



Image Kiosk 8560/8570 with Microsoft® Windows® CE 5.0



User's Guide

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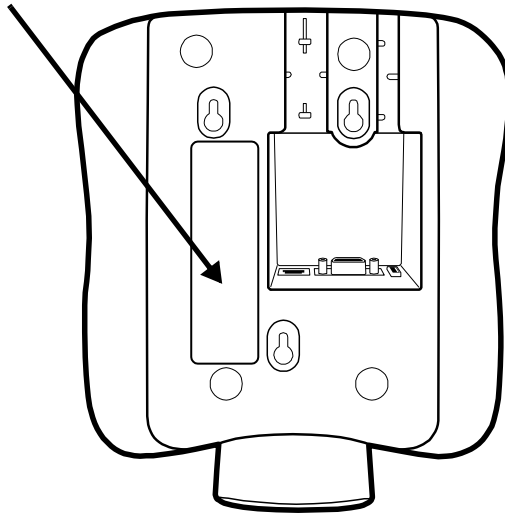
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Overview

Image Kiosks meet or exceed the requirements of all applicable standards organizations for safe operation. However, as with any electrical equipment, the best way to ensure safe operation is to operate them according to the agency guidelines that follow. Please read these guidelines carefully before using your Image Kiosk.

Compliance Label Location



Regulatory and Safety Approvals for all Image Kiosks

Parameter	Specification
U.S.A.	FCC Part 15, Class A
Canada	ICES-003
European Community	EN 55022 (CISPR 22) Class A; 1998 +A1:2000; +A2:2003 EN60950 EN60825-1 EN55024:1998; +A1:2000; +A2:2003



The CE Mark on the product indicates that the system has been tested to and conforms with the provisions noted within the 89/336/EEC Electromagnetic Compatibility Directive and the 73/23/EEC Low Voltage Directive.

For further information, please contact:

Hand Held Products, Inc.
Nijverheidsweg 9
5627 BT Eindhoven
The Netherlands

Hand Held Products, Inc. shall not be liable for use of our product with equipment (i.e., power supplies, personal computers, etc.) that is not CE marked and does not comply with the Low Voltage Directive.

UL and cUL Statement

UL and cUL listed: UL60950-1 and CSA C22.2 No. 60950-1-03.

FCC Compliance

Image Kiosk comply with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Image Kiosks With an 802.11b Radio

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio frequencies. However, there is no guarantee that interference will not occur in a particular installation. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

In accordance with FCC 15.21, changes or modifications not expressly approved by Hand Held Products, Inc. may void the FCC authorization to operate the equipment.



This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. To maintain compliance with FCC RF exposure guidelines, use only the accessories specified by the manufacturer.


Canadian Compliance for Image Kiosks With an 802.11b Radio

This Class A digital apparatus complies with Canadian ICES-003. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.


Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

Mexico

Safety	Radio
	COFETEL

RF, Regulatory, and Safety Agency Approvals for 802.11b

Parameter	Specification
U.S.A.	FCC Part 15-247
Canada	RSS 210, RSS GEN
Europe	EN300328-1, V.1.6.1:2004-11 EN301489-1, V.1.6.1:2005-09 EN301489-17, V.1.2.1:2002-08

This product is marked with **CE 1317**  in accordance with the Class II product requirements specified in the R&TTE Directive, 1999/5/EC.

The equipment is intended for use throughout the European Community. PAN European Frequency Range: 2.402–2.480 GHz
Restrictions in France are as follows:

- Indoor use: Maximum power (EIRP*) of 100 mW for the entire 2.400–2.4835 GHz

-
- Outdoor use: Maximum power (EIRP*) of 100 mW for the 2.400–2.454 GHz band and maximum power (EIRP*) of 10 mW for the 2.454–2.483 GHz band

Pacemakers, Hearing Aids and Other Electrically Powered Devices

Most manufacturers of medical devices adhere to the IEC 601-1-2 standard. This standard requires devices to operate properly in an EM Field with a strength of 3V/m over a frequency range of 26 to 1000MHz.

The maximum allowable field strength emitted by Image Kiosks is 0.3V/m according to Subpart B of Part 1 of the FCC rules. Therefore, the Image Kiosks RF has no effect on medical devices that meet the IEC specification.

Microwaves

The radio in the RF Image Kiosks operates on the same frequency band as a microwave oven. Therefore, if you use a microwave within range of the RF Image Kiosks you may notice performance degradation in your wireless network. However, both your microwave and your wireless network will continue to function.

Bath Image Kiosks do not contain a radio, and therefore, is not affected by microwave ovens.

For European Community Users

Hand Held Products complies with Directive 2002/69/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment (WEEE).

Waste Electrical and Electronic Equipment Information

This product has required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment, if not properly disposed.

In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems for product disposal. Those systems will reuse or recycle most of the materials of the product you are disposing in a sound way.



The crossed out wheeled bin symbol informs you that the product should not be disposed of along with municipal waste and invites you to use the appropriate separate take-back systems for product disposal.

If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You may also contact your supplier for more information on the environmental performances of this product.



Image Kiosk Models

Model Number	Description
IK8560CE	An Image Kiosk with an on-board 802.11b radio and no ethernet connection
IK8560CEUE	The same as the IK8560CE with European RF frequencies pre-programmed into the 802.11b radio.
IK8560EE	An Image Kiosk with a wired Ethernet connection and no radio.
IK8570E	An Image Kiosk with an on-board 802.11b radio, wired Ethernet connection, mag stripe reader, and additional memory.
IK8570EUE	The same as the IK8570E with European RF frequencies pre-programmed into the 802.11b radio.

Image Kiosk Features

Here is a list of the standard features for Image Kiosks:

- Microsoft Windows CE 5.0 operating system
- Intel® XScale PXA 255 200MHz processor
- 5.7 in. 320 X 240 landscape color display
- Touch screen and protective overlay
- Support for RS-232, RS-485, USB, and powered USB interfaces
- USB host communications port
- Adaptus Imaging Technology
- Beeper
- IK8560 Models: 32MB Flash ROM X 64MB SDRAM of on-board memory
- IK8570 Models: 64MB Flash ROM X 64MB SDRAM of on-board memory
- IK8560EE, IK8570E, & IK8570EUE: 100Base-TX/10Base-T Ethernet Port
- IK8560CE, IK8560CEUE, IK8570E, & IK8570EUE: 802.11b wireless radio

Connect the Power and Communication Cables

The Image Kiosks have a number of power and communication cables. Use one to apply power to the device.

For more information, see [Connecting the Power and Communication Cables](#) on page 3-4.

Boot the Image Kiosk

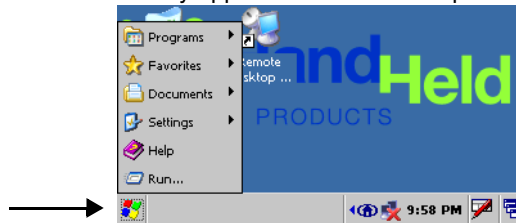
1. The Image Kiosk begins booting as soon as power is applied from the cable.
2. The splash screen appears as the system cold boots (see [Cold Boot](#) on page 3-7). The software version numbers for both the bootloader and the kernel appear on the splash screen.
3. The device begins loading software; this is Autoinstall. A status bar appears for each program that loads. Do NOT interrupt Autoinstall!
4. Autoinstall completes and the splash screen appears again as the system warm boots (see [Warm Boot](#) on page 3-7).
5. The warm boot completes on the [Desktop](#) (see page 2-2).

Desktop











Command Bar

The command bar is located at the bottom of every application window and provides access to the Start menu.



Task Tray Icons

Icon	Description
	Opens the Start menu.
	The communication cable is connected. Double-tapping this icon displays the cable type and connection status. <div data-bbox="865 1247 1122 1402" style="float: right; border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>USB Cable Status [X]</p> <p>Connected</p> <p>Hide this message: <input type="button" value="Hide"/> <input type="button" value="Disconnect"/></p> </div>
	Wired ethernet cable is not connected.
	Wired ethernet cable is connected.
	802.11b radio is not connected
	802.11b radio is connected.
	Displays the Soft Input Panel (SIP); see page 2-3.
	Tapping this button returns you to the Desktop. The pop-up menu that appears will also show two programs or windows currently open. <div data-bbox="927 1772 1333 1843" style="float: right; border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Internet Explorer</p> <p>Desktop</p> </div>

Setting the Time and Date

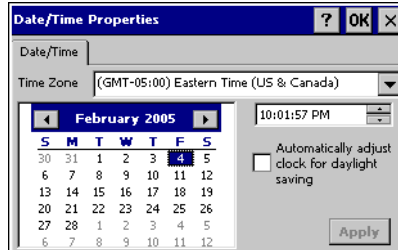
After the device boots up, set the time and date to set the system clock to real-time.



Double-tap the time on the taskbar

OR


Tap **Start > Control Panel > Date/Time**.

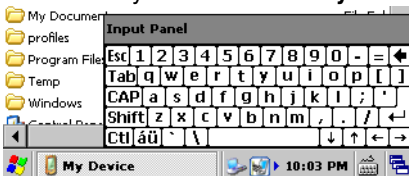


The date and time saved here sets the system clock. Any scheduled function runs off the system clock.


Using the Soft Input Panel (SIP)

The SIP is a soft keyboard that enters text into fields and screens. The SIP pops up automatically over certain screens that require text entry. You can also manually open the SIP when needed.

To open the SIP, tap the **Input Panel** icon in the task tray  and select **Keyboard** on the pop-up menu.

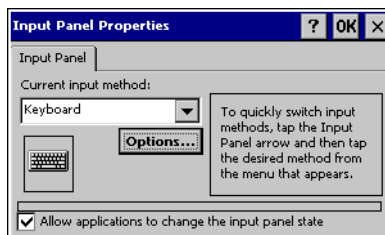



On the soft keyboard that displays, tap the character keys to enter them on the screen.

To close the SIP, tap the **Input Panel** icon again  and select **Hide Input Panel**.

SIP Settings

You can adjust SIP panel settings by tapping **Start > Settings > Control Panel > Input Panel**.



Allow applications to change the input panel state is selected by default and makes the SIP appear automatically in applications when text needs to be typed. If you de-select this option, you must manually tap the **SIP** button  every time you want to use the SIP.

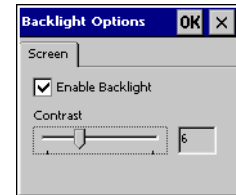
Adjusting the Backlight

Tap **Start > Settings > Control Panel > Display > Backlight** tab > **Advanced**. The Backlight Options window opens.

The backlight is on by default (and enabled after each re-boot).

To turn off the backlight, de-select the **Enable Backlight** option. Because the screen goes completely dark, the best way to enable the backlight again is to power cycle, which re-boots the unit. While the screen is dark, the Enable Backlight option is still there but can't be seen to be selected accurately.

Note: We do not recommended turning off the backlight, except for test purposes.



Adjusting the Contrast

On the Backlight Options window, use the **Contrast** slider to adjust the contrast.

Using Windows Explorer

You can access Windows Explorer by

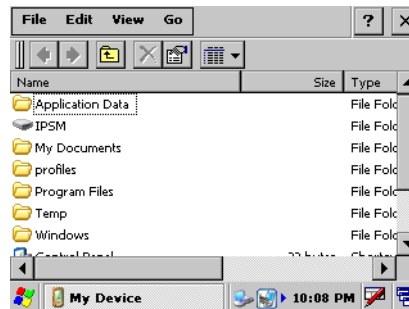
Double-tapping the **My Device** icon on the Desktop



OR

Tapping **Start > Windows Explorer**.

Windows Explorer opens to the root folder level.



Use Windows Explorer to find and move files.

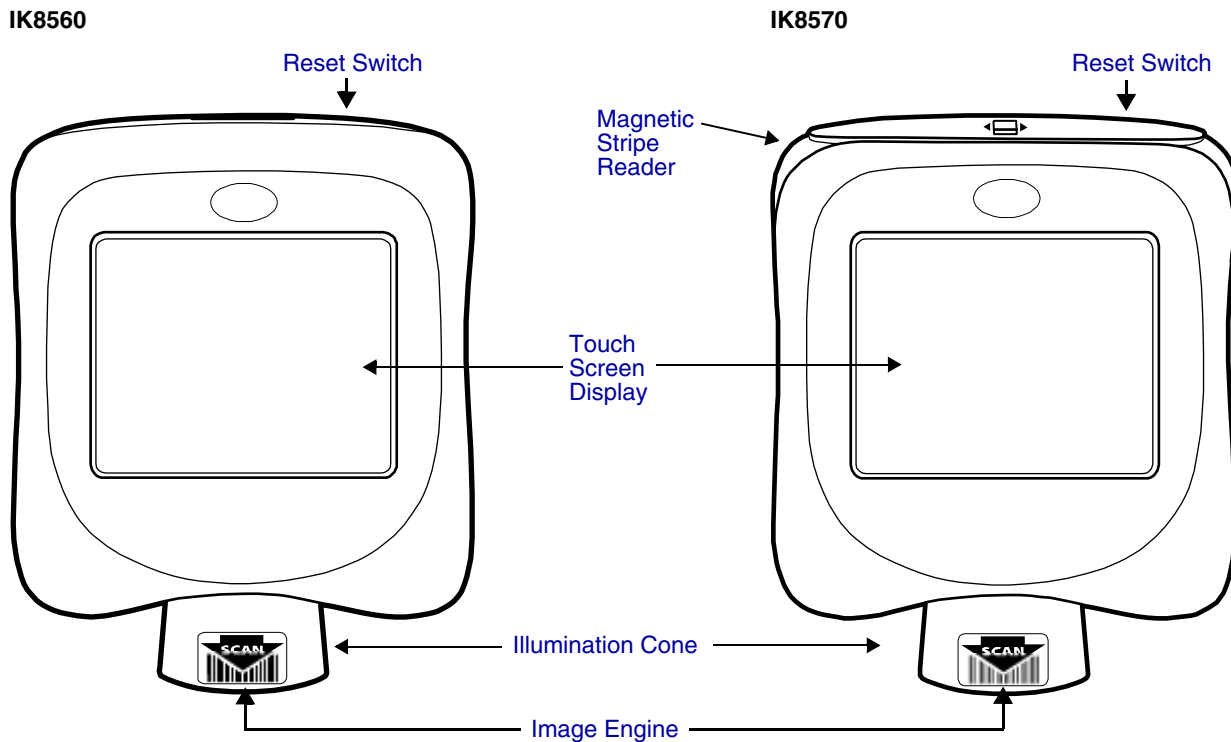
Selecting Text

To edit or format typed text, select it by dragging your finger across the text. Tap and hold the selection, then use the commands on the pop-up menu to cut, copy, and paste the selected text.

Selecting Programs

To launch a program, tap **Start > Programs** and select a program from the list.

Front Panel



Reset Switch

This switch cold boots the kiosk without having to power cycle (remove and reapply power). For details, see [Using the Reset Switch](#) on page 3-7.

Magnetic Stripe Reader

The magnetic stripe reader is on IK8570E and IK8570EUE devices. For more details, see [Using the Magnetic Stripe Reader](#) on page 3-8.

Touch Screen Display

The device features a 5.7" QVGA transmissive LCD color display that is backlit for maximum viewability, then covered with an industrial touch screen protector for maximum durability. The touch screen resolution is 903 x 1238 points per inch (PPI). For touch screen input, use your finger.



Use of objects, such as paper clips, pencils, or ink pens on the touch screen can damage the input panel and will void the warranty.

Screen Protectors—Hand Held Products requires screen protectors to protect the touch screen; especially when used with applications that require high-volume interfacing with the touch screen. Screen protectors help prevent damage to the touch screen display and are easily installed. Screen protectors can be purchased directly from Hand Held Products (p/n 10000583). You can replace the touch screen protector; see [Screen Protector Replacement](#) on page 3-10.

Beeper

The internal beeper generates a tone for successful decoding.

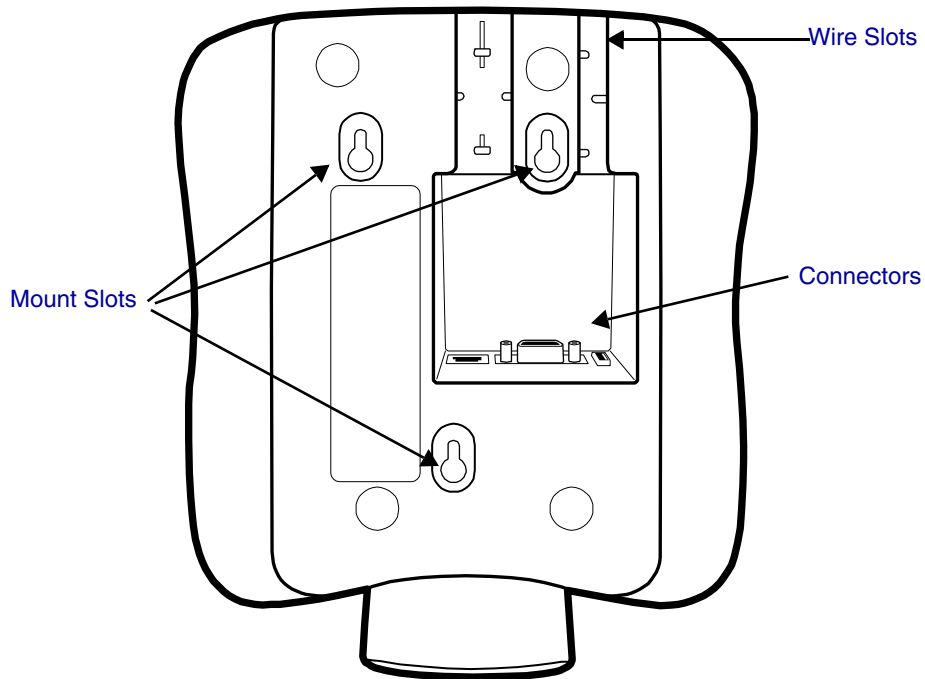
Illumination Cone

Projecting downward from the front panel, the image engine cone houses the image engine. Slide the bar code underneath this slot to scan a bar code or take an image. See [Scanning a Bar Code](#) on page 6-2.

Image Engine

The red illumination LEDs project out from the image engine at all times. For more information about imaging, see [Imaging](#) on page 6-1.

Back Panel



Wire Slots

These two slots are designed to hold the wires of the connecting cables.

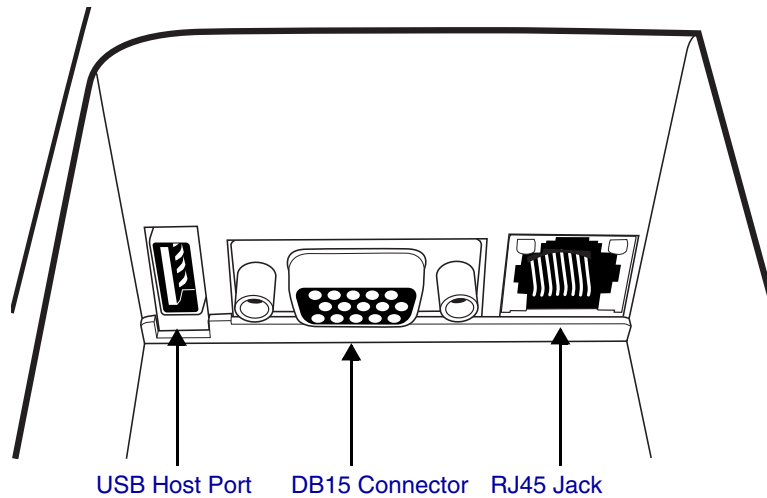
Connectors

There are three connectors in a slot inside the back panel; see [Connectors](#) on page 3-3.

Mount Slots

The back panel is designed for easy mounting, either to a wall or stand. Use these slots to mount Image Kiosks to a flat surface or bracket. For mounting specifications, see [Mounting](#) on page 7-1.

Connectors



USB Host Port

The USB Host port features a 5V DC power pass-through and can host supported USB client devices. Multiple USB devices can be accommodated by plugging a USB HUB into the USB Host port. This is a four-pin connector and supports USB 1.1 communication. USB 2.0 devices that are backwards compatible with USB 1.1 may be connected to this port but will operate at USB 1.1 speeds.

For more information, see [USB Host Port](#) on page 4-10.

DB15 Connector

This is a single 15-pin, D-style, high-density female connector. All power cables have a connector that matches this pin configuration. This connector powers the device (by receiving power from the cable) and communicates with a host workstation using ActiveSync (USB only).

For more information, see [Microsoft ActiveSync](#) on page 4-2.

RJ45 Jack

IK8560EE, IK8570E, & IK8570EUE—A 100Base-TX/10Base-T communications port that supports wired ethernet communication with a standard RJ45 ethernet cable. Cable must be purchased separately. You cannot power the device through the ethernet cable. For more information, see [Wired Ethernet Communication—IK8560EE, IK8570E, & IK8570EUE](#) on page 4-8.

IK8560CE & IK8560CEUE—The RJ45 Jack on these models is not functional. Only the IK8560EE, IK8570E, and IK8570EUE contain the functional ethernet controller that allows for ethernet communication.

Connecting the Power and Communication Cables

The Image Kiosks have standard power cables that connect to a number of communication cables to suit your environment.

Standard Power Cable

The standard power cable powers the device and with an AC power adapter to convert the voltage from the power source to the voltage required by the device. Image Kiosks must be connected to external power to run.

Communication Cables

The Image Kiosks offer the following communication options:

- USB Cable (four feet)
- Standard RS-232 Cable (12 feet)
- RS-232 Pass-Through (Y cable)

Note: You can verify the status of the USB communication cable by the icon in the task tray; see [Task Tray Icons](#) on page 2-2.

USB Cable

The USB communication cable (p/n 42206398-01E) supports USB 1.1. You can connect USB 2.0 devices that are backwards compatible with USB 1.1 with this cable but data transfer will occur 1.1 speeds.

This cable features a single, 15-pin male connector that plugs into the DB15-pin female port on the back panel. The other end features a standard Type A USB (1.1 or higher) connector designed to fit standard USB ports.

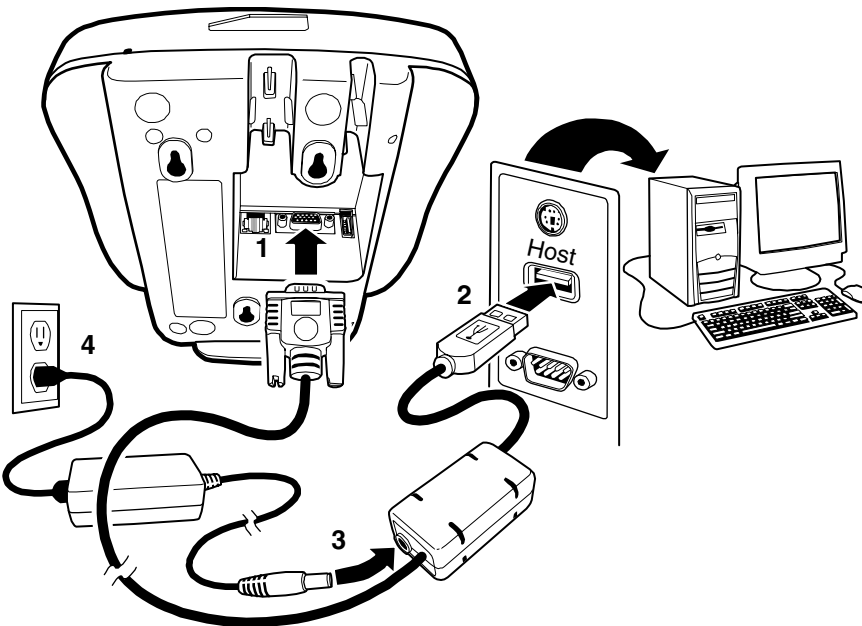
Note: Make sure the power switch is turned off on the computer where you will be installing the Image Kiosk.

1. Plug the 15-pin connector (HDB15) of the communication cable into the back of the Image Kiosk.
2. Plug the USB connector into the port on your host workstation.
3. Plug the power plug into the pod on the communication cable.
4. Plug the AC power supply into a power outlet.

Hardware installation is now complete. Your Image Kiosk powers on and auto-configures to USB.

When you power on the host workstation, you need to complete the Found New Hardware wizard and install the Image Kiosk driver to configure the workstation for ActiveSync communication; see [Microsoft ActiveSync](#) on page 4-2.

If you want to power the device without communicating, simply disconnect the USB connector from the host workstation.



Standard RS-232 Cable

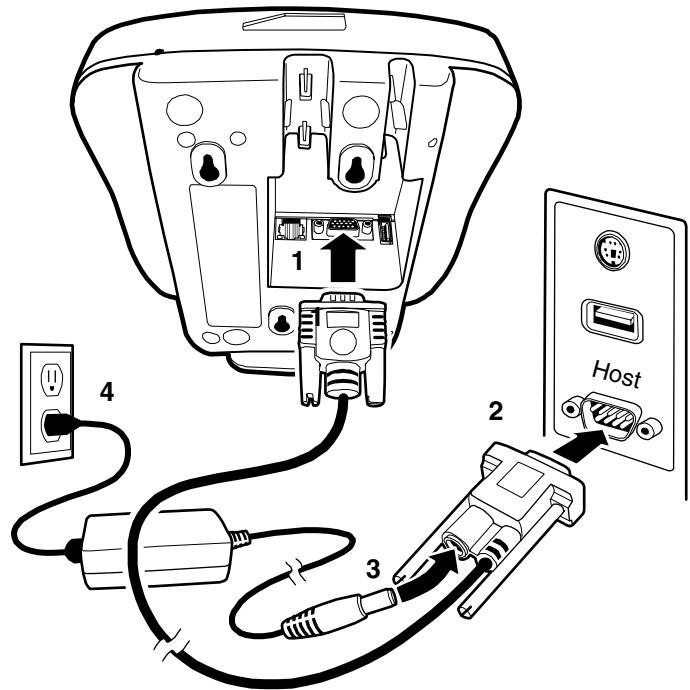
The standard RS-232 cable is 12 feet long and can connect to multiple devices but does not support ActiveSync communication.

Note: Make sure the power switch is turned off on the device where you will be installing the Image Kiosk.

1. Plug the 15-pin connector (HDB15) of the serial cable into the back panel.
2. Plug the 9-pin connector (DB9) of the serial cable into an available serial port on the device.
3. Plug the male connector of the AC power supply cable into the socket on the back of the DB9-pin serial cable connector, which is plugged into the back of your host device.
4. Plug the AC power supply into a power outlet.

Installation is now complete. Your Image Kiosk powers on and auto-configures to RS-232. You may now turn on your host device.

Note: If your computer has a 25-pin serial port, you will need to obtain a 25-pin to 9-pin adapter from your local computer store or other source.



RS-232 Pass-Through Cable

The RS-232 pass-through cable uses a Y cable with AC power adapter.

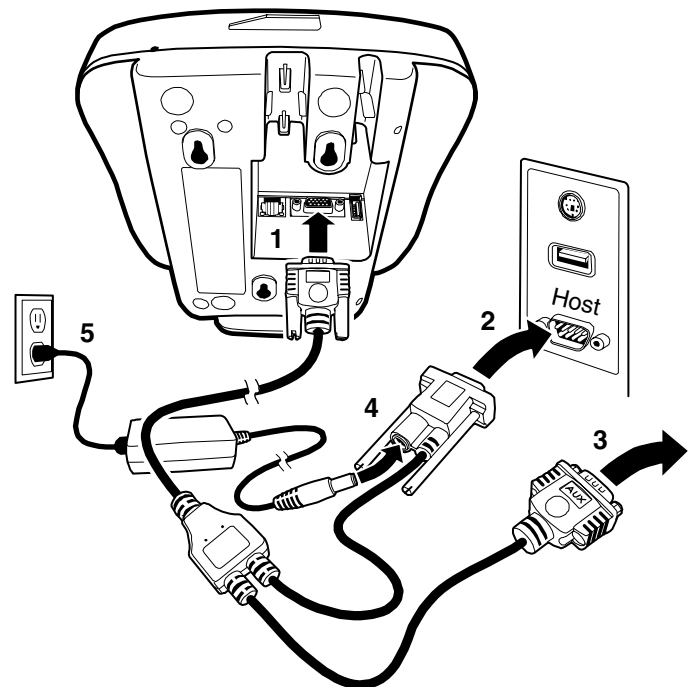
Note: Make sure the power switch is turned off on the device where you will be installing the Image Kiosk.

1. Plug the 15-pin connector (HDB15) of the serial cable into the back panel.
2. Plug the Host DB9 connector into the other RS-232 device (e.g., a label printer).
3. Plug the Aux DB9 connector into your host workstation (may need a 9-pin serial female-to-female "gender bender" to make this connect).
4. Plug the male connector of the AC power adapter cable into the socket on the back of the DB9-pin serial cable connector, which is plugged into the back of your host device.
5. Plug the AC power supply into a power outlet.

Note: The Aux connector is useful for upgrading the firmware on your unit when USB is not available.

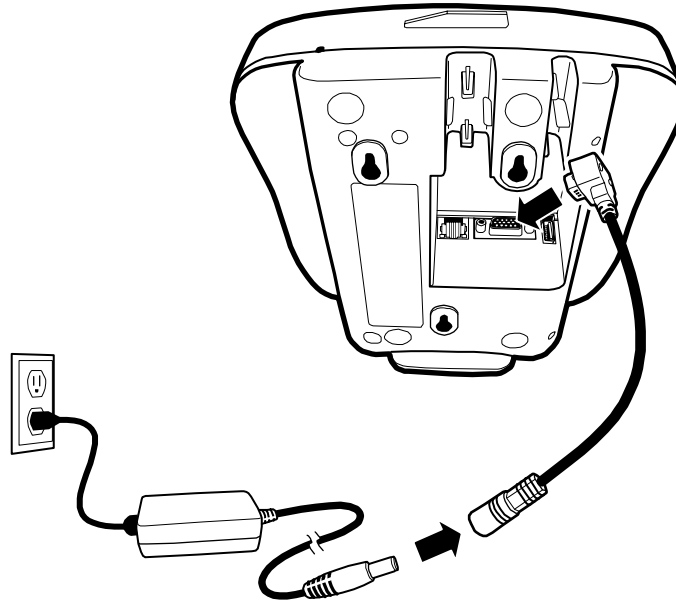
4. Plug the male connector of the AC power adapter cable into the socket on the back of the DB9-pin serial cable connector, which is plugged into the back of your host device.
5. Plug the AC power supply into a power outlet.

Installation is now complete. Your Image Kiosk powers on and auto-configures to RS-232. You may now turn on your host device.



Power Cable

There is a six-inch L connector power-only cable you can use to power the all Image Kiosks.



This cable would be ideal for the models IK8560CE and IK8560CEUE that only have a radio.

Rebooting the Device

There are three types of reboots: a warm boot, a cold boot, and a hard boot.

Warm Boot

A warm boot reboots the device without erasing data and applications stored in RAM memory. To launch a warm boot, tap **Start > Programs > Power Tools > Reboot > Warm Boot**.

Cold Boot

A cold boot reboots the device, erases some data and applications stored in RAM memory, and re-installs the CAB files stored in the Autoinstall folder.

To launch a cold boot,

- Tap **Start > Programs > Power Tools > Reboot > Cold Boot**.
- Use the reset switch; see [Using the Reset Switch](#) on page 3-7.

Hard Boot

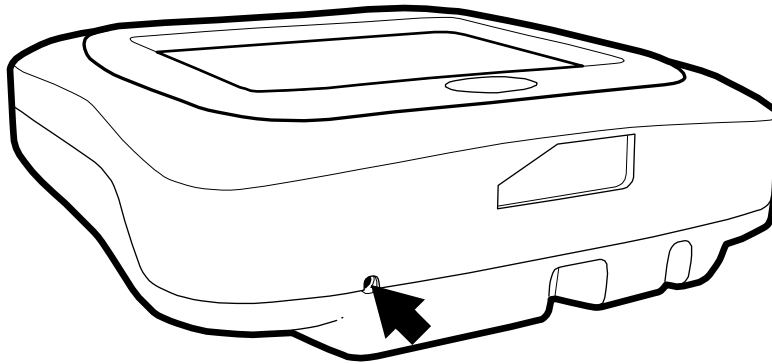
A hard boot reboots the device, erases all contents of RAM memory, and re-installs the CAB files stored in the Autoinstall folder.

To launch a hard boot, power cycle the unit (remove and reapply AC power).

Using the Reset Switch

The reset switch appears in the same place on all Image Kiosks and allows you to cold boot the device *without* having to remove and reapply AC power.

Use the end of a straightened paper clip to push the reset switch on the top panel. The unit begins cold booting immediately.



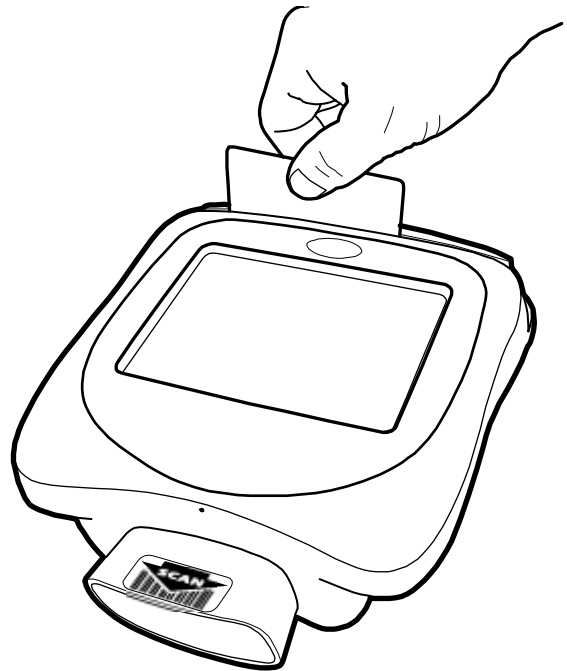
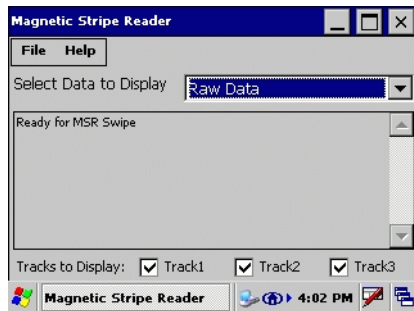
Using the Magnetic Stripe Reader

All IK8570 devices contain a magnetic stripe reader (MSR). To use the MSR, you must have an application installed on the Image Kiosk that can read and process data from a magnetic stripe.

Fortunately, all Image Kiosks contain an MSR Demo that demonstrates some of the capabilities of the MSR.

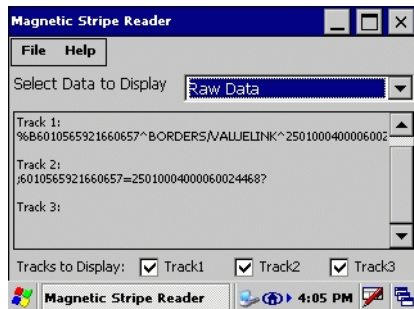
Swiping a Card With the MSR Demo

1. Tap **Start > Programs > Demos > double-tap MSR Demo** 



Note: The display area should read “Ready for MSR Swipe.”

2. Make sure that the magnetic strip is facing down, towards the touch screen display.
3. Slide the card from left to right or right to left as shown on the right.
4. MSR Demo reads the card, beeps, and displays the data according to the options selected; see [MSR Demo Options](#) on page 3-9.



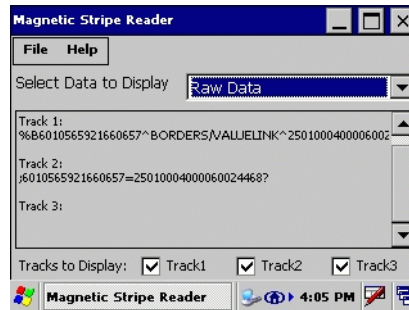
5. You can swipe the card again and the new data will display. (Scroll up to see the data from the prior swipe.)
6. You can continue to swipe cards and read the data.
To clear all prior card reads, tap **File > Clear**.
7. To close the MSR Demo, tap **File > Exit**.

MSR Demo Options

The MSR Demo main window offers many data display options.

Raw Data

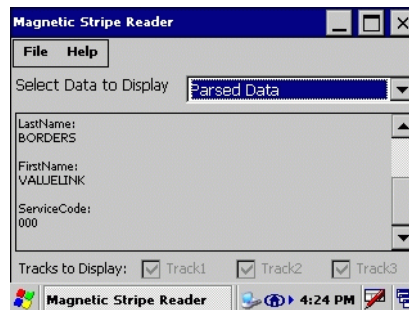
When you select Raw Data from the Select Data to Display drop-down list, all the data from Tracks 1, 2, and 3 of the card display.



If you don't want to see information from one or more of the tracks, de-select it, then swipe the card again. Tracks 1, 2, and 3 are active only when Raw Data is selected.

Parsed Data

When you select Parsed Data from the Select Data to Display drop-down list, parsed data from the card displays.



Not all MSR cards contain parsed data. If the data on the card is not parsed, the display area reads "PARSED DATA NOT AVAILABLE FOR THIS CARD" after you swipe the card.



Screen Protector Replacement

Screen protectors for Image Kiosks can be purchased at any major computer retail store or directly from Hand Held Products (p/n 100000583).

1. To remove the old screen protector frame, insert a straightened paper clip into the small hole in the front of the Image Kiosk. This releases the protector frame which can now be lifted off.



2. Clean any smudges or dirt from the Image Kiosk touch screen using glass cleaner or water. Wipe the surface dry.
3. Remove the protective film from the back of the new screen protector.



4. Line up the holes in the protector with the pins on the Image Kiosk screen.



-
5. Use a tissue or soft cloth to wipe the front of the screen protector. (This makes the protector lie flat.)



6. Place the protector frame back in place and press down until it snaps shut.



Maintenance

To clean your Image Kiosk, use a soft cotton cloth lightly dampened with isopropyl alcohol. This removes any ink, fingerprint smudges, or dirt.

Image Kiosk Technical Specifications

System Architecture	
Processor	Intel XScale PXA255 200 Mhz
Operating Platform	Microsoft Windows CE 5.0
Memory	IK8560 Models: 32MB Flash ROM X 64MB SDRAM of on-board memory IK8570 Models: 64MB Flash ROM X 64MB SDRAM of on-board memory
Development Environment	Image Kiosk .NET SDK for Visual Studio 2005. Setup supports C++, C#.NET, and VB.net development Image Kiosk SDK for eMbedded Visual C++. Setup supports C/C++ development
Third Party Software	Hand Held Products MSM, ITScriptNet [®] , Connect
Graphics Supported	BMP, CGM, DIB, EPS, MF, PCL, PCX, PLS, JPG, and TIF
Data Inputs	
Imager/Scanner	5100 Standard Range (SR) with LED aimer decodes from 2.1 in. to 13.2 in. (5.3cm to 33.5cm) for 30 mil UPC
Symbologies Supported	See Supported Bar Code Symbologies on page 6-1.
Data Outputs	
Display Window	Resistive, transparent, pressure-sensitive touch screen
LCD Size	5.7 in. (14.5 cm) 1/4 VGA
LCD Active Area	4.5 x 3.3 in. (11.3 x 8.4 cm) (Active area)
LCD Resolution	320 x 240 dot, 16-bit color
Touch Pad Resolution	903 x 1238 ppi
Communications	
RS-232	4800 to 115.2 Kbps
RS-232 Pass-Through	Using Aux. Y cable with AC power adapter
PC USB	AC power adapter required
USB Hub Host	5V DC power pass-through support for USB 1.1 for up to 10 devices USB 2.0 devices that are backwards-compatible with 1.1 can be used but will operate at 1.1 speeds.
Ethernet 100Base-TX/ 10Base-T	IK8560EE, IK8570E, & IK8570EUE models. Cable not supplied.

Image Kiosk Technical Specifications

WLAN	IK8560CE, IK8560CEUE, IK8570E, & IK8570EUE models. IEEE 802.11b DSSS Authentication Methodologies: Open communication, WEP (64 and 128 bit), WPA (PSK, TTLS PAP), LEAP, PEAP
Beeper	Programmable
Physical	
Width	7.3 in. (18.5 cm)
Depth	3.2 in. (8.1 cm)
Height	8.7 in (22.1 cm), including cone
Weight	2 lb. (.9 kg)
Operating/Storage Temperature	0° to 40°C (32° to 104° F)
Power Requirements	
Current Draw	IK8560EE (non-RF): 800mA @ 12V DC IK8560CE & IK8560CEUE (RF): 860mA @ 12V DC IK8570E & IK8570EUE: 870 mA @ 12 Volts DC
Source	120V (NA) or 230V (EU) AC adapter or powered host terminal port
Approvals and Certifications	
Agency Conformance	FCC Class A, CE (LVD), UL 1950, CSA 22.2



Communication Options

There are a number of communications options.

Microsoft ActiveSync

The USB communication cable supports Microsoft ActiveSync communication. For more information, see [Microsoft ActiveSync](#) on page 4-2.

Wired Ethernet—IK8560EE, IK8570E, & IK8570EUE

These Image Kiosks contain an ethernet port on the back panel that connects the device to an ethernet network via standard RJ45 cable. For information, see [Wired Ethernet Communication—IK8560EE, IK8570E, & IK8570EUE](#) on page 4-8.

USB Host Port

The USB host port on the back panel enables you to configure the Image Kiosks as a USB host connected to other USB devices. For more information, see [USB Host Port](#) on page 4-10.

802.11b Radio—IK8560CE, IK8560CEUE, IK8570E, & IK8570EUE

These Image Kiosks contain an on-board 802.11b radio that establishes the device on a wireless network. For information, see [Wireless LAN with 802.11b](#) on page 5-1.

Installing Additional Software

You can install additional programs on the Image Kiosks through most of the communication options. However, the following requirements must be met:

- The program must be created specifically for a Windows CE 5.0 device running an Intel XScale processor.
- The program must have an EXE, CAB, or DLL extension.
- The device must have enough memory to store the program. To check memory allocation and usage, tap **Start > Settings > Control Panel > System > Memory** tab

For more information,

- See [Adding Programs Using ActiveSync](#) on page 4-6.
- See [Adding Programs from a Network](#) on page 4-9.

Microsoft ActiveSync

Microsoft ActiveSync connects the device to a host workstation, which enables you to

- Transfer files,
- Install additional programs, and
- Synchronize information between the workstation and the device.

Requirements

Using ActiveSync with Image Kiosks requires the following:

1. A USB communication cable connecting the host workstation and the Image Kiosk; see [USB Cable](#) on page 3-4.
2. The **IK8560.inf** driver and **wceusbsh.sys** file installed in the Windows\System32 directory of the host workstation; see [Establishing the ActiveSync Connection](#) on page 4-2.
3. ActiveSync version 4.1 or higher installed on both the host workstation and the Image Kiosk. Image Kiosks ship with ActiveSync already installed. If ActiveSync is not already installed on the host workstation, you can download the latest version of ActiveSync from Microsoft's web site and run the install wizard.

Installing the Driver on the Host Workstation

You must have the IK8560.inf driver and wceusbsh.sys file installed in the Windows\System32 directory on your workstation to establish ActiveSync communication with any Image Kiosk. You can download these files from www.handheld.com.

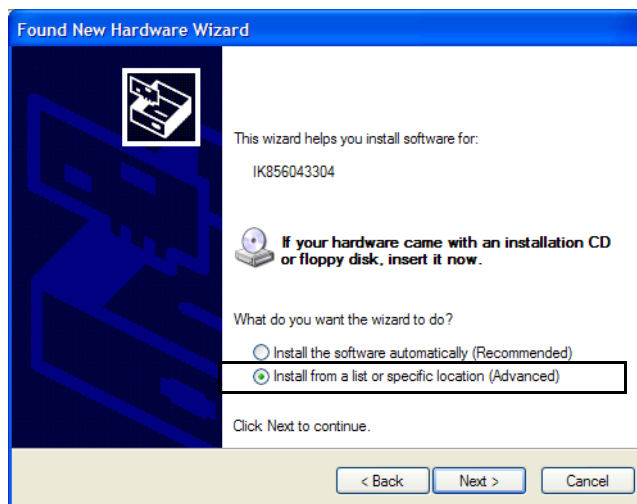
Also, when the Image Kiosk Power Tools and Demos is installed on a host workstation, the IK8560.inf driver and wceusbsh.sys file are installed to the following location: **C:\Program Files\Hand Held Products\Image Kiosk Power Tools and Demos\Desktop Driver**.

To establish an ActiveSync connection, you must copy and paste the IK8560.inf driver and wceusbsh.sys file to the Windows\System32 directory on that workstation, then complete the process of [Establishing the ActiveSync Connection](#) (see page 4-2).

For more information about Image Kiosk Power Tools and Demos, refer to the Image Kiosk Power Tools and Demos User's Guide, which is available for download from www.handheld.com.

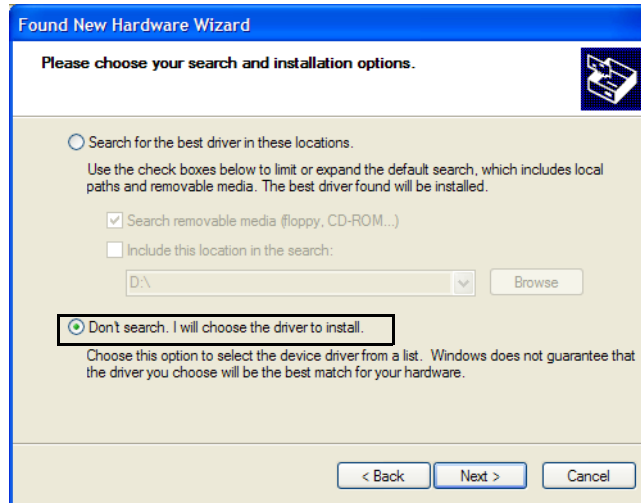
Establishing the ActiveSync Connection

1. When the device is connected to the host workstation via USB cable and both the device and the host workstation are powered on, the Found New Hardware Wizard opens on the workstation.
2. Select **Install from a list or specific location (Advanced)**.

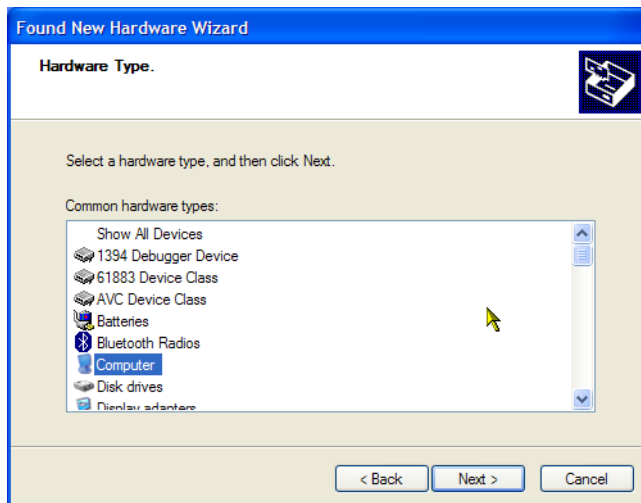


3. Click **Next**.

4. Select **Don't Search. I will choose the driver to install.**

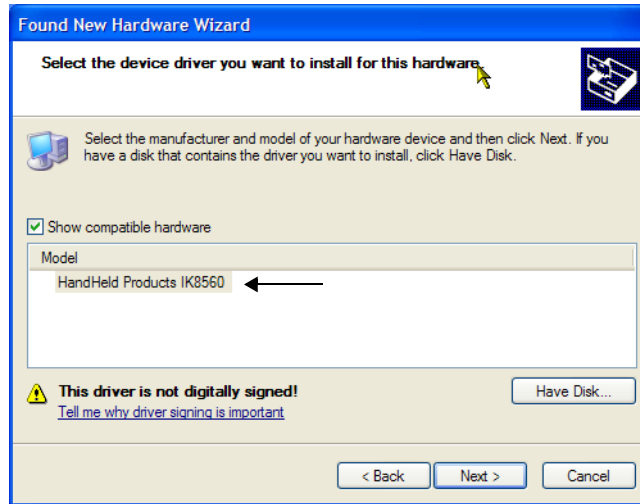


5. Click **Next** and select **Computer** as the hardware type.

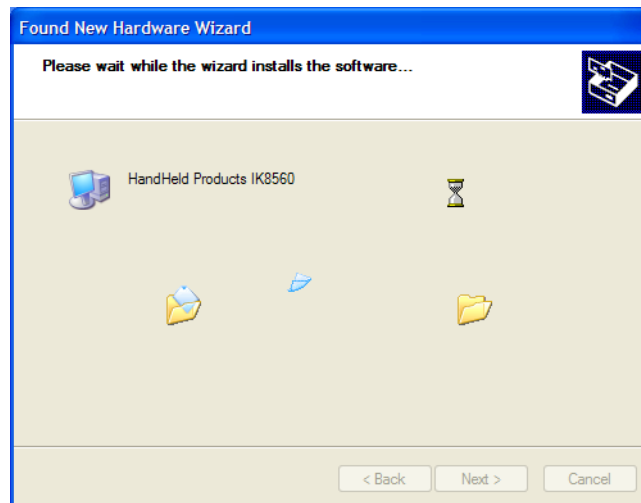


6. Click **Next**. When the wizard tells you it can't find drivers for the device, click **Have Disk**.

-
7. Navigate to where the **IK8560.inf** file is stored on the workstation and select it. The host workstation reads the file as “HandHeld Products IK8560.”

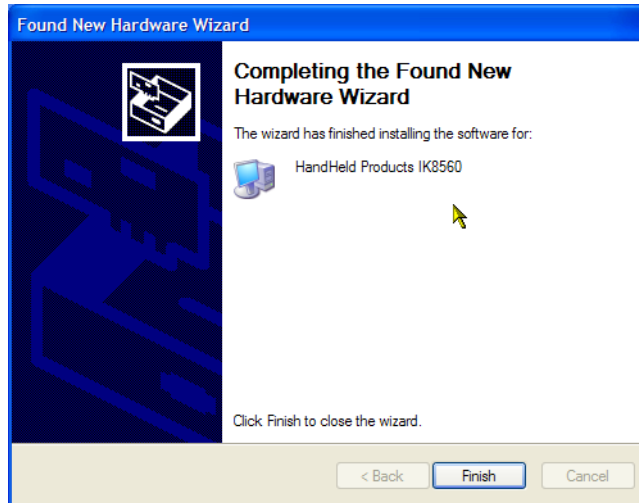


8. Click **Next**. The hardware begins installing.



9. You will see a brief flash on the Image Kiosk screen, then the ActiveSync Wizard appears on the workstation.
10. Complete the ActiveSync Setup Wizard. ActiveSync will auto-configure to USB communication.

11. The Found New Hardware Wizard notifies you that setup is complete.

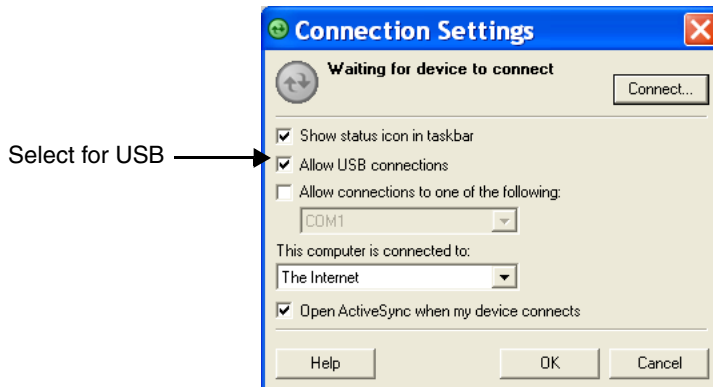


12. Click **Finish** and you are now ready to use the ActiveSync connection.

Note: You can find more information about ActiveSync in the ActiveSync Help on your workstation. In ActiveSync, click Help > Microsoft ActiveSync Help.

Setting Up the Host Workstation

Verify that ActiveSync on the workstation has selected the appropriate communication type by clicking **File > Connection Settings**.



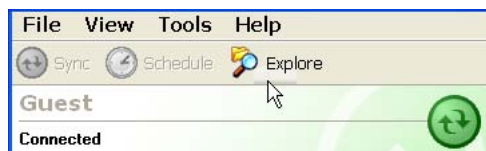
Verify the communication type:

- For USB, select **Allow USB connections**. Do **not** check the serial cable box below it! Tap **OK** to save changes.

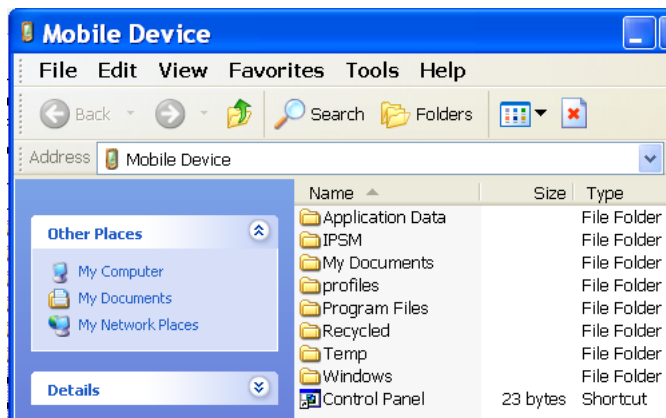
Exploring the Device from the Host Workstation

Use the Explore feature of ActiveSync to transfer files between the host workstation and the device.

When the device and host workstation are connected, open the main ActiveSync window, and click **Explore**.



The Mobile Device folder opens in Windows Explorer.



The device is now treated as a mass storage device, and transferring files is as simple as dragging and dropping or copying and pasting as you would for moving files between folders on your hard drive.

Adding Programs Using ActiveSync



When selecting programs, verify that the version of the program is designed for Windows CE 5.0 and the Intel XScale processor. Check both by tapping Start > Settings > Control Panel > System > General tab.

Depending on the application, the software must be stored or installed on the host workstation.

1. Download the program to the host workstation from either a network or CD-ROM.
You may see a single EXE with the application name or a file named "setup.exe", CAB, or DLL file. There may also be several versions of files for different device types and processors.
2. Read any installation instructions, Readme files, or documentation that comes with the program. Many programs provide special installation instructions.
3. *Connect the device to the workstation using a Hand Held Products communication cable.

*The program files can also be copied to a USB jump (flash) drive and then insert the jump drive into the USB host port on the back panel. The jump drive will appear as "hard drive" under "My Device" on the unit and will allow files to run/be copied.

If the File is an Installer:

An installer program is one that installs to the workstation and the device simultaneously; one process installs to both devices.

1. On the workstation, double-click the EXE or setup.exe file. The installation wizard begins.
2. Follow the directions on the workstation screen. The installation process includes transferring the software to the device.

If the File is Not an Installer:

Some programs cannot be installed on workstations. In these cases, the appropriate files must be stored on the host workstation, transferred to the device via ActiveSync, and installed on the device. You will know that the program cannot be installed on the workstation if an error message appears when you try to install it stating that the program is valid but designed for a different type of computer.

1. If you cannot find any installation instructions for the program in the Readme file or documentation, open **ActiveSync** and click **Explore**.*
2. Copy the program file or files to the **Program Files** folder on the device.

If you want the program to be part of the Autoinstall that occurs after every cold boot, place the program file in the **Autoinstall** folder (\\IPSM\\AutoInstall).

3. Depending on the program, you may need to open **File Explorer** on the device, navigate to the folder where the program is located, and tap on the program file to install it.

If you copied the file to the **Autoinstall** folder, you can either tap on the program inside the Autoinstall folder or perform a cold boot and the program will install as part of the Autoinstall process. Remember! A cold boot erases RAM data and applications.

4. After installation on the device is complete, tap **Start > Programs** and the program appear on the menu. Tap it to open the program.

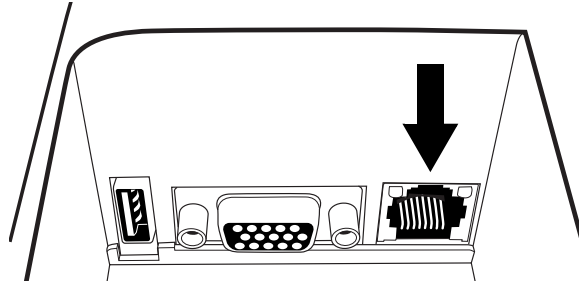
Synchronizing

By default, ActiveSync does **not** automatically synchronize all types of information. Use **ActiveSync Options** to specify the types of information you want to synchronize. The synchronization process makes the data (in the information types you select) identical on both your workstation and your device.

For more information about using ActiveSync on your workstation, open **ActiveSync**, then open **ActiveSync Help**.

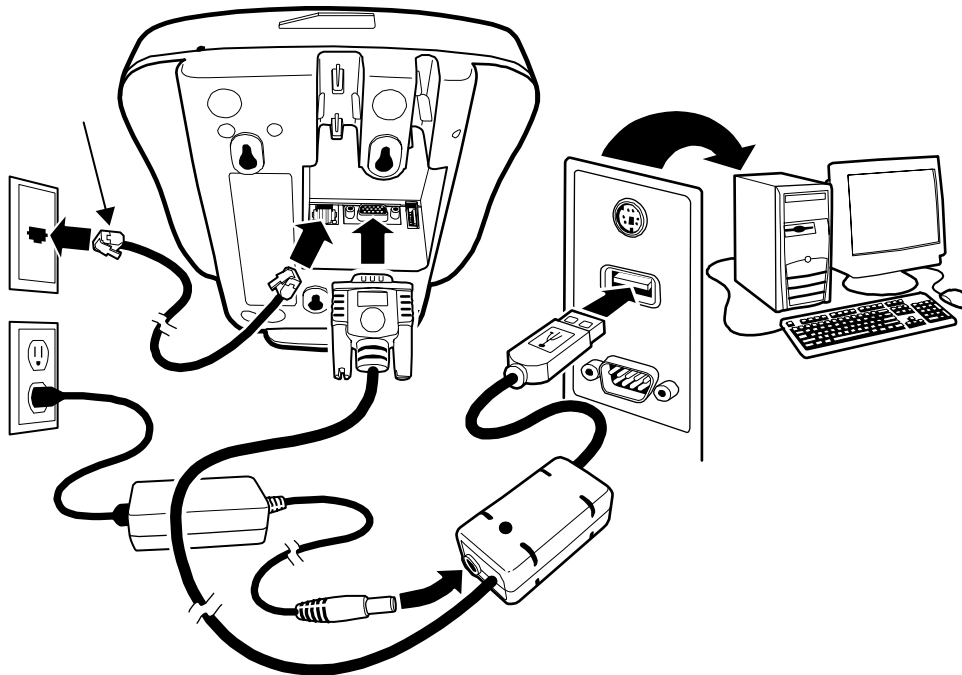
Wired Ethernet Communication—IK8560EE, IK8570E, & IK8570EUE

On these Image Kiosks, the Ethernet port on the back panel is compatible with standard 100Base-TX/10Base-T ethernet cables with RJ45 connectors on each end.



Note: Cables must be purchased separately.

To establish an ethernet connection, simply plug one RJ45 connector into the ethernet port on the device and the other RJ45 connector into your ethernet outlet.



The Image Kiosks auto-configure the wired ethernet connection when power is applied from the power cable. DHCP is enabled by default; a static IP must be configured manually if the network does not use DHCP.



To test the ethernet connection, tap the Internet Explorer icon on the Desktop **Internet Explorer**. If the device connects to a network with internet or an internet web server, the home page should begin loading.

To see information about IP addresses, tap **Start > Settings > Network and Dial-up Connections** and select the connection type.

Adding Programs from a Network


However you establish your network connection—ethernet or wireless radio—you can download and install programs from a network.



When selecting programs, verify that the version of the program is designed for both Windows CE 5.0 and your Intel XScale processor. Check both by tapping Start > Settings > Control Panel > System > General tab.

1. When you have established your network connection, open Internet Explorer and navigate to the web site.
2. Download the program files to your device.
You may see a single EXE or setup.exe file, or several versions of files for different device types and processors. If you are copying temporary files that are to be used once for the installation then discarded, then avoid copying them to the IPSM folder since the contents of the IPSM folder are preserved over reboots.
3. Read any installation instructions, Redeem files, or documentation that comes with the program. (Many programs provide special installation instructions.)

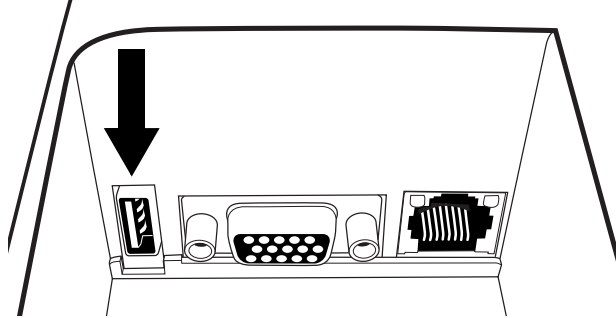


4. On the Desktop, double-tap the **My Device** icon  and navigate to where you copied the program files.
5. Tap the installation file. The installation wizard begins.
6. Follow the directions on the screen to install.

USB Communication Hardware

USB Host Port

All Image Kiosks have a 4-pin USB 1.1 host port on the back panel that supports USB communication with USB 1.1 and backward-compatible USB 2.0 devices. All data communication occurs at USB 1.1 speeds.



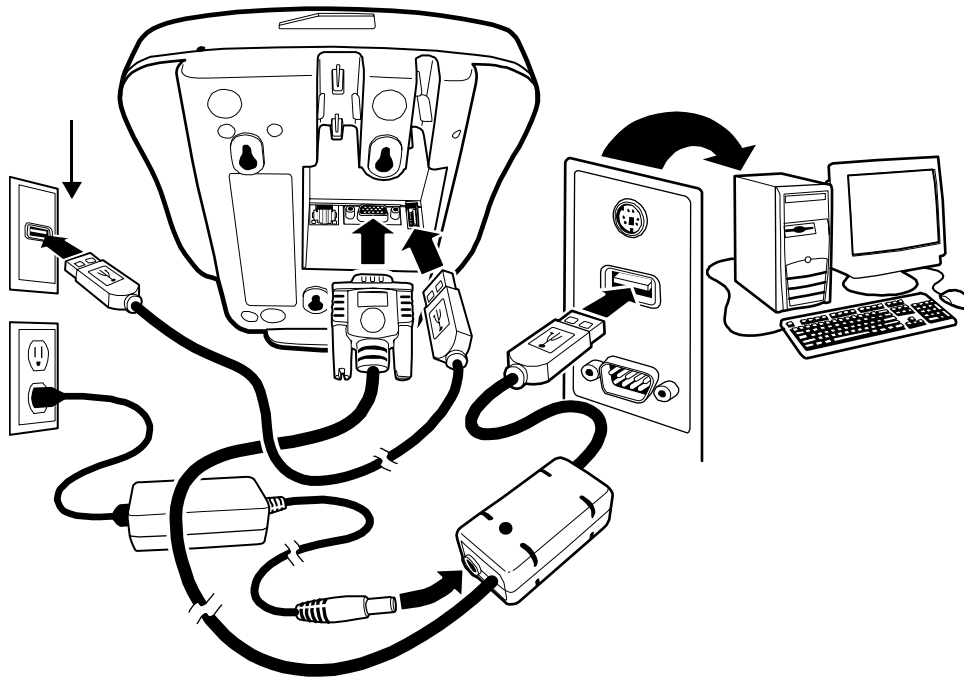
Multiple USB devices can be accommodated by plugging a USB HUB into the USB Host port. Image Kiosks can support the following USB peripherals:

- Mouse
- Keyboard
- Mass Storage

Note: The USB host port can support a maximum current output of 500mA. If all of your USB devices together require more power, attach them to a self powered hub, and plug the hub into the Image Kiosk.

Connecting the Image Kiosks Using USB

To connect Image Kiosks to other devices via USB, simply use a standard USB cable to plug one end into the USB host port and the other end into the USB device. Image Kiosks auto-configure to USB when power is applied.



Overview

The IK8560CE, IK8560CEUE, IK8570E, and IK8570EUE have on-board 2.4 GHz 802.11b WLAN (Wireless Local Area Network) radios that uses Direct Sequence Spread Spectrum (DSSS) technology. The signal is spread continuously over a wide frequency band at a data rate of up to 11 Mbps. The radio is interoperable with other 802.11b Wi-Fi-compliant products including Access Points (APs), PCs via PC card adapters and other wireless portable devices.

Configuring the 802.11b Radio

The IK8560CE, IK8560CEUE, IK8570E, and IK8570EUE contain the AEGIS Client[®], a comprehensive IEEE 802.1x tool to set up the on-board 802.11b radio. The Client is a standards-based implementation of IEEE 802.1x and can be configured to work with almost any network equipment—wired or wireless—that supports the 802.1x authentication standard. The Client is interoperable with 802.1x-capable wireless APs and authentication servers including Microsoft's IAS and Cisco's ACS.

The Client uses public key authentication and encryption between Wireless APs (WAP) and roaming stations to exchange dynamic Wired Equivalent Privacy (WEP) keys. In addition, network managers can control 802.1x user profiles from a centralized RADIUS server or, in the case of TTLS, from a RADIUS Diameter or other AAA servers. The Client supports both wireless and ethernet interfaces.

Supported Protocols

Authentication

The Client supports the following authentication methods according to the 802.1x protocols:

- MD5
- EAP TLS
- EAP TTLS
- Cisco LEAP and PEAP
- Microsoft PEAP

Encryption

The Client supports the following encryptions methods:

- WEP (64-bit and 128-bit)
- TKIP

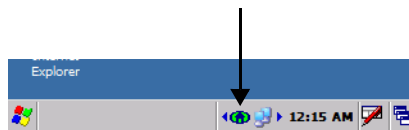
The Client can also configure the 802.11b without authentication or encryption; see [Associating With Open APs](#) on page 5-14.

Required Network Configuration Information

Because the Client accesses a network that is protected by the IEEE 802.1x protocol, you must configure EAP data communication to match your network server parameters. If the EAP configuration doesn't match your network configuration, you can't access the network. Therefore, make sure you have the correct network server parameters on hand when you configure the client.







Opening the Client

Double tap the icon in the command bar.



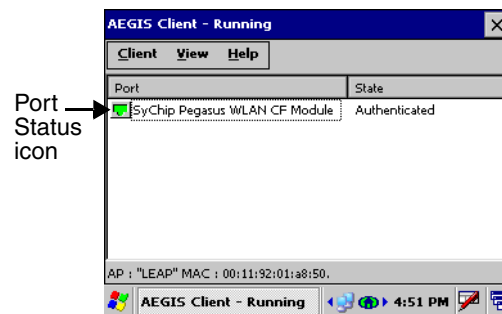
Color Indicators

Note: The Client icon displays in color only when 802.11b authentication is being performed (e.g., WPA-PSK and TKIP). No colors are shown for WEP encryption.

Icon	Color	Status
	Green	Authentication succeeded.
	Yellow	Authentication is in process.
	Red	Authentication failed.
If the icon is not yellow, red or green, then either the ports are not being controlled by 802.1x, or there is no authentication activity on the controlled ports. The absence of yellow, red or green may also indicate that the network access server is not an 802.1x aware device.		
	Blue	There is no 802.11b activity. The port may not be connected to an 802.1x-aware entity. <i>Note: If you are setting up the 802.11b radio to run without authentication and without encryption, this icon does not change from the standard blue; see Associating With Open APs on page 5-14.</i>
	Orange	The port is associated, but there is no response to 802.11b packets. If using WEP without 802.1x authentication, this will be the final state when the connection is complete. If using 802.1x authentication, it is either a transient condition or can indicate that attempts to authenticate have timed out as there was no response to 802.1x packets.
	Gray	The port is not in use or is disabled. Either the Client isn't running, or the port is not bound to the 802.1x protocol.

Main Window

Double-tap the icon in the command bar to open the Client . The main window opens displaying a list of ports.

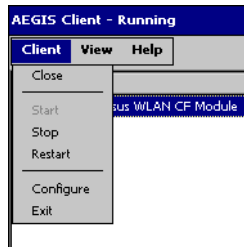


Port Status Icon

The main window contains a port status icon to the left of each port. As the network interface starts or stops, the color of the port icon and the status field updates to reflect the current state of the interface. The colors of the port status icon are the same as the color of the icon in the command bar. For details about what each color means, see [Color Indicators](#) on page 5-2.

Client Menu

On the main window, tap the **Client** menu.



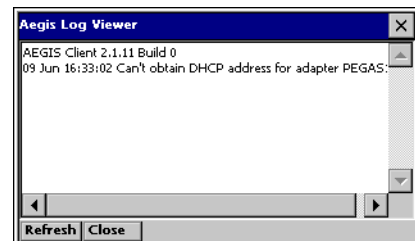
Menu Item	Description
Close	Closes the Client's interface, while leaving the client running.
Start/Stop	Starts or stops 802.1x operation. After you finish the initial configuration, tap the network interface and tap Start . If the port is already active, tap Stop first, then Start to force the program to read the new configuration file.
Restart	Same as a Stop followed by Start. Select this menu item when you receive a message that a restart is necessary.
Configure	Opens the client authentication windows; see Configuring Client Authentication on page 5-5.
Exit	Terminates the client, which stops the 802.1x protocol.

View Menu

To access the View menu, tap **View**.

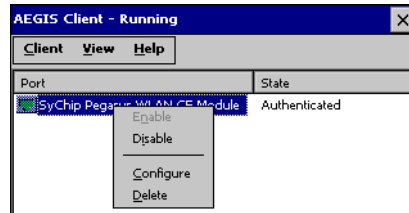


Menu Item	Description
The Standard and Advanced Views control the number of columns displayed in the main menu.	
Standard View	Displays the Port (adapter name) and State columns. This is the default view.
Advanced View	Displays the Port (adapter name), State, Primary Wireless Network, Wireless Network, and MAC Address of AP columns. Scroll right to see all columns.
Event Log	<p>Displays the event log in a custom viewer. The Event Log is a text file that contains system information; each entry is listed sequentially with a time/date stamp and text message.</p> <p>Tap Refresh to query the system again and update the log file while you are reading it. If the file gets too large, old entries are automatically deleted.</p> <p>Logging parameters are set on the System Tab (see page 5-7).</p>



Port Menu

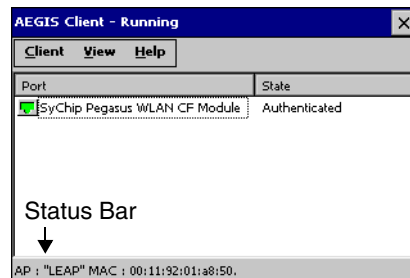
The Port menu enables you to configure the port. On the main window, tapping once on a port opens a popup menu.



Menu Item	Description
Enable Disable	These commands enable or disable 802.1x operation on the port. The port should be enabled before the protocol is started. Enabling a port is not the same as starting it (see Start/Stop on page 5-3); however, both actions are required for the Client to work.
Configure	Opens the port configuration window; see Configuring Client Authentication on page 5-5.
Delete	Selecting Delete has no effect because you cannot remove the radio driver from the device.

Status Bar

The status bar at the bottom of the main window indicates the connection status between the network card and the AP.



Depending on the status of connectivity, the status bar displays one of the following:

- Not Associated
- AP : [AP's SSID] MAC : [AP's BSSID].

Setup Windows

Use the following navigation aid to examine the configuration options for each set of configuration windows:

Configuring Client Authentication (see page 5-5)

- [User Tab](#) (see page 5-5)
- [System Tab](#) (see page 5-7)
- [Server Tab](#) (see page 5-8)

Configuring a Port (see page 5-9)

- [Wireless Networks Tab](#) (see page 5-9)
- [Protocol Tab](#) (see page 5-10)

Configuring a Network Profile (see page 5-11)

- [Profile Info Tab](#) (see page 5-11)
- [WEP Mgmt Tab](#) (see page 5-12)
- [WPA Settings Tab](#) (see page 5-13)

Configuring Client Authentication

Each user account needs to define the protocol and the credentials used to authenticate a user. When you start and stop on a port, you are enabling and disabling the authentication established here.

Note: Fields will be grayed out if not relevant to the selected protocol.

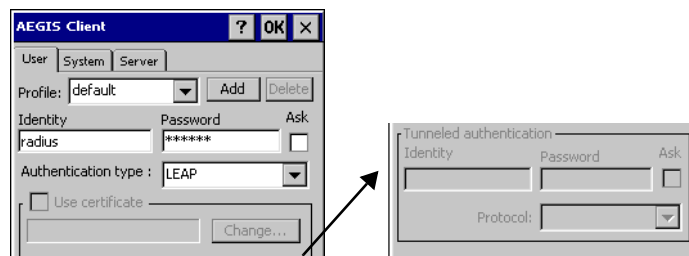
On the main window, tap **Client** > **Configure**. Complete the User (see page 5-5), System (see page 5-7), and Server (see page 5-8) tabs.




The configuration windows are in portrait orientation, which means that a portion of the window is below the command bar at the bottom. To access the rest of the window, tap and hold on a point on the right side of the window that is not active (for example, a button or a field) and drag the window up. After you complete your tasks on the lower portion of the window, you must drag the window back down so that you can tap **OK** to save changes. For the best results, tap and hold on the rightmost edge of the window.

User Tab

Enter the credentials used to authenticate a user.

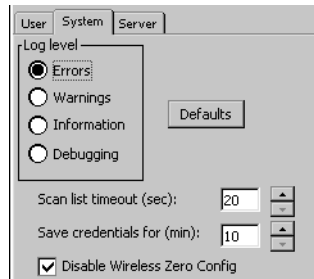


Field	Description
Profile	<p>Multiple user credential profiles can be created for use when the user roams from one network to another. The drop-down list contains existing authentication credential profiles. Select a profile from the list to edit it in the fields that follow.</p> <ul style="list-style-type: none"> • Tapping Add permits new profiles to be added to the list. A window appears where you can enter a name for the new profile. • Enter a Profile name and tap OK. The name entered appears in the Profile drop-down list. • Tapping Delete deletes authentication profiles. To be deleted, a profile cannot be assigned to a configured network.

Field	Description
Identity	<p>This is the 802.1x identity supplied to the authenticator. The identity value can be up to 63 ASCII characters and is case-sensitive.</p> <p>For tunneled authentication protocols such as TTLS and PEAP, this identity (called the Phase 1 identity) is sent outside the protection of the encrypted tunnel. Therefore, it is recommended that this field not contain a true identity, but instead the identity “anonymous” and any desired realm (e.g. anonymous@myrealm.com). For TTLS and PEAP, true user credentials (Phase 2 identity) are entered in the Tunneled authentication section.</p> <p>When used with PEAP and the .NET Enterprise Server Version 5.2, this field must contain the identity used in both Phase I and Phase II. The Phase II identity field is ignored.</p>
Password	<p>This is the password used for MD5-Challenge or LEAP authentication. It may contain up to 63 ASCII characters and is case-sensitive. Asterisks appear instead of characters for enhanced security.</p>
Authentication type	<p>This is the authentication method to be used - MD5-Challenge, LEAP, PEAP, TLS, or TTLS.</p> <p>Your network administrator should let you know the protocols supported by the RADIUS server. The RADIUS server sits on the network and acts as a central credential repository for Access Servers that receive the radio signals and ultimately block or allow users to attach to the network.</p>
Use certificate	<p>This is the certificate to be used during authentication. A certificate is required for TLS, optional for TTLS and PEAP, and unused by MD5 and LEAP. Therefore, this option becomes active only when TLS, TTLS, or PEAP is selected as the Authentication type.</p> <p>If Use certificate is enabled, the client certificate displayed in the field is the one that is passed to the server for verification. To select a client certificate, tap Change and select the certificate from the list that appears.</p> <p>To appear in this list, certificates must be installed in the system; see Certificates on page 5-16.</p> <p>The Issued to column should match the Identity field and the user ID on the authentication server used by the authenticator.</p> <p>Your certificate must be valid with respect to the authentication server. This generally means that the authentication server must accept the issuer of your certificate as a Certificate Authority.</p> <p>When obtaining a client certificate, do not enable strong private key protection. If you enable strong private key protection for a certificate, you will need to enter an access password for the certificate each time this certificate is used.</p> 
Tunneled authentication area	
<p>Tunneled authentication parameters are used by only by TLS, TTLS and PEAP protocols, in Phase 2 of authentication, and after the secure tunnel has been established. The fields in this section are active only if the TLS, TTLS, or PEAP is selected as the Authentication type.</p>	
Identity	<p>The user identity used in Phase 2 authentication. The identity specified may contain up to 63 ASCII characters, is case-sensitive and takes the form of a Network Access Identifier, consisting of <name of the user>@<user's home realm>. The user's home realm is optional and indicates the domain to which the tunneled transaction is to be routed.</p> <p>Because Microsoft .NET Enterprise Server Version 5.2 does not use this parameter for PEAP, This field will have no effect for PEAP at this time. Phase 1 identity is used instead.</p>
Password	<p>The password used for the tunneled authentication protocol specified. It may contain up to 63 ASCII characters and is case-sensitive. Asterisks appear instead of characters for enhanced security.</p>
Protocol	<p>This parameter specifies the authentication protocol operating within the secure tunnel.</p> <p>The following protocols are currently supported for TTLS: EAP-MD5, CHAP, PAP, MS-CHAP, MS-CHAP-V2</p> <p>The following protocols are currently supported for PEAP: EAP-MS-CHAP-V2, TLS/SmartCard, Generic Token Card (EAP-GTC)</p>

System Tab

Define logging settings and the port manager timeout period.



Field	Description
Log Level	<p>These settings control the detail of the log messages generated by the Client. Each level is cumulative. By default, all errors, warnings, and information events are logged. Each entry records a severity code (of one [debug message] to four [error] asterisks), a time stamp, and a message.</p> <ul style="list-style-type: none"> • Errors - only the most severe conditions are logged. • Warnings - less severe conditions are logged. • Information - all errors, warnings, and information events are logged. This is the default setting. • Debugging - creates a log message each time the Client detects or reacts to an event. Be advised that log entries fill memory quickly if the Debugging level is chosen. Do not use the Debugging option for a significant length of time because most internal operations generate messages. <p>For more information, see Logging on page 5-7.</p>
Defaults button	Tap this button to return log settings to the default settings.
Scan List Timeout	The time interval at which the Client polls the ports. This value should not be changed from the 10-second default unless technical support advises you to do so.
Save Credentials for (min)	The amount of time the Client saves credentials.
Disable Wireless Zero Config	Use this option only as directed by technical support. Selecting this option disables other wireless utilities.

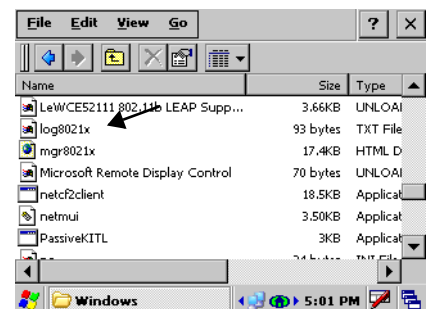
Logging

The event log is an ASCII text file named "LOG8021X.TXT" located in the directory defined by the WINDIR environment variable (usually the Windows directory).

In the text file, the format of the entries is: **Time StampMessage Text**

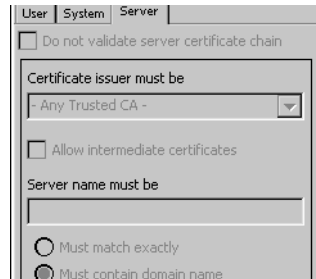
Note: To see an event log on the window, tap View > Event Log (see page 5-3).

If you wish to start with a blank file or clear the event log, close the Client (so that the icon no longer appears in the command bar) and delete the log file (log8021x) in Windows Explorer. When you restart the Client, a new log file is created.



Server Tab

The Server tab controls how the Client authenticates the server that handles the 802.1x protocol on the network side. This applies only to the TLS, TTLS, and PEAP authentication methods and is used to tell the Client what server credentials to accept from the authentication server to verify the server. The Client uses this information to verify that the Client is communicating with a trusted server.



Field	Description
Do not validate server certificate chain	If this option is selected, the server certificate received during the TLS/TTLS/PEAP message exchange is not validated.
Certificate issuer must be	This is the certificate authority used during TLS/TTLS/PEAP message exchange. Any Trusted CA is the default selection and means that any certificate authority can be used during authentication. Both trusted intermediate certificate authorities and root authorities whose certificates exist in the system store are available for selection in the drop-down list.
Allow intermediate certificates	This option is selected by default and enables unspecified certificates to be in the server certificate chain between the server certificate and the certificate authority selected in the Certificate issuer must be field. When selected, this option allows the server certificate received during negotiation to be issued directly by the certificate authority or by one of its intermediate certificate authorities. If disabled, then the selected Certificate issuer must have directly issued the server certificate.
Server name must be	This is either the server name or the domain the server belongs to, depending on which option is selected below the text field. During authentication, this name will be compared to the server certificate's Subject: CN field.
Must match exactly	When selected, the server name entered must match the server name found on the certificate exactly.
Must contain domain name	When selected, the server name field identifies a domain and the certificate must have a server name belonging to this domain or to one of its sub-domains (e.g., zeelans.com, where the server is blueberry.zeelans.com).

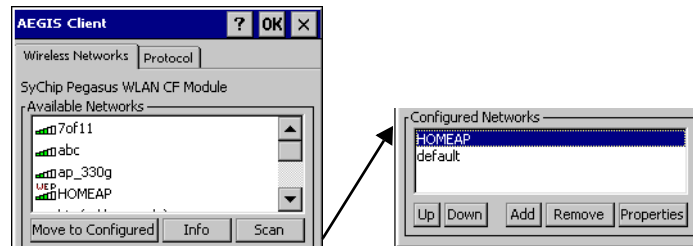
Configuring a Port

On the main window, tap on a port (e.g., ) and tap **Configure**.

Note: When the AEGIS Client window appears, it will be too tall to fit on the display. To view the bottom half of the window, simply tap and hold the right side of the window, then drag it up until the bottom half can be viewed.

Complete the [Wireless Networks Tab](#) (see page 5-9) and the [Protocol Tab](#) (see page 5-10).

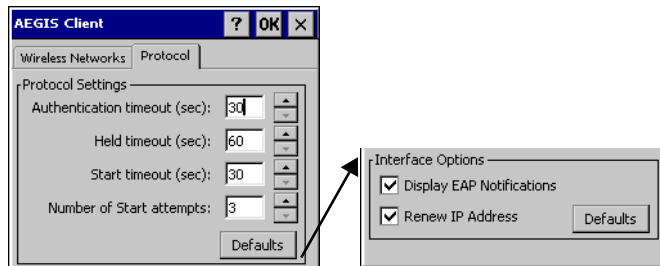
Wireless Networks Tab



Field	Description
Available Networks	Displays the networks the device recognizes as available to connect to.
Move to Configured	Activates after the available networks have been retrieved. Select the network you wish to connect to, and tap Move to Configured. This selects the network and moves it to the Configured Networks list.
Scan	Displays a list of networks broadcasting their availability. You can also attach to networks that are not broadcasting by tapping Scan .
Configured Networks	Displays the configured network profiles saved in the device. The order of the network profiles in this list is the same order (from the top down) that the device uses to connect to a network.
default	<p>This is the default network configuration that installs when the Client installs. This network profile associates with any network and is already configured with standard settings. You can modify this setting to match your desired connection.</p> <p>If you are in a location with only one AP (or more than one AP that attaches to the same network), the default profile may be sufficient without requiring the selection of a specific network or networks.</p> <p>If default is last in the list, it can act as a wildcard if the device is out of range of the primary networks (listed first).</p> <p>Do NOT place default at the top or middle of the list if you are connecting to other networks! If default is any place other than last, connection to the other list entries is never attempted.</p> <p><i>Note: There is nothing special about the name "default". You could configure any other record similarly and it would behave the same way.</i></p>
Up & Down	Moves a selected network up or down one place in the list. The order of the networks in this list is the exact order that connections will be attempted. The network listed first will be attempted first and so on. Place your primary networks first.
Add	Manually adds a network to the Configured Networks list if the AP does not broadcast its SSID or you are pre-configuring the client for an AP that is not currently in range. For details, see Configuring a Network Profile on page 5-11.
Remove	Removes a selected network from the list.
Properties	Displays the properties of the network selected in the list. Tap this button to edit existing wireless network configurations. For details, see Configuring a Network Profile on page 5-11.

Protocol Tab

The Protocol tab configures parameters that apply to all the networks the selected port connects to.



Field	Description
Protocol Settings	<p>These are the timer intervals and retry settings defined in the 802.1x standard. They determine how long the supplicant state machine will wait in a given state. These parameters shouldn't be modified without an understanding of the supplicant state machine. For more information about the supplicant state machine, obtain its 802.1x protocol specification.</p> <p>The parameters are:</p> <ul style="list-style-type: none"> • Authentication Timeout—The period of time the Client remains in the authenticating or acquired state without receiving a response from the AP or switch. • Held Timeout—The period of time the Client remains in the held state after failing authentication. • Start Timeout—The period of time the Client remains in the connecting state before restarting when there is no response. • Number of Start Attempts—The number of times the Client restarts before giving up. At that point, the Client then defaults to the authenticated state, but there will be no network connectivity because the protocol exchange was never completed.
Display EAP notifications	<p>Specifies that the EAPOL notification message will be displayed to the user. An authenticator may use such notification to inform you, for example, about a near password expiration. However, some authenticators send chatty and annoying notifications that may, for the convenience of the user, be suppressed. Note that all notifications are written to the event log even if they are not displayed.</p>
Renew IP address	<p>Initiates a DHCP request to obtain a dynamic IP address after a successful authentication, but only if the client detects that the connected network (the SSID) has changed. The result is that renewal should not occur upon re-authentication, but does occur at boot or when connecting to a different network.</p> <p>If you have a slow authenticator, you may wish to enable this option when configuring the service because a slow authenticator may prevent you from getting a DHCP-assigned IP address upon boot-up. This option is ignored if the given adapter has a static IP address.</p>

Configuring a Network Profile

You can configure a network based on an AP in range, create a new network, or modify the [default](#) (see page 5-9) network. Both methods start on the [Wireless Networks Tab](#) (see page 5-9) and open the Profile Info, WEP Mgmt, and WPA Settings tabs on which you configure the network profile and save the settings.

- [Profile Info Tab](#) on page 5-11
- [WEP Mgmt Tab](#) on page 5-12
- [WPA Settings Tab](#) on page 5-13

Note: The settings on these tab windows are interrelated. This means that selecting one may disable access to others.

To configure a network to an AP in range, double-tap one of the networks in the Configured Networks list (to make sure the AP you want is in the Configured Networks list, select it in the Available Networks list and tap **Move to Configured**.) When the Profile Info tab opens, information from the AP autofills some fields on these tabs.

To add a network that is not in the Available Networks or Configured Networks list, tap **Add**. When the Profile Info tab opens, it contains the [default](#) (see page 5-9) settings.

Profile Info Tab

Field	Description
Network Profile	If you are configuring a network from the list, the name that appears in this field is the same as the name in the Configured Networks list and, by default, is the same as the broadcast SSID. This name cannot be changed. If you are adding a new network, this field is configurable.
Network Name	This is the SSID of the AP. If the AP broadcasts its SSID, then this value is retrieved from the Available Networks list and this field is completed automatically. If the SSID does not broadcast, then the field will be active and you must manually enter the value here.
Peer-to-Peer Group	Select this option to have two or more client workstations communicate with each other without the benefit of an AP, otherwise known as ad hoc mode. You should also select Do Active Scan and, on the WEP Mgmt tab, select Use key for data encryption while entering a common key for both sides. WPA is not supported in this mode.
Do active scan	Select this option whenever the AP (or client, for ad hoc mode) is not broadcasting its SSID. <i>Note: This option is not available when Associate with any available network is selected.</i>
Authentication Profile	Select the authentication profile associated with this network and tap View . The drop-down list contains client profile names created in the User tab of the client configuration area; see User Tab on page 5-5. default is the default authentication profile.

WEP Mgmt Tab

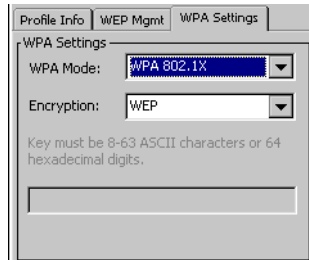
Enter the appropriate WEP parameters for the network.



Field	Description
Provide encryption key dynamically	This option is selected by default. The other WEP settings on this page are disabled to enable dynamic encryption. Selecting this option also enables WPA; the WPA Settings tab appears. To enter a custom WEP, de-select this option. The other fields become active and the WPA Settings tab no longer appears.
Use key for data encryption	Select this option to manually enter a WEP key (in the Key field) to encrypt your data to the AP.
Use key to authenticate with AP	Selecting this option toggles the WEP authentication mode between Open and Shared. When selected, the WEP key (entered in the Key field) is used when clients authenticate with the AP via a challenge/response mechanism (Shared). When not selected, the only authentication performed is to check that a client's SSID setting matches the SSID of the AP (Open).
Key	In this field, enter the WEP key to use for data encryption or authentication to the AP. ASCII: 5 or 13 characters Hexadecimal: 10 or 26 characters. When the key entered is in the correct format, the window changes to display the type—ASCII or Hexadecimal.
Key Index/Transmit Key	This list contains the available keys. You may enter up to four keys for reception; the Client will try all four to find one that works with the AP. Select the key to be used for transmission as well. If the key selected is the transmit key, the Transmit key box is checked. To change the transmit key, select another key and check the Transmit key box. The check box of the original transmit key will be automatically de-selected.

WPA Settings Tab

This tab controls the WPA settings. This tab window is available only if **Provide encryption key dynamically** is selected on the WEP Mgmt tab is selected.




Field	Description
WPA Mode	This drop-down list contains the following options: <ul style="list-style-type: none">• Disabled: Do not enable WPA mode. This is the default selection.• WPA 802.1x: Enable WPA and obtain key information through the 802.1x protocol.• WPA PSK: Enable WPA with Pre-Shared Key (PSK) information entered in the field below. This mode is used if the 802.1x protocol is not being used for authentication.
Encryption	Select the desired encryption. <ul style="list-style-type: none">• WEP: The least secure of the encryption methods. WEP uses a single encryption key of either 40 or 104 bits. WPA uses a 256 bit Pre-shared key.• TKIP: Uses the standard WEP format, but changes the key with every frame for improved security and includes a message integrity capability for determining unauthorized packet insertion. <i>Note: The current Image Kiosk hardware does not support AES.</i>
PSK pass-phrase	This field activates if you select WPA PSK as the mode. This field accepts only hexadecimal keys that are 8 to 64 characters long.

WEP Encryption Without Authentication

1. On the [Main Window](#) (see page 5-2), tap the port and select **Configure** on the popup menu.
2. On the [Wireless Networks Tab](#) (see page 5-9), select the SSID and tap **Properties**.
3. On the [Profile Info Tab](#) (see page 5-11), select **Do active scan**.
4. On the [WEP Mgmt Tab](#) (see page 5-12), select **Use key for data encryption**.
5. Enter the WEP **Key**; see [Key](#) on page 5-12. Tap **OK**.
6. On the main window, tap **Client > Restart** to restart the Client.
7. Wait as the Client connects.
8. When the connection is complete, the [Port Status Icon](#) (see page 5-2) on the main window reads **Associated** instead of **Authenticated**. However, the log file (see [Logging](#) on page 5-7) will read "Entered AUTHENTICATED state" when recording this event.

Associating With Open APs

To associate with open APs means to set up the 802.11b radio without authentication or encryption.

1. Double-tap the Client icon on the command bar .
2. On the [Main Window](#) (see page 5-2), tap on the port and select **Configure** on the popup menu.
3. On the [Wireless Networks Tab](#) (see page 5-9), tap Add in the Configured Networks section.
4. On the [Profile Info Tab](#) (see page 5-11), enter your AP's SSID in the **Network Profile** field.
5. Select **default** in the Authentication profile drop-down list.
6. On the [WEP Mgmt Tab](#) (see page 5-12), make sure none of the options are selected. Tap **OK**,
7. Tap **OK** on the Wireless Networks tab.
8. On the [Main Window](#) (see page 5-2), tap **Client > Restart** to restart the client.
9. Wait as the Client connects.
10. When connection is complete, the [Port Status Icon](#) (see page 5-2) turns yellow and the [Status Bar](#) (see page 5-4) reads "Associated".

Note: If your AP is strictly an AP and not a DHCP server, then you must statically assign an IP address and subnet mask.

Saving Radio Settings

The radio settings in the Client update the registry. Those settings will be erased during each cold boot (or power cycle) unless you save a REG file containing the Client's radio settings in the \IPSM\Autoinstall folder of the device.

Using the Registry

Each device contains a RegEdit Power Tool that can export specific registry entries into a single REG file that contains only the selected registry keys. Use RegEdit to create a REG file that contains the 802.11b radio settings and save the REG file to the \IPSM\Autoinstall folder. Then, the REG file will be installed and the radio settings applied when the device boots up.



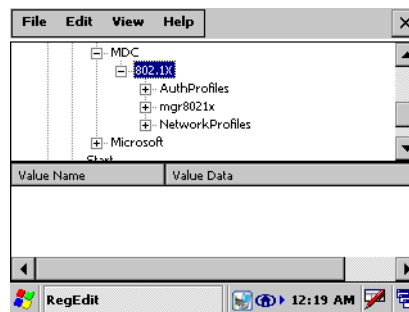
Do NOT place two REG files that contain overlapping registry data into \IPSM\AutoInstall at the same time.

Saving Radio Settings on One Device

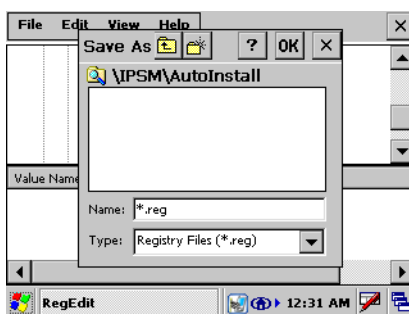
1. Configure the radio and save settings in the Client.
2. Verify that the radio works that way you want it to.
3. Perform a warm boot; tap **Start > Power Tools > Reboot > Warm Boot**. Wait as the device boots up.

4. When the Desktop appears, tap **Start > Programs > Power Tools > RegEdit**  RegEdit.

5. Navigate to the key \HKEY_CURRENT_USER\Software\MDC\802.11x.



6. Leave the key highlighted and tap **File > Export**.
7. Save the REG file with a name of your choice to the \IPSM\AutoInstall folder. (Use the SIP to enter the name.)



8. Tap **OK**. This REG file will load during the next cold boot.

Saving Radio Settings on Multiple Devices

After you have configured the radio on one device and exported those settings into a REG file—see [Saving Radio Settings on One Device](#) on page 5-15—copy that REG file and paste a copy of it on your hard drive. Then, save that same REG file to the \IPSM\Autoinstall folder of the devices that you want to have the same radio configuration.

During each hard reset, Autoinstall calls that REG file, which loads the radio settings and configures the Client.

Certificates

During configuration, you may have specified one or two certificates to use during the authentication process.

Certificate Requirements

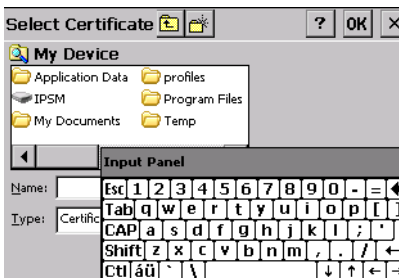
The specified identity should match the **Issued to** field in the certificate and should be registered on the authentication server (i.e., a RADIUS server) that is used by the authenticator. In addition, your certificate must be valid on the authentication server. This requirement depends on the authentication server and generally means that the authentication server must know the issuer of your certificate as a trusted Certificate Authority (CA).

If the selected certificate does require a password or pass phrase to decode the private key, enter this value in the **Certificate Pass Phrase** field. This value will be encrypted when the configuration is saved. However, on some systems, there may not be a certificate.

*Note: Client or CA certificates can be imported from *.cer (same as *.der), *.p7b, or *.pfx files.*

Installing Certificates with the Meetinghouse Certificate Installer

1. Download the certificate file to the device.
The location isn't critical, but you may want to create a standard folder for consistency.
2. Go to **Start > Programs > Meetinghouse Certificate Installer**.



3. Navigate to the certificate location.
4. Tap and hold on a certificate in the list. A pop-up appears asking if you want to install the certificate.
5. Tap **OK**. The certificate is loaded into the correct certificate store.

Installing a Root Certificate

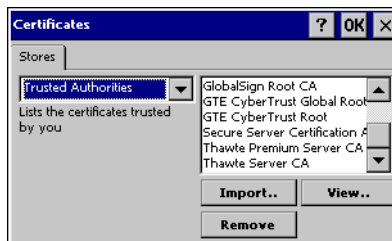
1. Save the certificate to the device. If no error appears when you save the certificate, it was most likely saved to the device.


Note: To make sure that the certificate persists through cold boots, install the certificate to the \IPSM folder.

2. To verify that the certificate is recognized by the operating system, tap **Start > Settings > Control Panel > Certificates**



. This opens the Certificates window, which displays all the certificates on the device.



3. Scroll through this list until you see the certificate you installed.
4. After you have identified your certificate in the list, tap **OK** to close.
5. To use the certificate in a network profile, double-tap the Client icon in the command bar .

-
6. Tap on the radio port on the main window and select **Configure** on the popup menu.
 7. Tap the **Server** tab and select the certificate from the **Certificate issuer must be** drop-down list.
 8. Tap **OK** to save the setting and close the port configuration.

Advice and Workarounds

Issue	Possible Causes and Solutions
The Client will not start on the device with an error message about missing files.	Perform a hard reset.
The wireless network interface (port) does not appear in the main AEGIS window.	<ul style="list-style-type: none"> • The license is not valid. • Restart the client: on the main window tap Client > Restart. • Perform a hard reset. • If problem continues to persist through all of the above, there may be a hardware failure.
The Client is not attaching to the correct AP.	<p>The default network profile instructs the client to attach to the first available AP. You must select a network, move it to the Configured Networks list, and then move it above default in the list using the up arrow buttons.</p> <p>For more information, see Wireless Networks Tab on page 5-9.</p>
The Client is failing authentication even though all my information was entered correctly.	<ol style="list-style-type: none"> 1. Verify that the network profile for the AP corresponds to the authentication profile you created for it: <ul style="list-style-type: none"> • Select the network profile in the Configured Networks list. • Tap Properties. The Profile Info tab opens - see page 5-11. • In the Authentication profiles drop-down list, select the profile you want to review. • Tap View. The User tab appears displaying the profile's information. 2. Verify that you have configured the identity and password into the correct fields on the User tab (page 5-11) in the authentication profile. If you are using PEAP or TTLS, the username and password are entered in the Tunneled authentication section.
My AP does not broadcast its SSID. Even though I have manually configured an AP with that name, the Client won't associate with it.	<ul style="list-style-type: none"> • Make sure that the Network Name field contains the AP's SSID. • Verify that Do Active Scan is selected on the Profile Info tab; see Do active scan on page 5-11. Otherwise, the Client will not attempt to find the AP.
I am authenticated, but I don't get an IP address through DHCP.	<ul style="list-style-type: none"> • On the main window, tap on the port, tap Configure on the popup menu, and select the Protocol tab. Verify that Renew IP Address is selected; see page 5-10. • Make sure that radio is configured for DHCP and not assigned a static IP address.
I cannot attach to my old network that does not support 802.1x authentication, but is using WEP encryption.	<ul style="list-style-type: none"> • On the Wireless Networks Tab (see page 5-9), verify that the desired SSID is at the top of the Configured Networks list so that it's accessed first. • See WEP Encryption Without Authentication on page 5-14.
I made changes, but they do not appear to have taken effect.	<p>Always tap OK before exiting a window you have changed.</p> <p>Then, on the main window, tap Client > Restart to restart the Client.</p>
How do I enable peer-to-peer (ad-hoc) mode to have two clients communicate without an AP?	<ul style="list-style-type: none"> • On the Wireless Networks window, move a network to the Configured Network list. • On the Profile Info tab, give each side the same network name (SSID). • Select Peer-to-Peer Group (ad hoc mode) and Do active scan. • On the WEP management section, select Use key for data encryption and enter an identical key for both clients. • Verify that this network profile is the first (or only) one in the Configured Network list and try to restart both clients at roughly the same time.

Overview

Image Kiosks use Adaptus Imaging Technology™ with an integrated Hand Held Products 5100 Standard Range (5100SR) image engine. When the Image Kiosk is powered the external illumination LEDs are always enabled providing the required illumination for the 5100SR image engine; however the engine may only be enabled for scanning under software application control. Please refer to the Image Kiosk SDK online help for details on connecting to and using the integrated scan engine.

The included [Scan Demo](#) (see page 6-4) enables the image engine for use in the Scan Demo only.

Supported Bar Code Symbologies

The 5100SR image engine supports the following bar code symbologies:

- Australian Post
- Aztec Code
- Aztec Mesas
- British Post
- Canadian Post
- Codabar
- Codablock F
- Code 11
- Code 39
- Code 49
- Code 93 and 93i
- Code 128
- Data Matrix
- EAN-8
- EAN-13
- EAN•UCC Composite
- Interleaved 2 of 5
- ISBT 128
- Japanese Post
- KIX (Netherlands) Post
- MaxiCode
- MicroPDF417
- MSI
- OCR
- PDF417
- Planet Code
- Plessey Code
- Postnet
- QR Code
- Reduced Space Symbology (RSS-14, RSS Limited, RSS Expanded)
- Straight 2 of 5 IATA
- TCIF Linked Code 39 (TLC39)
- UPC-A
- UPC-E
- UPC-E1

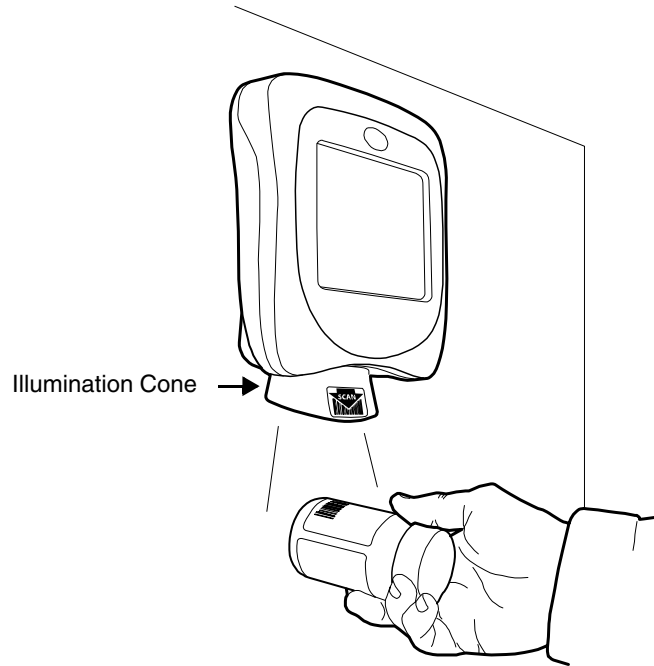
Default Bar Code Symbologies

Image Kiosks defaults to the following linear bar code symbologies:

- UPC-A
- UPC-E
- EAN/JAN
- Code 128
- Interleaved 2 of 5
- Code 39
- Codabar
- MSI
- PDF417
- Plessey Code
- RSS-14

Scanning a Bar Code

If you are running a software application, such as the Scan Demo, that accepts bar code information, simply slide a bar code underneath the illumination cone. A beep sounds on successful decoding.



Omni-Directional Aiming

Image Kiosks supports omni-directional aiming in two of the three optimal imaging modes



Omni-directional aiming means the bar codes label can be read if placed under the illumination cone in any orientation.

Sample Bar Codes

The following are bar code samples you can use with the Scan Demo to verify decoding:

Sample Code 128



Readout: "Code 128"

Sample Codabar



Readout: "13579"


Depth of Focus (DOF) Specifications

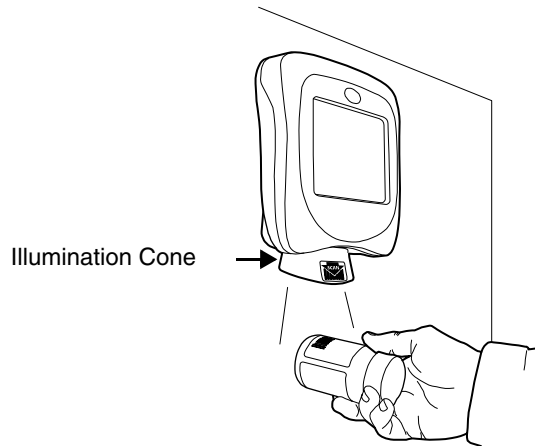
The point of reference for the DOF specifications is from the outermost edge of the illumination cone. Ambient light level at 535 Lux. Depth is measured in inches.

Code	Near	Far
MaxiCode (35-mil)	Contact	10.2"
Data Matrix 15-mil (ECC 200)	0.9"	3.7"
PDF417, ECL4 10-mil	0.3"	6.2"
PDF417, ECL4 8-mil	0.5"	5.2"
PDF417, ECL4 6.6-mil	1.7"	3.4"
Code 39 15-mil	Contact	10.0"
Code 39 10-mil	0.4"	6.4"
Code 39 8-mil	0.7"	4.8"
UPC-A 13-mil, 100%	Contact	9.7"
Postnet	1.2"	3.1"
12-point OCR-A	Contact	9.0"
12-point OCR-B	Contact	8.2"

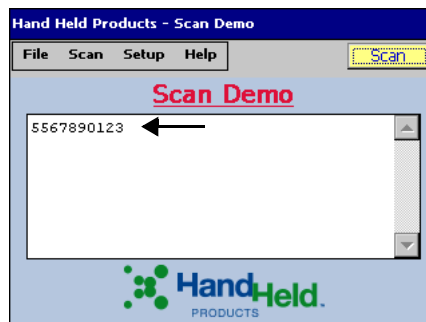
Scan Demo

Image Kiosks ship with a sample application called Scan Demo that can be used to demonstrate the scanning capabilities of the device. To launch and use the Scan Demo application please follow the following steps:

1. Tap **Start > Programs > Demos** and double-tap the **Scan Demo** icon . The Scan Demo window opens and the image engine is activated.
2. Slide a bar code under the illumination cone and tap **Scan**.



3. The device beeps and the bar code data appears on the screen.



Scanning Options

You can always manually scan the bar code inserted under the illumination cone by tapping the **Scan** button. The Scan menu offers you two additional scan options: Automatic and Continuous.

Automatic Scan

Automatic scan activates the image engine at regular one second intervals. To set the device to automatic scan, tap **Scan > Automatic** and the engine begins scanning at one-second intervals. Simply slide a bar code under the illumination cone and wait for the readout to appear on the screen.

1 second is the default interval; however, you can customize the interval time by tapping **Setup > Auto Scan Delay**.



Select an interval from 1 to 5 seconds. A checkmark appears next to the selected interval. Selecting None causes the engine to scan continuously. To turn off automatic scanning, tap **Scan > Automatic** again.

Continuous Scan

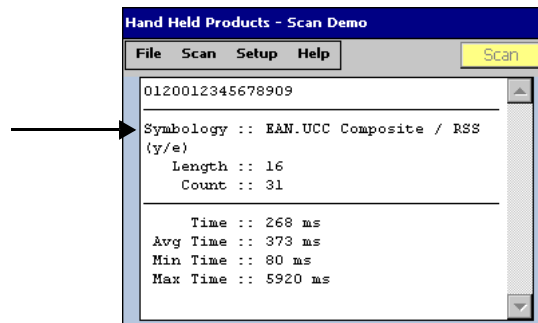
Continuous scan activates the image engine continually, without a pause. To set the device to continuous scan, tap **Scan > Continuous** and the engine begins scanning. Automatic scan **must** be turned off before you can activate continuous scan. To turn off continuous scanning, tap **Scan > Continuous** again.

Note: If you want to track bar code scans during automatic or continuous scan, enable the scan statistics.

Enabling Scan Statistics

The Scan Demo can record scan statistics for each bar code scanned and for all bar codes scanned in an activated scan session. By default, these statistics do not display on the screen.

To enable scan statistics and activate a scan session, tap **Setup > View Statistics**. The Scan Demo begins recording scan statistics beginning with the next bar code scanned. The scan statistics will appear underneath the bar code readout.



Field	Description
Symbology	The symbology type.
Length	The length of the bar code.
Count	The number of scans completed since scan statistics were enabled. If you complete one scan, this field displays a count of 1 and increases with each additional scan performed.
Time	The number of milliseconds (ms) to decode the bar code.
<i>Note: The following three fields display the cumulative scan statistics from the time that View Statistics was enabled. To reset any of these values to zero, disable the scan statistics.</i>	
Average Time	The average decode time of all bar codes decoded.
Min Time	The shortest decode time of all bar codes decoded.
Max Time	The longest decode time of all bar codes decoded.

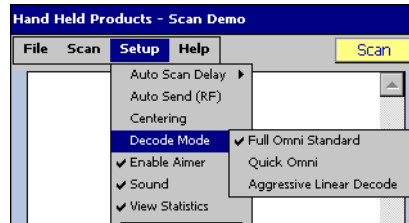
Beeper

By default, the beeper sounds after each successful decoding. To turn off the speaker, tap **Setup > Sound**. The beeper will not sound after your next successful scan.

Decode Mode

By default, the Scan Demo decodes in Full Omni Standard mode.

To choose another mode, tap **Setup > Decode Mode**. A checkmark appears next to the selected mode.

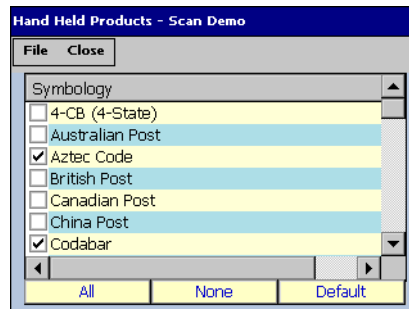


There are three options:

1. **Full Omni/Standard** This is the default scan mode. The image engine looks for any bar code within range.
2. **Quick Omni** The image engine attempts to decode any enabled barcode while searching a reduced area of the image. By searching for a barcode in a reduced area, based around the center of the image, scanning performance may be improved if the barcode label is found close to the center in the captured image used by the scan engine.
3. **Aggressive Linear Decoding** The image engine attempts to decode only enabled 1D linear barcodes.

Symbologies

The Scan Demo can decode a bar code only if its bar code symbology is selected in the symbologies list. To see this list, tap **Setup > Symbologies**.



The symbologies with a checkmark are the symbologies currently selected. The Scan Demo defaults to the [Default Bar Code Symbologies](#) on page 6-1.

Enabling and Disabling Symbologies

To enable a symbology, select it in the list. To disable a symbology, de-select it in the list. You can select and de-select more than one symbology at a time. When you are done enabling and disabling, tap **Close** and then **Yes** on the confirmation dialog. In addition to individual, manual selection, the Scan Demo offers you three selection options:

- All** Selects all the symbologies in the list.
- None** De-selects all the symbologies in the list; this button de-selects even the default symbologies.
- Default** Selects only the default symbologies; see [Default Bar Code Symbologies](#) on page 6-1. Use this button to return the Scan Demo to the default symbologies after modifications.

Tap **Close** and save your selections. Tap **Yes** and you are returned to the Scan Demo window. Verify symbology selections by scanning bar codes in the selected symbology(ies) format.

Note: Symbology selections apply only to the Scan Demo, not the image engine in general.

Centering

Centering is a scanning feature that requires the barcode label to be located within a specific area of the imager's field of view in order for the label to be successfully decoded. This feature allows the image engine to discriminate between symbols that are located physically close to each other so only one symbol is captured during a decode attempt. Please refer to the Image Kiosk SDK's online help for further details on the use of the centering feature.

To enable decode centering, tap **Options > Centering**. Centering will be applied to your next scan.

Enabling the Aimer

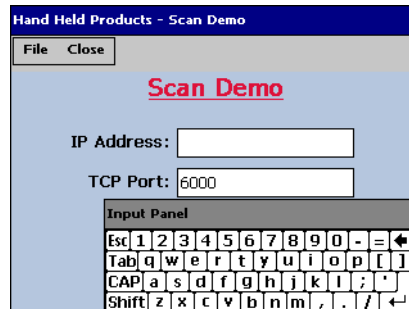
The 5100SR/SF engine contains a green aiming beam that is enabled by default in the Scan Demo. To enable the aiming beam, tap **Setup > Enable Aimer**. A checkmark appears on the menu to indicate that the aiming beam is enabled.

To see the aiming beam, see [Omni-Directional Aiming](#) on page 6-2.

Auto-Send

Auto-send allows you to send decoded information over a TCP/IP connection—both wired and wireless—to a workstation.

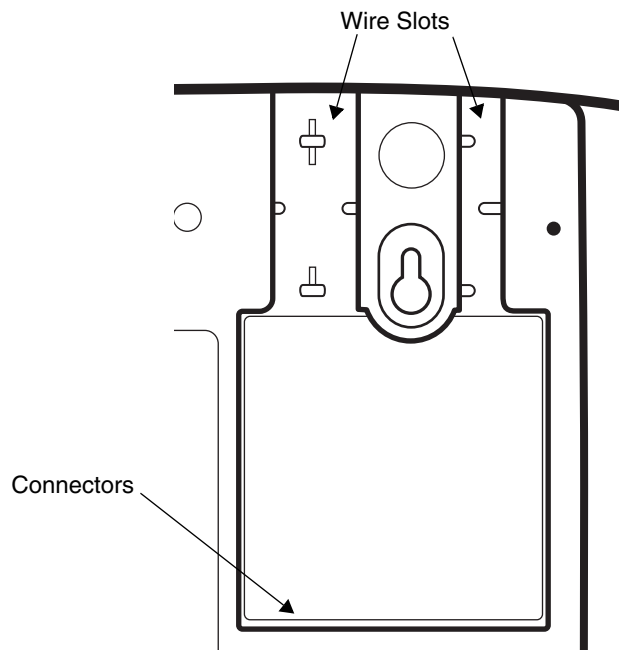
1. Enter the TCP/IP parameters by tapping **Setup > Radio Frequency**.



2. Use the SIP to enter the **IP Address** of the receiving workstation.
3. Verify that the default **TCP Port** of 6000 is correct.
4. Tap **Close** to save.
5. Tap **Setup > Auto-Send**. The next bar code you decode will be sent over the TCP/IP connection.



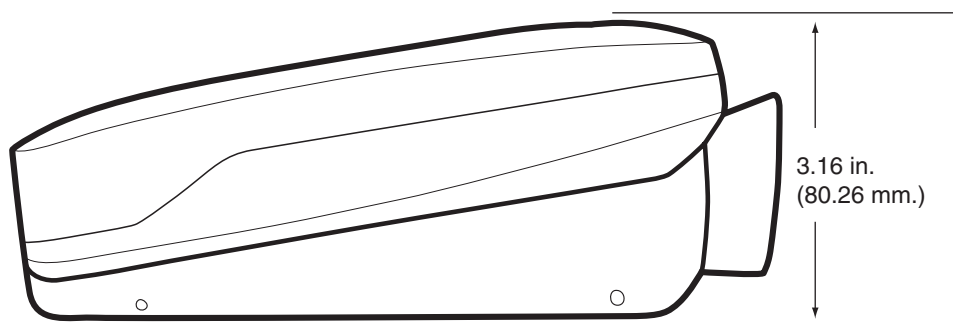
Connector Slots



If you want the Image Kiosk to lay flat against the mounting surface, make sure that the wires from the connectors are secured in the wire slots.

Side Panel Dimensions

The following graphic shows the depth of Image Kiosks at its widest point.



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Hand Held Products provides service for all its products through service centers throughout the world. To obtain warranty or non-warranty service, return the unit to Hand Held Products (postage paid) with a copy of the dated purchase record attached. Contact the appropriate location below to obtain a Return Material Authorization number (RMA #) before returning the product.

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Fax: (704) 566-6015
E-mail: naservice@handheld.com

Latin America

Telephone: (704) 998-3998, option 8, option 4
Telephone: (800) 782-4263, option 8, option 3
Fax: (239) 263-9689
E-mail: laservice@handheld.com

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E-mail: mxservice@handheld.com

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If you need assistance installing or troubleshooting, please call your Distributor or the nearest Hand Held Products technical support office:

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Hand Held Products extends these warranties only to the first end-users of the products. These warranties are non-transferable.

The limited duration of the warranty for the Image Kiosk 8560 is one year.

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