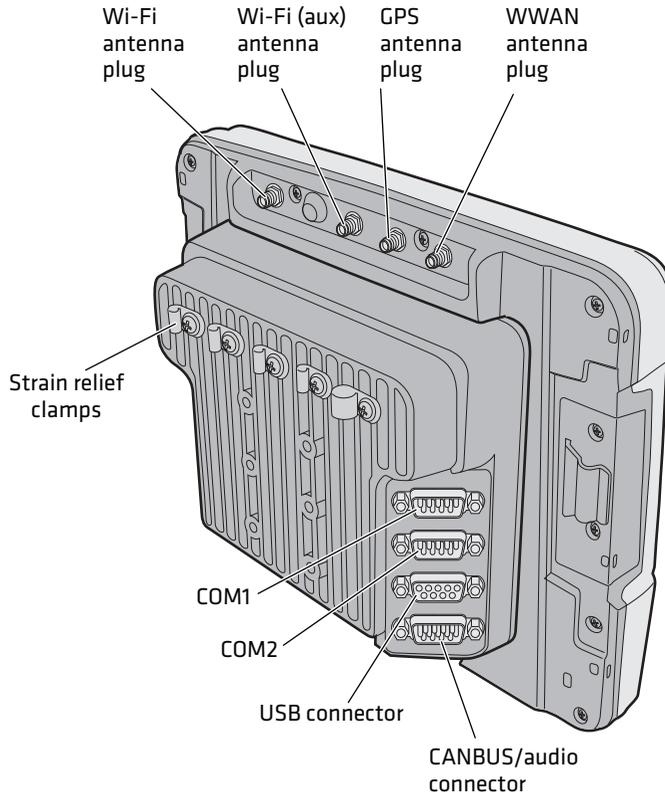
The rugged CV41 Vehicle Mount Computer is designed for real-time data collection applications in warehousing, distribution, work-in-process, time and attendance, and stationary applications. The CV41 is highly configurable and runs on the Microsoft® Windows® Embedded Standard (WES) operating system. Additionally, the CV41 supports terminal emulation applications, browser-based applications, and custom applications.

The CV41 is used with the smart dock. The dock installs onto a vehicle and provides conditioned power to the CV41. All peripheral connections are also made on the dock. With the CV41 design, you can easily remove the CV41 from the smart dock and attach it to another vehicle that is equipped with a dock.

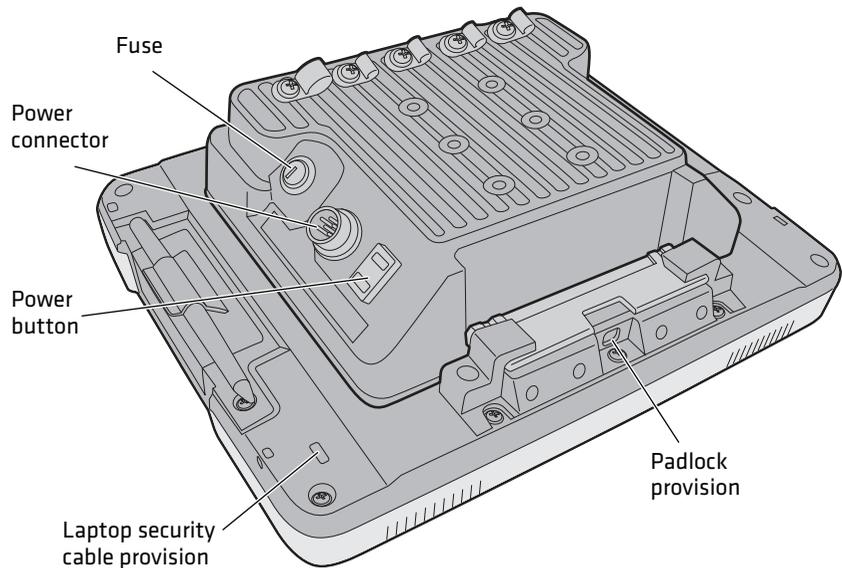
CV41 Front View



CV41 Back View with Quick Mount Smart Dock



CV41 Back View with Quick Mount Smart Dock



Overview of the Features

The CV41 includes these standard features:

- WVGA display with a resolution of 800 x 480 pixels
- 2 GB of RAM memory
- 4 GB solid state disk (SSD) or optional 8 GB SSD.
- User-installable SD expansion slot supporting up to 32 GB.
- 802.11a/b/g/n and Bluetooth® radios
- Optional WWAN radio (available in North America, Europe, and Australia only)
- Intel Atom 1.6 GHz processor



The CV41 Vehicle Mount Computer has an IEEE 802.11a/b/g/n radio installed and Wi-Fi® certified for interoperability with other 802.11a/b/g/n wireless LAN devices.

About the Power Supply Options

To operate the computer, you must provide power to the computer through the DC power cable that is provided or through one of the following power supply options:

- External 6-96 DC/DC Power Converter
- External AC/DC Power Supply

Contact your local Intermec representative to order one of the power supply options listed. For installation instructions, see the [CV41 Vehicle Mounting Kit Reference Guide](#).

About the Smart Dock

The smart dock is secured to a forklift using a RAM mounting kit and provides conditioned power to the computer. The computer can then be connected or removed from the smart dock at any time. With this unique system, you can easily move the computer from one vehicle equipped with the smart dock to another. The smart dock includes:

- a USB port.
- two COM ports.
- a CANBUS/audio port.
- strain relief cable mounts.

To connect any accessory such as a tethered scanner, an audio headset, or a USB flash drive, you need to purchase the correct accessory cables. For more information, contact your local Intermec representative.

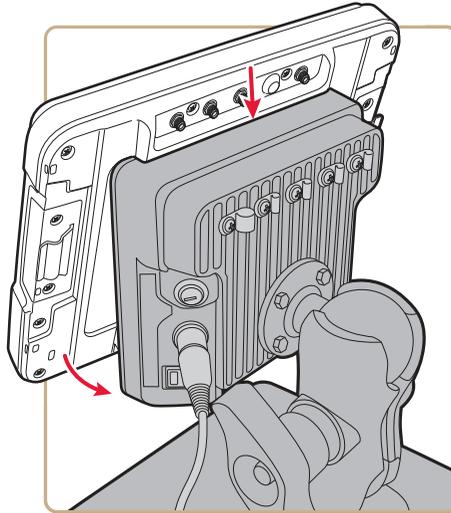


Make sure the smart dock is powered off before you connect any cables to it.

Attach the CV41 to the Smart Dock

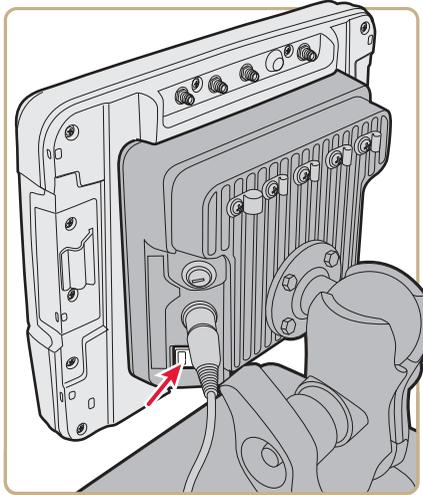
After you secure the smart dock and connected it to power, you can attach the computer to the smart dock.

- 1 Press the **Power** button . The computer turns off.
- 2 Locate the protruding lip on the rear of the computer.
- 3 Place the lip of the computer over the top of the dock.

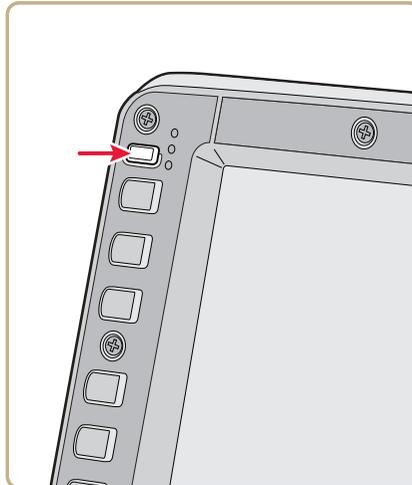


- 4 Slide the CV41 from side-to-side until the computer is seated into the smart dock.
- 5 Push down onto the smart dock until you hear click.
- 6 If necessary, adjust the viewing angle by adjusting the pivot arm on the RAM mount.

7 Press the **Power** button on the smart dock to turn on the dock.



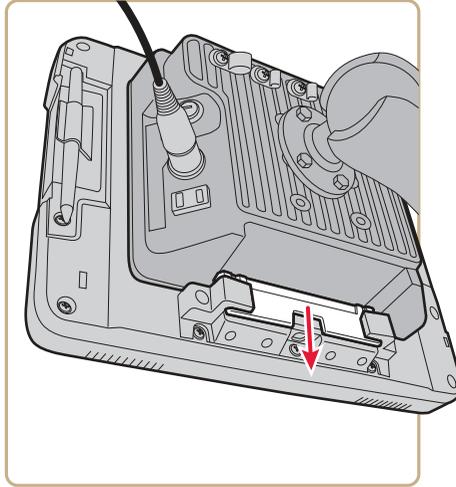
8 Press the **Power** button on the CV41 to turn on the CV41.



Remove the CV41 from the Smart Dock

You can easily move the computer from one vehicle equipped with the smart dock to another.

- 1** Press the **Power** button. The computer turns off.
- 2** Pull down on the red quick release handle.

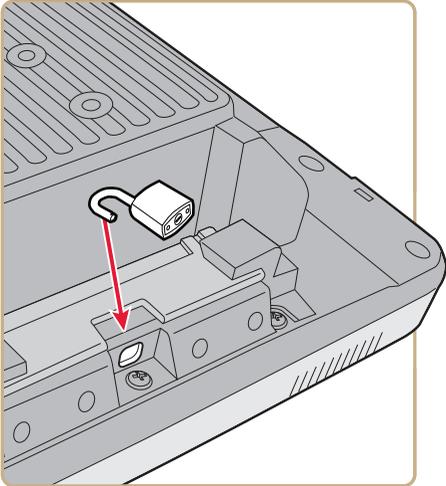


- 3** Pull the bottom of the computer away from the smart dock.
- 4** Lift the computer away from the dock.

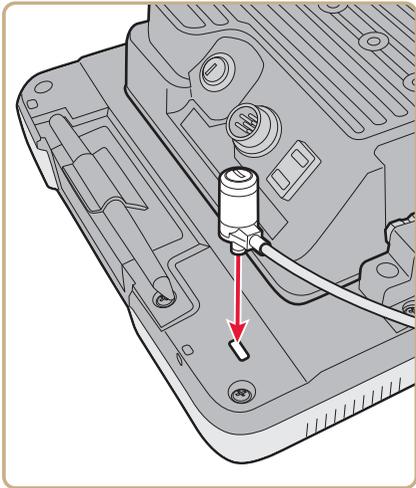
Secure the CV41

Use either a padlock or a laptop security provision to keep your computer safe.

Padlock Provision Location



Laptop Security Provision Location



About the CV41 Startup Behavior

Change the startup behavior so that the computer can be turned on and off through the ignition input signal of a vehicle or when power is applied to the smart dock. For more information about the startup behavior, see the following table.

CV41 Startup Behavior Descriptions

Startup Behavior Description	
Standard	The computer is turned on and off manually using the Power button on the computer.
Ignition control	When vehicle power is applied, the computer turns on. Make sure that the: <ul style="list-style-type: none">• power switch on the smart dock is on.• the ignition input wire is connected.
Auto-On	The computer is turned on when power is applied: <ul style="list-style-type: none">• power switch on the smart dock is on.• the ignition input wire is connected.

Select a Startup Behavior

By default the computer startup behavior is set to standard. If you intend to startup your computer using ignition control or auto-on, make sure you wire the ignition input wire according to the [CV41 Vehicle Mounting Kit Reference Guide](#).



Caution

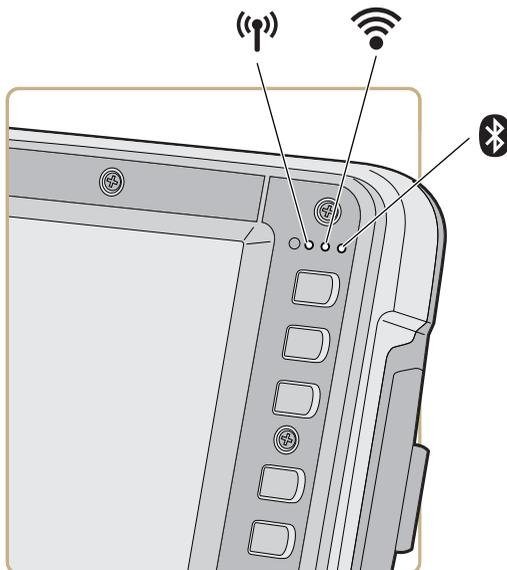
You must wire the ignition input wire before enabling ignition control or auto-on.

- 1 Tap **Start > Control Panel > AutoOn**. The Ignition and Auto-On Properties screen appears
- 2 Select the startup behavior.
- 3 Tap **OK**.

About the LEDs

The LEDs on the computer indicates the state of the computer.

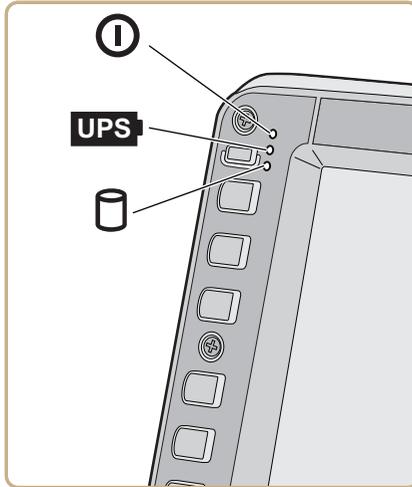
Connection LEDs



Connection LED Status Descriptions

LED	State	Description
	On	The computer is connected to WWAN.
	Off	The computer is not connected to WWAN.
	On	The computer is connected to Wi-Fi.
	Off	The computer is not connected to Wi-Fi.
	On	Bluetooth is turned on.
	Off	Bluetooth is turned off.

System LEDs



System LED Status Descriptions

LED	State	Description
	Solid green	<ul style="list-style-type: none"> The computer is on. The computer is on but the display or backlight may be off.
	Blinking green every 1.5 seconds	<ul style="list-style-type: none"> The computer is in suspend mode. External power is not present. You need to move the computer to a warmer environment.
	Blinking green every 4.5 seconds	<ul style="list-style-type: none"> The computer is in suspend mode. External power is not present. You need to move the computer to a warmer environment.
	Off	The computer is off.

System LED Status Descriptions (Continued)

LED	State	Description
	Solid green	<ul style="list-style-type: none"> When external power is present, the UPS battery is charging. When running on battery power, the computer is off or the UPS battery is not present.
	Solid amber	<p>When external power is present:</p> <ul style="list-style-type: none"> There is no UPS battery installed. The computer is out of charging temperature range. A charging timeout occurred. A charging fault occurred. <p>When running on battery power:</p> <ul style="list-style-type: none"> The UPS battery is supplying power to the computer.
	Solid red	When external power is not present, it means that the UPS battery is low on power, and the computer will shutdown in approximately 2 minutes.
	Off	<ul style="list-style-type: none"> The UPS battery is fully charged. The UPS battery is not charging.
	Flashing green	Read or write activity is occurring.
	Off	There is no read or write activity.

About the Internal UPS Battery

The computer contains an internal UPS battery that is automatically charged when you place the computer in a powered smart dock. The UPS battery can power the computer for approximately 30 minutes at -20 °C (-4 °F) or higher. The UPS battery allows you to continue using the computer when it is not mounted in a dock or when the vehicle battery is being changed.

If the UPS battery becomes critically low on power, the computer performs a controlled shutdown. You can recharge it by placing the CV41 into the smart dock. You can fully charge a discharged UPS battery in approximately 4 hours.



Caution

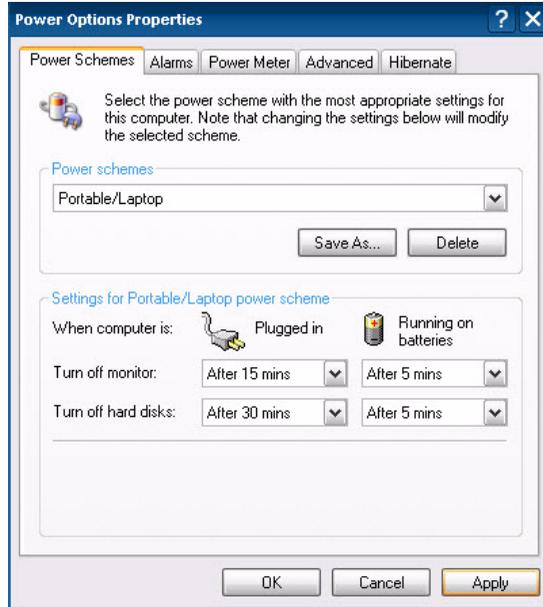
Disconnect the UPS battery if you plan on shipping the computer to another location. For help, see [“Disconnect the UPS Battery” on page 99](#).

Maximize the Internal UPS Battery Usage

Adjust the backlight, screen, or computer turn off times to maximize the internal UPS battery usage.

- 1 Tap **Start > Control Panel > Power Options**. The Power Option Properties screen appears.

- 2 In the Power Schemes tab, select a power scheme or set the power options manually in the drop-down menus.



- 3 Tap **OK** when you are finished to save your changes.

About the Backup Battery

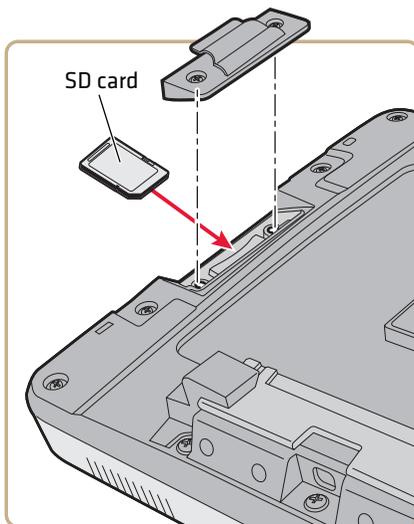
The computer has a permanent lithium-ion battery installed to maintain the time, date, and CMOS setup information for a minimum of 90 days. The lithium-ion battery is not user-replaceable and should last five years before it needs a replacement.

The backup battery must only be changed by authorized service personnel. For more information, contact your local Intermec service representative.

Insert an SD Card

You can use an SD card to increase file storage and install software. The computer supports SD cards up to 32 GB.

- 1 Remove the computer from the smart dock.
- 2 Press the **Power** button. The computer turns off.
- 3 Using a small Phillips screwdriver, remove the two screws that secure the SD card access panel.



- 4 Insert the SD card into the SD card slot.
- 5 Reattach the SD card access panel and screw to a torque value of 4-5 in/lbs.
- 6 Reattach the CV41 to the smart dock.
- 7 Press the **Power** button to turn on the computer.

About the Touch Screen

The computer comes with an 8-inch color touch screen display with a resolution of 800 x 480 pixels. The display also comes with an optional defroster to reduce condensation on the external surface of the display when moving between sub-freezing temperatures and normal temperatures.

Protect the Touch Screen

Apply the optional touch screen protective film to help protect the screen from minor damage, scratches, and abrasions. Contact your local Intermec representative to order protective film for your touch screen.

- 1 Clean the touch screen from fingerprints, lint particles, dust, and smudges. For more information, see **“Clean the Computer” on page 101**.
- 2 Peel off the backing from the film to expose the adhesive.
- 3 Slide one edge of the film between the touch screen and display housing.
- 4 Repeat Step 3 for the other three edges of the touch screen film.

Calibrate the Screen

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

- 1 In the Windows Taskbar, tap the **PM** icon and select **Control Panel**.
- 2 Select **PenMount 6000 USB** and tap **Configure**.
- 3 Tap one of the recalibration methods.
- 4 Follow the prompts on the screen to complete the alignment process.

Adjust the Screen Brightness

Depending on the current lighting conditions of the environment, you may want to adjust the screen brightness of the CV41.



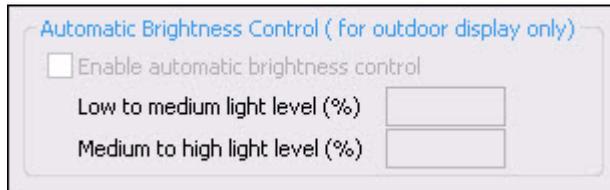
Note: If automatic screen brightness is enabled, you cannot adjust the screen brightness on the CV41.

- 1 On the keypad, tap the **ALT** key to enable the secondary keys.
- 2 Tap **F7** to increase brightness or **F8** to decrease the brightness.
- 3 Repeat Steps 1 and 2 to increase or decrease brightness.

Enable Automatic Screen Brightness

If your computer is equipped with an outdoor display, enable automatic brightness control to allow the computer to automatically adjust the screen brightness depending on the current lighting conditions.

- 1 Tap **Start > Control Panel > Screen**. The Screen Control screen appears.
- 2 Select **Enable Automatic Brightness Control**.

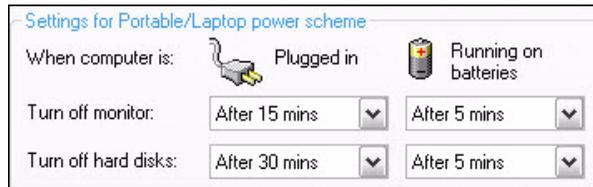


- 3 In **Low to medium light level (%)**, enter the brightness value you want to have in low to medium light conditions.
- 4 In **Medium to high light level (%)**, enter the brightness value you want to have in medium to high light conditions.
- 5 Tap **OK**.

Set the Screen Backlight

By default, the screen turns off when there is no activity with the computer. Use this section to learn how to configure the time that the screen backlight turns off.

- 1 Tap **Start > Control Panel > Power Options**. The Power Option Properties screen appears.
- 2 In the Power Schemes tab, select the time you want the screen backlight to turn off in the **Turn off monitor drop-down** menus.



- 3 Tap **OK** to save your settings.

Rotate the Screen

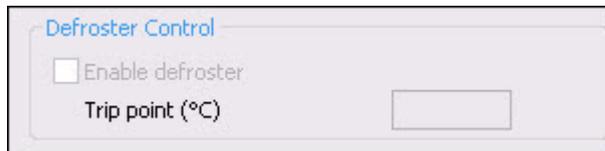
Rotate the screen to change the screen orientation of the computer.

- 1 Tap **Start > Control Panel > Screen Rotation**.
- 2 In the drop-down menu, select the orientation you want.
- 3 Tap **OK** to rotate your screen.

Enable the Defroster

If your CV41 contains a defroster, use it to help reduce condensation on an external surface when the computer is moving between sub-freezing and normal temperatures.

- 1 Tap **Start > Control Panel > Screen**. The Screen Control screen appears.
- 2 Select **Enable Defroster**.



- 3 In **Trip Point**, set the temperature tripping point in degrees Celsius. When the temperature reaches the trip point, the heater automatically turns on.
- 4 Tap **OK**.

Change the Volume

Change the CV41 volume to suit your needs and the environment.

- 1 On the keypad, tap **ALT** to enable the secondary keys.
- 2 Tap **F9** to increase volume or **F10** to decrease the volume.
- 3 Repeat Steps 1 and 2 to increase or decrease volume.

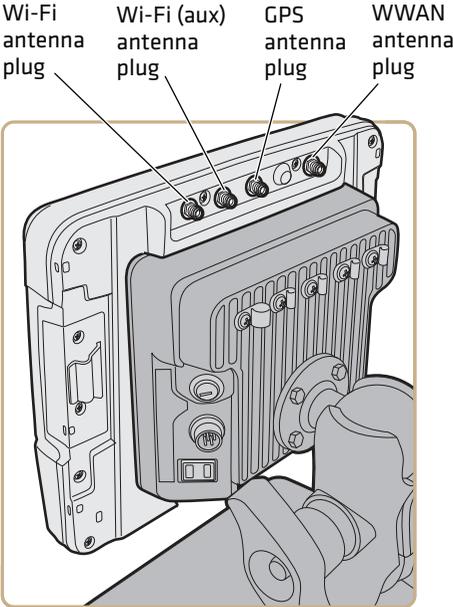
About the CV41 Radio Antennas

The CV41 comes equipped with an 802.11 radio and can be ordered with internal or external antennas. When the CV41 is ordered with internal 802.11 antennas, the external 802.11 antenna connectors are not used. GPS and WWAN are optional on the CV41 and require externally mounted antennas.

Connect an External Antenna

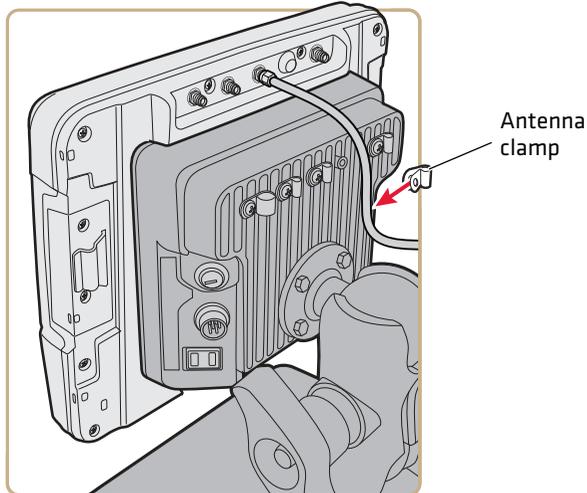
Use this section to learn how to connect an external radio antenna to the CV41. You can purchase 802.11, GPS, or WWAN antennas to mount onto a wall, forklift, or other flat surface. For more information on ordering an antenna, contact your local Intermec representative.

- 1 Using your own hardware, secure the external antenna to a wall, forklift, or other flat surface.
- 2 Secure the antenna to one of the antenna plugs on the CV41.

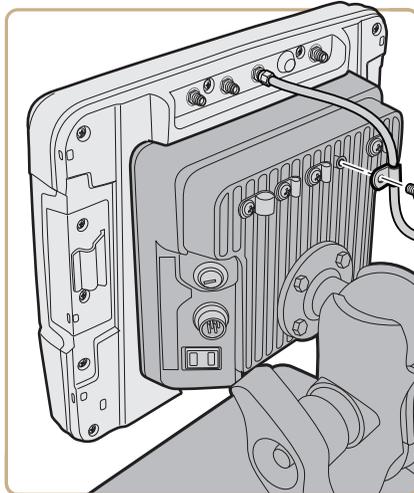


Chapter 1 – About the Computer

- 3 Unscrew the antenna clamp on the smart dock and route the antenna wire through the antenna clamp.



- 4 Screw the antenna clamp back into the smart dock.

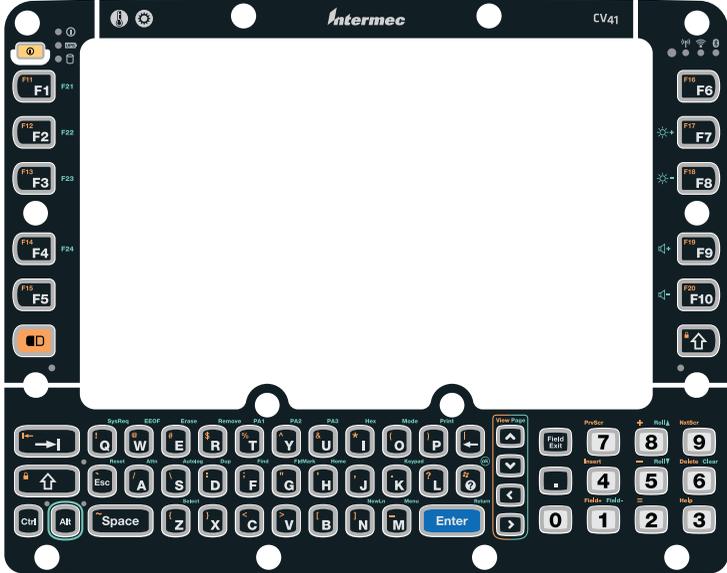


Because system performance and antenna polarization are site-dependent, a permanent mounting location may require some experimentation. In most fixed installations, you should mount the antenna initially in a vertically-polarized position, with the cable from the antenna parallel to the floor and ceiling. For information on purchasing an antenna, contact your local Intermec sales representative.

About the Keypad

The computer comes with one standard keypad overlay and contains a backlight for low light conditions. Use the following sections to understand how to use the keypad.

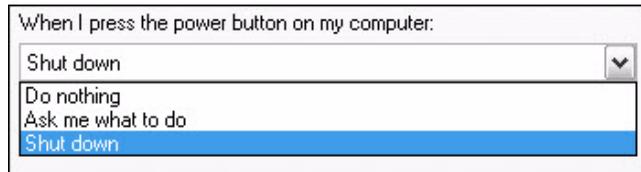
CV41 Keypad Overlay



Remap the Power Button

By default, pressing the **Power** button on the keypad shuts down the computer. You can change this by going to the Power Options Properties menu.

- 1 Tap **Start > Control Panel > Power Options** and select the **Advanced** tab.
- 2 In the drop-down menu, select the setting you want to assign to the **Power** button and tap **OK**.



Enter Characters on the Keypad

You need to use the the orange modifier () key, the green modifier (**Alt**) key, and the Control (**Ctrl**) key to access all characters and functions on the keypad.

To type a character:

- Press the key for that character.

To type an orange character or function printed on the key or overlay:

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

To use the green function printed on the overlay:

- Press **Alt** key and then press the key next to the function.

To type a single uppercase letter:

- Press  and then the letter key.

To type all uppercase letters:

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

To turn off Caps Lock:

- Press   to turn off Caps Lock.

CV41 Options and Accessories

You can use these accessories (sold and ordered separately) with the CV41. To order accessories, contact your local Intermec sales representative.

CV41 Accessories

Accessory	Description
Quick Mount Smart Dock	The smart dock provides a mount for the CV41, and supplies conditioned power to the CV41. For more information, see the CV41 Vehicle Mounting Kit Reference Guide .
RAM Mounting Kit	Use this mounting kit to attach the CV41 to a variety of surfaces, including a vehicle or to your desktop. For more information, see the CV41 Vehicle Mounting Kit Reference Guide .
USB Y-Cable	Use the USB cable to connect USB devices and peripherals to the CV41.
Screen Blanking Box	Use the screen blanking box to turn off the CV41 display while a vehicle is in motion.
CANBUS Y-Cable	Use the CANBUS Y-Cable to connect a CANBUS interface to the CV41.
UPS Battery	Purchase a new UPS battery when the one in your CV41 does not provide satisfactory operating time or is damaged.
Audio Cable	Use the audio cable to connect a wired headset to the CV41.
Vocollect Bluetooth Headset	Use the headset for a hands-free voice solution.
Touch Screen Protective Film (10 pack)	Use the protective film to reduce wear and protect the touch screen from being damaged.
Replacement Touch Panel	If your touch panel is damaged, purchase a replacement touch panel for the CV41.
Stylus Kit (5 pack)	Use the stylus to navigate around the user interface of the CV41.
WWAN Adhesive Mount Antenna Kit	If your CV41 is equipped with a WWAN radio, purchase the WWAN antenna to provide WWAN connectivity to the CV41.

CV41 Accessories (Continued)

Accessory	Description
GPS Antenna Kit	If your CV41 is equipped with a GPS radio, purchase the GPS antenna to provide GPS connectivity to the CV41.
6-96 VDC Power Connection Kit	Use this kit to supply power to trucks that are greater than 60 VDC.
AC Power Supply	Use the AC power supply to power the CV41.
Recovery DVD	Use the recovery DVD to reinstall the Windows Embedded Standard image onto the CV41.

2

Understand the User Interface and Intermec Applications

Use this chapter to learn about the Windows® Embedded Standard 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 Standard operating system is similar to the Windows XP operating system. The interface is touch-friendly and easy to navigate.

About the Desktop Screen

When you turn on your computer, the Desktop screen is the first screen that appears, unless Intermec Terminal Emulator (ITE) is configured to automatically launch. The Desktop screen contains the Desktop and the Taskbar.

Windows Embedded Standard Default Screen



The Taskbar is located at the bottom of the screen. It displays the Start menu icon, the current time, the Input panel icon, and the current status of information such as external power connections, and battery power remaining. Use the following table for CV41 specific taskbar icons.

About Screen Gestures

Learning to use the computer is easy. This section describes the basic concepts of using and customizing the vehicle mount computer and Windows Embedded Standard.

Screen Gestures

Action	Description
Tap	Tap the screen once with your stylus or finger to select options, open or close applications, or launch menus.
Double-tap	Double-tap the screen with your stylus or finger to launch applications.
Drag	Hold your stylus or finger on the screen and drag across the screen to select text and images.
Tap and hold	Tap and hold your stylus or finger on an item to see a menu of actions available for that item. On the pop-up menu that appears, tap the action you want to perform.

Use Pop-Up Menus

Use pop-up menus to quickly perform an action on an item. For example, you can use a pop-up menu to delete or make a copy of an item. To access a pop-up menu, tap and hold the item on which you want to perform the action. When the menu appears, tap the action you want to perform, or tap anywhere outside the menu to close the menu without performing the action.

Set the Date and Time

Use this section to learn how to set the date and time for the computer. Optionally, you can sync the date and time to a local time server.

- 1 Tap the clock on the taskbar. The Date/Time Properties screen appears.
- 2 Set your current date, time, and time zone.
- 3 (Optional) Sync to a local time server.
 - a Tap the **Internet Time** tab .
 - b Select **Automatically adjust clock for daylight savings**.
 - c In the **Server** drop-down menu, select a time server and tap **Update Now**.
- 4 Tap **Apply** to save your settings.

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 Computer

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

Applications Available On the Computer

Icon	Application	Description
	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 42 .

Applications Available On the Computer (Continued)

Icon	Application	Description
	Profile Settings	Use Profile Settings to easily configure the computer for a specific use.
	Bluetooth Printing	Use the Bluetooth Printing application to connect to a Bluetooth printer. For more information, see “Connect to a Bluetooth Printer” on page 53.
	Bluetooth Scanning	Use the Bluetooth Scanning application to connect to a Bluetooth scanner. For more information, see “Connect to a Bluetooth Scanner” on page 52.
	OneClick Internet	Use the OneClick Internet application to enable and configure WWAN and GPS settings. For more information, see “Use WWAN and GPS Communications” on page 71.
	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. For more information, see the Intermec Browser User Manual.
	Intermec Terminal Emulator (ITE)	Intermec Terminal Emulator (ITE), part of Intermec Client Pack (ICP), is a terminal emulation client designed for enterprise-level data collection. 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. For more information, see the Intermec Terminal Emulator User Guide.

Applications You Can Download For the Computer

You can download several Intermec applications from the website that extend the capabilities of your computer. All of the applications explained 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 computer.

About Intermec Launcher

Intermec Launcher is a Microsoft Windows application, designed for Intermec 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 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 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.

Chapter 2 – Understand the User Interface and Intermec Applications

SmartSystems Foundation provides a consistent way to manage Intermec devices including computers, vehicle mounted 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 Foundation can be downloaded at no charge from the Intermec website. For more information, visit www.intermec.com/SmartSystems.

3

Manage the Computer

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

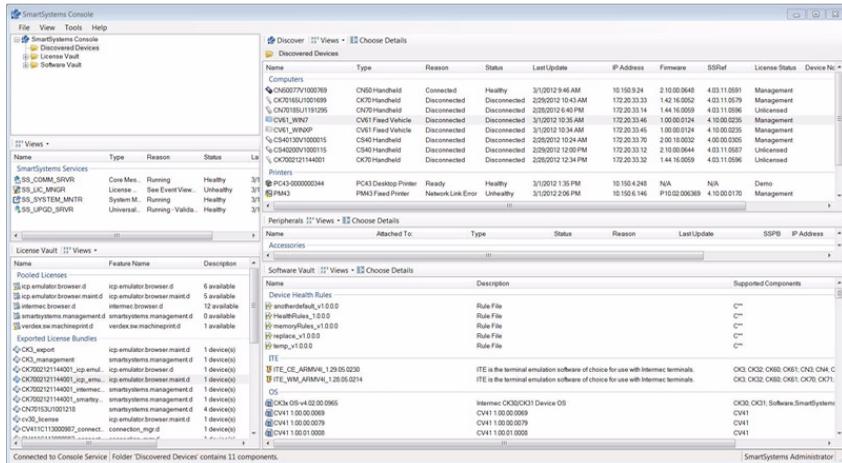
About Managing the Computer in Your Network

When you have multiple 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.

Manage the Computer Using SmartSystems Foundation

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 devices.

With a Provisioning license, SmartSystems Foundation can automatically push software, configuration settings, and other files to connected computers. You can download SmartSystems Foundation from the Intermec website at no charge. For more information, visit www.intermec.com/SmartSystems. To purchase a Provisioning license, contact your local Intermec sales representative.

Install Applications Onto the Computer

Install applications onto the computer using one of the following methods:

- SmartSystems Console
- SD card
- USB storage device

Install Applications Using SmartSystems Foundation Console

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

- 1** Download your application file from the Intermec website 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 computer in your network, or drop the application on a group of computers contained in a folder.

Install Applications Using an SD Card

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

- 1** Copy your application file to the storage card.

- 2 Install the SD card into the computer.
- 3 Tap **Start > My Computer > Removable Disk** and select the application you want to install.

Install Applications Using a USB Storage Device

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

- 1 Copy your application file to the USB storage device.
- 2 Insert the computer into the smart dock.
- 3 Insert the USB storage device to the USB Y-Cable and connect it to the smart dock.
- 4 Tap **Start > My Computer > Removable Disk** and select the application you want to install.

Update the System Software

The computer uses SmartSystems bundles to update system software. Intermec provides these methods to update your computer:

- you can update individual computers, or multiple computers at the same time using the SmartSystems console. for help, see the next section.
- You can update individual computers using a USB storage device.

Update System Software Using SmartSystems Foundation

You can use the SmartSystems console to update the system software on your CV41. The console is part of SmartSystems Foundation and is available from the Intermec website. Before you can update your computer, you need:

- SmartSystems Foundation. To download SmartSystems Foundation, go to www.intermec.com/SmartSystems and click the **Downloads** tab.
- the files you want to install. These files are available from the Intermec website at www.intermec.com. Go to **Support > Downloads > OS/Firmware/Drivers** list.

After you locate these items, you can update your computer using SmartSystems Foundation.

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



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

Update Individual Computers Using a USB Storage Device

You can transfer upgrade bundles from your desktop PC to your computer using a USB storage device. Before you can update your computer, you need:

- the SmartSystems bundles you want to install. These bundles are available from the Intermec website at www.intermec.com. Go to **Support > Downloads > OS/Firmware/Drivers** list.
- a USB storage device.
- USB Y-cable adapter

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

- 1 Download the SmartSystems bundle to your PC and note the download section.
- 2 Transfer the bundle file to the USB storage device.
- 3 Connect the USB storage device to the y-cable and to the CV41.
- 4 Run the .exe file from within the bundle.
- 5 Follow the onscreen instructions to update your computer.

4

Configure the Computer

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

How to Configure the Computer

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

There are several ways to configure the computer:

- Directly on the computer. You can use Intermec Settings directly on the computer to change only the settings on that computer. For more information, see the next section..
- Remotely using Intermec SmartSystems Foundation. When you use SmartSystems, you can remotely configure all of your CV41 vehicle mount computers as well as other SmartSystems-enabled Intermec computers and peripherals. For more information, see [“Use Intermec Settings Remotely With SmartSystems Foundation” on page 50.](#)
- You can use a third-party device management product that supports the computer and Intermec Settings, such as Soti MobiControl or Wavelink Avalanche. For more information, visit the [Device Management](#) page on the Intermec website.

You can also configure the computer with configuration bundles that you create using SmartSystems Foundation. For more information, see the SmartSystems Foundation Online Help.

Use Intermec Settings on the Computer

Use Intermec Settings to configure parameters for Intermec applications on the computer as well as some device-specific parameters like volume. You can configure parameters for important functions like data collection and communications.

External bar code scanners are supported by connecting the scanner to a USB port, COM port, or by Bluetooth. When configuring a scanner using Intermec Settings, the scanner symbologies can be updated through the CV41 data collection software.

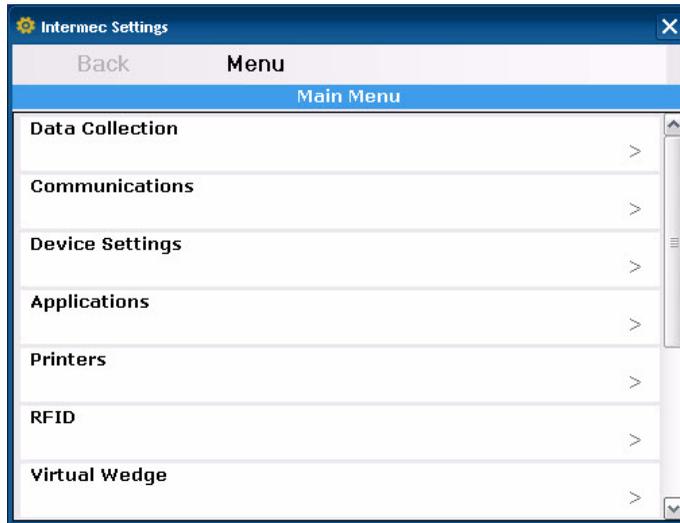
Start Intermec Settings

Intermec Settings is located in the Control Panel.

- 1 Tap **Start > Control Panel**.
- 2 If you are in Category View, tap **Switch to Classic View**.



- 3 Tap **Intermec Settings**. The Intermec Settings Main Menu appears.



About the Structure of Intermec Settings

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

If you see > next to a menu option, there are more screens available in the next level. If you see ... next to a menu option, there is only one more screen available.

Most parameters are saved when you tap **OK**. Some settings , require you to reboot the computer for the changes to take effect.

Data Collection Menu

Data Collection Options	Parameters You Can Configure
Tethered-Configure on connect	<ul style="list-style-type: none"> • Overwrite with computer settings • Keep scanner settings
Enable USB scanner auto-detect	Enable USB scanner auto-detect
Tethered Scanners (COM 1)	<ul style="list-style-type: none"> • Enable Scanner Port • Symbologies • Symbology options • Scanner settings • Scanner port settings • Decode security
Tethered Scanners (COM 2)	<ul style="list-style-type: none"> • Enable Scanner Port • Symbologies • Symbology options • Scanner settings • Scanner port settings • Decode security
Bluetooth Scanner	BT-configure on connect

Communications Menu

Communications Options	Parameters You Can Configure
Device Name	Device name
802.11 Radio	<ul style="list-style-type: none"> • Radio enabled • Security choice • Wireless security Settings • IP settings • Certificates • Radio bands • Allow security changes
Bluetooth	Bluetooth settings (power, discoverable, connectable, and so on)

Device Settings Menu

Device Settings Options	Parameters You Can Configure
Date and Time	Date and time settings
IDL Runtime Versions	<ul style="list-style-type: none"> • ITC50 (read-only) • ITCScan (read-only)
Heater	Screen heater settings
Power Management	Auto-on
Profile Settings Application	Whether these parameter options appear in Profile Settings: <ul style="list-style-type: none"> • Always on • Maximize battery life • Normal
Screen	<ul style="list-style-type: none"> • Brightness settings • Screen Blanking On Motion settings
System Component Versions	System component versions (read-only)

Applications Menu

Application Options	Parameters You Can Configure
Intermec Browser	<ul style="list-style-type: none"> • Administration settings • Menu options • Toolbar options • Key options • Printer settings • Function key mapping

Applications Menu

Application Options	Parameters You Can Configure
Intermec Terminal Emulation	<ul style="list-style-type: none">• Program name (read-only)• Program version (read-only)• Enable SIP• No Lockdown settings• No Auto-Start• OOR Monitor settings• Chk In License settings• Trusted App settings• Scan Control settings• Menu options• Toolbar options• Debug filters• UDP+ options• Sessions 1 - 4

Printer Menu

Printer Options	Parameters You Can Configure
Printer (if connected through Bluetooth)	Printer settings (Information, memory, printer definitions, power, Bluetooth communications, and so on)



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

RFID Menu

RFID Options	Parameters You Can Configure
RFID Service	Enable RFID service

Virtual Wedge Menu

Virtual Wedge Options	Parameters You Can Configure
Enable Virtual Wedge	Enable virtual wedge
Virtual Wedge Method	Set the virtual wedge method (adapt to application, character mode, and block mode)
Bar Code Scanner Wedge	Bar code scanner wedge settings (bar code scanner grid and label encoding)
RFID Reader Wedge	RFID reader wedge settings

Common Lockdown Service

Common Lockdown Service	Parameters You Can Configure
CLDS Server	CLDS server settings.

License Manager Menu

License Manager Options	Parameters You Can Configure
About	About settings (read-only)
License Vault	None (displays applications that are licensed)

Device Monitor Menu

Device Monitor Options	Parameters You Can Configure
Device Health Controls	<ul style="list-style-type: none"> • Enable health data collection • Set rule file location • Set data refresh periods

SmartSystems Information Menu

SmartSystems Information Options	Parameters You Can Configure
Identity	Identity information (hardware version, firmware version, OS version, and so on) (read-only)

SmartSystems Information Menu

SmartSystems Information Options	Parameters You Can Configure
Administrator	Administrator settings (name, phone, and email)
Location	Location settings (country, state, city, campus, and detail)
Information	Device Notes (read-only)

Core Messaging Service Menu

Core Messaging Service Options	Parameters You Can Configure
Server IP	Server IP (read-only)
Associated Server IP	Associated server IP
Broadcast Name	Broadcast name
Port	Port (read-only)
Keep Alive Ping Interval	Keep alive ping interval

For more information on all parameters in Intermec Settings, see the [Intermec Settings Command Reference Manual](#).

Navigate in Intermec Settings

You can easily navigate through the screens in Intermec Settings to find the parameter you need to configure.

To move down a level in Intermec Settings:

- Tap the menu item in the list.

To move back a level in Intermec Settings:

- Tap **Back** or **Cancel** on the Tile bar.

To save a parameter setting:

- Tap **OK**.

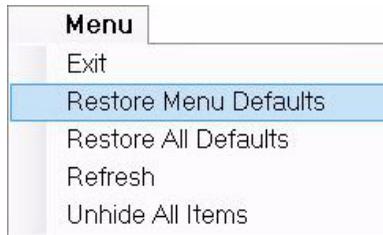
To exit Intermec Settings:

- Tap **Menu** > **Exit** or **OK**.

Restore Default Settings

You can easily restore a menu to its default settings or all of the Intermec Settings parameters to their default settings if necessary.

- 1 Navigate to the menu that you want to restore to defaults.
- 2 Tap **Menu > Restore Menu Defaults**.



- 3 When prompted, tap **Yes** to restore the menu default settings.
- 4 If prompted to refresh the computer, tap **Yes**.

You can restore default settings for all parameters.

- 1 Tap **Menu > Restore All Defaults**. The application asks if you are sure you want to restore all defaults.



- 2 Tap **Yes**.

After several minutes, all of the default settings are restored.

Hide Menu Items in Intermec Settings

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

On the computer, you can:

- hide menu items by tapping and holding the item, and then choosing **Hide Menu Item** from the popup list. When asked if you want to hide the menu, tap **Yes**.
- restore all hidden items in all menus, by tapping **Menu > Unhide All Items**.



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

Use Intermec Settings Remotely With SmartSystems Foundation

Your computer is SmartSystems-enabled, which lets you open Intermec Settings from the SmartSystems console to remotely configure all of your computers. For more information on SmartSystems, see [“Manage the Computer Using SmartSystems Foundation” on page 36](#).

- 1 In the SmartSystems console, select a computer and right-click.
- 2 From the menu, select **Start Intermec Settings**.
- 3 Configure the settings you need to change. As you choose parameters from the tree structure, help for each parameter appears in the upper right pane of Intermec Settings.
- 4 When you are done making changes, choose **File > Save Settings**.

For help using Intermec Settings, click **Help > Contents**. For information on all of the parameters in Intermec Settings, see the [Intermec Settings Command Reference Manual](#).

About Network Communications

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

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

Configure 802.11a/b/g/n (Wi-Fi) Radio Communications



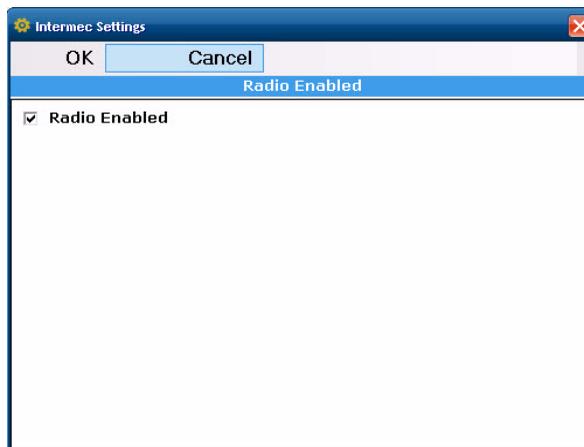
Caution

Make sure all components with antennas are at least 30 cm (1 ft) apart when power is applied. Failure to comply could result in equipment damage.

The computer contains an 802.11 radio to transfer data using wireless communications and to support the TCP/IP network protocols. This section of the manual assumes that your wireless network is set up, including your access points.

By default, the 802.11 radio is enabled. If it is disabled, use the following procedure to enable the Wi-Fi radio using Intermec Settings.

- 1 From the Intermec Settings main menu, tap **Communications > 802.11 Radio > Radio Enabled**.



- 2 Select the **Radio Enabled** check box and tap **OK**. By default, the computer uses Wireless security and enables DHCP.
- 3 Use Intermec Settings to configure any other parameters you need to use for communication with your network.
- 4 Configure 802.11 security. For help, see **“About Wireless Security” on page 57**.

About Bluetooth Communications

Your computer is Bluetooth™-enabled out-of-the-box. With Bluetooth, you can connect to other Bluetooth devices, such as scanners or printers.

Connect to a Bluetooth Scanner

You can connect the computer to an Intermec Bluetooth scanner, such as the SF51 or SR61.

- 1 Tap **Start > Settings > Control Panel > Bluetooth Scanning**.



2 Tap Add Device.



- 3 Select **Search**, **Manual**, **Quick Connect (Incoming)**, or **Previous Devices**. Follow the onscreen instruction to add a wireless scanner.

Connect to a Bluetooth Printer

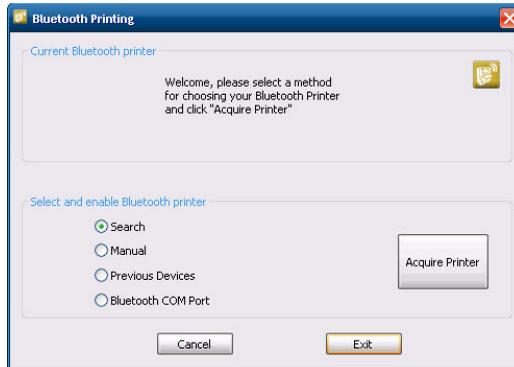
To configure your computer for Bluetooth wireless printing, you need to:

- create an application that opens the wireless printing COM port on your computer. For help, see the Bluetooth Resource Kit, which is part of the Intermec Developer Library (IDL), available from the Intermec website at www.intermec.com/idl.
- select the current wireless printer on your computer. For help, see the next procedure.



Note: You can also print wirelessly using Microsoft APIs with Bluetooth extensions for Winsock and Bluetooth virtual COM ports. For help, see the Bluetooth Resource Kit documentation.

1 Tap **Start > Settings > Control Panel > Bluetooth Printing**.



2 Select **Search, Manual, Previous Devices, or Bluetooth COM Port**.

3 Tap **Acquire Printer**. Follow the onscreen instructions to select the current wireless printer.

4 (Optional) Tap **Print Test Page**. The printer prints out a test page.

About Serial and USB Communications

Use a serial or USB cable to transmit and receive data from another device through serial or USB communications. If you are using a USB cable, you must purchase a USB Y-Cable. For more information, contact your local Intermec representative.

Connect the Intermec SR30 or SR61T USB Scanner

By default when an HID-enabled USB scanner is connected to the computer, the scanned data is transmitted to an active window as keystroke messages and bypasses the Intermec data collection wedge. Any data handling that is applied to the scanned data, such as strip leading or trailing characters must be programmed into the scan engine. You can program your scanner by:

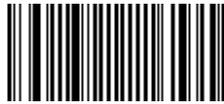
- scanning configuration bar codes from the manufacturer .
- installing an application that accepts the incoming data.

Once connected, configure the scanner parameters through the computer. If you are using an Intermec scanner, configure it using EasySet. For more information, go to www.intermec.com/EasySet.

Required USB Cables for the SR61T

Scanner Model	Required USB Cable
SR61T (Gen 1)	6.5 ft (1.9 m) USB cable (P/N 236-182-001)
SR61T (Gen 2)	6.5 ft (1.9 m) USB cable (P/N 236-240-001)

- 1 From the Intermec Settings main menu, tap **Data Collection > Enable USB Scanner Auto-Detect** and select **Enable USB Scanner Auto-Detect**.
- 2 Connect the scanner to the computer.
- 3 If you are using the SR30 or SR61T, enable the HID profile.
 - For the SR30, enable the generic HID profile by scanning the following bar code:



- For the SR61T (Gen 2), enable the keyboard HID profile by scanning the following bar code:

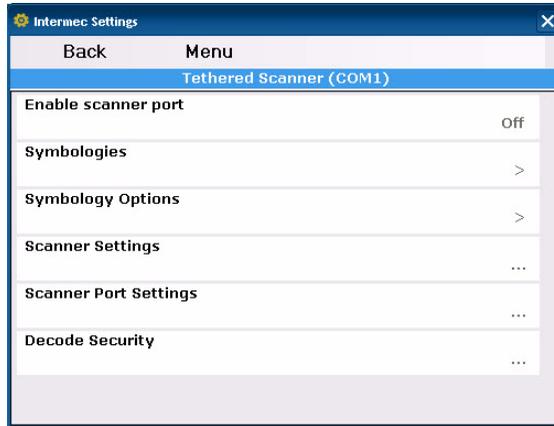


- 4 Refresh Intermec Settings.
- 5 Configure the scanner using Intermec Settings or EasySet.

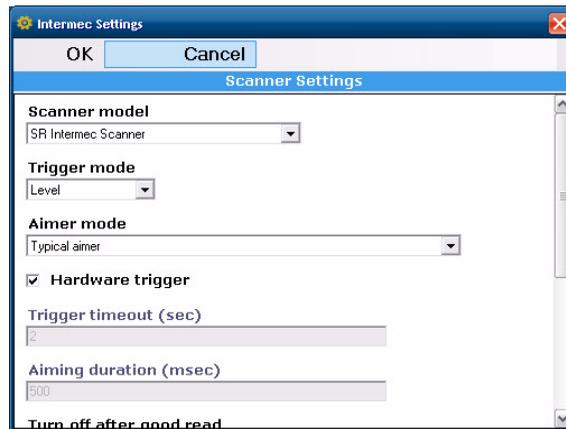
Connect to a Serially Tethered Scanner

Use this procedure to connect a tethered scanner and enable RS-232 communications.

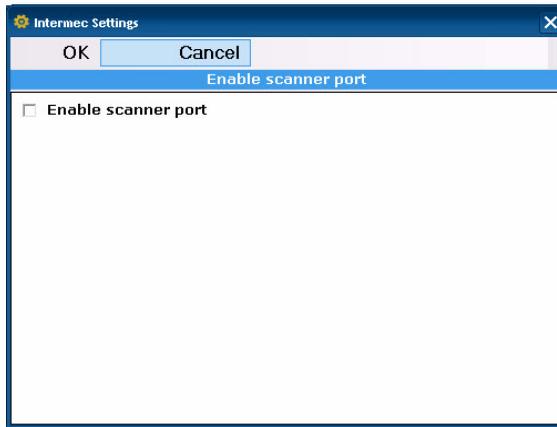
- 1 Connect the scanner to the COM1 or COM2 port.
- 2 From the Intermec Settings main menu, select **Tethered Scanner (COM 1 or COM 2)**.



- 3 Tap **Scanner Settings**.



- 4 Perform one of these items based on the type of scanner you are connecting:
 - For an SR30 or SR61T scanner, tap **Scanner Settings**, select **SR Intermec Scanner**, and then tap **OK**.
 - For an ASCII scanner, tap **Scanner Settings**, select **ASCII**, and then tap **OK**. Set up the appropriate COM port settings by selecting **Scanner Port Settings**.
- 5 Tap **Enable scanner port**.
- 6 Check the **Enable scanner port** check box and tap **OK**.



About Wireless Security

The computer provides five types of security for your wireless network:

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

This section explains how to configure wireless security on your computer. Intermec recommends that you implement WPA2 security using PSK (Personal) or 802.1X (Enterprise) key management as appropriate.

You must use either Wireless or Microsoft security to implement your security solution. For details, see the next section, **“Choose Between Microsoft and Wireless Security.”** Intermec recommends that you always implement WPA2 security using PSK (Personal) or 802.1X (Enterprise) key management.

If you are using WPA-802.1x, WPA2-802.1x, or 802.1x security, this section also assumes that your authentication server and authenticators are properly configured.



Note: Your security choice does not depend on your authentication server. For example, you can choose Wireless security if you use Microsoft Active Directory® to issue certificates.

Choose Between Microsoft and Wireless Security

The computer supports both Wireless and Microsoft security, which dynamically select wireless networks based on your preferences. The option you choose depends on your network security needs.

- If you are primarily using the computer to connect to Wi-Fi hotspots, you may want to use Microsoft security.
Microsoft security is enabled by default. If it is not, enable it. For help, see **“Select Microsoft Security” on page 59**
- If you are using the computer in a static environment that requires a high level of security, you should use Wireless security, which offers CCX v4.0 compliance, support for LEAP and TTLS, and configuration for up to four profiles.

To use Wireless security, you need to select Wireless security as your security choice and select profile. For help, see the next section, **“Select a Wireless Security Profile” on page 64.**

Select Microsoft Security as Your Security Choice

Microsoft Security is enabled by default. If it is not, you need to select it as your security choice to use it. After you select Microsoft security as your security choice, you will be prompted to save your settings and reset the computer for your changes to take effect.

With Microsoft as your security choice, you can configure:

- WPA or WPA2
- 802.1x
- Static WEP

Select Microsoft Security

Use the following procedure to select Microsoft security.

- 1 Start **Intermec Settings**. For help, see [“Start Intermec Settings” on page 43](#).
- 2 Choose **Communications > 802.11 Radio > Security Choice**.
- 3 From the **Security Choice list**, select **Microsoft Security**. An alert box appears telling you that you must save your settings and reboot the computer for the new security choice to take effect.
- 4 Tap **Yes**. The computer resets and starts with Microsoft Security as the Security Choice.

Configure WPA or WPA2 Enterprise (802.1x) Security With Microsoft Security

Use these procedures to set WPA-802.1x security on your computer with Microsoft security.

- 1 Make sure the communications and radio parameters on your computer are configured.
- 2 Tap **Start > Network Connections**. The Network Connections screen appears.
- 3 Tap and hold onto the **Wireless Network Connection** icon until the pop-up screen appears and select **Properties**.
- 4 Tap the **Wireless Networks** tab.

- 5 Make sure your wireless network you are configuring is selected and tap the **Properties** button.
- 6 For **Network Authentication**, choose **WPA** or **WPA2** and select **TKIP** or **AES**. The Encryption type automatically defaults to **AES**.
- 7 Tap the **Authentication** tab and choose, choose either **PEAP** or **Smart Card or other certificate**.
- 8 Tap the **Properties** button.
- 9 Select **Validate server certificate**.
- 10 Select a root certificate or load a root certificate of the authentication server on your computer. For help, see **“Load a Certificate” on page 69**.
- 11 Tap **OK** to exit the Properties screen.
- 12 Tap **OK** again to save the Microsoft Security settings.

Enable WPA or WPA2 Personal (PSK) Security With Microsoft Security

Use the following procedure to enable WPA-PSK With Microsoft Security.

- 1 Make sure the communications and radio parameters on your computer are configured.
- 2 Tap **Start** > **Network Connections**. The Network Connections screen appears.
- 3 Tap and hold onto the **Wireless Network Connection** icon until the pop-up screen appears and select **Properties**.
- 4 Tap the **Wireless Networks** tab.
- 5 Make sure your wireless network you are going to configure is selected and tap the **Properties** button.
- 6 For **Network Authentication**, choose **WPA-PSK** or **WPA2-PSK** and select **TKIP** or **AES**. The Encryption type automatically defaults to **AES**.

- 7** For **Network Key**, enter the pre-shared key or the passphrase.

The pre-shared key must be a value of 32 hex pairs preceded by 0x for a total of 66 characters. The value must match the key value on the authenticator. The passphrase must be from 8 to 63 characters. After you enter a passphrase, the computer internally converts it to a pre-shared key.

- 8** For **Confirm Network Key**, enter the pre-shared key or the passphrase again.
- 9** Save your settings.

Configure 802.1x Security with Microsoft Security

Use the following procedure to configure 802.1x security with Microsoft security. Intermec recommends that you use WPA2-802.1x instead of 802.1x-WEP if possible.

- 1** Make sure the communications and radio parameters on your computer are configured.
- 2** Tap **Start** > **Network Connections**. The Network Connections screen appears.
- 3** Tap and hold onto the **Wireless Network Connection** icon until the pop-up screen appears and select **Properties**.
- 4** Tap the **Wireless Networks** tab.
- 5** Make sure your wireless network you are configuring is selected and tap the **Properties** button.
- 6** For **Network Authentication**, choose **Open** or **Shared**. The Encryption type automatically defaults to **WEP**.
- 7** For **Network Key**, enter the pre-shared key or the passphrase.
- 8** For **Confirm Network Key**, enter the pre-shared key or the passphrase again.
- 9** Select **Enable IEEE 802.1x Authentication for this network**.
- 10** In **EAP type**, choose either **PEAP** or **Smart Card or other certificate**.
- 11** Tap the **Properties** button.
- 12** Select **Validate server certificate**.

- 13** Select a root certificate or load a root certificate of the authentication server on your computer. For help, see **“Load a Certificate” on page 69.**
- 14** Tap **OK** to exit the Properties screen
- 15** Tap **OK** again to save the Microsoft Security settings.

Configure Static WEP Security With Microsoft Security

Use the following procedure to configure static WEP security with Microsoft security. Intermec recommends that you use WPA2-PSK instead of WEP if possible.

- 1** Make sure the communications and radio parameters on your computer are configured.
- 2** Tap **Start** > **Network Connections**. The Network Connections screen appears.
- 3** Tap and hold onto the **Wireless Network Connection** icon until the pop-up screen appears and select **Properties**.
- 4** Tap the **Wireless Networks** tab.
- 5** Make sure your wireless network you are configuring is selected and tap the **Properties** button.
- 6** For **Network Authentication**, choose **Open**.
- 7** For **Data Encryption**, choose **WEP**.
- 8** For **Network Key**, enter an ASCII key or a hex key that is either 5 bytes or 13 bytes long depending on the capability of the radio.
Set a 5-byte value for 64-bit WEP or a 13-byte value for 128-bit WEP. Hex keys must be preceded by 0x and contain 5 or 13 hex pairs.
- 9** For **Confirm Network Key**, enter the the ASCII or hex key again.
- 10** For **Network Key Index**, select the key you want to use for data transmission or select **The key is provided for me automatically**.
- 11** Save your settings.

Use Open (No Security) Associations With Microsoft Security

Use the following procedure to configure your computer for open security using Microsoft WZC.

- 1** Make sure the communications and radio parameters on your computer are configured.
- 2** Tap **Start** > **Network Connections**. The Network Connections screen appears.
- 3** Tap and hold onto the **Wireless Network Connection** icon until the pop-up screen appears and select **Properties**.
- 4** Tap the **Wireless Networks** tab.
- 5** Make sure your wireless network you are configuring is selected and tap the **Properties** button.
- 6** For **Network Authentication**, choose **Open**.
- 7** For **Data Encryption**, choose **Disabled**.
- 8** Tap **OK**. Your settings are saved.

Select Wireless Security as Your Security Choice

Microsoft security is enabled by default. To use Wireless security, you need to select it as your security choice to use it. After you select Wireless security as your security choice, you will be prompted to save your settings and reset the computer for your changes to take effect.

Select Wireless Security

Use the following procedure to select Wireless security.

- 1** Start Intermec Settings. For help, see [“Start Intermec Settings” on page 43](#).
- 2** Choose **Communications** > **802.11 Radio** > **Security Choice**.
- 3** From the **Security Choice list**, select **Wireless Security**. An alert box appears telling you that you must save your settings and reboot the computer for the new security choice to take effect.
- 4** Tap **Yes**. The computer resets and starts with Microsoft Security as the Security Choice.

Select a Wireless Security Profile

You can define up to four profiles for Wireless security. Different profiles let your computer communicate in different networks without having to change all of your security settings. For example, you may want to set up one profile for the manufacturing floor and one for the warehouse. By default, the active profile is Profile 1.

Select a Wireless Security Profile

Use the following procedure to select a Wireless security profile.

- 1 Start Intermec Settings.
- 2 Choose **Communications > 802.11 Radio > Wireless Security**.
- 3 Choose a profile. A list of configurable settings appears.
- 4 (Optional) In the **Profile Label** text box, enter a meaningful name for your profile.
- 5 Configure your security settings. For help, see the next sections.
- 6 Repeat Steps 3 through 5 for each profile you want to define.
- 7 Set an active profile by choosing it from the **Active Profile** list.
- 8 Save your settings.

Configure WPA or WPA2 Enterprise (802.1x) Security With Wireless Security

Use these procedures to set WPA-802.1x or WPA2-802.1x security on your computer with Wireless security.

- 1 Make sure the communications and radio parameters on your computer are configured.
- 2 Make sure Wireless is selected as your security choice.
- 3 Start Intermec Settings.
- 4 Choose **Communications > 802.11 Radio > Wireless Security**.
- 5 Select the profile you want to configure.
- 6 For **Association**, choose **WPA** or **WPA2**. Encryption automatically defaults to **TKIP** or **AES**, respectively.

- 7 For **8021x**, choose **TTLS**, **PEAP**, **EAP-FAST**, or **TLS**.
- 8 If you choose **TTLS**, **EAP-FAST**, or **PEAP**:
 - a For **Prompt for Credentials**, choose **Enter credentials now**.
 - b Enter a **User Name** and **User Password**.
 - c For **Validate Server Certificate**, choose **Yes**.



Note: The correct date must be set on your computer when you enable **Validate Server Certificate**.

- 9 If you choose **TLS**:
 - a Load a user and root certificate on your computer. For help, see **“Load a Certificate” on page 69**.
 - b Enter a **User Name** and **Subject Name**.
 - c For **Validate Server Certificate**, choose **Yes**.

Configure WPA or WPA2 Personal (PSK) Security With Wireless Security

Use the following procedure to configure WPA-PSK or WPA2-PSK with Wireless security.

- 1 Make sure the communications and radio parameters on your computer are configured.
- 2 Make sure **Wireless** is selected as your security choice.
- 3 Start **Intermec Settings**.
- 4 Choose **Communications > 802.11 Radio > Wireless Security**.
- 5 Select the profile you want to configure.
- 6 For **Association**, choose **WPA** or **WPA2**.
- 7 For **8021x**, choose **None**.

- 8 For **Pre-Shared Key**, enter the pre-shared key or passphrase.

The pre-shared key must be a value of 32 hex pairs preceded by 0x for a total of 66 characters. The value must match the key value on the access point. The passphrase must be from 8 to 63 characters. After you enter a passphrase, the computer internally converts it to a pre-shared key. This value must match the passphrase on the authenticator.

- 9 Save your settings.

Configure 802.1x Security With Wireless Security

Use the following procedure to configure 802.1x-WEP security with Wireless security. Intermec recommends that you use WPA2-802.1x instead of 802.1x-WEP if possible.

- 1 Make sure the communications and radio parameters on your computer are configured.
- 2 Make sure Wireless is selected as your security choice.
- 3 Start Intermec Settings.
- 4 Choose **Communications > 802.11 Radio > Wireless Security**.
- 5 Select the profile you want to configure.
- 6 For **Association**, choose **Open**.
- 7 For **Encryption**, choose **WEP**.
- 8 For **8021x**, choose **TTLS**, **PEAP**, or **TLS**.
- 9 If you chose **TTLS** or **PEAP**:
 - a Enter a **User Name**.
 - b For **Prompt for Credentials**, choose **Enter credentials now**.
 - c Enter a **User Password**.
 - d For **Validate Server Certificate**, choose **Yes**.
- 10 If you choose **TLS**:
 - a Load a user and root certificate on your computer. For help, see **“Load a Certificate” on page 69**.
 - b For **Validate Server Certificate**, choose **Yes**.

- c** Enter a **User Name** and **Subject Name**.

- 11** Save your settings.

Configure LEAP Security With Wireless Security

After you configure the communications and radio parameters on your computer and select Wireless as your security choice, you can configure LEAP.

- 1** Start Intermec Settings.
- 2** Choose **Communications > 802.11 Radio > Wireless**.
- 3** Select the profile you want to configure.
- 4** For **8021x**, choose **LEAP**.
- 5** For **Association**, choose **Open**, **WPA**, **WPA2**, or **Network EAP**. Encryption automatically defaults to **TKIP** if you choose **WPA**, **AES** if you choose **WPA2**, and **WEP** if you choose **Open** or **Network EAP**.
- 6** For **Prompt for Credentials**, choose **Enter credentials now**.
- 7** Enter a **User Name** and **User Password**.
- 8** Save your settings.

Configure Static WEP Security With Wireless Security

Use the following procedure to configure static WEP security with Wireless. Intermec recommends that you use WPA2-PSK instead of WEP if possible.

- 1** Make sure the communications and radio parameters on your computer are configured.
- 2** Make sure Wireless is selected as your security choice.
- 3** Start Intermec Settings.
- 4** Choose **Communications > 802.11 Radio > Wireless Security**.
- 5** Select the profile you want to configure.
- 6** For **8021x** choose **None**.
- 7** For **Association**, choose **Open**.

- 8** For **Encryption**, choose **WEP**.
- 9** Define a value for the keys you want to use. You can define up to four keys (**Key 1** through **Key 4**).

Enter an ASCII key or a hex key that is either 5 bytes or 13 bytes long depending on the capability of the radio. Set a 5-byte value for 64-bit WEP or a 13-byte value for 128-bit WEP. Hex keys must be preceded by 0x and contain 5 or 13 hex pairs.
- 10** For **Transmit key**, choose the key you want to use for transmitting data.
- 11** Save your settings.

Use Open (No Security) Associations with Wireless Security

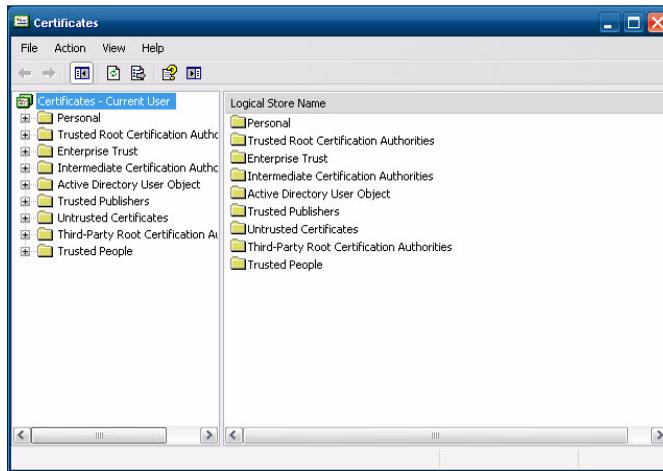
Use the following procedure to configure your computer for open security using Wireless.

- 1** Start Intermec Settings.
- 2** Choose **Communications > 802.11 Radio > Wireless Security**.
- 3** Select the active profile you are using.
- 4** For **Association**, choose **Open**.
- 5** For **Encryption**, choose **None**.
- 6** Tap **OK**. Your settings are saved.

Load a Certificate

To use transport layer security (TLS) with WPA or 802.1x security, you need a unique client certificate on the computer and a trusted root certificate authority (CA) certificate. Certificates are pieces of cryptographic data that guarantee a public key is associated with a private key. They contain a public key and the entity name that owns the key. Each certificate is issued by a certificate authority.

- 1 Tap **Start** and select **Run**.
- 2 Type `certmgr.msc` into the drop-down menu and tap **OK**. The Certificates screen appears.



- 3 If you are prompted for a password, type the password and continue.
- 4 Select the folder where you want to input the certificate.
- 5 Tap **Action** > **All Tasks** > **Import** and follow the instructions to import a certificate.

5

Use WWAN and GPS Communications

Some configurations of the CV41 come equipped with a WWAN radio. With WWAN enabled, you can use UMTS or CDMA communications to transmit data through cellular wide-area networks (WANs), and use the Global Positioning System Receiver (GPS).'

About WWAN Communications

The CV41 Vehicle Mount Computer has an optional WWAN radio that supports both CDMA and UMTS cellular technology. Use either one of these technologies to transmit data through cellular wide-area networks. To configure and activate CDMA and UMTS connections, use the Intermec OneClick Internet application.

Intermec OneClick Internet Application Main Screen



About the Status Buttons and Icons

Tappable buttons and icons in the Intermec OneClick Internet application immediately shows you the status of your WWAN connection. Some buttons or icons may also launch your default web browser, SMS, and email applications.

OneClick Internet Status Buttons and Icons

Icons	Description
	Displays your WWAN signal strength.
	Connected to WWAN. Tap the button to turn off the radio.
	Attempting to connect to WWAN.
	Ready to connect to WWAN. Tap the button to connect.

OneClick Internet Status Buttons and Icons (Continued)

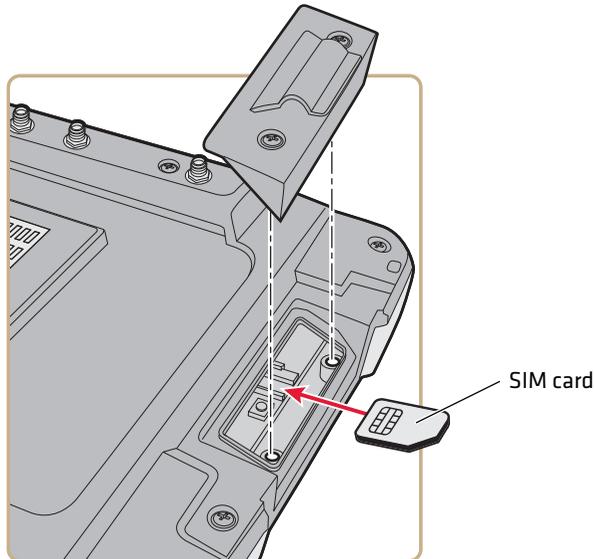
Icons	Description
	The WWAN radio enabled. Tap this button to disable the radio.
	The WWAN radio is attempting to connect or it has been disabled.
	The WWAN radio is disabled. Tap this button to enable the radio.
	The WWAN radio is ready to connect.
	The WWAN radio is attempting to establish a connection to WWAN.
	Connected to WWAN.
	Connection failure.

Activate UMTS Communications

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

- 1 Remove the computer from the smart dock.
- 2 Press the **Power** button. The computer turns off.

- Using a small Phillips screwdriver, remove the two screws that secure the SIM card access panel.



- Insert the SIM card into the SIM card slot.
- Reattach the SIM card access panel and screw to a torque value of 4-5 in/lbs.
- Reattach the computer to the smart dock.
- Connect an external WWAN antenna. For more information, see [“Connect an External Antenna” on page 21](#).
- Press the **Power** button. The computer turns on.
- Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens and tries to detect the carrier of the SIM you just inserted.
- If the carrier is not detected, tap **Settings** and select the **Firmware** tab.
- Select your carrier and tap **Change**.

Activate CDMA Communications

To activate the CDMA radio module in your computer, you need to contact your wireless carrier and set up an account for each 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	Verizon

The carrier will require the International Mobile Equipment Identity number (IMEI) to start the activation process. You can find the IMEI number in the OneClick Internet application, tap **Settings** and the **Info** tab.

After you supply the IMEI number to your carrier, they will respond with values that you must enter in the OneClick (if required). Your carrier sales contact and an Intermec representative can guide you through the process.

- 1 Press the **Power** button. The computer turns off.
- 2 Connect an external WWAN antenna. For more information, see [“Connect an External Antenna” on page 21](#).
- 3 Press the **Power** button again to turn on the computer.
- 4 Select **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 5 Tap **Settings** and select the **General** tab.
- 6 Select **Automated Activation** and tap **Next**.
- 7 Enter *22899 in the text field and tap **Next**. CDMA communications is activated.
- 8 Verify your settings by tapping **Settings** in the OneClick Internet application and selecting the **Network** tab.

About GPS

The GPS receiver in the computer can deliver standards-based National Marine Electronics Association (NMEA) data strings to GPS applications. To use the GPS receiver, you need to:

- enable WWAN communications.
- install an external GPS antenna to the CV41. For more information, see **“Connect an External Antenna” on page 21.**

For more information on purchasing an external GPS antenna, contact your local Intermec representative.

Test the GPS Receiver

Use this section to learn how to test the GPS receiver.

- 1** Make sure WWAN communications is enabled. For more information, see **“Use WWAN and GPS Communications” on page 71.**
- 2** Make sure an external GPS antenna is connected. For more information, see **“Connect an External Antenna” on page 21.**
- 3** Select **Start > All Programs > OneClick Internet > OneClick Internet.**
- 4** Tap the **GPS** button. The coordinates for your location are displayed. To show your current location in Google Maps, tap **Track Me.**

Configure WWAN Settings

Configure your connection settings to AutoLaunch the OneClick Internet application on startup, connect to WWAN automatically, or to reconnect to WWAN when a connection is available.

Create a Profile

A profile is a set of values that you can easily apply to the computer to ensure optimal performance in a specific scenario. Configure and create your own profiles to easily connect to your WWAN network operator.

- 1 Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **Profile** tab.
- 3 Tap () to create a new profile and set your new profile settings.
- 4 Tap () to save your profile.

Profile Settings Descriptions

Setting	Description
Profile	The profile name.
APN	The access point name of your network operator. For more information, contact your network operator. If you are registered to a CDMA network, the APN field is not available.
Username	Your username. For more information, contact your network operator.
Password	Your password.
DNS	Domain name server.
Proxy Settings	The proxy settings for your network.

About the OneClick Internet PIN Number

If you are using CDMA communications, you must enter a PIN number when the Oneclick Internet opens.

Activate or Deactivate a PIN Number

If you do not want to enter a PIN number every time the OneClick Internet Application stops, deactivate the PIN number.

- 1 Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **PIN** tab.

- 3 To deactivate your PIN number, clear the **Activate PIN** check box and enter your current PIN number.

To activate your PIN number, select the **Activate PIN** check box and enter your current PIN number.

Change the PIN Number

Use this section to learn how to change your PIN number.

- 1 Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **PIN** tab.
- 3 To change your PIN, select the **Change PIN** check box and enter your current PIN number, your new PIN number, and verify your new PIN number.

Configure Network Connections

Use this section to learn how to connect to a specific data connection method or to a specific network.



Note: If you are on CDMA communications, you cannot specify a specific network to connect to..

- 1 Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **Network** tab.
- 3 Tap **Select Connection** and choose the specific data connection you want to use. If **Select Automatically** is chosen, the computer automatically selects the network with the strongest signal.
- 4 Tap **Network Selection** and select the network operator you want to use.
- 5 Tap **Apply** to save your settings.

AutoLaunch the OneClick Internet Application

When you enable AutoLaunch, the OneClick Internet application opens when the computer starts up. Enable AutoLaunch to easily access the OneClick Internet application or view your current WWAN settings.

- 1 Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **General** tab.
- 3 Select the **AutoLaunch** checkbox to enable AutoLaunch.

Connect to WWAN Automatically On Startup

By default, you must manually enable WWAN connectivity. Use this section to learn how to automatically enable WWAN connectivity on startup.

- 1 Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **General** tab.
- 3 Select the **Connect Automatically** checkbox to automatically enable WWAN connectivity on startup.

Reconnect to WWAN Automatically

If for any reason you are disconnected from WWAN, you must manually re-enable WWAN connectivity. Use this section to learn how to reconnect to WWAN automatically.

- 1 Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **General** tab.
- 3 Select the **Reconnect Automatically** checkbox to automatically reconnect to WWAN.

About Data Roaming

Data roaming leaves your WWAN connection on even when you are not in an area covered by your carrier's network. If you want to avoid any unwanted roaming charges, turn off data roaming.

Enable or Disable Data Roaming

Enable data roaming to leave your WWAN connection on in areas not covered by your carrier's network or disable it to turn off your WWAN connection.

- 1 Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **General** tab.
- 3 Select the **Allow Roaming** checkbox to enable roaming and clear it to disable roaming.

Enable Roaming Alerts

If you have enabled roaming, the computer can notify you when you are not in your carrier's network by sending you an alert telling you that you are roaming.

- 1 Tap **Start > All Programs > OneClick Internet > OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **General** tab.
- 3 Select the **Roaming Alert** checkbox to enable alerts and clear it to disable alerts.

View WWAN Network Statistics

View WWAN network statistics to know how much data you have sent and received, the WWAN network speed, and the duration of your current connection.

View All Current Network Statistics

Use this section to learn how to view all of your current network statistics.

- 1 Tap **Start** > **All Programs** > **OneClick Internet** > **OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Statistics** button. The WWAN Network Statistics screen opens and displays the statistics of your current connection.

View Used Data History

Use this section to learn how much data has been transferred within a specific timeframe.

- 1 Tap **Start** > **All Programs** > **OneClick Internet** > **OneClick Internet**. The Oneclick Internet application opens.
- 2 Tap the **Settings** button and select the **History** tab. The WWAN Network Statistics screen opens and displays the statistics of your current connection.
- 3 Choose the dates you want to view your data history from the drop-down menus. The total data used is displayed.
- 4 (Optional) Tap **Reset** to reset your used data history.

6

Enable Screen Blanking

Enable screen blanking on your computer to turn off the computer screen while your vehicle is in motion.

About Screen Blanking

The CV41 supports screen blanking. When motion is detected, a screen blanking box or switch turns off the computer screen to avoid unnecessary driver distractions. Once the vehicle is stationary, the screen turns back on. To enable screen blanking on your computer, you must use one of the following:

- Screen blanking box
- Switch

Intermec recommends that you use the screen blanking box to enable screen blanking on the CV41. If your vehicle lacks an electrical signal that detects vehicle motion or your vehicle voltage is not supported by the screen blanking box, use a switch to enable screen blanking.

You can install the switch in a variety of ways, but Intermec recommends you install a switch that closes when the user presses the accelerator pedal on a vehicle.

Intermec does not sell a switch for screen blanking, but you can purchase a screen blanking box from Intermec. For more information, contact your local Intermec representative.

Install the Hardware for Screen Blanking

This section explains how to install the switch to enable screen blanking on your computer. To purchase a screen blanking box, contact your local Intermec representative.



Installation of the screen blanking box or switch should be done by trained service personnel only.

Before You Install the Switch

Before you install the switch or relay for screen blanking, you need to supply power to the vehicle mount computer.

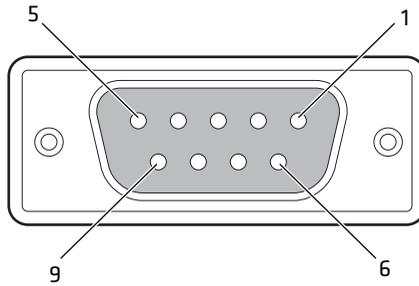
Tools You Need

To install the switch, you need the following parts and tools:

- Switch
- Mounting hardware and tools
- Custom serial cable

Create a Custom Serial Cable

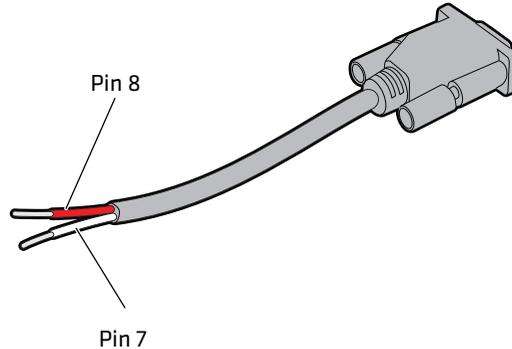
To install the switch, you need to create a custom serial cable with a DB9 connector built to the following specifications outlined below.



Custom Serial Cable Pinout Specifications

Pin	Signal	Description
1	Not used	
2	Not used	
3	Not used	
4	Not used	
5	Not used	
6	Not used	
7	RTS	Request to send output
8	CTS	Clear to send input
9	Not used	

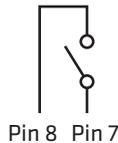
Sample Custom Serial Cable for Switch



Install Switch for Screen Blanking

This section explains how mount, connect, and enable the switch for screen blanking.

- 1 Using your own mounting hardware, secure the switch sensor to the vehicle.
- 2 Connect the serial cable to the switch. Make sure that Pin 7 connects to the switch connection and Pin 8 connects to the other terminal.



- 3 Connect the serial cable to the COM 1 or COM 2 port on your computer.

Enable Screen Blanking

After you have wired and mounted the motion switch sensor, you must enable screen blanking in Intermec settings on the vehicle mount computer.

- 1 In Intermec Settings, select **Device Settings > Screen > Screen Blanking on Motion**.

- 2** In **Screen Blanking on Motion**, select the COM port the custom serial cable is connected to.
- 3** In **Screen-on delay after motion stops (sec)**, enter the amount of time in seconds that you want the display to turn on after the vehicle is stationary.
- 4** Tap **OK**. Screen blanking is enabled.

7

Troubleshoot and Maintain the Computer

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

Troubleshoot Your Computer

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



Note: 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.

Troubleshoot 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 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.

Problems With the Wi-Fi Connection (Continued)

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.</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>

Troubleshoot 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.

Check 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.

- 1** Tap **Start > All Programs > Summit > Summit Client Utility**.
The Summit Client Utility application launches.

The Main tab shows:

- the current active profile.
- network association status.

- 2** Tap the **Profile** tab to view the current active profile security settings.

- Tap the **Scan** button to view a list of available 802.11 networks.
The list includes the signal strength and security information.

- 3** Tap the **Status** tab to view the current active profile status.

The Status tab shows:

- the current active profile.
- network association status.
- the IP and MAC addresses.
- the access point IP and MAC addresses.
- the DTIM and beacon period.
- the radio transmit power and signal strength information.

- 4 Tap the **Diags** tab to run a ping test to the host.
 - a In the text field, enter the IP address of the host.
 - b Tap **Start Ping**. The graph shows the amount of time it takes for the host to return the ping.
- 5 Tap the **Global** tab to view the global property values of the Wi-Fi connection.

Troubleshoot Reading Bar Codes

Use this section to troubleshoot problems that may prevent you from being able to read a bar code with an Intermec scanner. If you cannot find the solution in the following table, refer to your scanner user guide for more information.

Problems Reading Bar Codes

Problem	Solution
You cannot see the illumination beam or frame from the scanner when you press the Scan button and aim the imager at a bar code label.	<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 Intermec Settings. To check the setting go to Intermec Settings and select Data Collection > Scanner Settings. Hardware trigger should be checked.

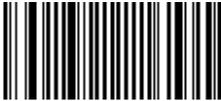
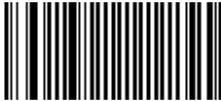
Problems Reading Bar Codes (Continued)

Problem	Solution
The scanner will not read the bar code label.	<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 Intermec 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• Check to see if the right scanner model is selected. To check the setting go to Intermec Settings and select Data Collection > Scanner Settings.• Check to see if the scanner cable is damaged.
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.
When Enable Scanner Port is checked in Intermec Settings, the “COM port is busy. Another application may be using the port” error message appears.	Confirm that no other application is currently using the COM port or select another COM port for the scanner. If that does not work, try to restart the computer to see if the COM port becomes available.

Problems Reading Bar Codes (Continued)

Problem	Solution
<p>The scanner does not read the bar code or is corrupted when it is enabled as an ASCII scanner.</p>	<ul style="list-style-type: none"> • Check to see if the Scanner Port Settings in Intermecc Settings match those settings programmed in the scan engine. • The scanner may be in an unknown state. Reset the scanner to the factory default settings by scanning the manufacturer’s configuration bar code, and reconnect the scanner. For the SR30 or SR61T (Gen II), scan one of the following bar codes to restore factory defaults: <p>SR30 Scanner</p>  <p>SR61T (Gen II) Scanner</p> 
<p>You scan a valid bar code label to enter data for your application. The data decoded by the scanner does not match the data encoded in the bar code label.</p>	<p>The scanner 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.</p>
<p>The input device attached to the computer does not work well or read bar code labels very quickly.</p>	<p>Set the Scanner Model command to the specific attached input device. Check enabled bar code symbologies and enable only the symbologies being used.</p>
<p>The connected scanner is not scanning.</p>	<p>Check to see that the right scanner model is selected in Intermecc Settings. You may also need to reset the scanner to the factory default settings and reconnecting the scanner through Intermecc Settings.</p>
<p>Only one SR61T (Gen II) scanner shows up in Intermecc Settings, but two SR61’s are connected.</p>	<p>By default, the SR61T does not expose its serial number at the keyboard HID profile. To allow more than one SR61T to be connected, use EasySet and scan the correct label to expose the serial number of the SR61T.</p>

Problems Reading Bar Codes (Continued)

Problem	Solution
When connected to USB, the SR30 or SR61T (Gen II) does not show up in Intermec Settings.	Make sure that: <ul style="list-style-type: none">• USB Auto-detect is enabled in Intermec Settings.• Enable the HID profile, by scanning one of the following bar codes: <p>SR30 Scanner</p>  <p>SR61T (Gen II) Scanner</p> 

Troubleshoot 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.	Try the following solutions: <ul style="list-style-type: none">• Make sure that power is connected to the computer, and that the Power switch on the smart dock is on.• If your computer is not connected to the smart dock, you may have run out of battery power.• Disconnect the UPS battery and turn the power back on. For help, see “Disconnect the UPS Battery” on page 99.
The computer appears to be locked up and you cannot enter data.	<ul style="list-style-type: none">• Perform a cold boot. For help, see “Restart or Shut Down the Computer” on page 98.• Disconnect the UPS battery. For help, see “Disconnect the UPS Battery” on page 99• If the computer does not boot or reset, contact your Intermec representative for help.

Problems Operating the Computer (Continued)

Problem	Solution
You tap the screen and nothing happens.	Align your screen. For help, see “ Calibrate the Screen ” on page 17 .
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.

Call 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
- WWAN settings
- If you are using security, know the type (Wireless or Microsoft) and the full set of parameters
- Power management settings
- If you are using Intermec Terminal Emulator (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 and in the OneClick Internet application. Consult your application developer for information on your custom application.

Find 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.

Find Your Operating System Version

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

- Tap **Start** > **Control Panel** > **About**. The OS version is displayed in the **Versions** tab as the Intermec Content version.

View WWAN Settings

Use the following procedure to view your current WWAN settings.

- Tap **Start** > **All Programs** > **OneClick Internet** > **Settings** and click the **Info** tab.

Reset the Computer

If the computer is not responding 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 two ways to reset the computer:

- Restart or shut down the computer
- Disconnect the UPS battery

Restart or Shut Down the Computer

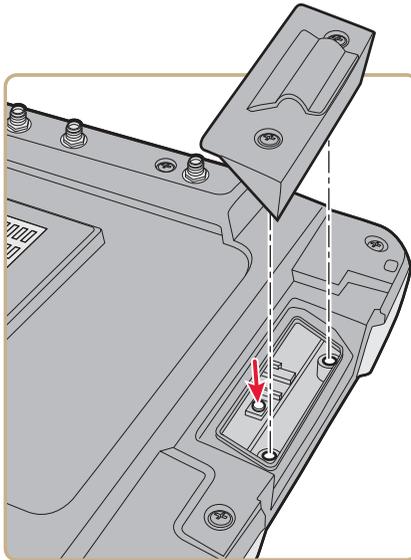
If an application is not responding, you can try to restart or shut down the computer.

- 1 Tap **Start** > **Shutdown**.
- 2 Select **Shut down** or **Restart** and tap **OK**.

Disconnect the UPS Battery

Disconnect the UPS battery when the computer completely stops responding or when you are shipping the computer to another location. Because disconnecting may result in data loss, use this method only if all other recovery methods have failed.

- 1 Remove the CV41 from the smart dock. For help, see [“Remove the CV41 from the Smart Dock” on page 8](#).
- 2 Using a Phillips head screwdriver, remove the two screws that secure the SIM card access panel.



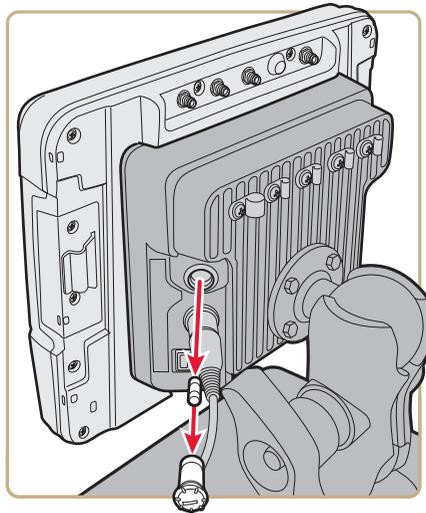
- 3 Press the **UPS Battery Disconnect** button located below the SIM card slot.
- 4 Reinstall the SIM card access panel and tighten the screws to a torque to a value of 4-5 in/lbs.

Once power external power is reconnected to the CV41, the UPS battery automatically reconnects.

Replace the Fuse

The CV41 uses a 10 A time delay (slow blow) fuse, which is located on the smart dock. If you need to replace the fuse, make sure that you replace it with the same size, rating, and type of fuse (Littelfuse 03260 10 MXP or equivalent).

- 1 Remove the CV41 from the smart dock. For help, see **“Remove the CV41 from the Smart Dock” on page 8.**
- 2 Disconnect the smart dock from power.
- 3 Using a flathead screwdriver, remove the fuse holder from the CV41.



- 4 Replace the fuse.
- 5 Secure the fuse holder back into the CV41.

Clean the Computer

To keep the computer in good working order, you may need to clean the touch screen. Clean 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.

- 1** Press the **Power** button to turn off the computer.
- 2** Dip a clean cloth towel in the ammonia solution and wring out the excess.
- 3** Wipe off the touch screen. Do not allow any abrasive material to touch these surfaces.
- 4** Wipe dry.

A

Specifications and Default Settings

Physical and Environmental Specifications

Physical Dimensions

CV41 dimensions	21.4 x 26.8 x 4.3 /6.6 cm (8.4 x 10.6 x 1.7/2.6 in)
CV41 weight	2.1 kg (5.6 lbs)
Smart dock dimensions	15.5 x 18 x 6.4 cm (6.1 x 7.1 x 2.5 in)
Smart dock weight	1.2 kg (3.2 lbs)

Environmental Specifications

Standard operating temperature	Non-condensing: -20 °C to 50 °C (-4 °F to 122 °F)
Extreme operating temperature when using a defroster	Condensing: -30 °C to 50 °C (-22 °F to 122 °F)
Storage temperature	Non-condensing: -30 °C to 60 °C (-22 °F to 148 °F)
Relative humidity	Up to 90% non-condensing at 40 °C (104 °F) with extended temperatures up to 100%
Water and dust	IP66
ESD	15 kV
Vibration	MIL-STD-810F, composite wheeled vehicles
Crash	SAE-J 1455

Power and Electrical Specifications

Input power	DC input voltage: 10 to 60 VDC Input current: 4.6 A Input fuse: 10 A time delay
External power supply	Internal power supply: 10-60 VDC AC adapter: 90-240 VAC DC power supply : 6-96 VDC
Backup battery (CMOS)	Field replaceable, rechargeable lithium-ion battery, 30 minutes of life at -20 °C (-4 °F).

Hardware

Touch Screen	<p>20 cm (8 in) color WVGA 800 x 480 LED backlit display.</p> <p>Standard display:</p> <ul style="list-style-type: none"> • 400 NIT indoor display • Ambient light sensor • Glove compatible • Field-replaceable resistive touch screen <p>Optional display:</p> <ul style="list-style-type: none"> • 900 MIT outdoor display • Defroster
Keypad	Backlit 64 QWERTY keyboard with number pad and 10 function keys. Universal keyboard overlay legend and supports VT220, 3270, 5250. All keys (except modifiers and the power button) are mappable.
Processor	Intel Atom Z530 at 1.6 GHz
Memory	2 GB RAM
Integrated radio	802.11a/b/g/n
Intefaces	USB 2.0 host port, USB 1.1 client port, two RS-232 COM ports, a CANBUS/audio port, DC power input and ignition input, and RF antenna ports for Wi-Fi, WWAN, and GPS.
Antennas	Dual internal anennas or optional external antennas
Removable storage	Secure Digital
Operating system	Microsoft Windows Embedded Standard

Standard Communications

- 802.11a/b/g/n
- WWAN (Optional and only available in North America, Europe, and Australia)
- Bluetooth
- USB
- Serial
- Canbus

Wireless LAN

Wireless frequency (varies by regulatory domain)	2.4 to 2.4895 GHz IEEE 802.11b/802.11g DSSS OFDM 5.15 to 5.82 GHz IEEE 802.11a DSSS OFDM
RF data rates	802.11a (OFDM) 6, 9, 12, 18, 24, 26, 48, 54 Mbps 802.11b (DSSS) 1, 2, 5.5, 11 Mbps 802.11g (OFDM) 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n (OFDM 20 MHz chs) 13, 26, 39, 52, 78, 104, 117, 130 Mbps 802.11n (OFDM 40 MHz chs) 27, 54, 81, 108, 162, 216, 243, 270 Mbps
RF power level	50 mW maximum
Channels	FCC: 1 to 11, 36, 40, 44, 48, 149, 153, 157, 161 ETSI: 1 to 13, 36, 40, 44, 48
Security	WPA, WPA2, 802.1x (EAP-TLS, TTLS, LEAP, PEAP, EAP-FAST), WEP
Cisco compatibility	CCX v4 certified

Bluetooth

Enhanced data rate	Up to 3.0 Mbit/s over the air
Connection	No less than 10 m (32.8 ft) line of sight
Bluetooth version	2.0 + EDR
Operating Frequency	2.402 to 2.480 GHz

Default Configuration

The following tables list the default values of the configuration settings supported on the computer. If you restore the computer to factory default settings, the 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 Bluetooth or tethered scanner and to configure the bar codes that you want the imager to be able to read.

Data Collection Settings

Data Collection for Tethered Scanner Setting	Default Value
Tethered-Configure On Connect	Overwrite with computer settings
Enable USB Scanner Aut-Detect	Off
Enable Scanner Port	Off
Bluetooth-Configure On Connect	Overwrite with computer settings

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

Symbology Settings (Continued)

Symbology	Default Value
Code 93	Disable
Code 128/GS1-128	Enable Code 128, GS1-128, GS1-128 identifier
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
JapanPost	Disable
KoreaPost	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
Telepen	Disable
TLC 39	Disable

Symbology Option Settings

Symbology Option Setting	Default Value
Preamble	None (Disable)
Postamble	None (Disable)
Symbology Identifier	Disable

Symbology Option Settings

Symbology Option Setting	Default Value
Enable Multicode	Disable
Number of Bar Codes	2
Bar Code Separator	<>
Complete Multicode	UDM0
Incomplete Multicode	UDM1
Code Mark	*
Incomplete Transmission	Disable
Incomplete Transmission Timeout	0
Bar Code 1-8 Symbology	All
Bar Code 1-8 Length	0
Bar Code 1-8 Mask	*
Enable Multicode	Disable

Scanner Settings

Scanner Setting	Default Value
Scanner Model	SR Intermec Scanner
Trigger Mode	Level
Aimer Mode	Typical aimer
Hardware Trigger	Enable
Trigger Timeout (sec)	2
Aiming Duration (msec)	500
Turn Off After Good Read	Enabled/One-shot
Number of Good Read Beeps	One
Energy Saver Mode	Disable

Scanner Port Settings

Scanner Port Setting	Default Value
Baud Rate	57600

Decode Security Settings

Decode Security Setting	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 computer communicates with the network.

Communications Settings

Communications Setting	Default Value
Device Name	CV4-xxx where xxx is the serial number of the device.

802.11 Radio Settings

802.11 Radio Setting	Default Value
Radio Enabled	On
Security Choice	Microsoft Security
Wireless Security	Disable
DHCP	Enable
DHCP Client Identifier	Null
Primary DNS	Null
Secondary DNS	Null
Import Root Certificates	False
Import User Certificates	False
Radio Bands	a/b/g (2.4 and 5.0 GHz)
Allow Security Changes	Enable

Device Settings

Use device settings to configure settings on the computer.

Date and Time

Date and Time Setting	Default Value
Date and Time	Current date and time

Heater Settings

Heater Settings	Default Value
Screen Heater	Enabled
Screen Heater Turns Off at	0°C

Power Management Settings

Power Management Setting	Default Value
Auto-On	Standard

Screen Settings

Screen Setting	Default Value
Brightness	High
Screen Blanking On Motion	Disable
Screen-On Delay After Motion Stops (sec)	1.0

RFID Settings

Use RFID settings to enable the RFID service.

RFID Settings

RFID Setting	Default Value
Enable RFID Service	Off

Virtual Wedge Settings

Use virtual wedge settings to configure the virtual wedge.

Virtual Wedge Setting

Virtual Wedge Setting	Default Value
Enable Virtual Wedge	Enable
Virtual Wedge Method	Adapt to application
Barcode Scanner Grid	Null
Label Encoding (Code Page)	1252(D)-ANSI Win3.1 US
Read Command	READ REPORT = DIRECT
Date (YYYY-MM-DD)	Disabled
Time (HH_MM_SS)	Disabled
Tag Separator	SP (space)
User-Defined Tag Separator	Null
End of Message	CRLF (Return-Line Feed)
User-Defined End of Message	Null
RFID Reader Grid	Null

Common Lockdown Service Settings

Use the common lockdown service to control the number of client connections and lockable keys.

Common Lockdown Service Settings

Common Lockdown Service Setting	Default Value
Port	7243
Maximum Client Connections	10
Enable Server	Enable

Lockable Key Settings

Lockable Key Setting	Default Value
Enable Windows Key	Disable
Enable Task Manager Key	Disable
Enable Task Switcher Key	Disable
Enable Windows Security Dialog Key	Disable
Enable Closing Application Key	Disable
Enable Minimize Key	Disable
Enable New Session Key	Disable

Device Monitor Settings

Use the device health control settings to enable health data collection and set refresh periods.

Device Monitor Settings

Device Monitor Setting	Default Value
Enable Health Data Collection	On
Set Rule file Location	\\SmartSystems\ HealthRules.txt
Asset Message Send Period	0
System Device Health	90 seconds
Network Device Health	45 seconds
Printer Device Health	0 seconds

Lockable Key Settings

Lockable Key Setting	Default Value
Enable Windows Key	Disable
Enable Task ManagerKey	Disable
Enable Task Switcher Key	Disable
Enable Windows Security Dialog Key	Disable
Enable Closing Application Key	Disable
Enable Minimize Key	Disable

Lockable Key Settings (Continued)

Lockable Key Setting	Default Value
Enable New Session Key	Disable

Core Messaging Services

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

Core Messaging Services Settings

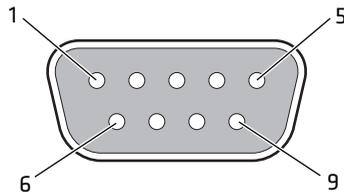
Core Messaging Services Setting	Default Value
Associated Server IP	Null
Broadcast Name	INTERMEC
Port	62241
Keep Alive Interval	30 seconds

Port Pin Assignments

Use this section to learn about the ports pin assignments on the CV41, smart dock, and cables.

COM 1 and COM 2 Ports

The COM 1 and COM 2 ports are located on the smart dock. By default, Pin 9 is configured to provide + 5 V for an external bar code scanner, or it can be configured to provide RI.

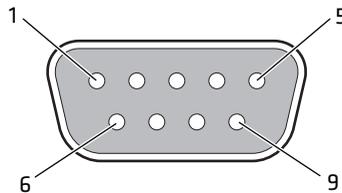


COM 1 and COM 2 Port Pin Assignments

Pin	Signal	Description
1	DCD	Data carrier detect (input)
2	RXD	Receive data (input)
3	TXD	Transmit data (output)
4	DTR	Data terminal ready (output)
5	GND	Signal/power ground
6	DSR	Data set ready (input)
7	RTS	Request to send (output)
8	CTS	Clear to send (input)
9	+5 VDC or RI	Bar code scanner power (500 mA max) or Ring indicator (input)
Shell	CGND	Chassis ground

USB Port

The USB port is located on the back of the smart dock.



USB Port

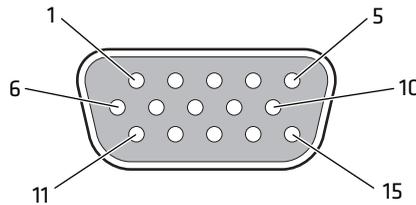
Pin	Signal	Description
1	GND	Common ground
2	USBC_D+	USB client data signal
3	USBC_D-	USN client data signal
4	USB_H1_PWR	USB host 1 (5 V output power)
5	GND	Common ground
6	GND	Common ground
7	USB_H1_D+	USB host 1 data signal

USB Port (Continued)

Pin	Signal	Description
8	USB_H1_D-	USB host 1 data signal
9	USBC_VBUS	USB client (5 V detect from attached host)

CANBUS/Audio Port

The CV41 CANBUS and audio port is located on the smart dock. The CV41 cannot support CANBUS and audio simultaneously.

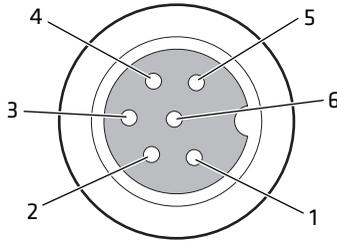


CANBUS/Audio Port

Pin	Signal	Description
1	-	CAN reserved
2	CAN_L	CAN_L bus line dominant low
3	CAN_GND	CAN ground
4	-	CAN reserved
5	GND	Optional ground
6	Audio return	Headset return
7	Audio output	Headset output
8	Mic input	Microphone input
9	Mic return	Microphone return
10	Audio return	
11	GND	Optional ground
12	CAN_SHLD	
13	CAN_H	CAN_H bus line dominant high
14	-	CAN reserved
15	CAN_V+	Optional CAN external power supply

Power Supply Connector

Power is supplied from the smart dock to the CV41 through the power connector. The power supply connector also provides a connection point for the vehicle chassis ground to be connected internally to the conductive chassis of the computer. The CV41 internal power supply can accept DC input voltages in the range of 10 to 60 VDC.

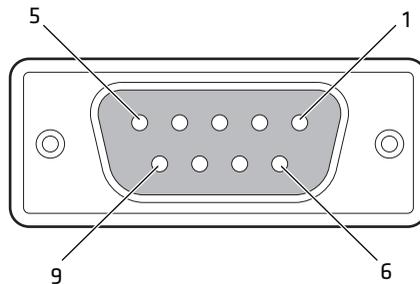
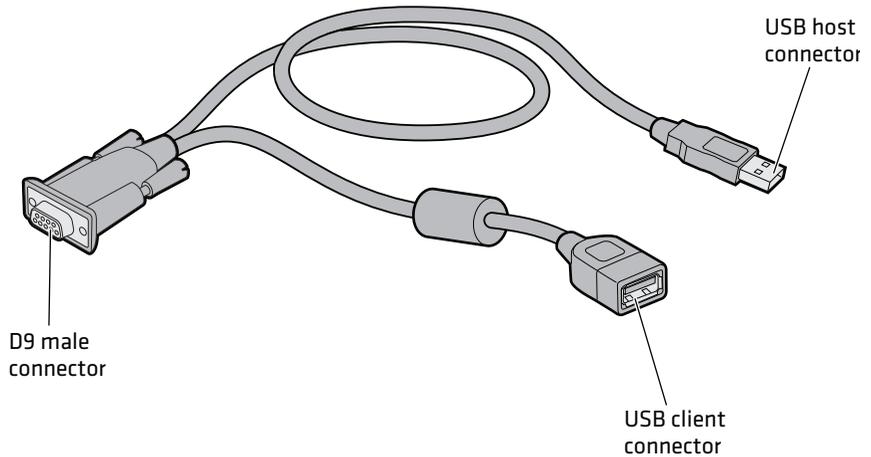


Power Supply Connector

Pin	Signal	Description
1	V In+	10-60 nominal DC input +
2	V In+	10-60 nominal DC input +
3	V In-	Input -
4	V In-	Input -
5	GND	Chassis ground
6	Ignition	+0 V to 60 V to start terminal

USB Dongle Cable

Use the USB dongle cable to connect USB devices, such as a USB flash drive to the smart dock and CV41.

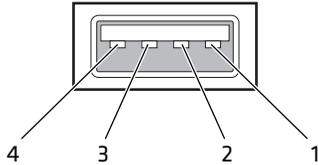


USB Dongle Cable D9 Male Connector

Pin	Signal	Description
1	GND	Common ground
2	USBC_D+	USB client data signal
3	USBC_D_	USN client data signal
4	USB_H1_PWR	USB host 5 V output power
5	GND	Common ground
6	GND	Common ground
7	USB_H1_D+	USB host 1 data signal

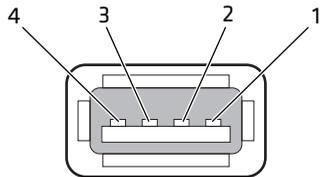
USB Dongle Cable D9 Male Connector (Continued)

Pin	Signal	Description
8	USB_H1_D-	USB host 1 data signal
9	USBC_VBUS	USB client 5 V detect from attached host



USB Dongle Cable Host Connector

Pin	Signal	Description
1	5V_USB	USB power, current limited
2	USB2N_A	USB D-
3	EUSB2PA_A	USB D+
4	DGND	USB power return
Shell	CGND	Chassis ground



USB Dongle Client Connector

Pin	Signal	Description
1	V In+	12 to 48 V nominal DC input +
2	V In+	12 to 48 V nominal DC input +
3	V In-	Input -
4	V In-	Input -

Appendix A – Specifications and Default Settings

B

Keypads and Keystrokes

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.

CV41 Alphanumeric Characters

To Enter	Keypad
a	A
b	B
c	C
d	D
e	E
f	F
g	G
h	H
i	I
j	J
k	K
l	L
m	M
n	N
o	O
p	P
q	Q
r	R
s	S

CV41 Alphanumeric Characters (Continued)

To Enter	Keypad
t	
u	
v	
w	
x	
y	
z	

CV41 Function Keys

To Enter	Keypad
F1	
F2	
F3	
F4	
F5	
F6	
F7	
F8	
F9	
F10	
F11	
F12	
F13	
F14	
F15	

CV41 Function Keys (Continued)

To Enter	Keypad
F16	 
F17	 
F18	 
F19	 
F20	 
F21	Alt 
F22	Alt 
F23	Alt 
F24	Alt 

CV41 Special Keys

To Enter	Keypad
* (asterik)	 
@ (at symbol)	 
# (pound)	 
& (ampersand)	 
% (percentage)	 
: (colon)	 
; (semicolon)	 
, (comma)	 
\$ (dollar)	 
! (exclamation)	 
? (question mark)	 
- (hyphen or minus)	 
. (period)	 or  

CV41 Special Keys (Continued)

To Enter	Keypad
+ (plus)	 
' (apostrophe)	 
= (equals)	 
_ (underscore)	 
^ (caret)	 
> (greater than)	 
< (less than)	 
((left parenthesis)	 
) (right parenthesis)	 
[(left square bracket)	 
] (right square bracket)	 
{ (left curly brace)	 
} (right curly brace)	 
~ (tilde)	 
\ (backslash)	 
/ (forward slash)	 
“ (quotes)	 
Insert	 
Delete	 
(broken vertical bar)	 
` (grave)	 
Forward Tab	
Backspace	
Up Arrow	
Down Arrow	

CV41 Special Keys (Continued)

To Enter	Keypad
Left Arrow	
Right Arrow	
CapsLock	 
Enter	
ok	Alt 
Shift	
Space	
Start (Windows)	 or  
Esc	
Alt	Alt
Ctrl	Ctrl

CV41 Intermecc Terminal Emulator Keys

To Enter	Keypad
Attention	Alt 
Autolog	Alt 
Clear	Alt 
Duplicate	Alt 
EEOF	Alt 
Erase	Alt 
Find	Alt 
Field +	 
Field -	Alt 
Fieldmark	Alt 
Help	 

CV41 Intermec Terminal Emulator Keys (Continued)

To Enter	Keypad
Hex	Alt I
Home	Alt H
Keypad	Alt K
Menu	Alt M
Mode	Alt O
New Line	Alt N
Next Screen	⏪ 9
PA1	Alt T
PA2	Alt Y
PA3	Alt U
Page	Alt ⬆
Print	Alt P
Previous Screen	⏩ 7
Remove	Alt R
Reset	Alt Esc
Return	Alt Enter
Roll Down	Alt 5
Roll Up	Alt 8
Select	Alt Z
System Request	Alt Q
View Down	⏪ ⏴
View Up	⏩ ⏴

Appendix B – Keypads and Keystrokes

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.

Radio Configuration Bar Codes

Use an external scanner to read the following ScanNGo bar codes to enable the 802.11 radio and set the defaults for either Wireless security or Microsoft 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.



Note: If you are using Microsoft security, you can only use the 1D configuration bar codes.

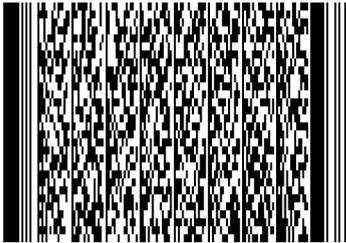
The following ScanNGo bar codes were created using SmartSystems Foundation. For more information on SmartSystems Foundation, see [“Manage the Computer Using SmartSystems Foundation” on page 36](#).

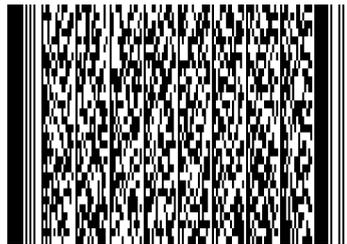
2D Configuration Bar Codes

You can configure the computer with a 2D imager.

- 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

When You Want To:	Scan This Bar Code
<ul style="list-style-type: none">• Set all communication settings to defaults (Wi-Fi, WWAN if applicable)• Enable Wi-Fi - set Wireless security to defaults	



1D Configuration Bar Codes

You can configure the computer with a 1D imager.

- 1** Scan the **START HERE** bar code from the table and wait for the program to start.
- 2** Scan the **1/9** bar code.
- 3** Scan the rest of the bar codes in any order.
- 4** Follow any instructions on the device.

1D Imager Radio Configuration Bar Codes

When You Want To:	Scan This Bar Code
--------------------------	---------------------------

- Set all communication settings to defaults (Wi-Fi, WWAN if applicable)
- Enable Wi-Fi - set Wireless security to defaults



START HERE



1/9



2/9



3/9



4/9



5/9

1D Imager Radio Configuration Bar Codes (Continued)

When You Want To:	Scan This Bar Code
-------------------	--------------------

- Set all communication settings to defaults (Wi-Fi, WWAN if applicable)
- Enable Wi-Fi - set Wireless security to defaults



6/9



7/9



8/9



9/9

1D Imager Radio Configuration Bar Codes (Continued)

When You Want To:	Scan This Bar Code
--------------------------	---------------------------

- Set all communication settings to defaults (Wi-Fi, WWAN if applicable)
- Enable Wi-Fi - set Microsoft security to defaults



START HERE



1/9



2/9



3/9



4/9



5/9

1D Imager Radio Configuration Bar Codes (Continued)

When You Want To:	Scan This Bar Code
-------------------	--------------------

- Set all communication settings to defaults (Wi-Fi, WWAN if applicable)
- Enable Wi-Fi - set Microsoft security defaults



6/9



7/9



8/9



9/9

Appendix C – ScanNGo Wi-Fi Configuration Bar Codes



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CV41 Vehicle Mount Computer (Windows Embedded Standard) User Manual



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