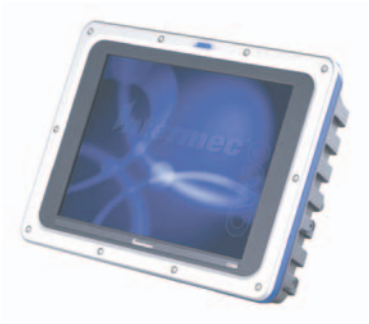
Intermec

User's Guide



# CV60 Data Collection PC

Intermec Technologies Corporation

Corporate Headquarters
6001 36th Ave. W.
Everett, WA 98203
U.S.A.

Technical Communications Department
550 Second Street SE
Cedar Rapids, IA 52401
U.S.A.

www.intermec.com

# Contents

# Before You Begin

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

## Safety Summary

Your safety is extremely important. Read and follow all warnings and 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 warnings and cautions.

### Do not repair or adjust alone

Do not repair or adjust energized equipment alone under any circumstances. Someone capable of providing first aid must always be present for your safety.

### First aid

Always obtain first aid or medical attention immediately after an injury. Never neglect an injury, no matter how slight it seems.

### Resuscitation

Begin resuscitation immediately if someone is injured and stops breathing. Any delay could result in death. To work on or near high voltage, you should be familiar with approved industrial first aid methods.

### Energized equipment

Never work on energized equipment unless authorized by a responsible authority. Energized electrical equipment is dangerous. Electrical shock from energized equipment can cause death. If you must perform authorized emergency work on energized equipment, be sure that you comply strictly with approved safety regulations.

## Safety Icons

This section explains how to identify and understand dangers, warnings, cautions, and notes that are in this manual. You may also see icons that tell you when to follow ESD procedures and when to take special precautions for handling optical parts.


A warning alerts you of an operating procedure, practice, condition, or statement that must be strictly observed to avoid death or serious injury to the persons working on the equipment.

Avertissement: Un avertissement vous avertit d'une procédure de fonctionnement, d'une méthode, d'un état ou d'un rapport qui doit être strictement respecté pour éviter l'occurrence de mort ou de blessures graves aux personnes manupulant l'équipement.


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.

Attention: Une précaution vous avertit d'une procédure de fonctionnement, d'une méthode, d'un état ou d'un rapport qui doit être strictement respecté pour empêcher l'endommagement ou la destruction de l'équipement, ou l'altération ou la perte de données.

**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 web site at http://www.intermec.com and click **Service & Support**. The Intermec Global Sales & Service page appears. From the **Service & Support** menu, move your pointer over **Support**, and then click **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 web site at http://www.intermec.com to download our current manuals in PDF format. To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

Visit the Intermec technical knowledge base (Knowledge Central) at http://intermec.custhelp.com to review technical information or to request technical support for your Intermec product.

## Telephone Support

These services are available from Intermec Technologies Corporation.

| Service | Description | In the U.S.A. and Canada call 1-800-755-5505 and choose this option |
|---|---|---|
| Factory Repair and On-site Repair | Request a return authorization number for authorized service center repair, or request an on-site repair technician. | 1 |
| Technical Support | Get technical support on your Intermec product. | 2 |
| Service Contract Status | Inquire about an existing contract, renew a contract, or ask invoicing questions. | 3 |
| Schedule Site Surveys or Installations | Schedule a site survey, or request a product or system installation. | 4 |
| Ordering Products | Talk to sales administration, place an order, or check the status of your order. | 5 |

Outside the U.S.A. and Canada, contact your local Intermec representative. To search for your local representative, from the Intermec web site, click **Contact**.

# 1 Introduction

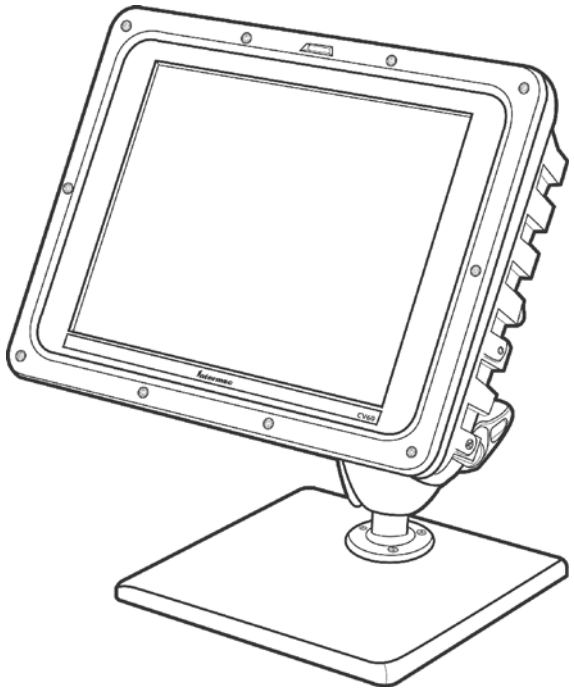
This chapter outlines the features and specifications of the CV60 Data Collection PC.

# Introducing the CV60 Data Collection PC

The CV60 Data Collection PC is a rugged PC computing device consisting of a 12.1-inch color, SVGA LCD display with touch screen for data input and menu navigation.

Communication options include connectivity through two RS-232 serial ports, USB (host), and Ethernet Wireless network connectivity is enabled through multiple LAN radio options.

Peripherals supported include PS/2 keyboard, USB mouse, external headset, wired RS-232 scanners, wireless scanners via proprietary wireless base station, wireless printers, and USB data recovery drives.



*CV60 Data Collection PC*

## Features

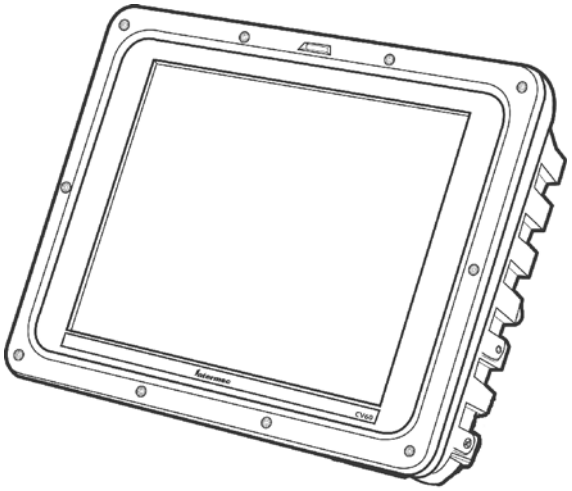
- Wi-Fi certified for interoperability with other 802.11g wireless LAN devices.
- Operating Systems: Windows CE. NET (4.2), Windows XP Embedded, Windows XP Professional Edition
- Intel® Pentium® III 800 MHz embedded
- 128MB base SDRAM memory 256/384 MB optional upgrade
- Display: 12.1" TFT 800*600 SVGA
- Resistive touch panel
- Rotating or solid-state IDE hard drive
- Solid-State PCMCIA Type II flash storage card
- Wireless Printing for cordless accessories and printing
- Integrated antennas
- Recovery CD provided by Intermec
- External USB boot support
- External headset jack
- Speaker
- Locking I/O connectors
- Heater option for low temperature operation

## Unpacking the CV60 Data Collection PC

When you remove the data collection PC from its box, save the box and shipping material in case you need to ship or store the data collection PC. Check the contents of the box against the invoice for completeness and contact your local Intermec service representative if there is a problem.

The CV60 shipping box contains:

- CV60 Data Collection PC (P/N 245-232-101)
- Documentation (P/N 962-054-072)



The CV60 display allows user input and menu navigation via resistive touchscreen. The touch panel is field replaceable.

Refer to the *CV60 Touch Panel Replacement Instructions* (P/N 962-054-078) for information on replacing the touch panel.

## Accessories for the CV60 Data Collection PC

You can use these accessories (sold and ordered separately) with the CV60 data collection PC:

- **AC power supply** Use the AC power supply (P/N 851-070-001) to power the data collection PC when it is in the desktop mounting stand. The AC power supply is only for use in clean, dry, office-like environments with temperatures from 10° C to 40° C (50° F to 104° F). The power supply comes with a North American power cord. If you are using the data collection PC outside North America, you need to purchase the appropriate power cord for your local power source.
- **DC power supply** There are two DC power supply kits that you can use to power the data collection PC when it is mounted to a vehicle:
- **Heater option kit** (15-96 VDC) (P/N 203-665-002) or (12-72VDC) (P/N 203-669-002).
- **Desktop mounting stand** The desktop mounting stand (P/N 203-664-001) attaches to your data collection PC to provide a stable desktop platform. The desktop mounting stand is useful when you have the data collection PC connected to your PC to develop applications.
- **Keyboard** The alphanumeric keyboard is backlit for view in low lighting conditions (P/N 850-537-002) and supports a subset of the available keys on a PC-AT keyboard. The CV60 PC ships with a keyboard overlay to match the application or language you ordered: English, Western European, or one of the three TE 2000 terminal emulation options. You must use the keyboard accessory with the Intermec TE 2000 terminal emulation applications.
- **Scanner cables** Use the scanner cables to connect a scanning device such as the 1550 and 1551 and 1553 laser scanners.
- **Keyboard tray mount** The keyboard tray (P/N G9A-KB000-01) is an orderable option which allows mounting the CV60 keyboard directly to the device.
- **Remote keyboard mounting kit** (P/N 203-564-001)

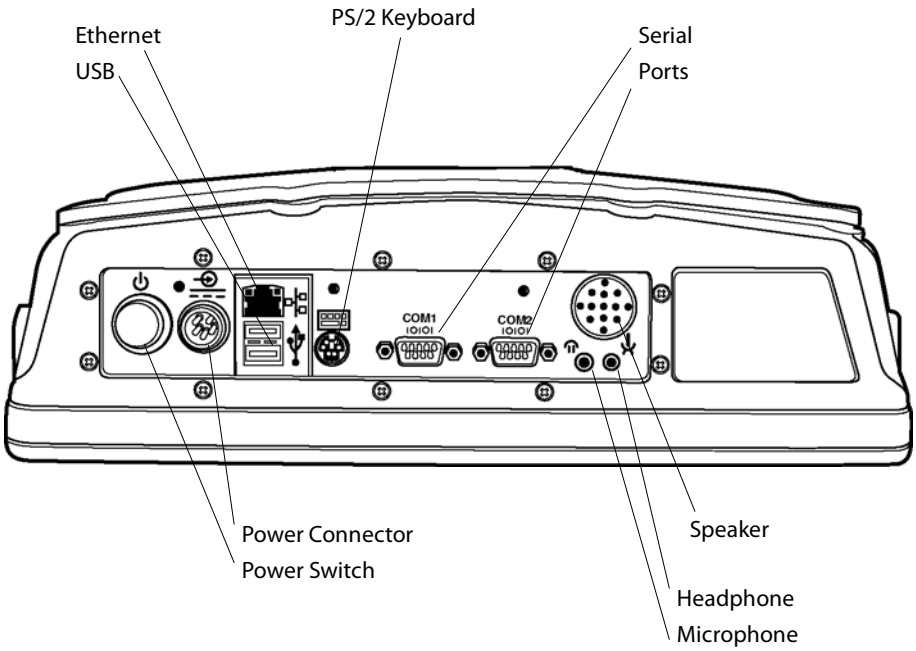
## Locating the Data Collection PC Connectors

You connect power, a keyboard, scanner, and RS-232 serial devices to the data collection PC ports that are located on the bottom panel of the CV60.

### Connectors

The On/Off switch and all connectors are located on the bottom of the CV60 PC.

These include a power connector, two standard serial I/O connectors (COM1 and COM2), a USB keyboard (USB) connector, and a network (NET) connector.




### Speaker

A speaker is provided to allow standard PC sounds, as well as business audio playback and record.

### Microphone

This 2.5 mm connector accepts an external microphone.

### USB Serial Port

The USB serial port accommodates an external USB standard mouse and keyboard. Other USB devices which do not have locking connectors can be used, provided the CV60 is used only as a fixed mount terminal.

### DC Power Input

This is a 5-pin circular power connector with a locking collar.

A regulated +12 volt power supply/converter is required.

### PS/2 Keyboard

This is a standard keyboard connector for use with PS/2-type keyboards.

### On/Off Switch

This switch is located on the bottom of the device next to the DC power input connector.

**Note**: ALWAYS perform a proper system (or Windows) shut-down before shutting the computer OFF.

### COM1, COM2 (Serial Ports)

Each port has its own address and a 9-pin male connector to attach RS-232 serial devices. COM ports can provide 5 volts dc to support a de-coding type tethered scanner.

**Note:** Picolink uses the COM2 serial port, so you have COM1 left for scanner or serial connection use. CV60 computers with the Picolink radio option installed will have a cover plate over the COM2 serial port.

### Headphone

This 3.5 mm connector accepts an external headphone.

### Network Connection (NET)

The CV60 Data Collection PC has Ethernet (10BASE-T, RJ-45 jack) on board.

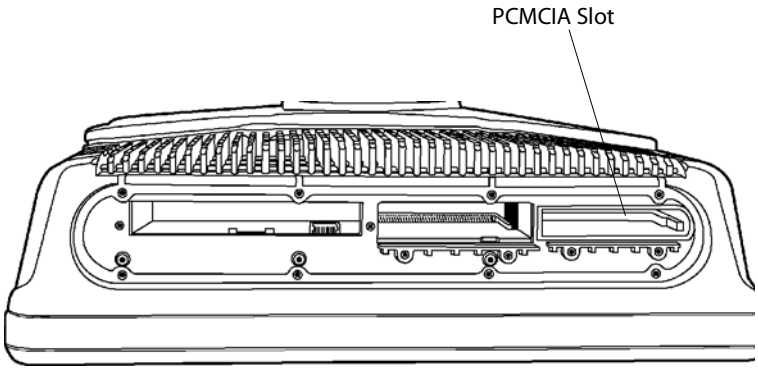
Caution

**Caution: The Lithium-ion (Li-Ion) backup battery is not user-replaceable. Refer to the *"Before You Begin"* section of this user guide for information on where to send your CV60 Data Collection PC for service and warranty repairs.**

## Card/Drive Slot

Remove the radome cover to access the PCMCIA card/drive slot. When reinstalling the cover, carefully route the antenna cables near the slot to avoid damage.

### PC Card Slot (PCMCIA)




*CV60 Top View (Radome Cover Removed)*

This user-accessible slot is for PC Card devices. The 68-pin slot can accommodate a Type I or Type II device.

**Note:** Use spinning media for fixed-mount applications only.

Warning

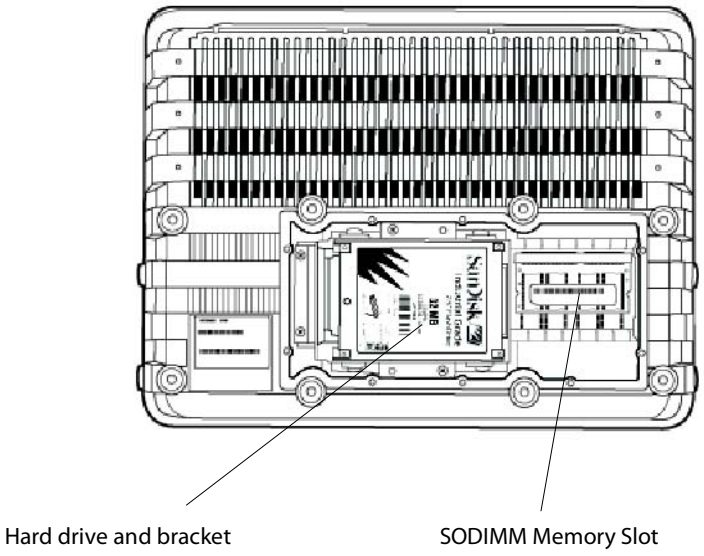
**Warning: Both edges of PC cards must be in the correct grooves in the drive to avoid damage to the card or to the computer. Do NOT force PC cards into their respective slots.**

## Hard Drive/Memory Location

Remove the rear cover to access the hard drive/memory slot. When reinstalling the cover, take care not to drop screws or other metallic objects into the compartment.

### Hard Drive Location

This user-accessible compartment is for the hard drive, mounting bracket and SODIMM memory slot.




## SODIMM Memory Slot

The SODIMM slot (Single Outline Dual Inline Memory Module) allows upgrading the base memory from 128MB to 384MB with an Intermec approved SDRAM card.

## AC-DC Power Supply

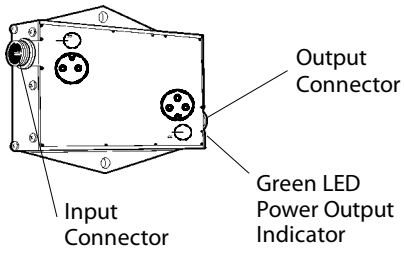
**Note:** The AC power supply shown below does NOT have an On/Off switch. To disable power to a fixed-mount CV60 PC, use the On/Off switch on the computer itself or unplug the AC power cable from the wall outlet.

*AC Power Supply with U.S Power Cord*

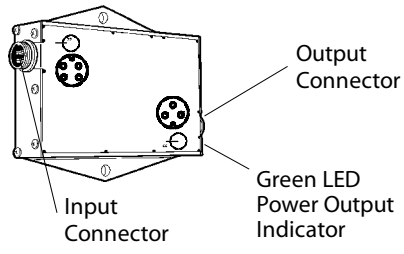
## DC-DC Power Supplies

Warning

**Warning: Make sure you have the correct power converter for your application. See Specifications for input voltage ranges.**




*P/N 851-041-001*




*P/N 851-040-001*

## Maintenance

Your terminal requires very little maintenance. Clean the terminal and the display periodically, and perform the daily checks listed below. If a failure message appears on the display, the computer may need to be sent to an authorized service facility for repair or adjustment.

## Cleaning

A recommended cleaner for the exterior of the CV60 Data Collection PC display is MICRO-CLEAN II Cleaner, made by Foresight International, Inc., 4887 F Street, Omaha, Nebraska 68127-0205 (phone: 1-800-637-1344).


**Caution: Do not pour any cleaner directly on the display.**


**Caution: Do NOT use a water-based cleaner on the display.**


**Caution: Use ethanol-based cleaners ONLY on the display.**

**Note**: Keep the display area clean and free of dust, dirt, grime, or smudges. Failure to do so can result in unreliable touch entries. Use a soft, lint-free cloth dampened with ethanol alcohol to remove dirt or finger smudges from the display area.

## Daily Checks

Each work day you should check to make sure that:

- All mounting knobs are tight.
- The power cable is secure.
- The scanner cable is secure.
- The keyboard cable is secure.

# Specifications

### CV60 Data Collection PC

Physical/Environmental

- Weight: 5.0 kg (11.02 lbs) for base unit

### Size

- Height: 26 cm (9.44 in)
- Width: 34 cm (13.38 in)
- Depth: 9.5 cm (3.74 in)

### Environmental

- Recommended Operating Temperature Range (Solid State Drive): –20° C to 50° C (–4° to 122° F)
- Recommended Operating Temperature Range (Rotating Drive): 0° C to 50° C (32° to 122° F)
- Recommended Operating Temperature Range (Heater Option): –30° C to 50° C (–22° to 122° F)
- Recommended Storage Temperature Range: -30° C to 70° C (–22° to 158° F)

### Processor/Memory/Storage

- Intel P-III 800Mhz embedded processor
- 128MB base memory with upgrade to 384MB SDRAM
- 512KB FLASH.
- Removable IDE rotating media or solid state drive or PC Card solid state memory
- Resistive display/touch Screen
- 12.1 Inch, Color TFT 800 X 600 SVGA

### System Software

- Windows XP, Embedded
- Windows XP Professional
- Windows CE.NET

### Power System

- 6-36 VDC DC/DC converter for 12 V vehicle systems
- 15-96 VDC DC/DC converter for 24-72 V vehicle systems
- AC/DC adapter that supports international power requirements
- Optional Uninterruptible Power Supply

### Wired Connectivity

- Two RS-232 ports, supporting external tethered scanners
- 2 USB host ports
- 10BaseT/100BaseT Ethernet

### Wireless Connectivity

- 802.11g
- Embedded wireless scanning option
- Wireless Printing radio module

### Peripherals/Accessories

- External alpha/numeric keyboard, PS/2
- Tethered barcode scanners
- Mounting brackets to meet a wide range of vehicles.

### Intermec Scanners:

Sabre (1551, 1552, 1553)

Vista (1400, 1800)

### External Keyboards

PS/2 interface with locking connector.

### External mouse

Off-the-shelf USB mouse.

# 2 Operation

This chapter tells you how to prepare the computer for first time operation and includes instructions for attaching or installing certain options or peripheral equipment. Once the computer has successfully booted to the operating system, you may need to load an application program or data.

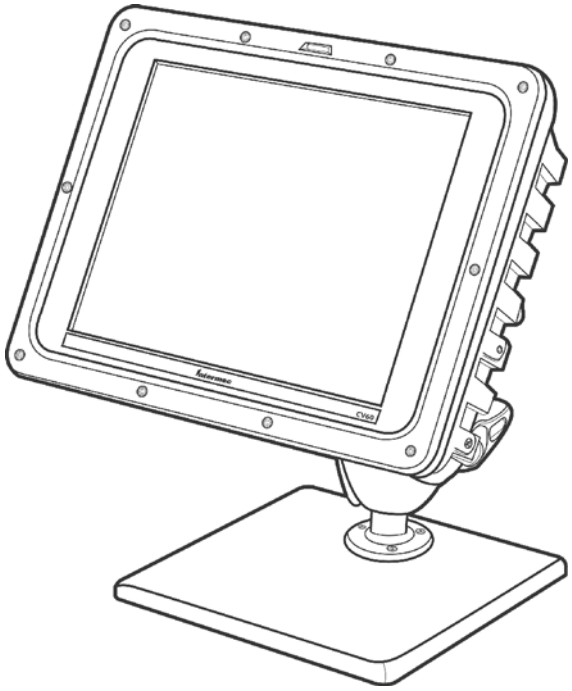
# Startup Requirements

Before powering up the computer for the first time, be sure it is securely mounted, that all cable connections are secure, and that the DC power input cable is firmly attached.

The computer begins its boot (start up) sequence when power is supplied to the DC power input connector and the On/Off switch is ON (press the switch briefly).

In the case of an AC-powered (fixed-mount) computer, the power supply must be connected to the computer and plugged into a wall outlet.

Vehicle mounts require that the DC-DC power converter be properly connected to the vehicle batteries and to the computer.



*CV60 Data Collection PC*

## Startup Sequence

Your computer should start up after all connections have been made, power has been applied, and the On/Off switch has been pressed.

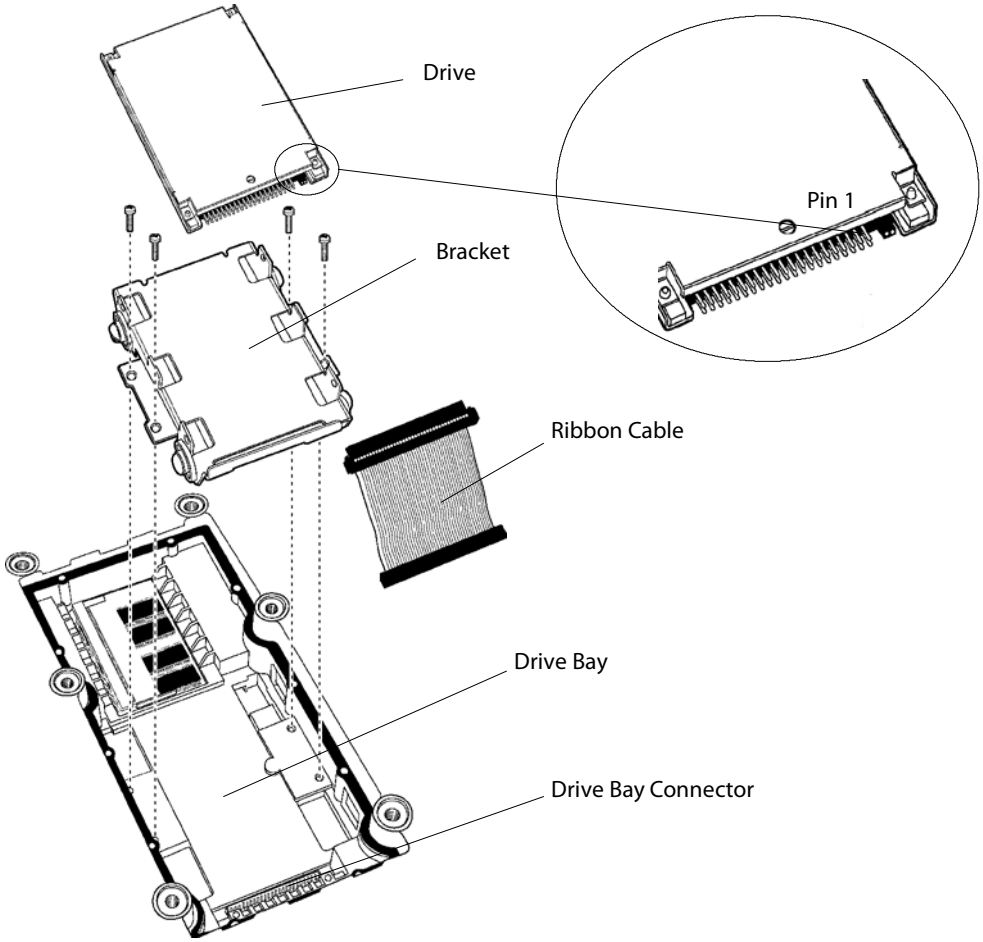
During startup, the computer (1) performs a power-on self-test, (2) runs the hardware initialization program, and (3) boots the operating system. Once the computer "boots" (starts up) successfully, you may load additional application software if this has not already been done for you. If you install a radio or other optional device, you may have to install driver software or make new system setups for the device(s) to work properly.

## Options

The CV60 PC can accommodate a 2.5 inch hard drive (or a solid state drive) plus one PC card. The instructions and illustrations that follow will help you perform these installations if they have not already been done.

## Hard Drive Installation

Attach the media drive to the bracket before use. Refer to the accompanying illustrations and the instructions to attach the bracket to your drive.




**1** Insert the ribbon cable through the bracket.

**2** Connect the ribbon cable to the drive, noting pin 1 position.

**3** Align the connector-end of the drive and the bracket.

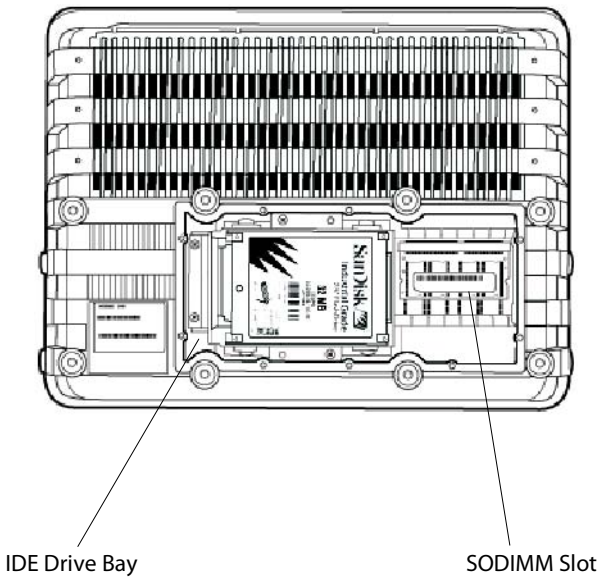
**4** Use four screws to secure the drive to the bracket.

**5** Connect the ribbon cable to the drive bay connector.

**6** Use an additional four screws to secure the bracket to the drive bay.

### Solid State Drive Installation

A bracket is also required to install a solid state drive. Installation is the same as on the previous page. If your computer is set up so that a solid state drive will be the boot disk, then it requires a jumper. If your computer will boot from some other source, the solid state media drive must be jumpered.




*CV60 Rear View (Mounting Bracket Removed*

1. If the solid state media is not the boot drive, install the jumper as shown.
2. Place the solid state media drive in the bracket as shown.
3. Align the connector-end of the drive and the bracket.
4. Use four screws to secure the drive.
5. Connect the ribbon cable to the drive bay connector.
6. Use an additional four screws to secure the bracket to the drive bay.

## SODIMM Slot

Your CV60 contains 128MB of base memory. You can upgrade the memory to 384MB maximum via the SODIMM (Single Outline Dual Inline Memory Module) slot depending on the operating system.

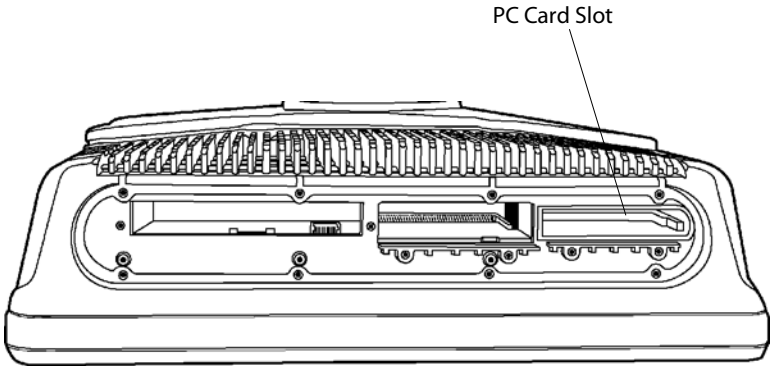
Consult your Intermec Sales Representative about the memory options available for your device.

**Note:** Use of unapproved SODIMM modules may void your warranty.

# Card/Drive Slot

## PC Card Installation

The PC Card drive ("slot") is located on the top of the computer. Use a Phillips screwdriver to remove the radome cover to access the PC card slot.




To install a PC Card, follow these steps:

1. Remove the radome cover.
2. Hold the PC Card with the connector facing into the computer.


**Caution: Do NOT force a PC card into its slot.**

3. Slide the PC Card into the slot.
4. If you encounter resistance, you may need to flip the card over and repeat Step 3. The card is fully seated when the card ejector is extended.
5. Use Program Manager to check the Card View icon. It will identify which slot contains a PC Card. PC Cards are identified as drive D:\ or E:\.
6. Reinstall the radome cover.

**Note:** Use spinning-media for fixed-mount applications only.

**Note**: The Windows CE OS option uses a PC card. It does not install in the IDE Drive Bay.


**Warning: Both edges of PC cards must be in the correct grooves in the drive to avoid damage to the card or to the computer. Do NOT force PC cards or the IDE drive into their respective slots.**

# Radio Installation Options

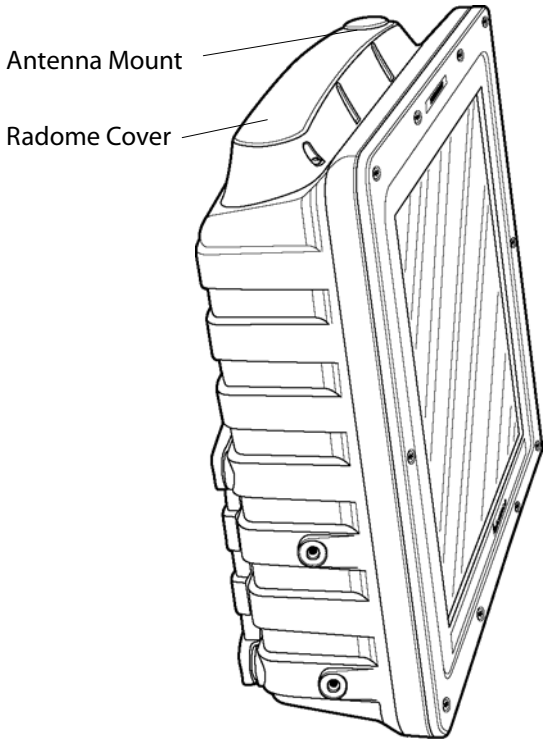
Your CV60 Data Collection PC is configured for radio options at the factory.

## 802.11 Radio

The 802.11 radio is a factory-installed option. The operating system automatically installs and configures the drivers for use.

## Wireless Printing Radio Module

The Wireless Printing radio module is factory-installed. The operating system automatically installs and configures the drivers for use.



## PicoLink™ Radio

Intermec's PicoLink radio uses an unlicensed 2.4GHz radio frequency (RF) hopping design that has global regulatory acceptance and interference immunity to other narrow band RF sources.

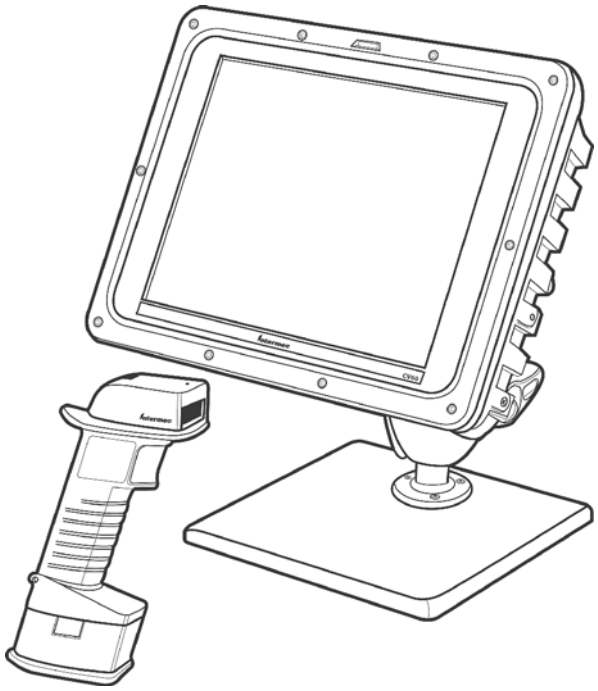
The Sabre™ 1552 wireless scanner connects by "associating" to the CV60 PC via wireless link for identification.

## Setting up the Cordless Scanner

Fully charge the cordless scanner battery before using the scanner.

Refer to the user documentation included with your cordless scanner for more information.

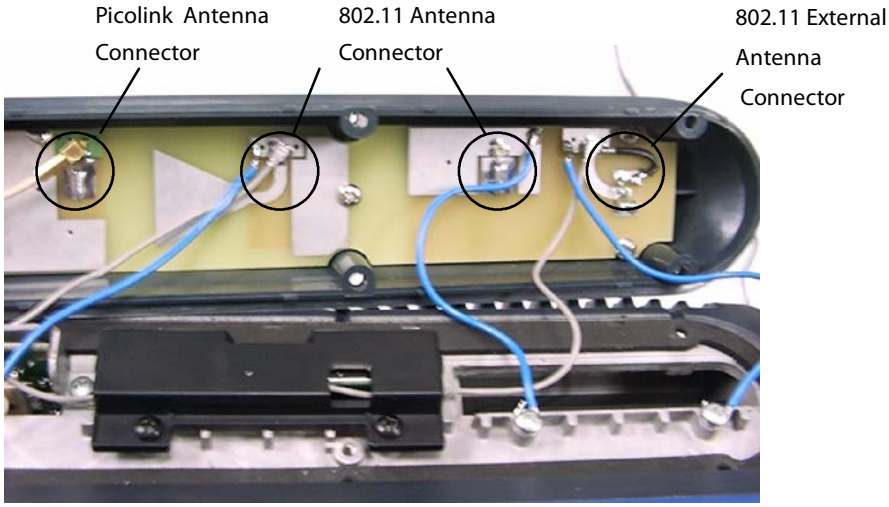
Scan the barcode located on the side of the CV60 to associate the scanner with its data collection device.



*CV60 with Sabre 1552 Cordless Scanner*

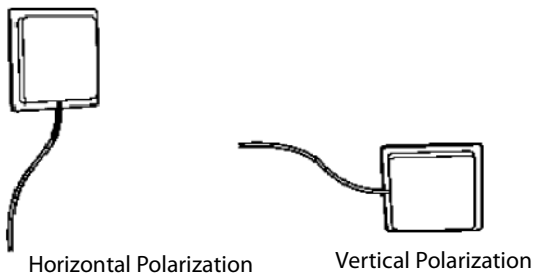
## External Antenna Connection

The external antenna mounts on the "radome assembly" on the top of the computer. Refer to the illustration below for connection information.




## Patch Antenna

The 2.4 GHz "patch" antenna can be mounted on a wall using either screws or small patches of adhesive-backed hook and loop fastener material. Since system performance and antenna polarization are site-dependent, a permanent mounting location and orientation may require some experimentation. In most fixed installations the antenna should be mounted initially in a vertically polarized position, with the cable from the antenna parallel to the floor/ceiling.

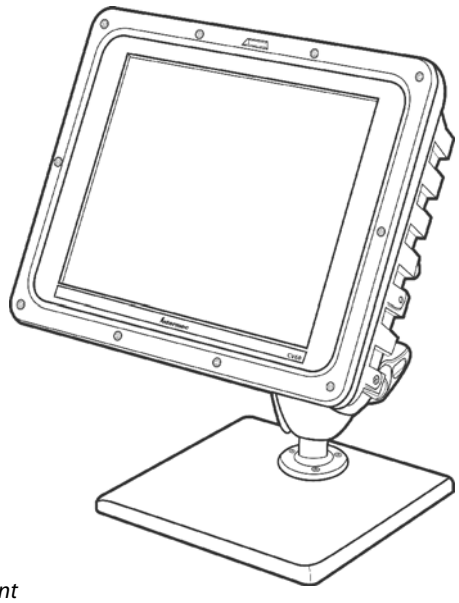



In mobile installations, best performance will be achieved by mounting the antenna flat, on top of the operator safety cage. Use at least two screws to hold the antenna in place.

## Desktop Mounting Options

This computer can be used as a stationary computer on a desktop or other work surface. An optional weighted baseplate and adjustable twin-ball pedestal are available, as shown below.

An AC power supply is required to power the computer for desktop use.



*Desktop Mount*

## Removing PC Cards

The CV60 PC allows the use of one PCMCIA Type II PC Card. Instructions for installing PC cards are provided earlier in this chapter.

To remove a PC Card, follow these steps:

1. Remove the radome cover.
2. Press inward on the ejector to release the PC Card.
3. Grasp the edge of the card to remove it.
4. Reinstall the radome cover that you removed in Step 1.

## Start-Up

All options and accessories must be connected or installed, and the power supply connected to the computer. It will start up ("boot") to a factory-configured operating system when you move the On/Off switch to the ON position. If the computer does not, it may be necessary to install an operating system or application software.

Factory-configured operating systems currently available:

- Windows XP Professional
- Windows XP embedded
- Windows CE.NET

## Restart (or, "Reboot")

**Note:** Make sure that a keyboard is attached to the CV60 PC *BEFORE* attempting to perform a warm restart.

If the system locks up during normal operations, you can reset it by performing either a "warm" or a "cold" restart. Use the warm restart to clear the system memory to run another program but not perform a self-test. When a warm restart does not restore operation, perform a cold restart.

### Warm Restart

If your operating system is Windows CE, exit the current application, then do the following to perform a warm restart:

1. Press Ctrl+Alt+Del on the keyboard to restart
2. Load, or reload, the desired software application.
3. Resume normal operation.
4. If your operating system is Windows XP, select **Start > Shut Down** from the Windows desktop, then select **Restart** to perform a restart or tap **Restart** on the display.

### Cold Restart

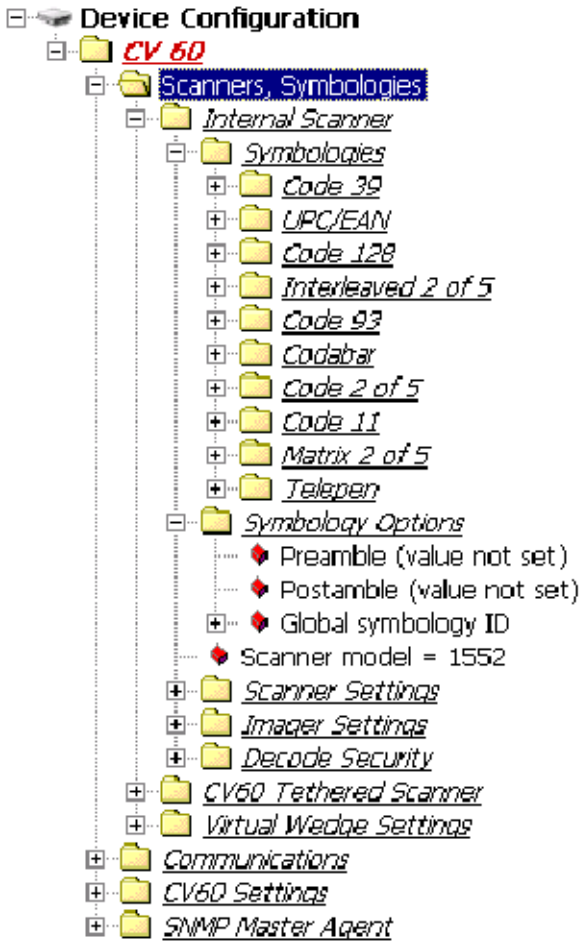
Perform a proper system shutdown, then toggle the On/Off switch on the bottom of the computer to the Off position. Wait one second, then toggle the switch back to the On position. If the On/Off switch is inaccessible, then do one of the following: For fixed-mount units, unplug the AC power supply from the wall outlet for a few seconds. Be sure to plug it back in.

For vehicle-mounted units, interrupt power to the DC/DC power converter for a few seconds.

# Setting up for Data Collection

## Device Configuration

Scanner settings for the CV60 Data Collection PC can be configured via the ICCU (Intermec Common Configuration Utility) control panel applet. From the CV60 Data Collection PC, tap **Start > Settings > Control Panel > ICCU**.




The ICCU utility creates the schema and map files used for the Device Configuration tree.

For more information, see the *Intermec SDK User's Manual* and *CV60 XP SDK User's Manual.*

The SDK is part of the Intermec Developer's Library (IDL) and is available on CD (P/N 235-114-001) or as a download from the Intermec web site at www.intermec.com.

# 3 PhoenixBIOS Setup Utility

A PS/2-compatible keyboard is required to configure the PhoenixBIOS Setup Utility (PSU). Turn off the CV60 Data Collection PC before attaching the keyboard, if one is not attached already.

Reboot the CV60 PC. Be ready to press the [F2] keys when the following prompt appears on the bottom, left side of the Intermec screen:

```
Press F2 for System Utilities
```

When you see this prompt, you have approximately eight seconds to press the [F2] key to enter the PSU, otherwise the computer proceeds to boot up.

**Note**: Any changes made to the PSU are not effective until they are saved and the CV60 PC is rebooted. Select **Exit** > **Exit Saving Changes** to save the changes.

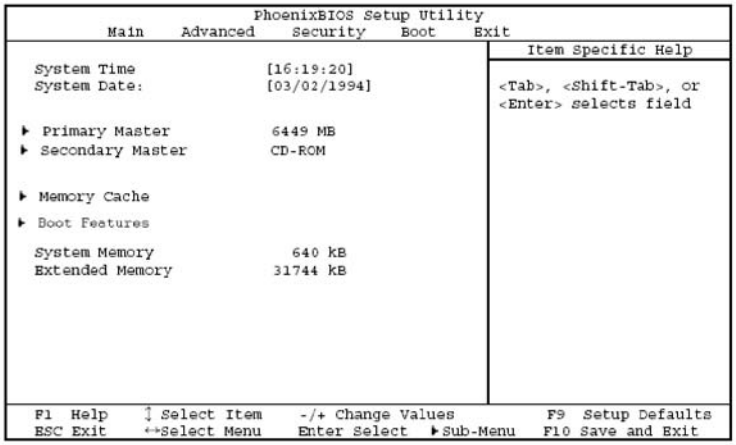
Press **<Esc>** to exit any window without changes.

# General Information

This page contains the same information as given in the General Help, available when you press [F1].

Setup changes system behavior by modifying the BIOS configuration. Selecting incorrect values may cause system boot failure, if so, then press [F9] to load setup default values to recover the system.

- Press the up or down arrow keys < ↑↓ > to select fields in the current menu.
- Press the <Page Up> or <Page Down> keys to move to the previous or next page of scrollable menus.
- Press the <Home> or <End> keys to move to the top or bottom item of the current menu.
- Within a field, press [F5} or < – > (dash) to decrease the value, or press [F6} or < + > (plus symbol) to increase the value.
- Press the left or right arrow keys < ← / → > to move between menus.
- Press <Enter> to display more options for items marked with ▶.
- Press [F9] to load factory-installed Setup Default values.
- Press [F10] to save the current settings and exit the PSU.
- Press either <Esc> or <Alt> [X] to exit the Setup or to return to the previous menu.
- Press [F1] or <Alt> [H] to display General Help information. Press [F1] or <Enter> to close the General Help screen.



# Main

Use this menu to adjust the PC's date and time, primary and secondary masters, set the state of the memory cache, select boot features, and view the system memory and extended memory values. Press the up or down arrow keys < ↑↓ > to move the cursor between fields. Press the left or right arrow keys < ← / → > to move the cursor to another menu.

## System Time

System Time is of the military hour, minute, and *second format.

Press <Tab> or <Enter> to move the cursor to the right, <Shift><Tab> to move the cursor to the left. Enter the correct number, then move the cursor to the next field. The system does not recognize characters other than numbers, and only recognizes the following values:

- Hour: 0–23
- Minute: 0–59
- Second: 0–59

**Note:** If you have entered an incorrect number, move the cursor off the field, then back on, to enter the correct number,

## System Date

System Date is of the month, day, and year format.

Press <Tab> or <Enter> to move the cursor to the right, <Shift><Tab> to move the cursor to the left. Enter the correct number, then move the cursor to the next field. The system does not recognize characters other than numbers, and only recognizes the following values:

- Month: 1–12
- Day: 1–31
- Year: 1981–2099 *(defaults to 1981 if entry was not valid)*

**Note:** If you have entered an incorrect number, move the cursor off the field, then back on, to enter the correct number,

## Primary Master

Press **[Enter]** to access the Primary Master menu. Press **[Esc]** to return to the Main menu.

At the **Type** field, press the plus (+) or minus (-) key to change the value to one of the following. The value selected dictates what configurable information is presented. *Default is None.*

### Auto

Select this to automatically set the hard-disk drive installed. Press the up or down arrow keys < ↑↓ > to move the cursor to the following field:

- **32 Bit I/O**: Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*

### None

Select this if there is no hard-disk drive.

### CD-ROM

This indicates that a CD-ROM drive is the drive installed. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*
- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*
- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.
- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

### IDE Removable

This indicates the removable disk drive is installed in the IDE sector. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*
- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*

- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.
- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

### ATAPI Removable

This indicates the removable disk drive is installed in the ATAPI sector. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*
- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*
- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.
- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

### Other ATAPI

This indicates the disk drive is installed in an ATAPI sector other than the removable sector. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*
- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*
- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.
- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

### User

Enter the parameters of the hard-disk drive installed at this connection. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Cylinders**: Enter the number of cylinders involved in this capacity, range is 0 through 65535. *Default is 0.*
- **Heads**: Enter the number of heads involved in this capacity, range is 1 through 16. *Default is 1.*
- **Sectors**: Enter the number of sectors involved in this capacity, range is 0 through 63. *Default is 0.*
- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*
- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*
- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.
- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

## Secondary Master

Press **[Enter]** to access the Secondary Master menu. Press **[Esc]** to return to the Main menu.

At the **Type** field, press the plus (+) or minus (-) key to change the value to one of the following. The value selected dictates what configurable information is presented. *Default is SanDisk SDP3B-85.*

### Auto

Select this to automatically set the hard-disk drive installed. Press the up or down arrow keys < ↑↓ > to move the cursor to the following field:

- **32 Bit I/O**: Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*

### None

Select this if there is no hard-disk drive.

### CD-ROM

This indicates that a CD-ROM drive is the drive installed. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*

- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*
- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.
- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

### IDE Removable

This indicates the removable disk drive is installed in the IDE sector. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*
- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*
- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.
- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

### ATAPI Removable

This indicates the removable disk drive is installed in the ATAPI sector. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*
- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*
- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.

- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

### Other ATAPI

This indicates the disk drive is installed in an ATAPI sector other than the removable sector. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*
- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*
- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.
- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

### User

Enter the parameters of the hard-disk drive installed at this connection. Press the up or down arrow keys < ↑↓ > to move the cursor between the following fields:

- **Cylinders**: Enter the number of cylinders involved in this capacity, range is 0 through 65535. *Default is 650.*
- **Heads**: Enter the number of heads involved in this capacity, range is 1 through 16. *Default is 8.*
- **Sectors**: Enter the number of sectors involved in this capacity, range is 0 through 63. *Default is 32.*
- **Multi-Sector Transfers**: Press the plus (+) or minus (-) key to select between 2, 4, 8, or 16 sectors per block for multiple sector transfers or to disable the transfer. *Default is disabled.*
- **LBA Mode Control**: Press the plus (+) or minus (-) key to enable or disable the use of the Logical Block Addressing (LBA) in place of cylinders, heads, and sectors. *Default is disabled.*
- **32 Bit I/O** Press the plus (+) or minus (-) key to enable or disable 32-bit IDE data transfers. *Default is disabled.*
- **Transfer Mode**: Press the plus (+) or minus (-) key to select between seven methods by which to move data to and from the drive. *Default is Standard*.
- **Ultra DMA Mode**: Press the plus (+) or minus (-) key to select between six ultra DMA modes by which to move data to and from the drive or to disable the movement. *Default is Disabled*.

## Memory Cache

Press **[Enter]** to access the Memory Cache menu and set the state of the memory cache. Press **[Esc]** to return to the Main menu.

### Memory Cache

Press the plus (+) or minus (-) key to enable or disable the memory cache. *Default is enabled.*

### Cache System/Video BIOS Areas

Press the plus (+) or minus (-) key to select either "Write Protect" or "uncached" to control the caching of the system BIOS area. *Default is Write Protect*

### Cache Base 0–512k, 512k–640k, Extended Memory Area

Press the plus (+) or minus (-) key to select "Write Back," "uncached," "Write Through," or "Write Protect" to control the caching of the 512k or 512k through 640k base memory or extended memory area. *Default is Write Back.*

### Cache A000–AFFF, B000–BFFF

Press the plus (+) or minus (-) key to select "Disabled," "USWC Caching," "Write Through," "Write Protect," or "Write Back" to control the appropriate cache range. *Default is Disabled.*

### Cache C800–CBFF through EC00–EFFF

Press the plus (+) or minus (-) key to select "Disabled," "Write Through," "Write Protect," or "Write Back" to control the appropriate cache range. *Default is Disabled.*

## Boot Features

Press **[Enter]** to access the Boot Features menu and configure the floppy check, the summary screen, the boot-time diagnostic screen, or the QuickBoot mode. Press **[Esc]** to return to the Main menu.

### Summary Screen

Press the plus (+) or minus (-) key to dictate whether to display system configuration information on boot. *Default is enabled.*

### Boot-Time Diagnostic Screen

Press the plus (+) or minus (-) key to state whether to display the diagnostic screen during the boot up process. *Default is disabled.*

### QuickBoot Mode

Press the plus (+) or minus (-) key to dictate whether the system can skip certain tests during the boot process, thus shortening the time required to perform the boot. *Default is enabled.*

# Advanced

This configures advanced features within your CV60 PC. Press the up or down arrow keys < ↑↓ > to move the cursor to the following fields. Press the left or right arrow keys < ← / → > to move the cursor to another menu.


Caution: If you set items in this menu to incorrect values, you could cause your system to malfunction.

## Advanced Chipset Control

Press **[Enter]** to access the Advanced Chipset Control menu and configure the video boot type, the enable memory gap, or the frequency ratio. Press **[Esc]** to return to the Advanced menu.

### Video Boot Type

Press the plus (+) or minus (-) key to select either 512 KB or 1 MB of system memory to allocate to the onboard video controller. *Default is 1 MB.*

### Enable Memory Gap

Press the plus (+) or minus (-) key to select either "Disabled" or "Extended." If "Extended," this turns off the system RAM to free space for use with an option card. *Default is disabled.*

### Frequency Ratio

Press the plus (+) or minus (-) key to select from fourteen different internal frequency multiplier values of the CPU. *Default is 4x.*

## I/O Device Configuration

Press **[Enter]** to access the Advanced Chipset Control menu and configure peripheral devices, such as serial ports, panel heater circuit and power, or the Picolink radio. Press **[Esc]** to return to the Advanced menu.

### Serial Ports

Press the plus (+) or minus (-) key to select "Disabled," "Enabled," "Auto," or "OS Controlled" to configure serial ports A through D.

If "Enabled" is selected, press the plus (+) or minus (-) key to set the base I/O address and the interrupt for the enabled serial port. *Default is OS Controlled.*

**Note**: To enable the touchscreen, select "Enabled" for Windows CE systems and "OS Controlled" for Windows XP systems.

### Panel Heater

Press the plus (+) or minus (-) key to enable or disable the panel heater circuit and power. *Default is disabled.*

### Picolink

Press the plus (+) or minus (-) key to enable or disable support for the Picolink radio. *Default is disabled.*

## Legacy USB Support

Press the plus (+) or minus (-) key to enable or disable support for Legacy Universal Serial Bus (USB) devices. *Default is enabled.*

## Reset Configuration Data

Press the plus (+) or minus (-) key to select whether to clear the Extended System Configuration Data (ESCD). *Default is No.*

## FirstWare Authentication Level

Press the plus (+) or minus (-) key to select the level of FirstWare authentication, from high, medium, or low. *Default is High.*

## PC Card Boot Support

Press the plus (+) or minus (-) key to dictate whether to support PC card boot. *Default is enabled.*

# Security

Use this menu to set the supervisor password. Press the up or down arrow keys < ↑↓ > to move the cursor to the following field. Press the left or right arrow keys < ← / → > to move the cursor to another menu.

## Set Supervisor Password

Press the plus (+) or minus (-) key to dictate how controlled is the supervisor password to the setup utility. *Default is Enter.*

# Boot

Use this menu to view or configure devices for the dual-booting process for Windows CE and XP systems. Press the plus (+) or minus (-) key to rearrange the order of the devices listed. Press the up or down arrow keys < ↑↓ > to move the cursor between devices. Press the left or right arrow keys < ← / → > to move the cursor to another menu.

# Exit

Use this menu to access exit options, settings, and version information. Press the up or down arrow keys < ↑↓ > to move the cursor between devices. Press the left or right arrow keys < ← / → > to move the cursor to another menu.

## Exit Saving Changes

Select this option to exit the PSU and save your changes to CMOS. Press **[Enter]** to select the option, then press **[Yes]** to continue. Press **[No]** to return to the Exit menu.

## Exit Discarding Changes

Select this option to exit the PSU without saving the data to CMOS. Press **[Enter]** to select the option, then press **[Yes]** to continue. Press **[No]** to return to the Exit menu.

## Load Setup Defaults

Select this option to load the default values for all setup items. Press **[Enter]** to select the option, then press **[Yes]** to continue. Press **[No]** to return to the Exit menu.

## Discard Changes

Select this option to discard all current changes and load previous values from CMOS for all setup items. Press **[Enter]** to select the option, then press **[Yes]** to continue. Press **[No]** to return to the Exit menu.

## Save Changes

Select this option to save current changes to CMOS without exiting the PSU. Press **[Enter]** to select the option, then press **[Yes]** to continue. Press **[No]** to return to the Exit menu.

# Reflash Procedure

**Note**: See the *CV60 Recovery Instruction Guide* P/N: 962-054-073 for more information.

## Windows CE

The following information pertains to the Windows CE operating system.

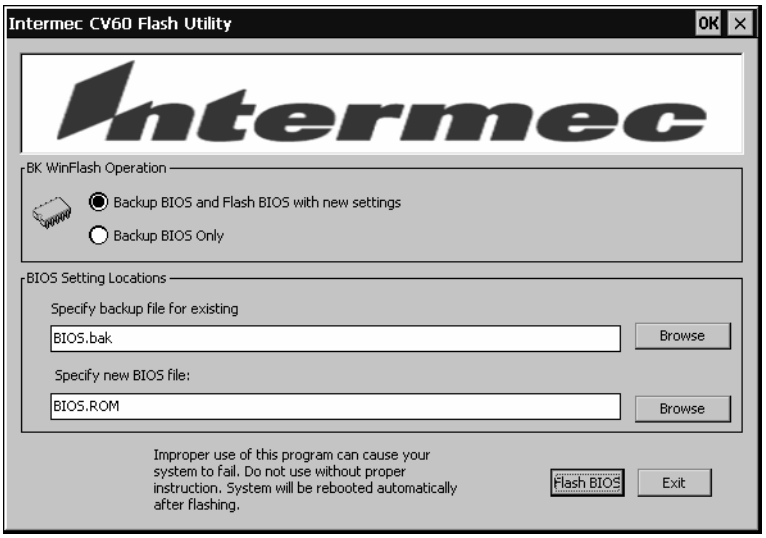
1 Copy the new BIOS onto a Secure Digital (SD) storage card, insert the SD card into your CV60 PC, then reboot the unit.


2 From the CV60 PC desktop, double-click the **My Computer** desktop icon, then double-click the **Windows** folder.


3 Double-click the **BiosFlash** desktop icon to access the Intermec CV60 Flash Utility.

4 Select **Backup BIOS and Flash BIOS with new settings**, then from within the BIOS Settings Locations box, click the second **Browse** to locate the new BIOS ROM file. You may also click the first **Browse** to dictate the location where to save the backup file.

Click **Flash BIOS** to initiate the reflash. The system should automatically reboot after finishing. If not, then perform a reboot.




5 Upon reboot, at the DOS prompt, enter the following:

`BiosFlash.exe/nogui/f:<newbiosname>.rom/b:<backupfilename>`

where *newbiosname* is the name of your new flash file name and *backupfilename* is the name of the backed up file.

## Windows XP


This information pertains to the Windows XP and Windows XP Embedded operating systems. Do the instructions as written for Windows CE, *except* double-click the **CV60Flash** desktop icon.

# 4 Windows Device Configurations

This chapter has the following configurable devices for the Windows CE, Windows XP, and Windows XP Embedded operating systems:

# AutoIP/DHCP

Automatic Private IP Addressing (AutoIP) is enabled by default in Windows Mobile 2003. To remain compatible with other versions of Pocket PC, this setting needs to be enabled. You can configure the registry settings in the following to set the required AutoIP/DHCP behavior:

- For Ethernet: `HKEY_LOCAL_MACHINE\Comm\LAN9001\TcpIp`
- Fot 802.11b: `HKEY_LOCAL_MACHINE\Comm\NETWLAN1\TcpIp`

Other registry keys that can modify the behavior of AutoIP are as follows. You can find the appropriate settings and behavior of each of these keys in Microsoft Help.

- AutoInterval
- AutoMask
- AutoSubnet
- AutoIP
- AutoSeed

When a TCP/IP client cannot find a DHCP server, it generates an AutoIP address from the 169.254.xxx.xxx block. The client then tries to check for a DHCP server every 300 seconds (5 minutes) and if a DHCP server is found, the client drops the AutoIP address and uses the address from the DHCP server.

In the MSDN Windows CE documentation available out on the Microsoft Developer Network web site (http://www.msdn.com), see "*Automatic Client Configuration*" for more information on AutoIP.

To disable AutoIP, set the AutoCfg registry entry to "0." If a DHCP server cannot be found, instead of using AutoIP, the system will display the "Unable to obtain a server assigned IP address" message.

**Note**: If AutoIP is defined using CAB files, the EnableDHCP registry key must also be defined and set to "1" before the system will attempt to obtain a DHCP address.

**Note**: To extend the number of attempts that a DHCP client makes to get a DHCP address, use the DhcpRetryDialogue and DhcpMaxRetry registry settings.

**Note**: Change the AutoInterval registry key value to make the client retry more often to obtain a DHCP address.

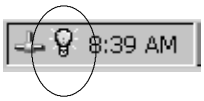
# CV60 Settings

Use the CV60 control panel applet to adjust the brightness, communication ports, and UPS of your CV60 PC. Note that these can also be adjusted within your PhoenixBIOS Setup Utility. See Chapter 2, "*PhoenixBIOS Setup Utility*" for more information.

## Windows CE

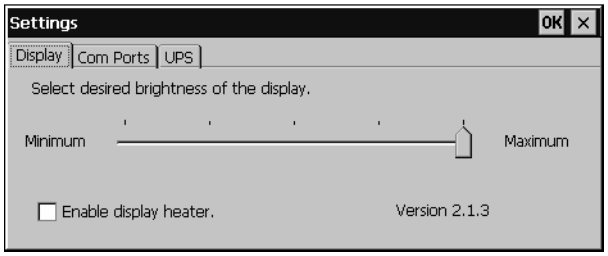
The following information pertains to the Windows CE operating system.


From the desktop, select **Start** > **Settings** > **Control Panel**, then double-click the **Settings** desktop icon, or double-click the lightbulb icon in the System Tray *(circoled in the following illustration)*. Do your adjustments, then click **OK** to close the Settings.



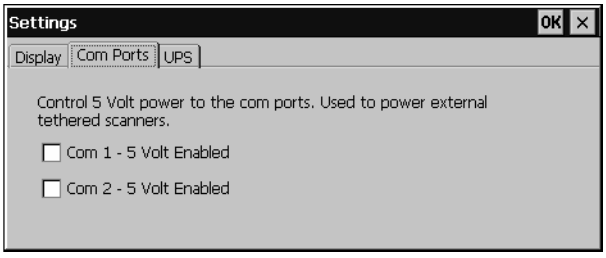

### Display

Use this page to adjust the brightness of your display or to enable or disable the display heater. Tap the desired level of display brightness within the Minimum/Maximum range. Check the **Enable display heater** to enable the heater, or clear this box to disable the heater.




### Com Ports

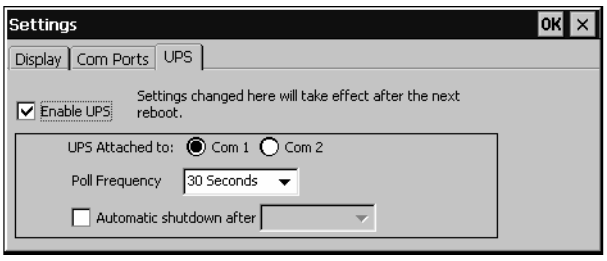
Check **Com 1 – 5 Volt Enabled** to activate the tethered scanner. If a Picolink radio is installed in your CV60 PC, then **Com 2 – 5 Volt Enabled** is checked by default.



### UPS

Use this page to dictate which COM port is to hold the UPS service, how often to poll the UPS, and set when the unit is to automatically shut down. Click the drop-down arrow to reset the **Poll Frequency** value. Check **Automatic shutdown** before you click its drop-down arrow to adjust its value.

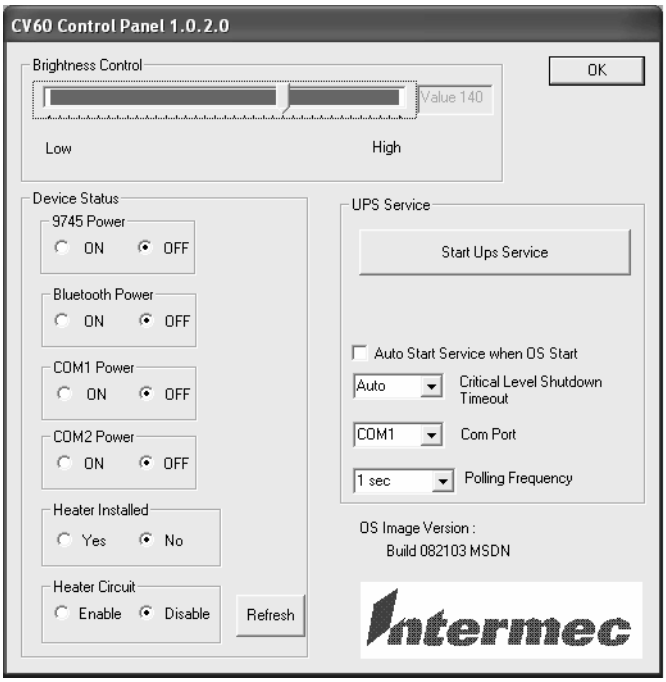
Be sure to check **Enable UPS** to enable the rest of the page.




## Windows XP

The following information pertains to the Windows XP and Windows XP Embedded operating systems.


From the desktop, select **Start** > **Settings** > **Control Panel**, then double-click the **CV60** desktop icon. Do your adjustments, then click **OK** to close the CV60 Control Panel.

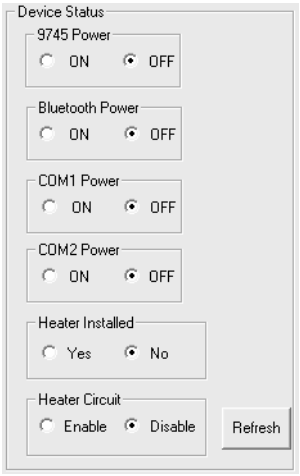


## Brightness Status

Within this box, tap the desired level of brightness within the Low/High range.

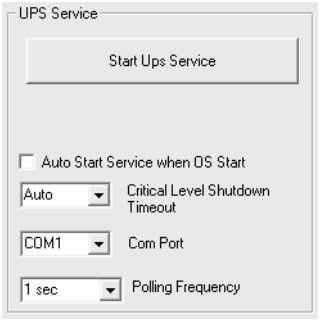

## Device Status

Use the information within this box to monitor whether power to the 9745, Bluetooth, COM1, or COM2 is on or off, the display heater is installed, and the heater circuit is enabled.




## UPS Service

Use this box to start up the UPS service and to dictate which COM port is to hold the UPS service, how often to poll the UPS, and set when the unit is to automatically shut down. Click the drop-down arrow to reset the appropriate values. Check **Auto Start Service when OS Start** before adjusting any values.



# Network Adapters

Your CV60 PC can have up to three radios installed. The default network adapter or radio is dependent on what radios are installed in your CV60 PC. Below are the the network adapters that exist as of this publication. See the Developer's Support web site for the latest information on network adapters for your unit.


- 802.11b/g Radios *(ActionTec)* — page 48.
- Wireless Printing *(Bluetooth)* — page 48.
- Picolink — page 53.


## 802.11b/g Communications

Information for the ActionTec radio supporting 802.11b/g communications is not available as of this publication.

## Wireless Printing

"Bluetooth" is the name given to a technology standard using short-range radio links, intended to replace the cables connecting portable and fixed electronic devices. The standard defines a uniform structure for a wide range of devices to communicate with each other, with minimal user effort. Its key features are robustness, low complexity, low power, and low cost. The technology also offers wireless access to LANs, the mobile phone network, and the internet for a host of home appliances and portable hand-held interfaces.

The Wireless Printing control panel separates the task of wireless printing from the other Bluetooth management items not relevant to this task.

Wireless Printing has a concept of the "current wireless printer". This printer is the one to which the CV60 PC makes a connection when the wireless printing COM port is opened. If there is no current wireless printer, there is no wireless printing COM port. Registration and deregistration of this COM port is controlled by BTCC. The Wp_quickset_l.exe executable calls BTCC when a printer is chosen to handle the COM port registration. Customer software or other test applications can also use BTCC to manage the COM port registration and deregistration.

The current wireless printer is stored in the registry and is registered and deregistered on Bluetooth stack load/unload. If the current wireless printer changes, the existing wireless printing COM port is deregistered, and the new one is registered instead. The registered COM port is stored in the registry as the WPPort.

## Windows CE

The following information pertains to the Windows CE operating system.

## Wireless Printing

There are currently three ways to set the wireless printer. You can use a Bluetooth device discovery to locate the remote device, you can manually enter the remote Bluetooth Device Address, or you can use the Bluetooth Device Manager to choose from previously discovered printers.

### Use a Bluetooth Device Discovery

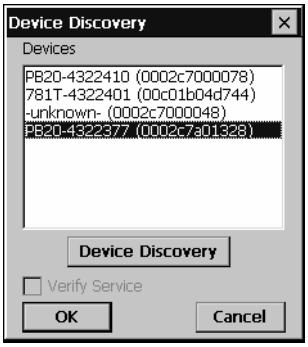
You can set your wireless printer via a Bluetooth Device Discovery, which takes about half a minute to locate all Bluetooth devices in your range.


1 From the CV60 PC desktop, select **Start** > **Settings** > **Control Panel**, then double-click the **Wireless Printing** desktop icon.

2 Make sure **Device Discovery** is selected in the **Set Wireless Printer** box, and click **Acquire Printer** to initiate the device discovery.


3 Momentarily, Bluetooth devices discovered within range appear. If your preferred printer is in the list, select to highlight the printer, and click **OK**.

If you do not see your preferred device, make sure this device is powered on and set to discovery. Click **Device Discovery** again.




**Note**: Click **Cancel** to return to the first screen without making changes

### Enter the Remote Device Address

If you know the Bluetooth Device Address of the printer you want to use, you can avoid Device Discovery and perform a manual setup.

1 Select **Manual** from within the **Set Wireless Printer** box, then click **Acquire Printer**.


2 Type the address of your device in the field, then click **OK**.


When you set your printer manually, your device does not receive the printer name. Therefore, ”-unknown-” is displayed under **Device Name** unless you enter the correct value in to the registry in some other way.

`HKEY_LOCAL_MACHINE\Software\Intermec\Bluetooth\Wireless Printing`

- RemoteDeviceAddress [String] - ex. 0002c7a01328
- RemoteDeviceAddress [String] - ex. PB20-4322377
- WPPort [String] - ex. COM6:

*WPPort* is the COM port to use in a call to CreateFile.

*wp_quickset* also alerts BTCC of Wireless Printer changes. When a new wireless printer is set, *wp_quickset* calls BTCC, which then deregisters the existing port (if necessary) and registers a new one based on the updated remote Bluetooth device address.

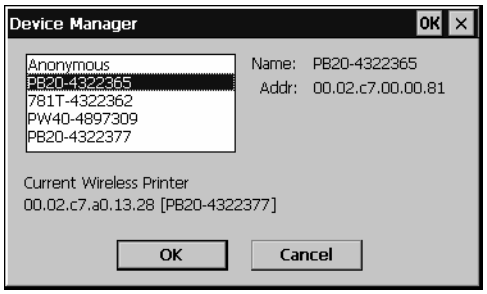
**Note**: Click **Cancel** to return to the first screen without making changes

### Choose from Previously Discovered Printers

Do the following to select from a list of previously discovered printers:

1 Tap **Device Manager** from within the **Set Wireless Printer** box, then click **Acquire Printer**.


2 Select to highlight the printer of choice, then tap **OK**.




**Note**: Click **Cancel** to return to the first screen without making changes

## Local Bluetooth

Local Bluetooth (Btlocal) is a Control Panel applet that views and sets local device Bluetooth settings. Local Bluetooth also provides a versions screen for various Bluetooth items in the system.


From the CV60 PC desktop, select **Start** > **Settings** > **Control Panel**, then double-click the **Local Bluetooth** desktop icon.


- **Device Name**
  This provides the "friendly" name of your CV60 PC.
- **Device Address**
  Device address is universally unique and cannot be changed. Read-only.
- **Discoverable**
  Check this box to make your CV60 PC discoverable to other Bluetooth devices. The default is for the CV60 PC to be undiscoverable since it does not offer any incoming services out of the box.
- **Connectable**
  Check this box to allow other Bluetooth devices to connect to your CV60 PC. The default is for the CV60 PC to be unconnectable since it does not offer any incoming services out of the box.
- **Class of Device**
  This sets how your CV60 PC appears to other devices during a device discovery. The default is 0x920100 which specifies the CV60 PC is a PC capable of services of information, object transfer, and networking. *Note that though the CV60 PC identifies itself as having service classes, these services are not supported as of this publication.*

`HKEY_LOCAL_MACHINE\Software\Intermec\Network\Bluetooth`

- Discoverable [DWORD] - 0=FALSE, 1=TRUE (Default is false)
- Connectable [DWORD] - 0=FALSE, 1=TRUE (Default is false)
- DeviceName [String] - ex. 720-6025320 not yet implemented
- CoD [?] - ex. ? not yet implemented

## Windows XP

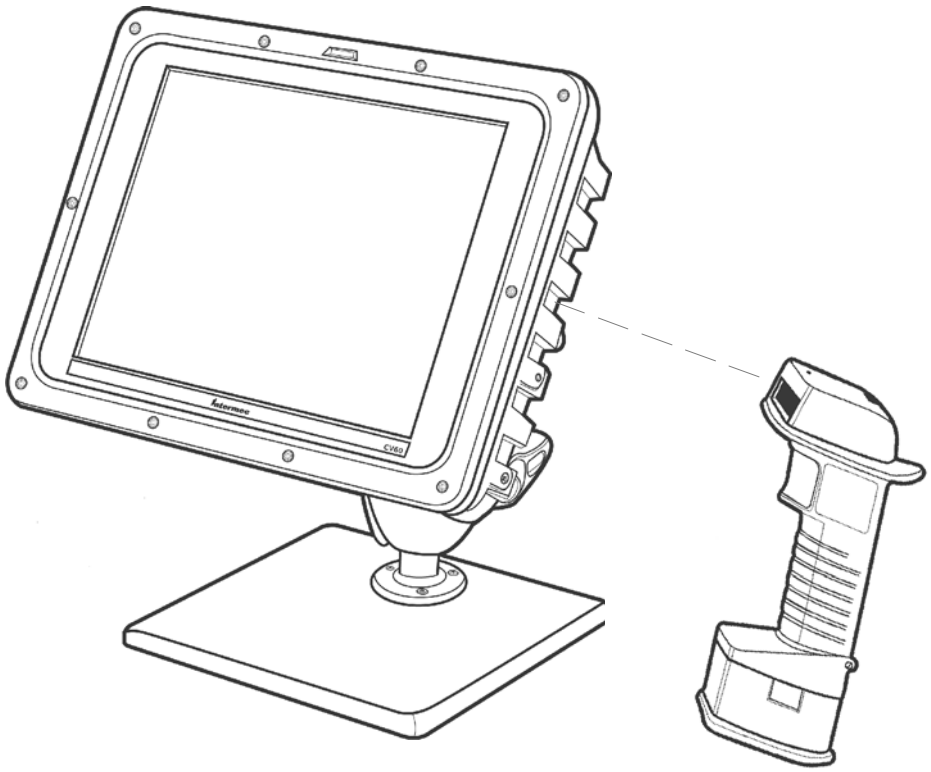
Information that pertains to the Windows XP and Windows XP Embedded operating systems is not available as of this publication.

## Picolink Radio

**Note**: To ensure the Picolink radio is enabled in your CV60 PC, ensure the COM2 serial port is turned on in the PhoenixBIOS Setup Utility. See Chapter 2, "*PhoenixBIOS Setup Utility*" for more information.

The Picolink radio is an Intermec product that is factory-built into your unit with a plate that covers the COM2 serial port at the bottom. Wireless scanning capability is enabled using the Intermec Picolink radio, compatible with the Intermec 1552 Decoded Cordless Laser wireless scanner.

To associate the Picolink radio with your 1552 wireless scanner, scan the Picolink bar code label located on the right side of your CV60 PC in the third indented rib from the top.



*Continue to scan the Picolink label on the CV60 until you hear two beeps from the 1552 Scanner.*

**Note**: To enable the touchscreen in units with Windows CE, set COM3 to "Enabled" within the PhoenixBIOS Setup Utility. In units with Windows XP and Windows XP Embedded, set COM3 to "OS Controlled." See Chapter 3, "*PhoenixBIOS Setup Utility*" for more information.

# Stylus

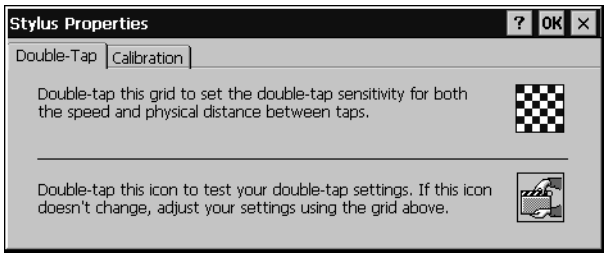
When the CV60 Data Collection PC is first reimaged to Windows CE, Windows XP, or Windows XP Embedded or when it is necessary to recalibrate (or realign) the touchscreen, use the Stylus Control Panel.

## Windows CE

The following information pertains to the Windows CE operating system.

### Double-Tap

Follow the instructions on this page to set the double-tap sensitivity of your stylus. Tap **OK** when finished.

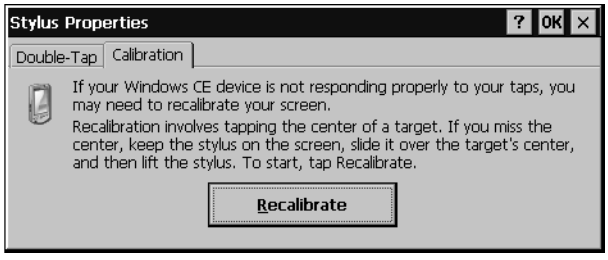



### Calibration

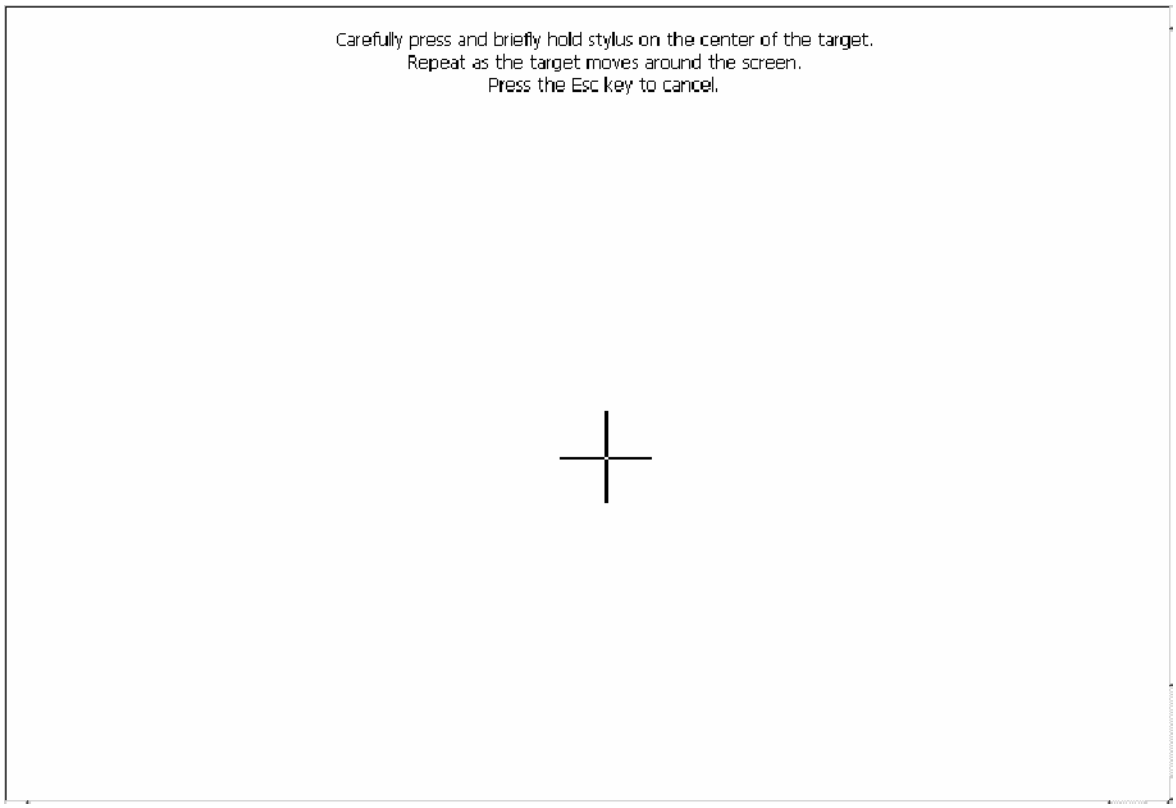
This applet calibrates the stylus for the CV60 PC, aligning the Windows cursor and stylus to the same location on the screen. When complete, the calibration values are stored permanently until the next time you do a calibration.

**Note**: In situations where the touchscreen calibration is off base or is not usable, use the external keyboard to navigate to the calibration screen.


1 From the CV60 desktop, select **Start** > **Settings** > **Control Panel**, double-tap the **Stylus** icon to access the Stylus Properties, then tap the **Calibration** tab. Tap **Recalibrate** to begin.



**2** Tap your stylus firmly at the center of the crosshairs target. Continue the process as the crosshair moves to the upper-left corner, the bottom-left, the bottom-right, and upper-right corners of the screen.




**3** After all targets are tapped, a message appears to indicate that new calibration settings have been measured. Press [Enter] on the external keyboard to accept the new settings and return to the Stylus Properties screen, or press [Esc] to do another calibration.

**4** Tap **OK** to close the Stylus Properties screen.

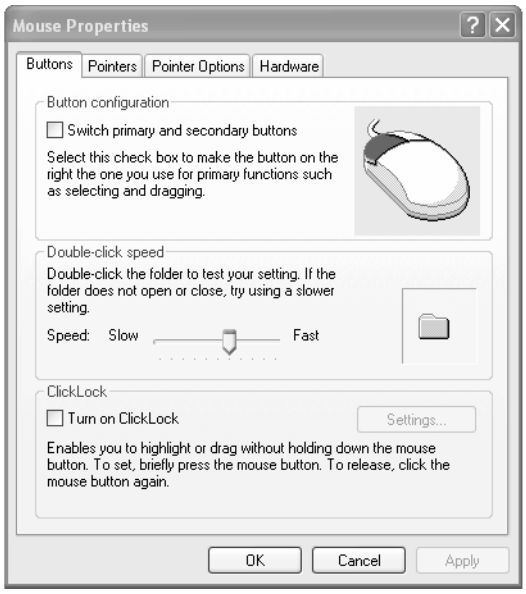
# Windows XP

The following information pertains to the Windows XP and Windows XP Embedded operating systems.

## Double-Tap

Use the Mouse control panel applet to adjust the double-tap sensitivity of your stylus.


1. From the Windows desktop, select **Start** > **Settings** > **Control Panel**, then double-click the **Mouse** desktop icon.
2. From the center **Double-click speed** box, drag the **Speed** bar to slower or faster, then test the sensitivity between taps on the folder.
3. When satisified with your double-tap sensitivity, click **Apply** to save your settings, then click **OK** to close the Mouse Proprties.

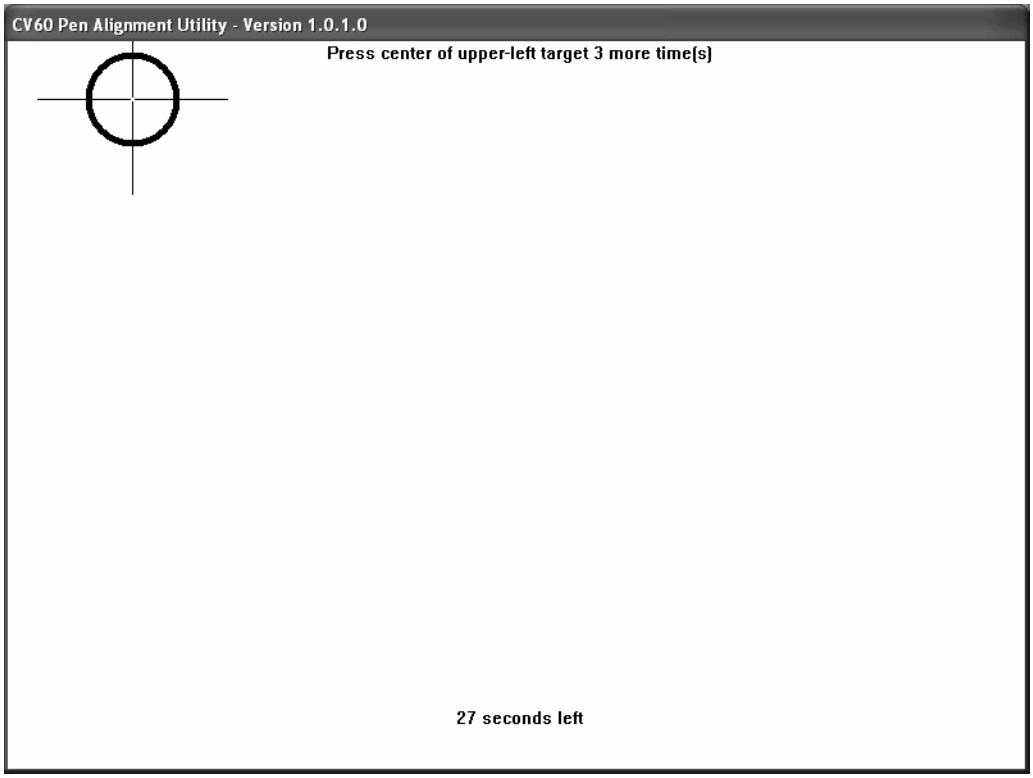



## Calibration

When the CV60 PC is first reimaged to Windows XP or Windows XP Embedded or when it is necessary to recalibrate (or realign) the touch-screen, use the CV60 Pen Alignment Utility. This utility is located in the Windows Control Panel.

The CV60 Pen Alignment Utility calibrates the pen for the CV60 PC, aligning the Windows cursor and tip of the stylus to the same location on the screen. When complete, the calibration values are stored permanently.

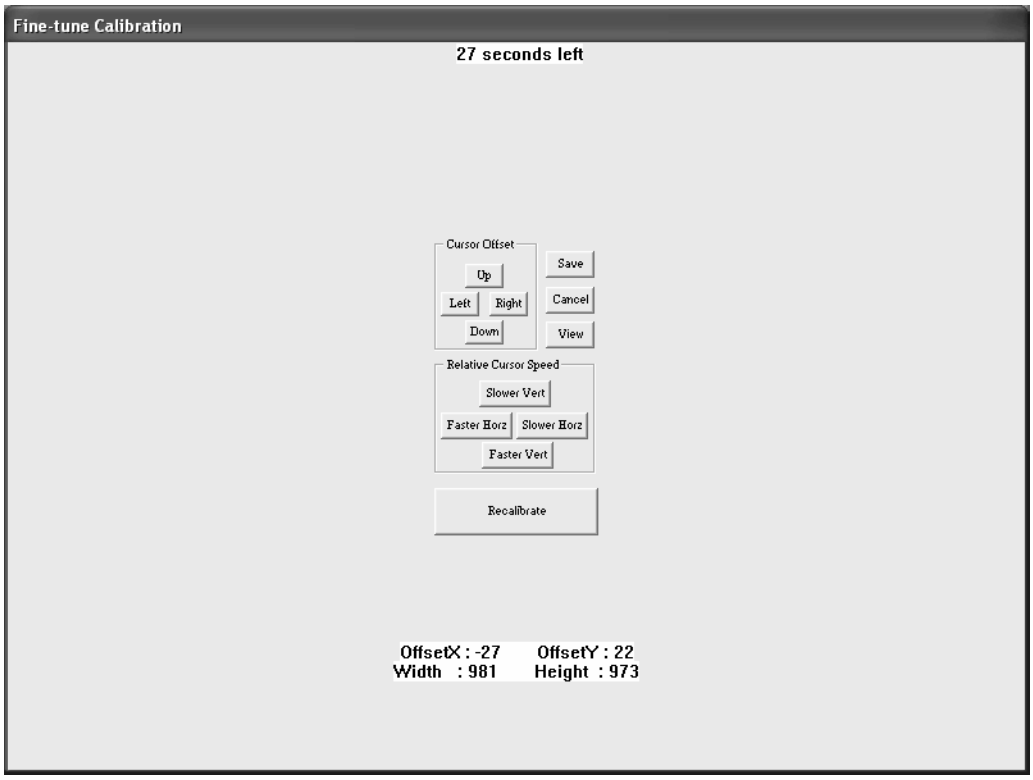

1 From the Windows desktop, select **Start** > **Settings** > **Control Panel**, then double-click the **CV60 PEN** desktop icon to access the CV60 Pen Alignment Utility.




2 Tap your stylus firmly at the center of the crosshairs target in the upper-left corner. You should hear a click and see two sets of x,y coordinate values display on the screen. Tap two more times in this same way at the center of this target.

3 Continue the three-tap process as the crosshair moves to the upper-right corner, the lower-left, and lower-right corners of the screen.

4 Touch on an open area to determine if the Windows cursor matches the location your stylus. Click **Recalibrate** if there is no match. When finished, click **Save** to permanently save the new values or click **Cancel** to continue using the old calibration.




- **Left**
  Move the cursor to the left with respect to your stylus.
- **Right**
  Move the cursor to the right with respect to your styls.
- **Up**
  Move the cursor up with respect to your stylus.
- **Down**
  Move the cursor down with respect to your stylus.
- **SlowerVert**
  Moves the cursor more slowly in the vertical direction with respect to your stylus. Use this when the cursor matches at the top of the screen, but is lower than the tip of your stylus at the bottom of the screen.
- **FasterVert**
  Moves the cursor more quickly in the vertical direction with respect to your stylus. Use this when the cursor matches at the top of the screen, but is higher than the tip of your stylus at the bottom of the screen.
- **SlowerHorz**
  Works like SlowerVert, except movement is in the horizontal direction.
- **FasterHorz**
  Works like FasterVert, except movement is in the horizontal direction.

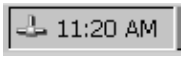
# TCP/IP

This section contains Transmission Control Protocol/Internet Protocol (TCP/IP) network information supported for the CV60 PC. This protocol readies the CV60 PC for communications.

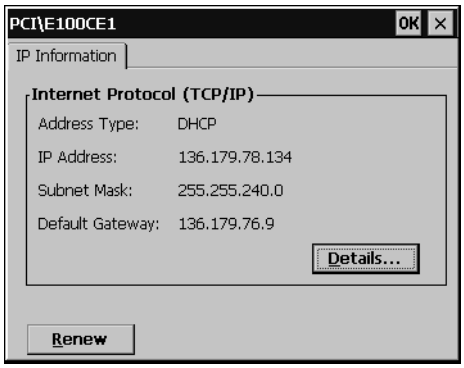
By default, the Local Area Connection is set to obtain an IP address and a DNS server address automatically on your CV60 PC.

## Windows CE

The following information pertains to the Windows CE operating system.



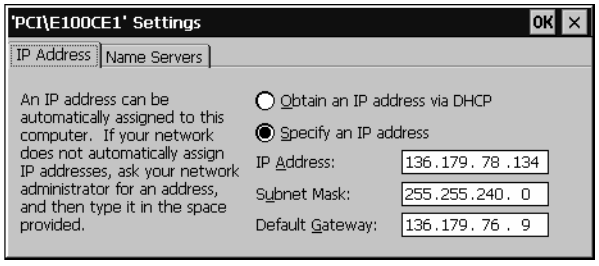

To determine what type of Ethernet connection is set up on your CV60, tap the Ethenet icon twice in your System Tray to access the following information. Tap **Renew** to refresh this information.



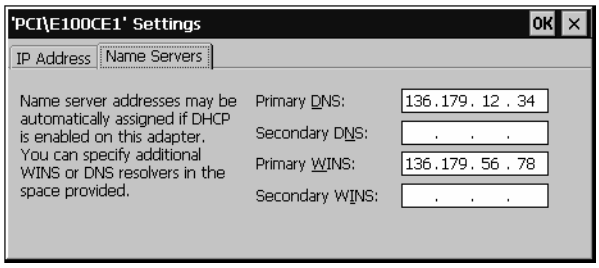

Do the following to assign static IP and DNS addresses:

1 From the CV60 desktop, tap **Start** > **Settings** > **Network and Dial-up Connections**.


2 Double-tap the **PCI-E100CE2** icon to get its settings. Under the **IP Address** tab, tap **Specify an IP address**, then complete the information:



3 Tap the **Name Servers** tab, then complete the information. Be sure to complete at least the primary addresses:



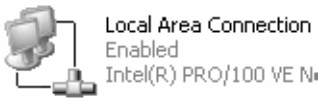

4 Tap **OK** to close the Settings, then close the Network Connections screen.

## Windows XP

The following information pertains to the Windows XP and Windows XP Embedded operating systems.

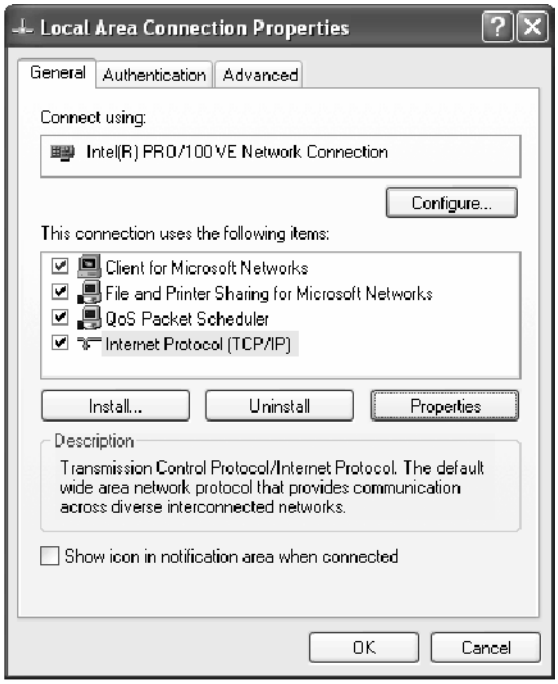
Do the following to assign static IP and DNS addresses:

1 From the CV60 desktop, tap **Start** > **Settings** > **Network Connections**.

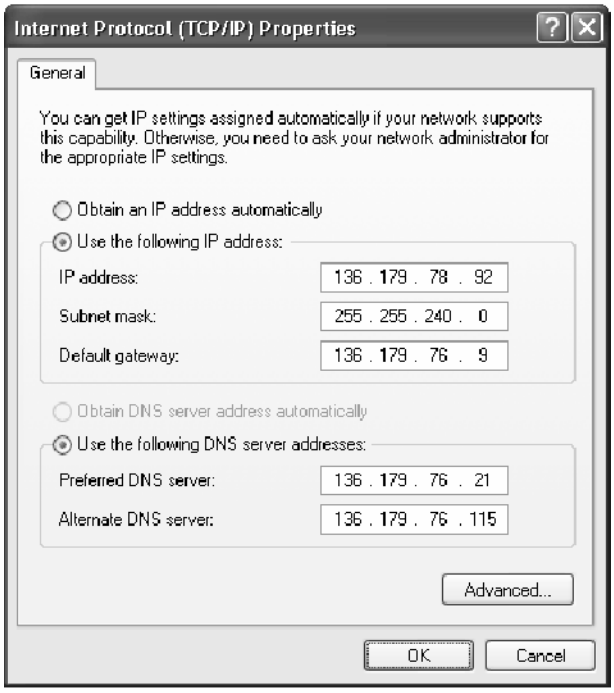



2 Press and hold the stylus on the **Local Area Connection** icon to get its pop-up menu, then select **Properties**.

3 Select to highlight the **Internet Protocol (TCP/IP)** option, then tap **Properties**.



**4** Tap **Use the following IP address**, then complete both the IP address and DNS addresses.



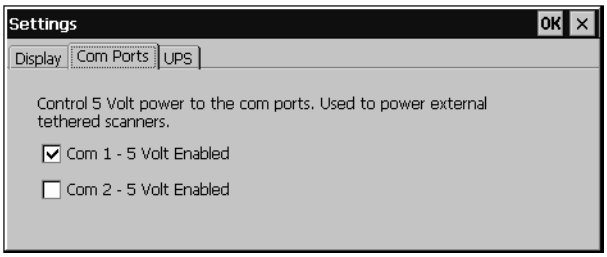

**5** Tap **OK** to close the TCP/IP Propertiess, tap **OK** again to close the Local Area Connections screen.

# Tethered Scanner

The Intermec Tethered Scanner feature allows Automatic Data Collection (ADC) by accepting data from the COM1 port and wedging it into the keyboard interface. This feature is enabled or disabled via the ICCU and Settings control panel applets. See Chapter 4, "*Device Configuration*," for more information about the ICCU applet.

## Enabling and Disabling


From the CV60 PC desktop, select **Start** > **Settings** > **Control Panel**, then double-click the **Settings** desktop icon. Click the **Com Ports** tab, then click **Com 1 - 5 Volt Enabled** to activate the tethered scanner. See page 45 for more information about this control panel applet.




## Scanner Cabling

Sabre 1551E / 1553 Cables connect directly to the CV60 COM Port.

## Limitations and Capabilities

The Tethered Scanner has the following limitations:

- No auto detection of a scanner's physical connection to COM1 port. User needs to ensure the communication settings of COM1 port matched the settings of the device.
- Communications port is COM1 and cannot be changed.
- A complete bar code label is detected when the time between bytes (the inter-byte gap) exceeds 100 ms. This allows that data could be concatenated if two labels were received while the 1551/1553 Tethered Scanner was not performing a read. That is, it could be wedging data just read or the read thread could be preempted. Also, the labels could appear concatenated if the scanner itself were to buffer the labels before transmitting them.

When enabled, the 1551/1553 menu option has these capabilities:

- Grid Data Editing is available.
- The source of the symbology configurations is only available via the Easy Set command labels. Only the Virtual Wedge configurations can be configured via the ICCU control panel applet. See Chapter 4, "*Device Configuration*," for more information.
- May transmit the data through the keyboard interface (via the Virtual Wedge).
- The bar code APIs, defined in the IADC interface, are available to get bar code data from the bar code scanner. The following example shows how to programmatically collects bar code data:

```
#include "IADC.h"                    // Linked with ITCUUID.LIB
#include "ITCAdcMgmt.h"              // Linked with ITCAdcDevMgmt.lib

  IADC* pIADC;
  HRESULT hrStatus = S_OK;

// Create a ADC COM interface to collect bar code data from the 1551E/1553
// when the 1551/1553 menu option is enabled.
  hrStatus =
  ITCDeviceOpen(TEXT("ExtScanner"), // Name of the ADC device.
    IID_IADC,                      // COM interface to return
    ITC_DHDEVFLAG_READAHEAD,       // Device's Flags
    (LPVOID *) &pIADC);            // the returned interface

if( SUCCEEDED(hrStatus) )
  {
    BYTE byteBuffer[MAX_LABEL_SIZE];
    DWORD dwLength = 0;
  HRESULT hr = pIDC->Read(
    byteBuffer,                    // Buffer to put the ADC data.
    MAX_LABEL_SIZE,                // Size of pDataBuffer in bytes.
    &dwLength,                     // Number bytes returned.
    NULL,                          // Time stamp of the received data. NULL.
    INFINITE                       // Number of milliseconds to wait.
  );

}
    when done using this COM interface, delete it:
ITCDeviceClose( (IUnknown **) pIADC);
```

# 5 Developing and Installing Applications

In this chapter you will find guidelines for developing applications using the Software Developer's Kit (SDK) and converting existing Trakker Antares applications using theProgrammer Software Kit (PSK).

You will also find information on installing applications and automatically launching them.

In this chapter you will find these sections:

- Developing applications for the CV60
- Installing applications on the CV60

# Developing Applications for the CV60

The CV60 data collection PC run applications programmed in Microsoft C++ and also run applications developed for the .NET framework using Microsoft C#.

Use this section to understand how to:

- Convert a Trakker Antares application to a CV60 application
- Develop a new application for the CV60
- Develop a web-based application for the CV60

## Converting a Trakker Antares Application to a CV60 Application

If you have an existing Trakker Antares application that you would like to run on the CV60, you can use the Programmer's Software Kit (PSK) to convert it. The CV60 PSK is a set of libraries and tools that you use to convert your existing Trakker Antares C applications into C++ applications for use on your CV60 Data Collection Computer.

The CV60 does not support all Trakker Antares PSK functions. You may need to rewrite parts of your application when converting it for use on the CV60.

See the PSK online manual for a list of functions that are not supported.

You need these hardware and software components to use the PSK:

- PC with at least 1M of free disk space running Microsoft Windows 2000/XP.
- Microsoft eMbedded Visual C++ version 4.0 with Service Pack 2
- Intermec SDK and development tools
- Intermec PSK whick contains these files and utilities:
- PSK functions library
- Header files
- Example files

The PSK is part of the Intermec Developer's Library (IDL) and is available on CD (P/N 235-114-001) or as a download from the Intermec web site at www.intermec.com.

## Developing a New Application for the CV60

Use the Intermec SDK to develop new applications to run on the CV60. The Intermec SDK is a library of C++ language functions you can use to create applications for the CV60.

See the SDK online user's manual for help developing your application. The *Intermec SDK User's Manual* contains hardware and software requirements, all of the functions that are supported by the CV60, and how to use these functions.

You need these hardware and software components to use the Intermec SDK:

- Pentium PC, 400 MHz or higher
- Windows 2000 (Service Pack 2 or later) or Windows XP (Home, Professional, or Server)
- Microsoft eMbedded Visual C++ version 4.0 with Service Pack 2 for native C++ development
- 128MB RAM (196MB recommended)
- 360MB Hard drive space for minimum installation (720MB for complete)
- CD-ROM drive compatible with multimedia PCspecification
- VGA or higher-resolution monitor (Super VGA recommended)
- Microsoft Mouse or compatible pointing device

The SDK is part of the Intermec Developer's Library (IDL) and is available on CD (P/N 235-114-001) or as a download from the Intermec web site at www.intermec.com.

For .NET Compact Framework development there are additional requirements. See the .NET SDK documentation for more information.

## Developing a Web-Based Application

You can develop web-based data collection applications for use on the CV60. For help, see any HTML source book. The CV60 ships with Internet Explorer 6.0.

# Installing Applications on the CV60

There are several ways you can install applications on the CV60:

If you have a simple application, you might only need to deliver the EXE file.

You can copy a directory structure that contains the application, supporting files, DLLs, images, sound files, and data files.

There are several ways you can install files and applications on the CV60.

- ActiveSync
- PC Card
- Wavelink Avalanche

The following sections explain how to use each one of these processes to install your application on the CV60.

### Using ActiveSync to Install Applications

You can use ActiveSync to establish a connection between your desktop PC and the CV60. ActiveSync allows you to transfer files, synchronize files, perform remote debugging, and other device management activities.

ActiveSync is a free application available from the Microsoft web site at http://www.microsoft.com (search for ActiveSync).

To establish a partnership between your desktop PC and the CV60, you will need:

- Female-to-female null modem serial cable
- ActiveSync version 3.7 or later.

## Installing ActiveSync and Establishing a Partnership

You can use a serial cable to establish your initial partnership between the CV60 and your desktop PC.

### To install ActiveSync and establish a partnership

1. Download ActiveSync from the Microsoft web site and follow the onscreen instructions for installing it on your desktop PC.
2. When the installation process is complete, the Get Connected dialog box appears.
3. Connect the CV60 to your desktop PC with the serial cable.
4. Click **Next** in the Get Connected dialog box. ActiveSync detects a device on the serial port and prompts you to set up a new partnership.
5. In the Set Up a Partnership dialog box, click **Next**.
6. In the Select Number of Partnerships dialog box, select **Yes, I want to synchronize with only this computer** and then click **Next**.
7. In the Select Synchronization Settings dialog box, check the items you want to synchronize and click **Next**.
8. In the Setup Complete dialog box, click **Finish**.

When the partnership is established, the following screen appears on your desktop showing the device name of your CV60 and the Connected status.

## The Microsoft ActiveSync Screen

An ActiveSync icon () also appears on the CV60 status bar indicating that it has established an ActiveSync partnership with your desktop PC.

**Note:** If ActiveSync does not establish a partnership on the first try, the Get Connected dialog box appears on your desktop with the message "Your device was not detected." Click **Next** on the Get Connected dialog box until your device is detected.

Now that the partnership has been established, ActiveSync initiates all future connections.

### Using ActiveSync to Copy Files and Install Applications

You can use ActiveSync to copy files to the CV60 and to install applications. To install an application, you need to copy the CAB file to a directory on the CV60 and then run it. Use the following procedures to learn how to copy files and install applications on the CV60 using ActiveSync.

### To install an application on the CV60 using ActiveSync

1. Connect the CV60 to your desktop PC using ActiveSync. For help, see the previous section, "Installing ActiveSync and Establishing a Partnership."
2. In the Microsoft ActiveSync screen, click **Explore**. Windows Explorer opens the Mobile Device window of your CV60.
3. In Windows Explorer on your desktop PC, browse to the file that you want to copy to your CV60.
4. Right-click the file and click **Copy**.
5. Place the cursor in the folder of your CV60, right-click, and click **Paste**.

The file has now been copied to the CV60 and you can see it using the CV60 File Manager.

Navigate to your application file and run it.

After your application is installed, it is accessible from the Programs menu in the System Main Menu.

## Installing Applications Using Wavelink Avalanche

You can use the Wavelink Avalanche device management system to install applications on all of your wireless CV60s.

The CV60 ships with the Avalanche Enabler already installed. Each time the Avalanche Enabler is activated (typically on a warm boot), the CV60 attempts to connect to the Avalanche Agent. When the CV60 connects to the agent, the agent determines whether an update is available and immediately starts the software upgrade, file transfer, or configuration update.

### To use Avalanche to remotely manage the CV60

1. Install software packages and updates for the CV60 using the Avalanche Administrative Console.
2. Schedule the CV60 updates or manually initiate an update using the Avalanche Administrative Console.

For more information on using Wavelink Avalanche, contact your local Intermec representative or visit the Wavelink web site at www.wavelink.com.

## Developing Applications with the Intermec SDK

The Intermec SDK provides a functional subset of JANUS and Trakker Antares PSK functions. Functionality available with Windows CE development tools is not duplicated with the SDK. The SDK provides:

- the necessary development targets for Microsoft eMbedded Visual Tools.
- the library and header files required to use the SDK functionality.
- a bar code scanning emulation environment.

**Note:** The Intermec SDK online help (provided with the SDK software) provides additional information about using the Intermec SDK, SDK functions, and components (FileCopy, FileServer, and ADC Simulator).

Key features of the SDK include:

- SDK functions, which are available as DLL interfaces and as ActiveX Controls.

The DLL interface is used when developing Visual C++ applications. The ActiveX Controls can be used when developing Visual C++, Visual Basic, and JScript applications.

Automatic Data Collection (ADC) simulator. The ADC simulator simulates the operation of the bar code scan engine in a Windows NT environment. You can use the ADC simulator to send bar code data to an application that you are developing.

- The FileServer utility. Use the FileServer utility on a host PC to receive messages from a CV60 device through the serial port (RS-232 connection) or a TCP/IP port.
- The FileCopy utility. Use the FileCopy utility to download or upload files or applications between a desktop computer and a CV60 using a serial link.
- Custom Edit ActiveX control that integrates CV60 input devices into a Windows control.
- QuickWin, a simplified Windows interface to ease the migration of JANUS or Trakker Antares applications.

## Developing applications without the Intermec SDK

You can develop data collection applications by using Visual C++, Visual Basic, the standard Win32 API, or Microsoft Foundation Classes (MFC).

If you develop applications without the Intermec SDK, you can use:

- Standard virtual wedge functions to scan input through the keyboard interfaces to any CV60 application. This includes any application using a standard input control.
- Standard Win32 serial and Winsock communication layer support. Without the Intermec SDK, you cannot use the following features of the CV60 in your application:
- Advanced scanning (No data routing,or symbology information)
- TFTP file transfer capabilities
- UDP Plus communication support
- System information functions.

# Developing a New Application for the .NET Framework

## Using ActiveSync to Copy Files and Install Applications

You can use ActiveSync to establish a connection between your desktop PC and the CV60. ActiveSync allows you to transfer files, synchronize files, perform remote debugging, and other device management activities. ActiveSync is a free application available from the Microsoft web site.

To establish a partnership between your desktop PC and the CV60, you will need:

- a serial cable.
- ActiveSync version 3.7 or later.

## Installing ActiveSync and Establishing a Partnership

You must use a serial cable to establish your initial partnership between the CV60 and your desktop PC.

1. Download ActiveSync from the Microsoft web site and follow the onscreen instructions for installing it on your desktop PC. When the installation process is complete, the Get Connected dialog box appears.
2. Connect the CV60 to your desktop PC with the serial cable.
3. Click **Next** in the Get Connected dialog box. ActiveSync detects a device on the USB port and prompts you to set up a new partnership.
4. In the Set Up a Partnership dialog box, click **Next**.
5. In the Select Number of Partnerships dialog box, select **Yes, I want to synchronize with only this computer** and then click Next.
6. In the Select Synchronization Settings dialog box, check the items you want to synchronize and click **Next**.
7. In the Setup Complete dialog box, click **Finish**.

When the partnership has been established, the following screen appears on your desktop showing the device name of your CV60 and the Connected status.

### The Microsoft ActiveSync Screen

An ActiveSync icon also appears on the CV60 status bar indicating that it has established an ActiveSync partnership with your desktop PC.

**Note:** If ActiveSync does not establish a partnership on the first try, the Get Connected dialog box appears on your desktop with the message "Your device was not detected." Click Next on the Get Connected dialog box until your device is detected.
Now that the partnership has been established, ActiveSync initiates all future connections.

### Using ActiveSync to Copy Files and Install Applications

You can use ActiveSync to copy files to the CV60 and to install applications. To install an application, you need to copy the .CAB file to a directory on the CV60 and then run it. Use the following procedures to learn how to copy files and install applications on the CV60 using ActiveSync.

### To copy a file to the CV60

1. Connect the CV60 to your desktop PC using ActiveSync. For help, see the previous section, "Installing ActiveSync and Establishing a Partnership."
2. In the Microsoft ActiveSync screen, click **Explore**. Windows Explorer opens the Mobile Device window of your CV60.
3. In Windows Explorer on your desktop PC, browse to the file that you want to copy to your CV60.
4. Right-click the file and click **Copy**.
5. Place the cursor in the desired folder for your Mobile Device (CV60), right-click, and click **Paste**.

The file has now been copied to the CV60 and you can see it using the CV60 File Manager.

### To install an application on the CV60

1. Open File Manager on the CV60.
2. Navigate to the .CAB file you want to install. Select the file by tapping its associated number or by scrolling to it and pressing Enter.
3. Select Run from the dialog box and press Enter.

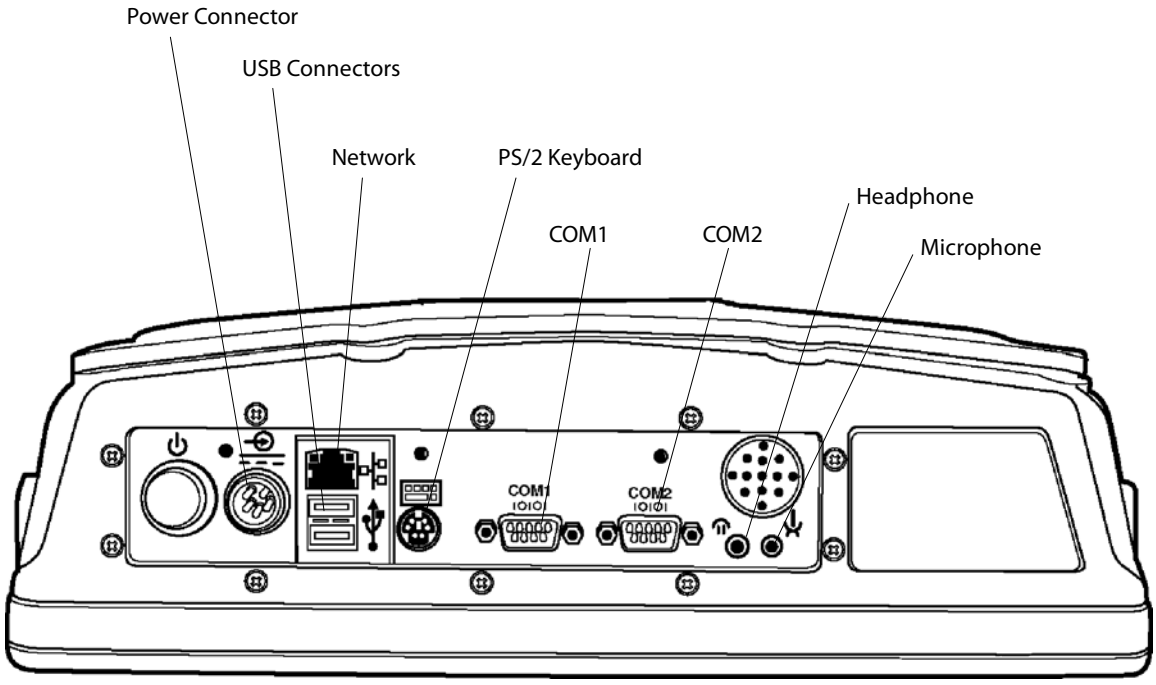
The .CAB file runs and your application begins the installation process on the CV60.

# 6 Connector Pinouts

This chapter details the CV60 Data Collection PC connectors.

# Connectors

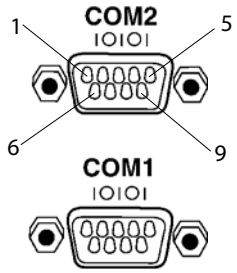
Connectors are located on the bottom of the computer and are identified below.




## Connectors

Each COM serial port has its own address and uses a 9-pin male connector to attach RS-232 serial devices, such as a printer, a mouse, an external modem, a scanner, or a serial network connection.

## COM Port Pinout



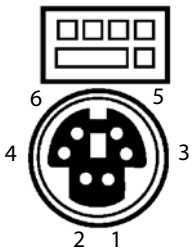

***COM Port Pinout*** *(COM1 & COM2 identical)*

| Pin | Description |
|---|---|
| 1 | RS232 DCD |
| 2 | RS232 RXD |
| 3 | RS232 TXD |
| 4 | RS232 DTR |
| 5 | GND |
| 6 | RS232 DSR |
| 7 | RS232 RTS |
| 8 | RS232 CTS |
| 9 | RS232 RI & +5V for external tethered scanner |

## Keyboard PS/2

This 6-pin mini-DIN, PS/2-standard connectors connect an external keyboard to the computer.

Where an external keyboard is not connected to the computer, you may use an emulated keyboard (if available in your application) that can be activated on the display.

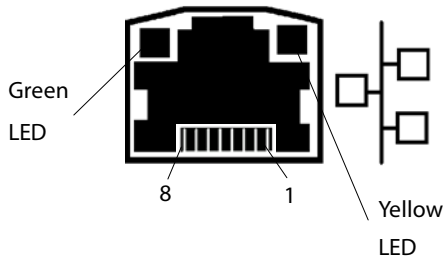



| Pin | Description |
|---|---|
| 1 | Keyboard Data |
| 2 | NC |
| 3 | GND |
| 4 | NC |
| 5 | +5 Volts DC |
| 6 | Keyboard Clock |

## Ethernet

The RJ-45 type 8-pin modular connector shown below provides an interface to an Ethernet local area network. Pinouts are as shown below when the user views the connector straight on from the outside of the computer.

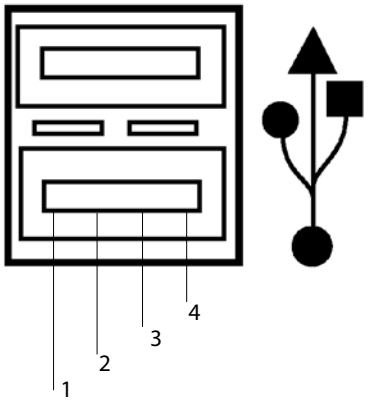
Once a valid link is detected, whether it is 10Base-T or 100Base-T, the green LED light on the connector will be ON. The yellow LED flash will if there is any activity on the Ethernet LAN port.




| Pin | Signal |
|---|---|
| 1 | TX+ |
| 2 | TX- |
| 3 | RX+ |
| 4 | GND |
| 5 | GND |
| 6 | RX- |
| 7 | GND |
| 8 | GND |

### USB Connectors

There are 2 external USB 1.1 ports that can be used for connection to common serial type devices such as a mouse or keyboard.

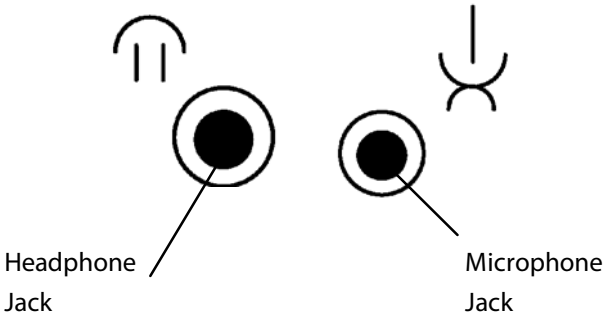



| Pin | Signal |
|---|---|
| 1 | +5V |
| 2 | USB_DATA- |
| 3 | USB_DATA+ |
| 4 | Ground |

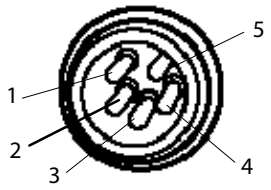
## Audio Connections

The microphone and headphone jacks are shown below.

### Microphone / Headphone



## Power Connector Pin out




| Pin | Description |
|---|---|
| 1 | Chassis GND |
| 2 | System Line |
| 3 | System Neutral |
| 4 | Heater Neutral |
| 5 | Heater Line |

Intermec

**Corporate Headquarters**
6001 36th Avenue West
Everett, Washington 98203
U.S.A.

**tel** 425.348.2600

**fax** 425.355.9551

www.intermec.com

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