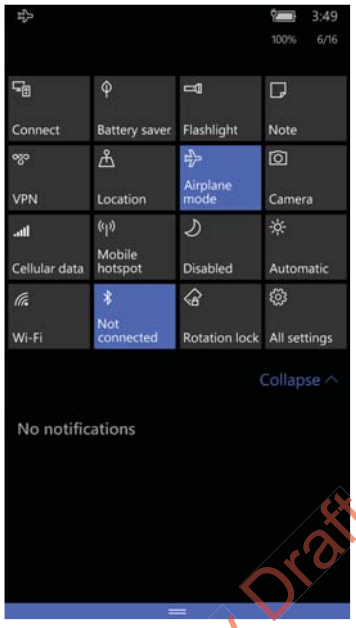
View Action Center

Use the Action Center to view the battery charge level, view details about a notification, or to quickly access and modify settings.



Windows Action Center

- To open the action center, touch and hold the status bar at the top of the screen and then drag down.
- To close the action center, swipe up from the bottom of the screen, or tap the Back or Home buttons.
  - To dismiss a notification, swipe it sideways.
  - To dismiss all notifications, tap the X in the top right corner.

Customize the Start Screen

The Start screen is the first screen you see when you power on the computer and unlock the screen. You can add, delete, move, resize, or group tiles into folders for quick access. Tiles can be apps, contacts, maps, albums, or office files. Live tiles provide notifications and updates in real time, such as weather information.

On the Start screen:

1. Touch and hold a tile.
2. Drag the tile to a new location on the Start screen:
   - Tap Unpin ( ) to delete the tile.
   - Tap the arrow (↖) to toggle through the tile sizes

Set the Date, Time, or Time Zone

The computer gets the current date and time from its network connection. You can manually set the date, time, and time zone for your location. The 24-hour clock is turned off by default. By default, the CT50 is set to automatically update the time and date for your current location. Use this procedure to manually set the date, time, or time zone.

1. Tap **All Apps > Settings** > **Time & language** > **Date & time**.
2. Tap the toggle box for **Set date and time automatically** to turn it off.
3. Tap the Time zone, Date, and Time to set each one manually.

   To set the Date and Time, you need to select the correct values and then tap .

   To set the Time zone, you just need to tap the new time zone.

View Software Information

1. Tap **All Apps > Settings > System > About.**
2. Tap **more info**. The following information appears on the screen:
   - Model
   - Carrier
   - Software
   - Version
   - OS build
   - Firmware and hardware revision numbers
   - Bootloader version
   - Radio software and hardware version number
   - Chip SOC version
   - Screen resolution
   - MAC address
   - MEID, MDN, IMEI, and IMS

View Hardware Information

Use the DiagnosticInfo app to view detailed hardware information on the computer.

1. Tap **All Apps > DiagnosticInfoW10.**
2. Swipe up or down to scroll through these settings:
   - System Date/Time
   - Device Information
   - Honeywell Apps (version numbers)
   - Radio Information (includes MAC, Bluetooth, IP Addresses)
   - Battery Information
   - Memory Information
   - Scanner Information
3. To export the diagnostic information to a text file, tap  .
4. Select a folder location and then tap  .
5. Tap **OK** to return to the DiagnosticInfo screen.

Honeywell Applications on the Computer

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

Honeywell Applications Available on the CT50

Icon	Application	Description
	DiagnosticInfoW10	Use the DiagnosticInfo app to view device information, Honeywell Apps, Radio Information, Battery Information, Memory Information, and Scanner Information.
	IPConfig	Use IPConfig to view network adapter information.
	Ping	Use Ping to verify communication links or to make sure a specific IP address is working.
	Route	Use Route to view and edit the rules that govern how packets destined for various subnets are routed.
	ScanDemoW10	Use ScanDemo to demonstrate how the scanner works. You can use it to scan a bar code, set the symbologies it scans, and determine the computer response to a scanned bar code.

3

About the Scanner

Use this chapter to understand how to scan bar codes and how to configure the scanner.

About the Scanner

The internal scanner can read 1D and 2D bar code symbologies, composite symbologies, and postal codes. It also supports omni-directional scanning for greater flexibility in real-world settings. The image engine can also capture black and white images, such as signatures and pictures of damaged inventory.

Warning: Do not stare into the imager laser aimer.

About ScanDemoW10

ScanDemo demonstrates the functionality of the scanner in the CT50 and is not intended as a functional business solution. Detailed information on how to create custom applications for the CT50 is provided in the *Software Development Kit (SDK)* section of the Dolphin CT50 Software tab on **www.honeywellaidc.com**.

Scan a Bar Code

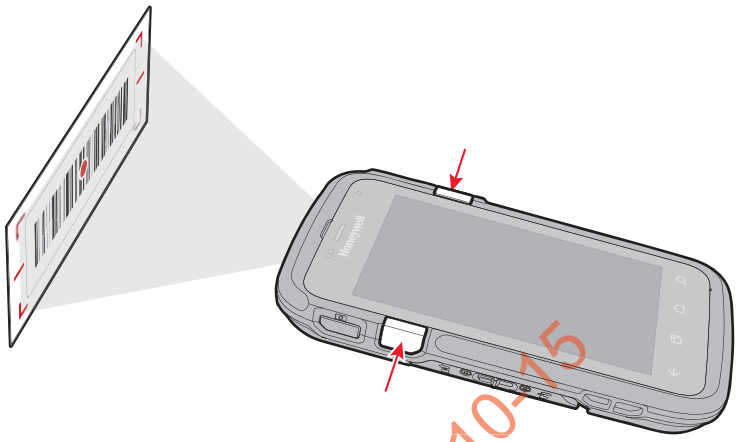
ScanDemoW10 demonstrates the functionality of the scanner in the CT50 and is not intended as a functional business solution. Detailed information on how to create custom applications for the CT50 is provided in the *Software Development Kit (SDK)* section of the Dolphin CT50 Software tab on **www.honeywellaidc.com**.

The scanner has an aiming beam to help you correctly frame bar codes. It also supports omni-directional (360°) scanning to make it easier for you to scan bar codes.

Note: Before you start scanning bar codes, you can use the Settings app within ScanDemoW10 to enable only the bar code symbologies that you need.

1. Tap **All Apps** > **ScanDemoW10**.
2. Point the scanner window at the bar code and hold the computer steady a few inches from the label.

3 Press one of the **Scan** buttons. The illumination frame appears.



Make sure the entire bar code is inside of the frame. When the scanner successfully reads a bar code, you hear a high beep and the Good Read LED turns on briefly.

4 Release the **Scan** button.

About the Scanner Settings

You can set several scanner settings from the ScanDemo application that determine scanning options and profile settings. Settings include these sections: Scan, Symbology, and Profiles.

- Swipe the screen left or right to access the **Settings** menu.

Scan Settings

Use the scan settings to determine how the scanner acts when you scan a bar code. You can control whether it vibrates, makes a sound, and how it scans.

Scan Settings and Descriptions

Scan Setting	Description
Vibrate	Turns on or off the vibrate on a good read.
Sound	Turns on or off the beeps to indicate a good read.

Scan Settings and Descriptions (continued)

Scan Setting	Description
Scan Mode	There are three options for scan mode: • **Normal:** Normal mode requires you to press **Scan** or one of the **Scan** buttons between each scan. • **Automatic:** Automatic mode activates the scanner for continuous scanning without requiring you to touch **Scan** on the screen each time. • **Continuous:** Continuous mode activates the scanner only when you touch and hold one of the **Scan** buttons.
Automatic Interval	Adjusts the automatic interval from 0 to 30 seconds between each scan.

Symbology Settings

The Symbology Settings define the bar code symbologies the scanner will decode with the ScanDemo app.

- Touch the toggle box next to a symbology to enable or disable it.
- Swipe up or down to scroll through the list of available symbologies.

For a complete list of all available symbologies, see Appendix A, **"Specifications" on page 77**.

Profile Settings for ScanDemoW10

The built-in Point of Service (POS) profiles are applied by the ScanDemoW10 app using the Microsoft POS application program interface (API), ClaimedBarcodeScanner.SetActiveProfileAsync. This API sets the active profile on the CT50 bar code scanner. The profile strings defined by the \Documents\Profile\HoneywellDecoderSettingsv2.exm file are returned to the app using BarcodeScanner.GetSupportedProfiles. It gets the list of profiles supported by the bar code scanner.

Profile Settings and Descriptions

Profile	Description
HON:Reset	Resets all symbology settings to disabled.
HON:EnablePreviewOnDecode	Profile not supported in ScanDemoW10.

Profile Settings and Descriptions (continued)

Profile	Description
HON:EnablePreviewOnDecodeAttempt	Profile not supported in ScanDemoW10.
HON:DisablePreview	The default profile. Disables sending images to the application. Only decode results are shown on the screen.
HON:EnableOOBE	Enables the symbology types required when the built-in Out-of-box plug-in runs at first boot for scanning EZConfig labels. This profile allows you to scan a prov.xml file to set up the CT50. You cannot modify this profile.
HON:ScanButtonEnable	Enables the Scan button.
HON:ScanButtonDisable	Disables the scan button.

About the Wedge Mode Profile

Wedge mode enables a default list of symbologies (for example, UPCA, Code 39, Code 128, GS1128, Aztec, Data Matrix, Maxicode, Pdf417 and QR code). You can enable or disable Symbologies for wedge mode using a profile named **HONWedge**. Profile commands customize scan wedge mode behaviors. Customers set wedge mode configuration commands using an .exm file. To learn more about customized profiles, see the next section **"Create a Custom Profile" on page 41**.

You can use the following HONWedge profile commands to modify the scan wedge.

HONWedge Profile Commands

Profile Commands	Description	Default
ENABLE_WEDGE	Controls when bar code data is inserted into the keyboard buffer. While in wedge mode, scanning is disabled and enabled using the ENABLE_WEDGE profile command.	True (Enabled)

HONWedge Profile Commands (continued)

Profile Commands	Description	Default
WEDGE_POWER_TIMEOUT	Use this command to optimize scan performance or to save power. The WEDGE_POWER_TIMEOUT defaults to 30 ms. After 30 seconds of inactivity, the scan acquisition system enters a low power state. Press the scan button to exit the low power state and power up the scan acquisition system. The timeout value is set using the WEDGE_POWER_TIMEOUT profile command. The units are milliseconds.	30 ms
PREAMBLE	Adds a prefix to the start of the bar code data.	
POSTAMBLE	Adds a suffix at the end of the data to bar code data.	
ENTER_DELAY	Inserts a delay between bar codes when wedging the bar code data into the keyboard buffer. A delay of ENTER_DELAY is inserted whenever the Wedge encounters a carriage return, line feed, or tab key. The units for ENTER_DELAY are milliseconds. Some applications, such as Excel, may require additional processing time when advancing to the next input field. Without a delay, data may arrive faster than the application can process the data. You can use the POSTAMBLE command to add a line feed at the end of each bar code.	200 ms

Create a Custom Profile

You may need to create customized profiles to configure the scanner for your application. Some settings are only possible when using customized profiles.

The computer uses profiles to enable symbologies, configure symbology options, and set scanning options. The HoneywellDecoderSettingsV2.exm file is used to define or specify one or more profiles and must be placed on the computer in either of these two locations:

- **\Documents\Profile**

  The user must create the Profile folder. To learn how to transfer files from your PC to the mobile computer, see **"How to Transfer Files" on page 22**.

- **\SharedData\Enterprise\Persistent\Profile**

  This folder is only accessible by an Enterprise signed application.

To download a sample HoneywellDecoderSettingsV2.exm file, go to **www.honeywellaidc.com**, navigate to the CT50 product page, and then select "Honeywell Decoder Settings Sample EXM File" under the Software listings.

When the HoneywellDecoderSettingsV2.exm file is updated, the computer receives notification, performs initial processing of the profile information, and writes status information to the HoneywellDecoderSettingsV2.err file. The err file is written back to the same location as the .exm file, either \Documents\Profile or \SharedData\Enterprise\Persistent\Profile.

The HoneywellDecoderSettingsV2.exm file may contain profiles for both Wedge Mode and POS Mode. The HoneywellDecoderSettingsV2.exm is in XML format and each section element defines a different profile. The profile targeted for Wedge Mode is identified by the name "HONWedge". There can only be one HONWedge profile. All other profiles are available for POS applications.

The HONWedge profile is applied whenever the computer enters Wedge Mode. POS profiles are applied when a POS application calls the POS API to set an active profile. POS profiles may be automatically applied using the Apply command set to true.

Custom Profile Example

The following example contains two profiles, one for Wedge Mode and one for POS Mode.

- The .exm file contains the required ConfigDoc element named “Data Collection Profiles.” This element is not optional and must alway be included.
- The Section tags <section> identify the profile names. The POS profile name may be customized to anything you want but wedge mode profile must be named “HONWedge”. For the example below, “C39 Internal Scanner” is used for the POS Mode profile and “HONWedge” for the Wedge Mode profile.
- The command tags <cmd> identify the profile settings.
- The Device command <cmd=“Device”> is set to Internal to indicate the internal scanner and not an external scanner (e.g., ring scanner). The second profile, named “HONWedge,” must contain a Device command set to Internal but a POS profile can be set to either Internal or USB.
- The Type command (cmd=“TYPE”), is set to Full, which instructs the scanning system to first restore defaults before applying the commands in the profile.
- The Apply (cmd=“APPLY”) command instructs the scanning system to automatically apply the profile when a POS application claims the scanner. The Apply command is not applicable to Wedge Mode. In Wedge Mode the “HONWedge” profile is automatically applied whenever the scanning system switches to Wedge Mode.
- The “HONWedge” profile enables EAN-13 and issues a command to include the check digit.
- The “HONWedge” profile shows the syntax for issuing wedge commands, including how to enter binary data as postambles or preambles.

```
<?xml version="1.0"?>
<ConfigDoc flags="000" name="Data Collection Profiles" desc="Profiles used for
scanner configuration via POS Scanner API">
   <HHPReserved>
      <Key name="EXMVersion">1.0.1</Key>
      <Key name="ContentVersion">1.0.0</Key>
   </HHPReserved>

   <Section flags="000" name="C39 Internal Scanner" id="C39">
      <Key cmd="DEVICE" desc="Specifies the scanner type" list="Internal,USB"
      name="Device Type">Internal</Key>
      <Key cmd="TYPE" list="Incremental,Full" name="ProfileType">Full</Key>
      <Key cmd="APPLY" list="true,false" min="" name="ApplyProfileOnLoad">false</Key>
      <Key cmd="DEC_CODE39_ENABLED" list="true,false" name="Code 39 Enable Symbology"
      id="Enable" gr="flag">true</Key>
      <Key cmd="DEC_CODE39_MIN_LENGTH" name="Code 39 Minimum Character Length"
      id="MinLength" min="0" max="48">3</Key>
   </Section>

   <Section flags="000" name="HONWedge" id="WedgeConfig">
      <Key cmd="DEVICE" list="Internal,USB" name="Device Type">Internal</Key>
      <Key cmd="TYPE" list="Incremental,Full" name="ProfileType">Full</Key>
      <Key cmd="ENABLE_WEDGE" list="true,false" name="WedgeEnable">true</Key>
      <Key cmd="PREAMBLE" name="Preamble">MyPreamble</Key>
      <Key cmd="POSTAMBLE" name="Postamble">&#x0d;</Key>
      <Key cmd="ENTER_DELAY" min="" name="Enter Delay">400</Key>
      <Key cmd="WEDGE_POWER_TIMEOUT" min="2" max="10000"
      name="ImagerPowerTimeout">5000</Key>
      <Key cmd="DEC_EAN13_ENABLED" list="true,false" name="EAN13 Enable Symbology"
      id="Enable" gr="flag">true</Key>
      <Key cmd="DEC_EAN13_2CHAR_ADDENDA_ENABLED" list="true,false" name="EAN13 2 Digit
      Addenda (UPC/EAN)"
      id="Addenda2Digit" gr="flag">false</Key>
      <Key cmd="DEC_EAN13_5CHAR_ADDENDA_ENABLED" list="true,false" name="EAN13 5 Digit
      Addenda (UPC/EAN)"
      id="Addenda5Digit" gr="flag">false</Key>
      <Key cmd="DEC_EAN13_CHECK_DIGIT_TRANSMIT" list="true,false" name="EAN13 Send
      Check Character"
      id="CheckTransmit" gr="flag">true</Key>
   </Section>
</ConfigDoc>
```


Available Profile Commands

Here is a list of the available profile commands you can use when creating customer profiles:

"DEC_CODE128_ENABLED"

"DEC_CODE128_MIN_LENGTH"

"DEC_CODE128_MAX_LENGTH"

"DEC_GS1_128_ENABLED"

"DEC_GS1_128_MIN_LENGTH"

"DEC_GS1_128_MAX_LENGTH"

"DEC_C128_ISBT_ENABLED"

"DEC_CODE39_ENABLED"

"DEC_CODE39_MIN_LENGTH"
"DEC_CODE39_MAX_LENGTH"
"DEC_CODE39_CHECK_DIGIT_MODE"
"DEC_CODE39_FULL_ASCII_ENABLED"
"DEC_CODE39_START_STOP_TRANSMIT"
"DEC_CODE39_APPEND_ENABLED"
"DEC_CODE39_BASE32_ENABLED"
"DEC_DATAMATRIX_ENABLED"
"DEC_DATAMATRIX_MIN_LENGTH"
"DEC_DATAMATRIX_MAX_LENGTH"
"DEC_UPCA_ENABLED"
"DEC_COUPON_CODE_MODE"
"DEC_UPCA_CHECK_DIGIT_TRANSMIT"
"DEC_UPCA_NUMBER_SYSTEM_TRANSMIT"
"DEC_UPCA_2CHAR_ADDENDA_ENABLED"
"DEC_UPCA_5CHAR_ADDENDA_ENABLED"
"DEC_UPCA_ADDENDA_REQUIRED"
"DEC_UPCA_ADDENDA_SEPARATOR"
"DEC_UPCE0_ENABLED"
"DEC_UPCE1_ENABLED"
"DEC_UPCE_CHECK_DIGIT_TRANSMIT"
"DEC_UPCE_NUMBER_SYSTEM_TRANSMIT"
"DEC_UPCE_2CHAR_ADDENDA_ENABLED"
"DEC_UPCE_5CHAR_ADDENDA_ENABLED"
"DEC_UPCE_ADDENDA_REQUIRED"
"DEC_UPCE_ADDENDA_SEPARATOR"
"DEC_EAN8_ENABLED"
"DEC_UPCE_EXPAND
"DEC_EAN8_CHECK_DIGIT_TRANSMIT"
"DEC_EAN8_2CHAR_ADDENDA_ENABLED"
"DEC_EAN8_5CHAR_ADDENDA_ENABLED"
"DEC_EAN8_ADDENDA_REQUIRED"

"DEC_EAN8_ADDENDA_SEPARATOR"
"DEC_EAN13_ENABLED"
"DEC_EAN13_CHECK_DIGIT_TRANSMIT"
"DEC_EAN13_2CHAR_ADDENDA_ENABLED"
"DEC_EAN13_5CHAR_ADDENDA_ENABLED"
"DEC_EAN13_ADDENDA_REQUIRED"
"DEC_EAN13_ADDENDA_SEPARATOR"
"DEC_AZTEC_ENABLED"
"DEC_AZTEC_MIN_LENGTH"
"DEC_AZTEC_MAX_LENGTH"
"DEC_HK25_ENABLED"
"DEC_HK25_MIN_LENGTH"
"DEC_HK25_MAX_LENGTH"
"DEC_CODABAR_ENABLED"
"DEC_CODABAR_MIN_LENGTH"
"DEC_CODABAR_MAX_LENGTH"
"DEC_CODABAR_START_STOP_TRANSMIT"
"DEC_CODABAR_CHECK_DIGIT_MODE"
"DEC_CODABAR_CONCAT_ENABLED"
"DEC_CODABLOCK_F_ENABLED"
"DEC_CODABLOCK_F_MIN_LENGTH"
"DEC_CODABLOCK_F_MAX_LENGTH"
"DEC_CODE11_ENABLED"
"DEC_CODE11_MIN_LENGTH"
"DEC_CODE11_MAX_LENGTH"
"DEC_CODE11_CHECK_DIGIT_MODE"
"DEC_CODE93_ENABLED"
"DEC_CODE93_MIN_LENGTH"
"DEC_CODE93_MAX_LENGTH"
"DEC_COMPOSITE_ENABLED"
"DEC_COMPOSITE_MIN_LENGTH"
"DEC_COMPOSITE_MAX_LENGTH"

"DEC_COMPOSITE_WITH_UPC_ENABLED"
"DEC_HANXIN_ENABLED"
"DEC_HANXIN_MIN_LENGTH"
"DEC_HANXIN_MAX_LENGTH"
"DEC_IATA25_ENABLED"
"DEC_IATA25_MIN_LENGTH"
"DEC_IATA25_MAX_LENGTH"
"DEC_I25_ENABLED"
"DEC_I25_MIN_LENGTH"
"DEC_I25_MAX_LENGTH"
"DEC_I25_CHECK_DIGIT_MODE"
"DEC_KOREA_POST_ENABLED
"DEC_KOREA_POST_MIN_LENGTH"
"DEC_KOREA_POST_MAX_LENGTH"
"DEC_M25_ENABLED"
"DEC_M25_MIN_LENGTH"
"DEC_M25_MAX_LENGTH"
"DEC_MAXICODE_ENABLED"
"DEC_MAXICODE_MIN_LENGTH"
"DEC_MAXICODE_MAX_LENGTH"
"DEC_MICROPDF_ENABLED"
"DEC_MICROPDF_MIN_LENGTH"
"DEC_MICROPDF_MAX_LENGTH"
"DEC_MSI_ENABLED"
"DEC_MSI_MIN_LENGTH"
"DEC_MSI_MAX_LENGTH"
"DEC_MSI_CHECK_DIGIT_MODE"
"DEC_PDF417_ENABLED"
"DEC_PDF417_MIN_LENGTH"
"DEC_PDF417_MAX_LENGTH"
"DEC_QR_ENABLED"
"DEC_QR_MIN_LENGTH"

"DEC_QR_MAX_LENGTH"
"DEC_RSS_14_ENABLED"
"DEC_RSS_LIMITED_ENABLED"
"DEC_RSS_EXPANDED_ENABLED"
"DEC_RSS_EXPANDED_MIN_LENGTH"
"DEC_RSS_EXPANDED_MAX_LENGTH"
"DEC_S25_ENABLED"
"DEC_S25_MIN_LENGTH"
"DEC_S25_MAX_LENGTH"
"DEC_TELEPEN_ENABLED"
"DEC_TELEPEN_MIN_LENGTH"
"DEC_TELEPEN_MAX_LENGTH"
"DEC_TELEPEN_OLD_STYLE
"DEC_TLC39_ENABLED"
"DEC_TRIOPTIC_ENABLED"
"DEC_OCR_MODE"
"DEC_POSTAL_ENABLED"
"DEC_POSTAL_ENABLED_DIRECT",
"DEC_POSTNET_CHECK_DIGIT_TRANSMIT"
"DEC_PLANETCODE_CHECK_DIGIT_TRANSMIT"
"DEC_VIDEO_REVERSE_ENABLED"
"DEC_WINDOW_MODE"
"DEC_WINDOW_TOP"
"DEC_WINDOW_BOTTOM"
"DEC_WINDOW_LEFT"
"DEC_WINDOW_RIGHT
"DEC_OCR_ACTIVE_TEMPLATES"
"DEC_OCR_TEMPLATE"
"GENERIC"
"DEC_ECI_HANDLING"
"SCN_ACTIVESTANDBY_TIMEOUT"
"SCN_SCAN_TIMEOUT"

"WEDGE_POWER_TIMEOUT"
"ENABLE_WEDGE"
"ENABLE_GOOD_READ_BEEP"
"PREAMBLE"
"POSTAMBLE"
"ENTER_DELAY"

4

Use the Phone

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

About the Phone

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

The WAN radio in your computer determines the supported network types:

- If your computer includes the UMTS/HSPA+ WAN radio, you can connect to UMTS networks.
- If your computer includes the Flexible Network Radio, you can connect to CDMA or UMTS networks in all regions that support these technologies. The Flexible Network Radio is a software-defined radio (SDR) that can be configured for CDMA or UMTS depending on your wireless communication needs.

  Honeywell supports Verizon in the United States (only) as a CDMA network carrier.

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

Note: Both WWAN radios support Network Information and Time Zone (NITZ) messages to automatically set the system time.

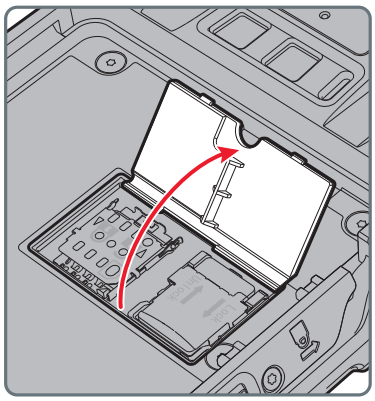
Activate the UMTS Phone

Activating the UMTS phone on your CT50 is done the same way whether your computer has the Flexible Network Radio or the UMTS/HSPA+WAN radio.

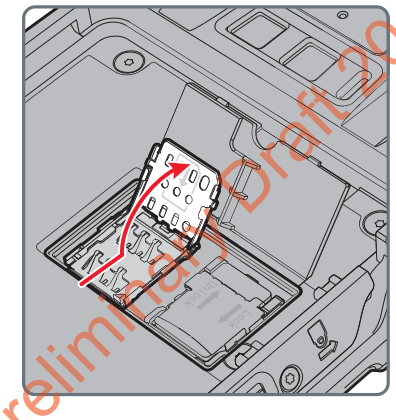
You use a SIM card to activate the UMTS phone on the CT50. You can purchase the SIM card from your network provider.

1. Power off the CT50.
2. Disconnect the handstrap from the bottom of the computer.
3. Press and slide the battery door toward the bottom of the computer to unlock the door.
4. Lift up on the edge of the battery and remove it from the computer.

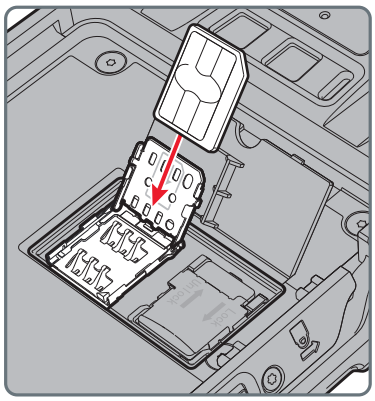
5 Lift up on the SIM and MicroSD door.



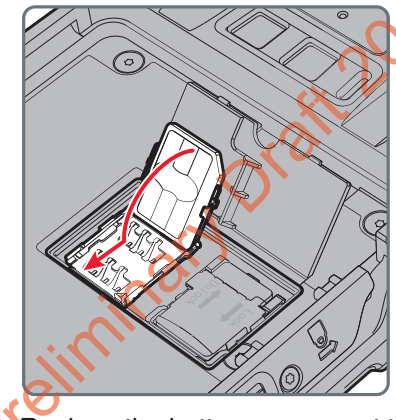
6 Press down and slide the SIM door toward the top of the CT50 to open it.



7 Insert the SIM card in the door.



8 Close the SIM card door and slide it toward the bottom of the CT50 to secure it.



9 Replace the battery, reconnect the handstrap, and press the **Power** button to turn on the CT50. The phone is now ready to use.

Activate the CDMA Phone

To activate the CDMA phone in your mobile computer, you need to contact your wireless carrier and set up an account.

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

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

Note: For the CDMA phone, settings are permanently stored in the WWAN radio after activation. CDMA settings persist through a factory data reset.

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

Make a Phone Call

Once the phone is activated, you can make a phone call.

1. On the Start screen, tap .
2. Tap the keypad icon to enter the number, and then touch the Call button to dial the number.

Answer the Phone

When you receive a phone call, the Incoming Call screen opens, showing the caller ID. All incoming calls are recorded in the Call log. If you miss a call, you receive a notification.

Make an Emergency Phone Call

You can use the phone to make an emergency phone call, even if the SIM card is missing from your UMTS phone or if you do not have a valid CDMA account. In either case, the phone shows that you have no service. However, if you dial certain emergency numbers (such as 112, 911, 000, 08, 118, 119, or 999) the call will go through.

5

Use the Camera

Use this chapter to learn how to take pictures and record videos with the color camera.

About the Color Camera

The CT50 contains an 8-megapixel color camera for taking pictures and videos. The camera and flash are located on the back of the computer.

Use the Photos app to view photos and videos stored on the CT50.

Adjust the Camera and Video Settings

The camera and video settings are adjustable from within the **Camera** app.

How to Zoom

The camera zoom is controlled using a pinching motion on the touch screen. Place two fingers on the screen at the same time, and then:

- spread them apart to zoom in (enlarge an object).
- pinch them together to zoom out.

Change Photo Settings

You can change the camera settings for best results when taking pictures.

Note: HDR (high dynamic range) is enabled by default which means that the flash is controlled by the HDR and the other settings are overwritten. When you press , HDR is disabled.

1. Press the **Camera** button to open the camera app.
2. Configure these automatic settings:
   - Flash
   - HDR
3. From the right side of the screen, tap to view and modify these photo settings:
   - White balance
   - Focus
   - Sensitivity
   - Shutter speed
   - Brightness
4. Tap a setting from the menu.

5 Slide the photo setting icon along the half-circle until you reach the setting you want.

6 When you are done changing settings, tap the screen.

Change Video Settings

You can change the video settings for best results when taking videos.

1 From the right side of the screen, tap  to view and modify these photo settings:

- Video light
- White balance
- Focus
- Brightness

2 When you are done changing the settings, tap the screen.

Take a Photo

1 Press the **Camera** button or tap **All Apps** > **Camera**.

2 Using the screen as a viewfinder, move the computer until you see the image you want to capture.

3 Tap the screen to set the focus.

4 Press the Camera button or tap the camera icon () to take a picture. The camera takes a picture and small image of the picture appears in viewfinder at the top of the screen.

- To view the picture, tap the thumbnail image.
- To return to the Camera app, tap the back button ().

Record a Video

1 Press the **Camera** button or tap **All Apps** > **Camera**.

2 Tap the video icon ( ) at the bottom of the screen.

3 Tap the video icon to start recording video.

4 When you are done recording, tap the video icon again to stop recording.

6

Configure the Computer

Use this chapter to learn how to configure the CT50. You will also find information on how to configure network communications and wireless security.

How to Configure the Computer

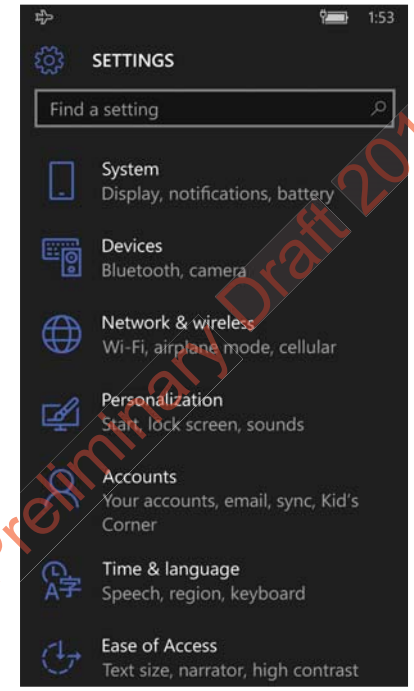
You can configure many parameters on the computer such as the display orientation, or the network settings. The values you set for these parameters determine how the computer operates.

You configure the computer using the Settings app.

Start the Settings App

The Settings app is located in the All Apps menu.

- Tap **All Apps > Settings**. Or, pull down the Action Center from the top of the screen and tap **All Settings**.



About the Structure of the Settings App

Use this section to learn about the structure of the Settings app so you can find parameters quickly.

Settings App Structure

Setting	Description
System	Provides information about your CT50 and lets you set the brightness level, screen rotation, battery saver settings, and photos+camera settings.
Devices	Lets you configure the default camera, Bluetooth settings, NFC, the mouse, and USB connections.
Network & wireless	Lets you configure your Wi-Fi network, turn on or off airplane mode, turn on a mobile hotspot, and configure cellular data usage.
Personalization	Lets you personalize the CT50 according to your needs. You can configure the theme, sounds, screen lock times, notifications, and more.
Accounts	Lets you set up email, contacts, and workplace accounts.
Time & language	Lets you configure the date and time, language, region, and keyboard settings.
Ease of Access	Lets you configure the text size, contrast, zooming capability, and narration and speech settings for the CT50.
Privacy	Lets you configure the privacy settings for your CT50 such as location and account info.
Update & security	Lets you backup data to the cloud, check for updates, find your phone, and configure developer features.
Extras	Lets you configure extra information for the CT50 such as turn off display on face down. It also provides battery information.

About Network Communications

You can use the mobile computer in your wireless or wired data collection network. You can connect your computer using:

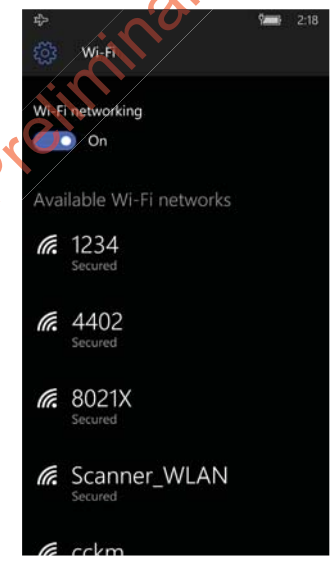
- 802.11 radio communications.
- Ethernet communications.
- Bluetooth communications.
- Near Field Communication (NFC) technology.
- USB and serial communications.

Connect to a Wi-Fi Network

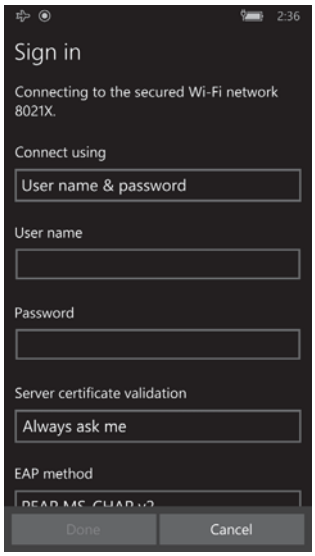
The CT50 has an 802.11 radio to transfer data using wireless communications. Before you connect to a Wi-Fi network, you need to know about your network security protocol and its required credentials. By default, the 802.11 radio is disabled.

When a Wi-Fi connection is active, you can view connection information or edit the networks settings by selecting the network name on the Wi-Fi Settings screen.

1. Tap **All Apps** > **Settings** > **Network & Wireless** > **Wi-Fi**.
2. Touch the toggle box to turn on Wi-Fi. A list of discovered networks appears.



3 Tap a network name in the list to view details:



If the network is secured, a list of required information appears (such as a password, or other credentials). To connect to the secured network, enter the required information and tap **Done**.

Connect to a Hidden Wi-Fi Network

For security reasons, some networks do not appear on the available network list even if you are in range.

1 Tap **All Apps** > **Settings** > **Wi-Fi**.

2 Touch the toggle box to turn on Wi-Fi. A list of discovered networks appears.

3 Scroll to the bottom of the screen and tap **Manage**.

4 Tap ⊕ and the Add Network screen appears.

5 In the **Network name** box, type the network name. The network name is case-sensitive.

6 Tap **Add**.

7 If the network is secure, you are asked to provide information relevant to the network security protocol such as a password, key, or certificate. Type the required information.

8 Tap **Done** to connect.

Modify Channel Settings

You can manually select the channels the 802.11 radio uses for communication.

1. Tap **All Apps** > **Settings** > **Extras** > **Wi-Fi Radio Settings.**
2. Tap **Channel Settings**.
3. Swipe left or right to view the channels available under the 2.5 GHz, 5 GHz, and DFS bands.
4. Select the boxes next to the channels to enable or disable them.
5. Tap to save the settings.

Change Roaming Settings

By default, roaming is enabled for the 802.11 radio. When enabled, the Wi-Fi radio automatically roams from one access point to another as needed to provide seamless connectivity.

1. Tap **All Apps** > **Settings** > **Extras** > **Wi-Fi Radio Settings.**
2. Tap **Roaming Settings**.
3. Tap the **Roaming** check box to disable roaming.
4. Tap to save the settings.

Connect to an Ethernet Network

By default, the CT50 is configured to obtain IP addresses automatically through the DHCP server. In most cases, you can simply insert the CT50 into an Ethernet dock and connect to the Ethernet network. To connect the computer to an Ethernet network, you need an Ethernet dock.

1. Make sure the dock is connected to your Ethernet network.
2. Place the computer in the dock.
3. Tap **All Apps** > **DiagnosticInfoW10** to view the assigned IP address.

How to Connect to Virtual Private Networks

The computer supports connecting to virtual private networks (VPNs). To configure VPN access, you must obtain details from your network administrator. To establish a VPN connection, you must first create a VPN profile on the CT50.

Add a VPN Profile

Before you can connect to a VPN, you must add VPN information.

1. Tap **All Apps** > **Settings** > **Network & Wireless > VPN**.
2. Tap  to Add a VPN connection.
3. From the **VPN provider** box, select a provider from the drop-down list.
4. In the **Server name or address** box, type the server name or IP address of the VPN server.
5. In the **VPN type** box, choose **Point to Point Tunneling Protocol (PPTP)**, **L2TP/IPsec with certificate**, **L2TP/IPsec with pre-shared key**, or **IKEv2**.

   The VPN service provider only appears in the options if you have already downloaded and installed the service provider app. If necessary, you can touch the link under the Type box to connect and download an SSL VPN app from the Windows Store.
6. Select the **Type of sign-in info** required to connect to the VPN server and then type the required information.
7. (Optional) Type a **User name** and **Password**.
8. Tap **Save**. The VPN connection appears on the screen.

About Wireless Security

The computer provides these security solutions for your wireless network:

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

Honeywell recommends WPA2 security with PSK (Personal) or 802.1x (Enterprise) key management.

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

Use the Settings app to access and configure all wireless security settings.

About Certificates

The CT50 allows you to install digital certificates for secure client communications with websites and services. You can install certificates through Microsoft Edge, email, or mobile device management (MDM). Once you install a certificate, you can use it to set up your VPN profiles, Wi-Fi, and email accounts. You can only remove a certificate if you restart the computer. For help, see **"Restart the Computer" on page 73**.

Install a Certificate with Microsoft Edge

Some certificates are posted and made available for download through a device-accessible URL.

1. Type the URL in the Microsoft Edge address bar.
2. Select the certificate. It opens on the CT50.
3. When prompted, select to install the certificate.

Install a Certificate with Email

The Windows 10 Mobile certificate installer supports .cer, .p7b, .pem, and .pfx files.

1. Open the email with the ecrypted certificate file attached.
2. Save the file to the CT50.
3. Select the file to open it and choose install.
4. Type any security information required.

How to Install a Certificate with MDM

Administrators can use Mobile Device Management (MDM) software to add root and CA certificates or configure the CT50 to enroll a client certificate with an enrollment server that supports Simple Certificate Enrollment Protocol (SCEP) used for certificate based client authentication (such as Wi-Fi, VPN, or email). To learn how to install certificates with MDM, go to **https://technet.microsoft.com/en-us/itpro/windows/keep-secure/installing-digital-certificates-on-windows-10-mobile**.

About Bluetooth Communications

The CT50 is Bluetooth-enabled, which lets you connect to other Bluetooth devices. You need to turn on the Bluetooth radio before you can discover and connect to other Bluetooth devices. By default, the radio is turned off.

The Bluetooth radio maintains its current state through a system reset. If you perform a factory data reset, you must recreate pairings to devices.

Connect a Bluetooth Device

To connect to a Bluetooth device, you must enable Bluetooth and then select the device from a list of discovered devices.

Note: If you are attempting to connect to a printer or a headset, the default pin may be 1234 or 0000. If neither of these pin numbers work, consult the device documentation for the pin number.

1. Tap **All Apps** > **Settings** > **Devices** > **Bluetooth**.
2. Touch the toggle to turn on Bluetooth. A list of available Bluetooth devices appears.
3. Tap the name of the device you want to pair with the CT50. As the Bluetooth radio attempts to connect with the device, “Pairing” appears under the name.
4. If the device requires a pin, do one of the following:
   - Compare the pin displayed on both the computer and other device in the Pairing accessory message box. If they match, select **OK**.
   - Enter the pin for the device and then select **Done**.
5. When the devices are paired successfully, “paired” appears under the device name.

Disconnect a Paired Device

You can disconnect a paired Bluetooth device from the Settings app.

1. Tap **All Apps** > **Settings** > **Devices > Bluetooth**.
2. Touch and hold the name of the paired device and then select **Delete**.

About Serial and USB Communications

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

- Vehicle dock
- HomeBase
- Ethernet HomeBase
- USB snap-on adapter
- RS-232 DEX adapter

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

About Near Field Communication (NFC)

NFC technology provides the ability for short-range, wireless data transfer between the CT50 and NFC tags or other NFC enabled devices placed in close proximity to the back of the computer. NFC equipped CT50 models support the following modes of operation:

- **NFC tag reader/writer mode:** The computer reads or writes digital information from or to an NFC tag.
- **Peer-to-Peer (P2P) mode:** The computer uses Android Beam or Bluetooth technology to transfer screen content (such as a picture, contact information, Web page url, or file) between NFC enabled devices.

Note: Sleep Mode (Suspend Mode) and the screen lock temporarily turns the NFC radio off.

7
Manage and Maintain the CT50

Use this chapter to understand how to upload software, perform troubleshooting, and maintain the CT50.

Update the CT50 Software

You can use a microSD card to flash a specific firmware image to the CT50 or to update the computer if there is no access to the internet for over-the-air (OTA) automatic updates. To update the CT50 with a microSD card, you will need a:

- 4GB microSD card.
- valid full flash update image (.ffu) supplied by Customer Support.

Caution: All data on the CT50 is erased during the flash process. Make sure any files you want to keep are backed up prior to updating the software.

1. Copy the .ffu image to the root directory on the microSD card.

   You must rename the update image to "upg_<platform>_00.00.ffu" for the computer to recognize it. <platform> corresponds to the first seven characters of the Configuration Number (CN) and can be found printed on the inside of the battery compartment.
2. Insert the microSD card into the CT50. For help, see **"Insert a microSD Card" on page 20**.
3. Apply external power to the CT50 and power it on.

   The computer must have power for the length of the entire flash process which can take up to 15 minutes.
4. Set up your computer again when you are prompted to select a language.

Test a Network Connection

The Ping app provides a GUI-based version of the traditional command line ping utility. Pinging sends out an echo request to a specific computer on the network. Use Ping to verify communication links or to make sure a specific address is working.

1. Tap **All Apps** > **Ping**.
2. Type the destination IP address in the box.

3 Tap **Ping**. The results appear in the lower half of the screen.

View Network Adapter Information

The IPConfig app displays, releases, and renews IP parameters for on-board network adapters. Use IPConfig to view information on the network adapters including the MAC address, IP address, netmask, gateway, and DHCP settings.

1 Tap **All Apps** > **IPConfig**.

2 From the AdapterInfo screen, touch the box under **Adapter**.

3 Select one of the integrated network adapters installed in the computer from the drop-down menu.

Change How Data Packets are Routed

The Route app allows you to view and edit the rules that govern how packets destined for various subnets are routed. These rules tell the computer which gateways, on a given subnet, may be used to route packets to hosts on other subnets. You can add, delete, clear, or print a route. This procedure explains how to add a route.

1. Tap **All Apps** > **Route**.
2. Type the range of IP addresses to which this rule will apply in the **Destination** and **Netmask** fields.
3. Type the **Gateway**.
4. (Optional) Type the **Metric**.
5. (Optional) Type the **Interface**.
6. Tap **Execute**. The system verifies your results and the Output screen lets you know if your entry was added successfully.

How to Restart the Computer

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

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

- **Restart:** Restarts the computer and goes through the initialization process.
- **Clean boot:** Completely erases the computer memory, including all applications and data files, except those found in any removable storage.
- **Reset to factory settings:** Returns the computer to the factory default state.

Restart the Computer

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

1. Save your files and close any open applications.
2. Press and hold the **Power** button until this screen appears:

3. Swipe down toward the bottom of the screen to power off the CT50. The word “Goodbye” appears on the screen as the computer powers off.
4. Press the **Power** button to turn on the CT50.

If the touch screen is unresponsive:

- Press and hold the **Power** button for approximately 13 seconds. The computer automatically restarts.

Clean Boot the Computer

If reset does not work, use a clean boot to get the computer up and running for further troubleshooting.

When you perform a clean boot, all personal content is erased and all factory default settings are restored on the computer. The clean boot discards any account information you may have added, including your Microsoft account information. Only installed Microsoft over-the-air (OTA) updates persist after you perform a clean boot.

Caution: A clean boot erases the memory on the computer, including all applications and data files with the exception of the information found in any removable storage. You must reimplement any custom provisioning after a clean boot.

1. Tap **All Apps** > **Settings** > **System > About**.
2. Scroll to the bottom of the screen and tap **Reset your phone**.
3. When the warning appears, select the check boxes you want to apply and then tap **Yes**.
4. When prompted again, tap **Yes**. You should see “goodbye” appear on the screen and then a set of gears with a status bar below until the computer turns off.
5. Press the **Power** button to turn on the CT50. You will need to set up your computer again.

Reset the Computer to Factory Default State

If the computer is unresponsive and all other recovery methods have failed, you probably need to reset the computer to the factory default state.

When you reset the computer to the factory default state, all personal content is erased and all factory default settings are restored on the computer. The reset discards any account information you may have added, including your Microsoft account information. Only installed Microsoft over-the-air (OTA) updates persist after you perform a reset.

Caution: Resetting the computer to the factory default state erases the memory on the computer, including all applications and data files with the exception of the information found in any removable storage. You must reimplement any custom provisioning after resetting the computer to the factory default state.

1. Press and hold the **Volume Down** and **Power** buttons simultaneously until a large exclamation point appears on the screen.

   This process can take quite a while, but continue to hold down on the two buttons until you see the exclamation point.
2. Press the following buttons in this order:
   a. **Volume Up**
   b. **Volume Down**
   c. **Power**
   d. **Volume Down**

   Once the computer resets, the language selection screen appears. You need to set up the computer again.

Clean the Computer

To keep the computer in good working order, you may need to clean the scanner window, color camera window, and the touch screen. Clean the windows and the touch screen as often as needed for the environment in which you are using the computer. To clean the computer, use one of these recommended cleaning agents:

- Acetic acid, 10% in water
- Ethyl alcohol, 10% in water
- Mild soap solutions

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

Note: Honeywell recommends that you must leave the battery installed when you clean the computer. Leaving the battery installed helps prevent fluids from entering the computer through the SIM card and microSD card connectors.

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

A
Specifications

Physical and Environmental Specifications

This section lists the physical and environmental specifications for the CT50.

Physical Dimensions

Length:	160 mm (6.30 in)
Width:	82.5 mm (3.25 in)
Depth:	19 mm (0.75 in) (without handstrap) 22.6 mm (0.89 in) (with handstrap)
Weight:	342 g (1.13 lbs) (including battery)

Tumble and Drop Specifications

Tumble specification:	1000 1 m tumbles
Drop specification:	5 ft multiple drops to unyielding steel plate, -10 °C to 50 °C (14 °F to 122 °F) temperature range and 4 ft drop at -20 ° C (-4 °F)

Power and Electrical Specifications

Operating battery:	Rechargeable Lithium-ion 3.9 V, 4000 mAh battery
Electrical rating:	5 V, 2 A

Temperature and Humidity Specifications

Operating temperature:	-20 °C to 50 °C (-4 °F to 122 °F)
Storage temperature:	-30 °C to 70 °C (-22 °F to 158 °F) For maximum battery life, store at 23 °C (73 °F) at 50% charge.
Relative humidity (operating):	0% to 95% non-condensing
Environmental rating:	IP67, Category 1

CT50 Non-Incendive Computer Specifications

The CT50 mobile computers with non-incendive (NI) certification comply with the following specifications for North America and Canada regions only.

Location	Suitable for use in Division 2 locations
Safety	SGS Listing - ISA/ANSI 12.12.01, CAN/CSA C22.2 No 213-15
Gases	Class I - Groups A. B. C, D
Dusts	Class II - Groups E, F. G
Fibers and Flyings	Class III
Maximum Ambient Temperature	T4A rating for ambient temperature range -20°C to 50°C.

Screen Specifications

4.66-inch TFT color LCD with backlight, 720-pixel HD, outdoor viewable touch screen.

Language Support

World-wide English, French, German, Italian, Spanish, Simplified Chinese, Traditional Chinese.

Bar Code Symbologies Supported

The CT50 supports these bar code symbologies:

1D Symbologies

- China Post
- Codabar
- Code 11
- Code 128
- Code 32
- Code 39
- Code 39 with Full ASCII
- Code 93
- EAN-8
- EAN-8 with 2 Digit Addenda
- EAN-8 with 5 Digit Addenda
- EAN-13

- EAN-13 with 2 Digit Addenda
- EAN-13 with 5 Digit Addenda
- GS1-128
- Korea Post
- IATA 2 of 5
- Industrial 2 of 5
- Interleaved 2 of 5
- ISBN
- ISBN with 5 Digit Addenda
- ISBT 128
- Matrix 2 of 5
- MSI
- EAN.RCC (RSS-14)
- RSS Limited
- RSS Expanded
- Telepen
- Trioptic Code
- UPC-A
- UPC-A with 2 Digit Addenda
- UPC-A with 5 Digit Addenda
- UPC-E0
- UPC-E with 2 Digit Addenda
- UPC-E with 5 Digit Addenda
- UPC-A (Coupon Code)

2D Symbologies

- Aztec Code
- Codablock A
- Codablock F
- DataMatrix
- HanXin
- Maxicode
- Micro PDF 417

- MicroQr
- PDF 417
- QR Code
- TLC39
- OCR-A
- OCR-B

Postal Codes

- Australian Post
- Canadian Post
- KIX (Netherlands Dutch) Post
- Japanese Post
- British Post
- Planet Code
- Postnet
- UsIntelligent

Imager Reading Distances

The guaranteed depth of field measurements were taken using these parameters:

- Distances are measured from the front of the engine.
- 23 °C (73 °F), 0 lux
- Photographic quality codes

Note: Time to Read and Depth of Field are impacted if the bar code symbol is at the edge of the image.

White Illumination Monochrome Sensor Only - Guaranteed Specs

Focus	Standard Range (SR		
Symbology	**Near Distance (in/cm)**	**Far Distance (in/cm)**	**Delta (in/cm)**
5 mil Code 39/128	3.6 (9.1)	5.6 (14.2)	2.0 (5.1)
10 mil Code 39/128	1.9 (4.8)	12.0 (30.5)	10.1 (25.6)
100% UPC	2.1 (5.3)	15.1 (38.1)	12.9 (32.7)
6.7 mil PDF 417	2.5 (6.4)	6.6 (16.7)	4.1 (10.4)

White Illumination Monochrome Sensor Only - Guaranteed Specs

Focus	Standard Range (SR		
Symbology	**Near Distance (in/cm)**	**Far Distance (in/cm)**	**Delta (in/cm)**
10 mil DataMatrix/Aztec	2.9 (7.4)	7.3 (18.5)	4.4 (11.1)

White Illumination Monochrome Sensor Only - Typical Specs

Focus	Standard Range (SR		
Symbology	**Near Distance (in/cm)**	**Far Distance (in/cm)**	**Delta (in/cm)**
5 mil Code 39/128	2.5 (6.4)	6.4 (16.3)	3.9 (9.9)
10 mil Code 39/128	1.1 (2.8)	13.0 (33.0)	11.9 (30.2)
100% UPC	1.8 (4.6)	16.5 (41.9)	14.7 (37.3)
6.7 mil PDF 417	1.8 (4.6)	7.3 (18.5)	5.5 (14.0)
10 mil DataMatrix/Aztec	2.1 (5.3)	8.0 (20.3)	5.9 (15.0)

Honeywell

www.honeywellaidc.com

Dolphin CT50 Mobile Computer with Windows 10 IoT Mobile Enterprise User Guide

P/N CT50-W10-EN-UG-AG Rev (c)