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Installing the Mini-PCI Wireless Card Kit in the WS4 and KWS4

This document describes how to install the Mini-PCI wireless kit in the Workstation 4 or KWS4. The kit consists of the Mini-PCI Adapter Card, Mini-PCI Wireless Card, Antenna Cable, Antenna, and PCMCIA security bracket. The Mini-PCI Adapter Card is connected to the existing PCMCIA Daughter Card socket on the WS4 or KWS4 System Boards.

Requirements

WS4

From the hardware perspective, the Mini-PCI Wireless Card Kit can be installed in any WS4 system board up to the current ROHS compliant model.

From the software perspective, the "GR2.3 Workstation 4 General Release V2.3 Client Package" must be installed. GR2.3 provides two software components required to support the Mini-PCI wireless card.

- *WS4 boot loader version 2.0.15.* Previous versions of the boot loader do not recognize the Mini-PCI adapter card and may fail the Power On Self Test (POST) with a PCI Bus Error.

- *Windows CE Image, MICROS Build Number 12.97.* This version of CE includes a driver that supports the 'Prism' Mini-PCI Wireless Card.

The GR2.3 Workstation 4 General Release client package contains other important updates including the DST time change update and Internet Explorer Version 6.0.

KWS4

From the hardware perspective, the Mini-PCI Wireless Card Kit can be installed in any KWS4 up to the current ROHS model.

From the software perspective, the "GR1.9 Keyboard Workstation General Release Client Package" must be installed. The GR1.9 package provides two software components required to support the Mini-PCI wireless card kit:

- *KWS4 boot loader version 1.0.12.* Previous versions of the boot loader do not recognize the Mini-PCI adapter card and may fail the Power On Self Test (POST).

- *Windows CE Image, MICROS Build Number 6.2.* This version of CE includes a driver that supports the 'Prism' Mini-PCI Wireless Card.

In addition, the KWS4 GR1.9 General Release Client Package contains other important Windows CE 4.2 updates including the DST time change update.

Configuring the wireless card requires a larger screen than the 240x64 Operator Display. One option is to access the unit you are configuring through a remote VNC session. Another option is to temporary connect a CRT or LCD monitor to the workstation using the KWS4 VGA Interface Cable P/N 300107-012. See Appendix B of the KWS4 Setup Guide P/N 100016-133 for a cable diagram.

Obtaining the Client Package

WS4 - GR2.3

The Workstation GR2.3 Client Package is available at the Hardware section of the MICROS web site under Drivers and Tools - WS4 Client Software.

Download and install this package using the instructions contained in the zip file. During the upgrade, a file called LOADER.ROM is placed on the Compact Flash Card. Proceed to the section called Upgrading the WS4 Boot loader.

KWS4 - GR 1.9

The Keyboard Workstation 4 GR1.9 Client Package is available at the Hardware section of the MICROS web site under Drivers and Tools - KWS4 Client Software.

Download and install this package using the instructions contained in the zip file. During the platform upgrade, a file called LOADER.ROM is placed on the CF Card. Proceed to Upgrading the KWS4 Boot loader.

Upgrading the Boot loader

WS4

The WS4 boot loader update is performed with DOCUTILIY. The GR2.3 Client Package must be installed to provide the boot loader binary file.

1. Navigate to the \DOC folder, then select the \Utilities folder. Locate DOCUTILITY.EXE and start it.

    •   To upgrade the boot loader, press the [UPDATE Bootloader] button. The process takes about one minute.

        •   If the message 'FAILED TO OPEN LOADER.ROM' is displayed, apply the GR2.3 client package before proceeding.

    •   The DOC Utility displays the message, 'Please Wait. Checking Bootloader File !!' then... 'Please Wait. Programming Bootloader !!'

- When the process is complete, the message 'Bootloader Update Complete' is displayed.
- Restart the WS4.

2. Confirm the Boot loader Version. This is optional.
   - After the workstation restarts, navigate to the DiagUtility, located in the \DOC\Utilities folder.
   - When you start the DiagUtility, it displays System Information Screen. The 'Boot Loader Version' is located about midway down the left column. Confirm the version is 2.0.15 before installing the Mini-PCI Adapter Card. Also confirm the 'MICROS Build Number' is 12.97.

3. See the Section on installing the Mini-PCI Adapter and wireless card.

KWS4

The KWS4 boot loader is upgraded with the KWS4 Utility. The GR1.9 Client Package must be installed to place the required LOADER.ROM binary file on the CF card.

1. When KWS4 CAL is in the background, press the <Shift>-<Ctrl>-<D> key combination. (Press the <Shift> key and hold, press the <Ctrl> key and hold, then press the <D> key).
   - From the Main Menu, press 3) Firmware Utilities, then 1) Bootloader.
   - When the message 'Update Complete' appears, the boot loader update is complete.
   - Restart the KWS4.

2. Confirm the Boot loader version. This is optional.
   - After the workstation restarts, start the KWS4 Utility.
   - From the Main Menu, press 1) System Info, then 1) HW Info.

3. See the Section on installing the Mini-PCI Adapter and wireless card.

Installing the Mini-PCI Adapter and Wireless Card - WS4 or KWS4

The following procedure describes how to install the new Mini-PCI Adapter Card and Wireless Card combination in a WS4 or KWS4 System Board with a PCMCIA Daughter Card connector.

Before installing the Mini-PCI Adapter card, be sure to install the appropriate GR client package and update the boot loader as described above.

1. Remove the AC cable and place the unit face down on your work surface. Remove the security bracket from the 'OPT' Slot (if installed).

2. Mount the antenna connector to the new security bracket.

    •   Remove the lock washer and nut, then insert antenna connector in the security bracket supplied in the kit. Install lock washer and nut and fasten securely.

    •   Attach the antenna by twisting it on the connector.

    •   Install bracket /w antenna and fasten the hex screws. Make sure the antenna lead is inside the unit.
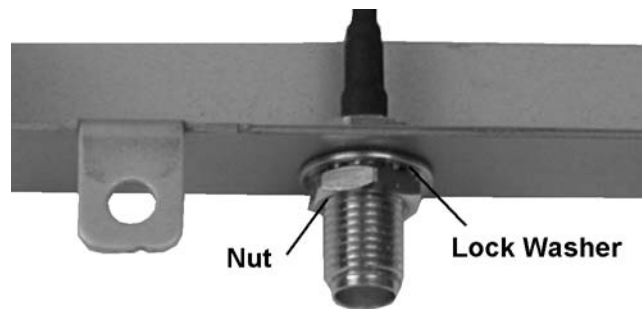

Figure 1: Installing the Antenna Connector

3. Remove the top cover and RF Shield cover to access the system board PCMCIA socket.

4. If installed, remove the existing PCMCIA Daughter Card from the system board PCMCIA connector.

5. Refer to Figure 2 and insert the Mini-PCI Adapter Card in the PCMCIA connector. Use the screws provided in the kit to fasten the card to each stand-off.
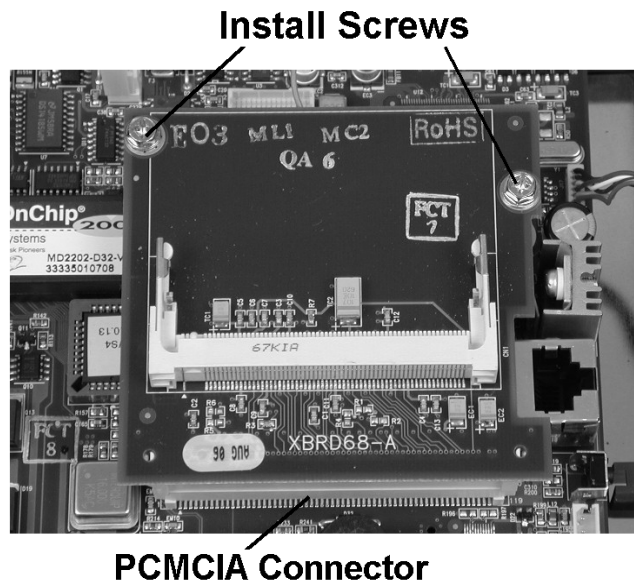

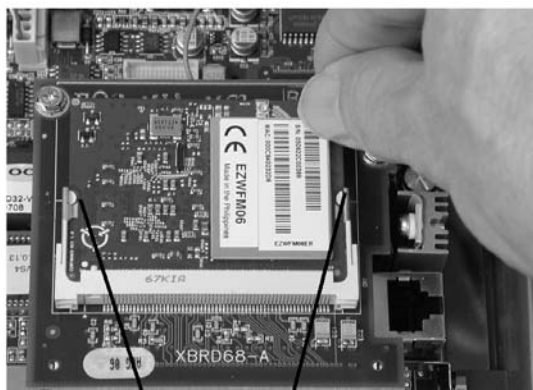*Figure 2: Installing the Mini-PCI Adapter Card*

6. Install the Mini-PCI Wireless Card.
   - 1) To begin, insert the wireless card into the socket at a 30° angle relative to the adapter card socket as shown in Figure 3.

Figure 3: Preparing to install the Mini-PCI Wireless Card

- 2) When the card is fully inserted in the socket, rotate the card downward until the socket side rails snap into the corresponding notches on each side of the board as shown in Figure 4.

Rotate Card Until Side Rails Lock in Card Notches

Figure 4: Locking the Wireless Card in the Mini-PCI Socket

- Connect the antenna cable to the "MAIN" terminal on the wireless card as shown in Figure 5, below.

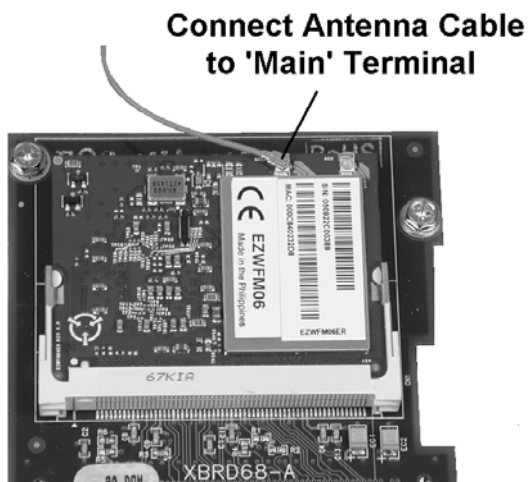

Connect Antenna Cable to 'Main' Terminal

Figure 5: Installing the Antenna Cable

7. Reinstall the RF shield.

8. Reinstall the top cover and fasten the screws.

9. Power-up the unit. When the unit boots to Windows CE, the wireless card should be detected automatically by the wireless card driver.

- To configure the wireless card on the KWS4, you must be running a VNC session from another computer with a full screen display. Another option is to temporarily connect a CRT or LCD monitor to the workstation using the KWS4 VGA Interface Cable P/N 300107-012. Attach this cable to J4 on the system board.

- The 'Prism' window appears containing a list of nearby wireless Access Points (APs). Configure the security settings as required in order to associate with the AP.

- If the unit does not start, but instead emits several POST beeps and then shuts down, make sure the Mini-PCI Adapter card and wireless card are seated properly. If the unit continues to fail POST, remove the Mini PCI Adapter card, and power-up the unit. If the POST does not fail, make sure the boot loader is version 2.0.15 for the WS4 (1.0.12 for the KWS4).