Oracle® MICROS Hardware

Wireless Networking Best Practices Guide

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Oracle MICROS Hardware Wireless Networking Best Practices Guide,

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Contents

Preface

Audience

This document is intended for installers, dealers, customer service representatives, training personnel, and MIS/IT personnel.

This document assumes the reader has the following knowledge and expertise:

- Operational understanding of personal computers
- Understanding of basic network concepts

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:

https://support.oracle.com

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Documentation

Oracle Hospitality product documentation is available on the Oracle Help Center at http://docs.oracle.com/en/industries/hospitality/.

Revision History

Date	Description of Change
July 2015	• Rebranded to Oracle. • Added information for the WS 6, Tablet E-Series, Tablet R-Series, MC40, and DT430. • Removed legacy products no longer supported. • Updated copyright information.
April 2016	• Added information for the WS6 Series. • Updated the Oracle Help Center link in the Documentation section.
July 2016	• Added information for the support of the Microsoft Windows 10 IoT Enterprise operating system on the Workstation 610.

Date	Description of Change
November 2016	• Published in HTML and PDF format.
April 2017January 2018	• Added information for the Oracle MICROS Tablet 720.
December 2017	• Added information for the Oracle MICROS Tablet 721.
January 2018	• Added information for the Oracle MICROS Compact Workstation 310.
March 2020	• Added information for the Oracle MICROS Workstation 625/655.
April 2020	• Added information for the Oracle MICROS Tablet 721P.
October 2020	• Added information for the Oracle MICROS Express Station 4 Series.

1 Recommendations

The PCI DSS Wireless Guidelines Informational Supplement version 2.0 references several security methods. This document specifies the highest possible security method for each device. However, it is sometimes not practical to use all the recommendations specified in the supplement. See below:

From Section 4.4.1 Summary of Recommendations:

- WPA or WPA2 Enterprise mode with 802.1X authentication and AES encryption is recommended for WLAN networks.
- It is recommended that WPA2 Personal mode be used with a minimum 13-character random passphrase and AES encryption.
- Pre-Shared Keys should be changed on a regular basis.
- Centralized management systems that can control and configure distributed wireless networks are commended.
- The use of WEP in the CDE is prohibited for all deployment after June 30, 2010.

PCI Wireless requirements can be broken down into two primary categories:

1. Generally applicable wireless requirements. These are requirements that all organizations should have in place to protect their networks from attacks by way of rogue or unknown wireless Access Points (APs) and clients. They apply to organizations regardless of their use of wireless technology and regardless of whether the wireless technology is a part of the CDE or not. As a result, they are generally applicable to organizations that wish to comply with PCI DSS.
2. Requirements applicable for in-scope wireless networks. These are requirements that all organizations that transmit payment card information over wireless technology should have in place to protect those systems. They are specific to the usage of wireless technology that is in scope for PCI DSS compliance, namely the Cardholder Data Environment (CDE). These requirements apply in addition to the universally applicable set of requirements.

This document assumes that all Access Points operate inside the CDE scope as explained in the PCI DSS Wireless Implementation Guide 2.0.

For wireless environments, change wireless vendor defaults, including but not limited to:

- Wireless Equivalency Privacy (WEP) keys
- Default Services Set Identifiers (SSID)
- Default Passwords
- SNMP Community Strings
- Disable SSID Broadcasts
- Enable Wi-Fi protected access (WPA or WPA2) technology for encryption EAP authentication when WPA-capable

Default settings must be changed before the site goes live to maintain PCI compliancy.

All wireless encryption keys must be changed at least once a year to maintain PCI compliancy.

For wireless networks transmitting cardholder data, encrypt the transmissions by using Wi-Fi protected access (WPA or WPA2) technology, IPSEC VPN, or SSL/TLS. Never rely exclusively on wired equivalent privacy (WEP) to protect confidentiality and access to a wireless LAN.

If WEP is used, do the following:

- Use with a minimum 104-bit encryption key and 24 bit-initialization value
- Use ONLY in conjunction with Wi-Fi protected access (WPA or WPA2) technology, VPN, or SSL/TLS
- Rotate shared WEP keys quarterly (or automatically if the technology permits)
- Rotate shared WEP keys whenever there are changes in personnel
- Restrict access based on media access code (MAC) address

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Configuring the Express Station 4 Series

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

Connecting the Express Station 4 Series to a Wireless Network

Select configurations of the Express Station 4 Series include a Wi-Fi adapter. If WEP/WPA/WPA2 is enabled, the SSID and WEP/WPA/WPA2 parameters and the access points have to match. Consult your network administrator for proper configuration.

1. To connect the Oracle MICROS Express Station to a wireless network:
    a. Tap the **Wireless Networks** icon in the System Tray.
    b. Select the wireless access point from the list of available networks.
    c. If you want the device to automatically connect to this wireless network, select **Connect automatically**.
    d. If required, enter the network's password.
    e. Select **Connect**. The device is now connected to the selected wireless network.
2. To manage wireless network connections on the Oracle MICROS Express Station using the Settings interface:
    a. On the Desktop, swipe left from the right edge of the workstation screen, and then select **All settings**.
    b. Select **Network & Internet**.
    c. Select **Wi-Fi** from the panel on the left.
    d. Select **Manage known networks**. From here, you can add or remove wireless network connections.

Configuring Bluetooth on the Express Station 4 Series

1. On the Desktop, swipe left from the right edge of the workstation screen, and then select **All settings**.
2. Select **All settings**, and then tap **Devices**.
3. Select **On/Off** and ensure Bluetooth is turned on. The **Bluetooth** icon is shown in the System Tray when Bluetooth is turned on.

4. Select the Bluetooth device from the list of available devices.

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Configuring the Workstation 625/655

Select configurations of the Oracle MICROS Workstation 625/655 are equipped with an 802.11 a/b/g/n/ac dual band wireless adapter with Bluetooth 5.0.

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

Connecting the Workstation 625/655 to a Wireless Network

Select configurations of the Oracle MICROS Workstation 625/655 are equipped with an 802.11 a/b/g/n/ac dual band wireless adapter with Bluetooth 5.0. If WEP/WPA/WPA2 is enabled, the SSID and WEP/WPA/WPA2 parameters and the access points have to match. Consult your network administrator for proper configuration.

1. To connect the Oracle MICROS Workstation 625/655 to a wireless network:
    a. Tap the **Wireless Networks** icon in the System Tray.
    b. Select the wireless access point from the list of available networks.
    c. If you want the device to automatically connect to this wireless network, select **Connect automatically**.
    d. If required, enter the network's password.
    e. Select **Connect**. The device is now connected to the selected wireless network.
2. To manage wireless network connections on the Workstation 625/655 using the Settings interface:
    a. On the Desktop, swipe left from the right edge of the workstation screen, and then select **All settings**.
    b. Select **Network & Internet**.
    c. Select **Wi-Fi** from the panel on the left.
    d. Select **Manage known networks**. From here, you can add or remove wireless network connections.

Configuring Bluetooth on the Workstation 625/655

The Oracle MICROS Workstation 625/655 contains Bluetooth 5.0 network technology.

To configure Bluetooth on the Oracle MICROS Workstation 625/655:

1. On the Desktop, swipe left from the right edge of the workstation screen, and then select **All settings**.

2. Select **All settings**, and then tap **Devices**.
3. Select **On/Off** and ensure Bluetooth is turned on. The **Bluetooth**  icon is shown in the System Tray when Bluetooth is turned on.
4. Select the Bluetooth device from the list of available devices.

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Configuring the Compact Workstation 310

The Oracle MICROS Compact Workstation 310 is equipped with an embedded 802.11ac dual band (2x2) wireless adapter with Bluetooth 4.1 network technology.

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

Connecting the Compact Workstation 310 to a Wireless Network

The Oracle MICROS Compact Workstation 310 contains an embedded 802.11ac dual band (2x2) wireless adapter with Bluetooth 4.1. If WEP/WPA/WPA2 is enabled, the SSID and WEP/WPA/WPA2 parameters and the access points have to match. Consult your network administrator for proper configuration.

1. To connect the Oracle MICROS Compact Workstation 310 to a wireless network:
    a. Tap the **Wireless Networks** icon in the System Tray.
    b. Select the wireless access point from the list of available networks.
    c. If you want the device to automatically connect to this wireless network, select **Connect automatically**.
    d. If required, enter the network's password.
    e. Tap **Connect**. The device is now connected to the selected wireless network.
2. To manage wireless network connections on the Oracle MICROS Compact Workstation 310 using the Settings interface:
    a. On the Desktop, click the **Settings** icon.
    b. Select **Network**.
    c. Select **Connections**.
    d. Click **Manage known networks**. From here, you can add or remove wireless network connections.

Configuring Bluetooth on the Compact Workstation 310

The Oracle MICROS Compact Workstation 310 contains Bluetooth 4.1 network technology.

To configure Bluetooth on the Oracle MICROS Compact Workstation 310:

1. From the Start Menu, tap **Settings**.

2. Tap **Devices**, and then tap **Bluetooth**.
3. Tap **On/Off** and ensure Bluetooth is turned on. The **Bluetooth**  icon is shown in the System Tray when Bluetooth is turned on.
4. Select the Bluetooth device from the list of available devices.

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Configuring the Tablet 720

The Oracle MICROS Tablet 720 is equipped with an embedded 802.11a/b/g/n WLAN adapter and Bluetooth 4.0 low energy (LE) network technology.

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

Connecting the Tablet 720 to a Wireless Network

The Oracle MICROS Tablet 720 contains an embedded 802.11a/b/g/n WLAN adapter equipped with a hidden custom antenna. If WEP/WPA/WPA2 is enabled, the SSID and WEP/WPA/WPA2 parameters and the access points have to match. Consult your network administrator for proper configuration.

1. To connect the Tablet 720 to a wireless network:
    a. Tap the **Wireless Networks** icon in the System Tray.
    b. Select the wireless access point from the list of available networks.
    c. If you want the device to automatically connect to this wireless network, select **Connect automatically**.
    d. If required, enter the network's password.
    e. Tap **Connect**. The device is now connected to the selected wireless network.
2. To manage wireless network connections on the Tablet 720 using the Settings interface:
    a. On the Desktop, click the **Settings** icon.
    b. Select **Network**.
    c. Select **Connections**.
    d. Click **Manage known networks**. From here, you can add or remove wireless network connections.

Configuring Bluetooth on the Tablet 720

The Oracle MICROS Tablet 720 contains the Bluetooth 4.0 LE network technology, providing a more energy and power efficient Bluetooth communication range.

To configure Bluetooth on the Tablet 720:

1. From the Start Menu, tap **Settings**.
2. Tap **Devices**, and then tap **Bluetooth**.

3. Tap **On/Off** and ensure Bluetooth is turned on. The **Bluetooth** icon is shown in the System Tray when Bluetooth is turned on.
4. Select the Bluetooth device from the list of available devices.

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Configuring the Tablet 721/721P

The Oracle MICROS Tablet 721/721P features an embedded 802.11a/b/g/n/ac WLAN adapter and Dual Mode Bluetooth 4.2 BLE network technology.

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

Connecting the Tablet 721/721P to a Wireless Network

The Oracle MICROS Tablet 721/721P contains an embedded 802.11a/b/g/n/ac WLAN adapter equipped with a hidden custom antenna. If WEP/WPA/WPA2 is enabled, the SSID and WEP/WPA/WPA2 parameters and the access points have to match. Consult your network administrator for proper configuration.

1. To connect the Tablet 721/721P to a wireless network:
    a. Tap the **Wireless Networks** icon in the System Tray.
    b. Select the wireless access point from the list of available networks.
    c. If you want the device to automatically connect to this wireless network, select **Connect automatically**.
    d. If required, enter the network's password.
    e. Tap **Connect**. The device is now connected to the selected wireless network.
2. To manage wireless network connections on the Tablet 721/721P using the Settings interface:
    a. On the Desktop, click the **Settings** icon.
    b. Select **Network**.
    c. Select **Connections**.
    d. Click **Manage known networks**. From here, you can add or remove wireless network connections.

Configuring Bluetooth on the Tablet 721/721P

The Oracle MICROS Tablet 721/721P features Dual Mode Bluetooth 4.2 BLE network technology.

To configure Bluetooth on the Tablet 721/721P:

1. From the Start Menu, tap **Settings**.
2. Tap **Devices**, and then tap **Bluetooth**.

3. Tap **On/Off** and ensure Bluetooth is turned on. The **Bluetooth**  icon is shown in the System Tray when Bluetooth is turned on.
4. Select the Bluetooth device from the list of available devices.

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Configuring the Wireless Workstation 6 Series

The Oracle MICROS Workstation 6 (WS6) Series consists of three configurations – the 610, 620, and 650.

- The Oracle MICROS Workstation 610 features an Intel Atom processor and runs the Microsoft Windows Embedded 8.1 Industry Pro operating system or the Microsoft Windows 10 IoT Enterprise operating system.
- The Oracle MICROS Workstation 620 features an Intel Celeron processor and runs the Microsoft Windows 10 IoT Enterprise operating system.
- The Oracle MICROS Workstation 650 features an Intel Core i5 processor and runs the Microsoft Windows 10 IoT Enterprise operating system.

Each workstation supports an optional wireless networking module comprising of a large PCB module, a small PCB module, and two wireless antennas.

Pre-Configuration Requirements for the Wireless WS6

Before you can connect the Wireless WS6 to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Verify that the WS6 has minimum CAL version 13.1.3.115 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
3. Verify that the Wireless Networking Module was installed on the WS6. This must be installed before connecting the Wireless WS6 to a wireless network. If you need to request this part, reference the following part number (PN) and description:
   - PN: 400633-400-PT
   - Description: Wireless Upgrade Kit (802.11 a/b/g/n) for Workstation 6

   The *MICROS Workstation 6 Series Setup Guide* contains installation instructions.
4. Ensure that your site has a WPA2-AES compatible Access Point.
5. Have a USB keyboard for the workstation.

Configuring the Wireless WS6 and the Mini-PCI Wireless Card

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, contact your site administrator.

1. To connect the Wireless WS6 to a wireless network:

   a. In the lower right corner, click the **Wireless Network**  icon.

   b. In the **Networks** list, select your wireless network.

   c. If you want this device to automatically connect to this wireless network, select **Connect automatically**.

   d. Click **Connect**.

   e. If required, enter the password or network security key for the network.

      The device is now connected to the selected wireless network.

2. To manage wireless network connections on the Wireless WS6 using the Settings interface:

   a. On the Desktop, click the **Settings**  icon.

   b. Select **Network**.

   c. Select **Connections**.

   d. Click **Manage known networks**. From here, you can add or remove wireless network connections.

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Configuring the Tablet E-Series and the Wireless Card

The Tablet E-Series is pre-installed with the Microsoft Windows Embedded 8.1 Industry Pro Retail operating system. It comes with a pre-installed, embedded wireless networking module.

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

1. To connect the Tablet E-Series to a wireless network:
    a. In the lower right corner, click the **Wireless Network**  icon.
    b. In the **Networks** list, select your wireless network.
    c. If you want this device to automatically connect to this wireless network, select **Connect automatically**.
    d. Click **Connect**.
    e. If required, enter the password or network security key for you the network. The device is now connected to the selected wireless network.
2. To manage wireless network connections on the Tablet E-Series using the Settings interface:
    a. On the Desktop, click the **Settings**  icon.
    b. Select **Network**.
    c. Select **Connections**.
    d. Click **Manage known networks**. From here, you can add or remove wireless network connections.

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Configuring the Tablet R-Series and the Wireless Card

The Tablet R-Series is pre-installed with the Microsoft Windows Embedded CE 6.0 operating system. It comes with a pre-installed, embedded wireless networking module.

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the Tablet E-Series to a wireless network:

1. On the Desktop, click the **Laird Connection Manager (LCM)** icon.
2. On the Configuration tab, ensure that the settings are as follows, and then click **Scan**:
   a. Ensure that the **Wi-Fi** is selected.
   b. Ensure that the **Active Profile** is set to **Default**.
   c. Click **Scan**.

Figure 9-1 Configuration Tab of the Laird Connection Manager

3. Double-click a wireless network, and then click **Yes** to create a new profile.
4. If the SSID does not have a name, enter a unique name for the profile, and then click **OK**.
5. In Manage Profiles, the Profile tab is pre-populated with the settings of the selected wireless network by default.

6. To view the default global settings, click the **Global** tab.

   These settings are dependent upon the site's infrastructure. Contact your site administrator before adjusting.

7. To save the profile and any changes made to the global settings:
   a. Click **Commit**.
   b. In the upper right corner of the dialog box, click **OK**.
8. On the Configuration tab:
   a. Set the **Active Profile** to your newly created profile.
   b. Click **Scan**.
   c. Close the Scan dialog box.

      The device is now connected to the selected wireless network.
9. To view the status and strength of the wireless connection, click the **Status** tab.
10. To close the LCM, click **OK** in the upper right corner of the dialog box.

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Configuring the Wireless Workstation 5A

The Workstation 5A (WS5A) is pre-installed with the Microsoft Windows Embedded CE 6.0 operating system or the Microsoft Windows Embedded POS Ready 2009 operating system. It supports an optional wireless networking module comprised of a mini-PCI wireless card.

Pre-Configuration Requirements for the Microsoft Windows CE Wireless WS5A

This section explains the steps necessary to connect a Wireless WS5A with Microsoft Windows CE for PCI compliance. When configuring, use the highest encryption level available to the device. It is recommended that the WS5A always be used at a minimum of WPA2-AES.

Before you can connect the Microsoft Windows CE Wireless WS5A to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Verify that the WS5A has minimum CAL version 13.1.3.68 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
3. Verify that the Mini-PCI Wireless Card was installed on the WS5A. This must be installed before connecting the Wireless WS5A to a wireless network. If you need to request this part, reference the following part number (PN) and description:
   - PIN: 400633-115-PT or 400633-220-PT
   - Description: KIT, MINI-PCI UPGRADE, WS4LX, WS5, WS5A. Note that this card is capable of using WPA2 encryption with AES. Its configuration is PCI compliant when using WPA2 encryption and placed behind a Firewall.

   The *Installing the Workstation 5/5A Mini-PCI Wireless Kit* document contains installation instructions.
4. Ensure that your site has a WPA2-AES compatible Access Point.
5. If using PEAP, have an Authentication device (for example, IAS Server or the WS2000).

6. Have a USB keyboard for the workstation.

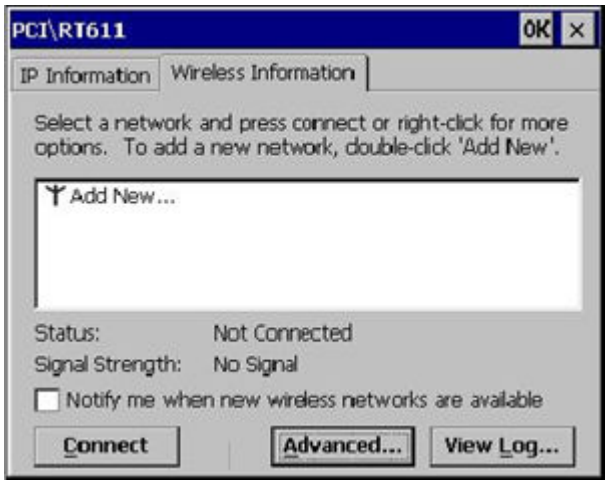
Configuring the Microsoft Windows CE Wireless WS5A for (WPA2-PSK) Wi-Fi Protected Access 2 with Pre-Shared Key

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the Microsoft Windows CE Wireless WS5A to a wireless network using (WPA2-PSK) Wi-Fi Protected Access 2 with Pre-Shared Key:

1. Power on the workstation. If the card has never been configured, the WS5A displays a Wireless Configuration dialog box on the desktop asking you to configure the wireless network.

Figure 10-1 Adding a New Wireless Network for the Microsoft Windows CE WS5A



2. Double-click **Add New**.

   The Wireless Network Properties dialog box opens.

Figure 10-2 Wireless Network Properties for the Microsoft Windows CE Wireless WS5A

3. On the Wireless Network Properties dialog box, enter the following:
   a. In the **Network Name (SSID)** field, enter the SSID for your Access Point. Note that this is case sensitive.
   b. In the **Encryption** drop-down list, select **AES**.
   c. In the **Authentication** drop-down list, select **WPA2-PSK**.
   d. In the **Network Key** field, enter your network key.

      This is a passphrase and must match the WPA2-PSK passphrase of your network. Use a strong password policy that includes upper and lower case, numeric and special characters.
   e. Click **OK** to close and save.
4. Select your network, and then click **Connect**.

   Once you have a wireless network association, you can keep the Wireless network card on the default **DHCP** setting.
5. To set a static IP address:
   a. Click **Start**, click **Settings**, and click select **Network and Dial-Up Connections**.
   b. Double-click the **Wireless Card (PCI-E1Y51CE61)** icon, and then enter a static IP address, subnet mask, and gateway if using a router.
6. Run the MICROS CAL normally.

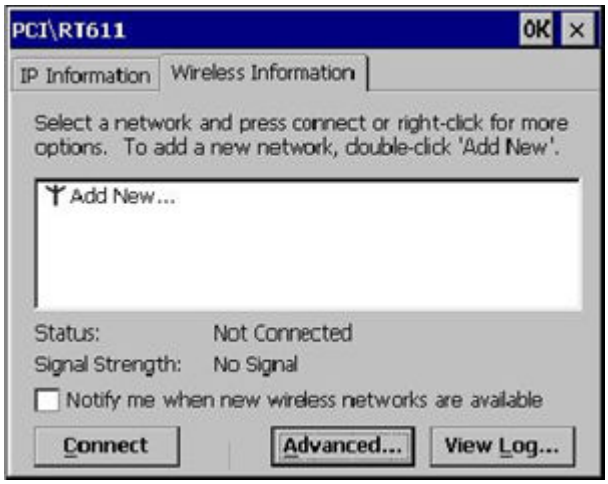
Configuring the Microsoft Windows CE Wireless WS5A for (WPA2) Wi-Fi Protected Access 2 with PEAP Authentication

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the WS5A to a wireless network using (WPA2) Wi-Fi Protected Access 2 with PEAP Authentication:

1. Power on the workstation. If the card has never been configured, the WS5A displays a Wireless Configuration dialog box on the desktop asking you to configure the wireless network.

Figure 10-3 Adding a New Wireless Network for the Microsoft Windows CE Wireless WS5A for PEAP Authentication



2. Double-click **Add New**.

   The Wireless Network Properties dialog box opens.

Figure 10-4 Wireless Network Properties for the Microsoft Windows CE Wireless WS5A for PEAP Authentication

3. On the Wireless Network Properties dialog box, enter the following:
   a. In the **Network Name (SSID)** field, enter the SSID for your Access Point. Note that this is case sensitive.
   b. In the **Encryption** drop-down list, select **AES**.
   c. In the **Authentication** drop-down list, select **WPA2-PSK**.
   d. In the **EAP type** drop-down list, select **PEAP**.

      PEAP is a security method that requires a user name and password before being able to join the network.
   e. Click the **Properties** button. The Authentication Settings dialog box opens.
      - If you are using a certificate to validate the server, select **Validate Server**, click **Select**, select the certificate, and then click **OK** close and save.
      - If you are not using a certificate, deselect the **Validate Server**, and then click **OK** close and save.
   f. Click **OK** close and save.
4. Select your network, and then click **Connect**.

   Once you have a wireless network association, you can keep the Wireless network card on the default **DHCP** setting.
5. To set a static IP address:
   a. Click **Start**, click **Settings**, and then click **Network and Dial-Up Connections**.
   b. Double-click the **Wireless Card (PCI-E1Y51CE61)** icon, and then enter a static IP address, subnet mask, and gateway if using a router.
6. Run the MICROS CAL normally.

Pre-Configuration Requirements for the Microsoft Windows Embedded POSReady 2009 Wireless WS5A

This section explains the steps necessary to connect a Microsoft Windows Embedded POSReady 2009 Wireless WS5A for PCI compliance. When configuring, use the highest encryption level available to the device. It is recommended that the WS5A always be used at a minimum of WPA2-AES.

Before you can connect the Microsoft Windows Embedded POSReady 2009 Wireless WS5A to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Verify that the WS5A has minimum CAL version 13.1.3.68 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
3. Verify that the Mini-PCI Wireless Card was installed on the WS5A. This must be installed before connecting the Wireless WS5A to a wireless network. If you need to request this part, reference the following part number (PN) and description:
   - PN: 400633-220-PT
   - Description: : KIT, MINI-PCI UPGRADE, WS4LX, WS5, WS5A. Note that this card is capable of using WPA2 encryption with AES. Its configuration is PCI compliant when using WPA2 encryption and placed behind a Firewall.

   The *Installing the Workstation 5/5A Mini-PCI Wireless Kit* document contains installation instructions.
4. Ensure that your site has a WPA2-AES compatible Access Point.
5. If using PEAP, have an Authentication device (for example, IAS Server or the WS2000).
6. Have a USB keyboard for the workstation.

Configuring the Microsoft Windows Embedded POSReady 2009 Wireless WS5A and the Mini-PCI Wireless Card

Follow this procedure if you are using the 802.11i WPA2-Personal security method.

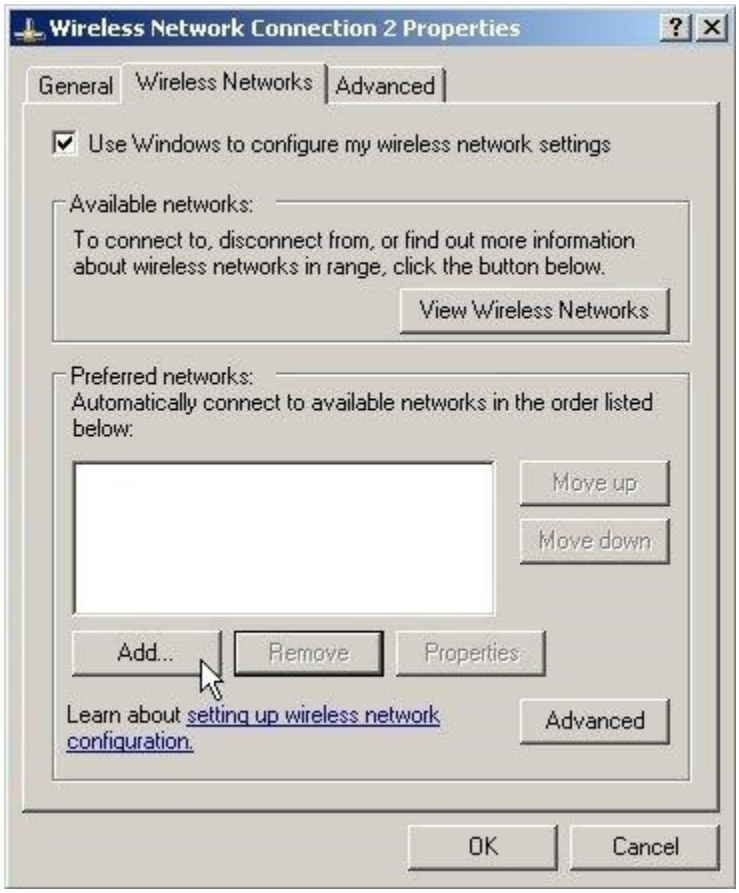
All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the Microsoft Windows Embedded POSReady 2009 Wireless WS5A to a wireless network using (WPA-PSK) Wi-Fi Protected Access with Pre-Shared Key:

1. Click **Start**, click **Settings**, and then click **Network and Dial-Up Connections**.
2. Right-click the **Wireless Network Connection** icon, and then select **Properties**.

   The Wireless Network Connection Properties dialog box opens.

Figure 10-5 Wireless Network Properties for the POSReady 2009 Wireless WS5A



3. Click the **Wireless Networks** tab, and then click the **Add** button. The Wireless Networks Properties dialog box opens.
   a. In the **Network Name (SSID)** field, enter the SSID for your Access Point. Note that this is case sensitive.
   b. In the **Network Authentication** drop-down list, select **WPA2-PSK**.
   c. In the **Data Encryption** drop-down list, select **AES**.
   d. In the **Network Key** field, enter the secure paraphrase that matches the one entered on your Access Point.
   e. Click **OK** to close and save.
4. Select your network, and then click **Connect**.
5. If you are using DHCP, click **OK** and let the WS5A make an association with the selected Access Point.
6. If you are using a static IP address, do not click **OK**. Instead, do the following:
   a. Select **Internet Protocol (TCP/IP)**, and then click **Properties**.

      The Internet Protocol Properties dialog box opens.
   b. Select **Use the following IP address**, and then enter the IP, subnet, and gateway addresses.
   c. Click **OK**.

7. Click **OK** to close and save.
8. Run the MICROS CAL normally.

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Configuring the Wireless Workstation 5

The Workstation 5 (WS5) is pre-installed with the Microsoft Windows Embedded CE 6.0 operating system. It supports an optional wireless networking module comprised of a mini-PCI wireless card.

Pre-Configuration Requirements for the Wireless WS5

Before you can connect the Wireless WS5 to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Verify that the WS5 has minimum CAL version 7.1.3.68 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
3. Verify that the Mini-PCI Wireless Card was installed on the WS5. This must be installed before connecting the Wireless WS5 to a wireless network. If you need to request this part, reference the following part number (PN) and description:
   - PIN: 400633-220-PT
   - Description: Mini-PCI Card, Abocom

     Note that this card is capable of using WPA2 encryption with AES. Its configuration is PCI compliant when using WPA2 encryption and placed behind a Firewall.

   The *Installing the Workstation 5 Wireless Kit* document contains installation instructions.
4. Ensure that your site has a WPA2 compatible Access Point.
5. Have a USB keyboard for the workstation.

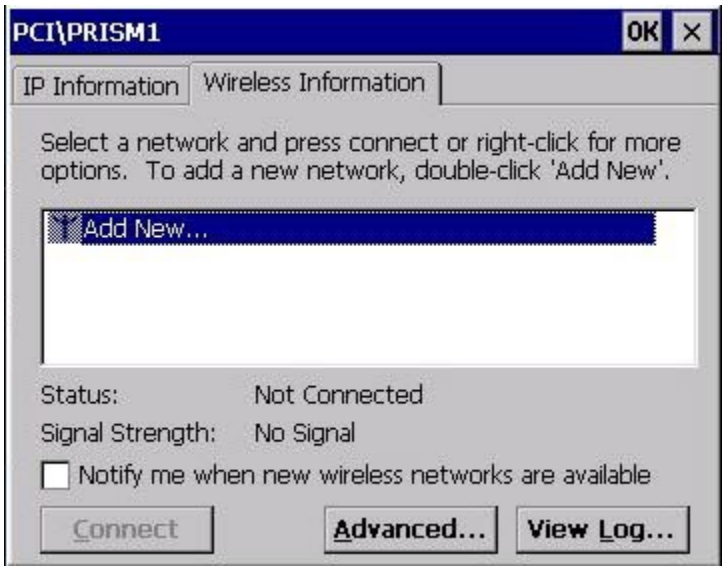
Configuring the Wireless WS5 and the Mini-PCI Wireless Card

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the Wireless WS5 to a wireless network:

1. Power on the workstation. If the card has never been configured, the WS5 displays a Wireless Configuration dialog box on the desktop asking you to configure the wireless network.

Figure 11-1 Add New Wireless Network for the Wireless WS5



2. Double-click **Add New**.

   The Wireless Network Properties dialog box opens.

Figure 11-2 Wireless Network Properties for WS5

3. On the Wireless Network Properties dialog box, enter the following:

a. In the **Network Name (SSID)** field, enter the SSID for your Access Point. Note that this is case sensitive.

b. In the **Encryption** drop-down list, select **AES**.

c. In the **Authentication** drop-down list, select **WPA2-PSK**.

d. In the **Network Key** field, enter your network key.

   This is a passphrase and must match the WPA2-PSK passphrase of your Access Point. Use a strong password policy that includes upper and lower case, numeric and special characters.

e. Click **OK** to close and save.

4. Select your network, and then click **Connect**.

   Once you have a wireless network association, you can keep the Wireless network card on the default **DHCP** setting.

5. To set a static IP address:

   a. Click **Start**, click **Settings**, and then click **Network and Dial-Up Connections**.

   b. Double-click the **Wireless Network Connection** icon, and then enter a static IP address, subnet mask, and gateway if using a router.

12

Configuring the Wireless Workstation 4 LX

The Workstation 4 LX (WS4 LX) is pre-installed with the Microsoft Windows Embedded CE 6.0 operating system. It supports an optional wireless networking module comprised of a mini-PCI wireless card.

Pre-Configuration Requirements for the Wireless WS4 LX

Before you can connect the Wireless WS4 LX to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Verify that the WS4 LX has minimum CAL version 6.1.3.68 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
3. Verify that the Mini-PCI Wireless Card was installed on the WS4 LX. This must be installed before connecting the Wireless WS4 LX to a wireless network. If you need to request this part, reference the following part number (PN) and description:
   - PIN: : 400624-150-PT
   - Description: Mini-PCI Card, Abocom

     Note that this card is capable of using WPA2 encryption with AES. Its configuration is PCI compliant when using WPA2 encryption and placed behind a Firewall.

   The *Wireless Card Installation for the PCWS2010/WS4 LX* document contains installation instructions.
4. Ensure that your site has a WPA2 compatible Access Point.
5. Have a USB keyboard for the workstation.

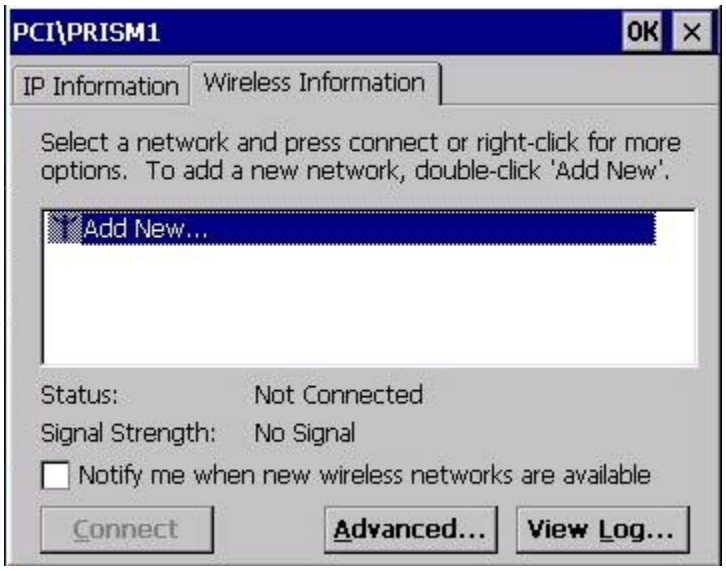
Configuring the Wireless WS4 LX and the Mini-PCI Wireless Card

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the Wireless WS4 LX to a wireless network:

1. Power on the workstation. If the card has never been configured, the WS4 LX displays a Wireless Configuration dialog box on the desktop asking you to configure the wireless network.

Figure 12-1 Add New Wireless Network for the Wireless WS4 LX



2. Double-click **Add New**.

   The Wireless Network Properties dialog box opens

Figure 12-2 Wireless Network Properties for the Wireless WS4 LX

3. On the Wireless Network Properties dialog box, enter the following:

a. In the **Network Name (SSID)** field, enter the SSID for your Access Point. Note that this is case sensitive.

b. In the **Encryption** drop-down list, select **AES**.

c. In the **Authentication** drop-down list, select **WPA2-PSK**.

d. In the **Network Key** field, enter your network key.

   This is a passphrase and must match the WPA2-PSK passphrase of your network. Use a strong password policy that includes upper and lower case, numeric and special characters.

e. Click **OK** to close and save.

4. Select your network, and then click **Connect**.

   Once you have a wireless network association, you can keep the Wireless network card on the default **DHCP** setting.

5. To set a static IP address:

   a. Click **Start**, click **Settings**, and then click **Network and Dial-Up Connections**.

   b. Double-click the **Wireless Card** icon, and then enter a static IP address, subnet mask, and gateway if using a router.

6. Run the MICROS CAL normally.

13

Configuring the Wireless PC Workstation 2015

The PC Workstation (PCWS) 2015 is pre-installed with the Microsoft Windows Embedded POS Ready 2009 operating system or the Microsoft Windows 7 Professional Embedded operating system. It supports an optional wireless networking module comprised of a mini-PCI wireless card.

Pre-Configuration Requirements for the Microsoft Windows Embedded POSReady 2009 PCWS 2015

This section explains the steps necessary to connect a Microsoft Windows Embedded POSReady 2009 Wireless PCWS 2015 for PCI compliance. When configuring, use the highest encryption level available to the device. It is recommended that the PCWS 2015 always be used at a minimum of WPA2-AES.

Before you can connect the Microsoft Windows Embedded POSReady 2009 Wireless PCWS 2015 to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Verify that the PCWS 2015 has minimum CAL version 3.1.3.115 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
3. Verify that the Mini-PCI Wireless Card was installed on the PCWS 2015. This must be installed before connecting the Wireless PCWS 2015 to a wireless network. If you need to request this part, reference the following part number (PN) and description:
    - PN: 400633-225-PT
    - Description: SparkLAN WMIR-200N; WIRELESS (802.11a/b/g/n) UPGRADE KIT WS5/WS5A/PCWS2015, INCLUDES MINI-PCI CARD,ANTENNAS, AND INSTALLATION INSTRUCTIONS.

Note that this card is capable of using WPA2 encryption with AES. Its configuration is PCI compliant when using WPA2 encryption and placed behind a Firewall.

For installation instructions, contact your Oracle MICROS representative.

4. Ensure that your site has a WPA2-AES compatible Access Point.
5. If using PEAP, have an Authentication device (for example, IAS Server or the WS2000).
6. Have a USB keyboard for the workstation.

Configuring the Microsoft Windows Embedded POSReady 2009 Wireless PCWS 2015 with the Windows Wireless Zero Configuration (WZC) Service

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the POSReady 2009 Wireless PCWS 2015 to a wireless network using (WPA-PSK) Wi-Fi Protected Access with Pre-Shared Key with the Microsoft Windows Wireless Zero Configuration (WZC) Service:

1. Click **Start**, click **Settings**, and then click **Network Connections**.
2. Right-click the **Wireless Network Connection** icon, and then select **Properties**.

   The Wireless Network Connection Properties dialog box opens.

Figure 13-1 Wireless Network Properties for the POSReady 2009 Wireless PCWS 2015

3. Click the **Wireless Networks** tab, and then click **Add**. The Wireless Networks Properties dialog box opens.
   a. In the **Network Name (SSID)** field, enter the SSID for your Access Point. Note that this is case sensitive.
   b. In the **Network Authentication** drop-down list, select **WPA2-PSK**.
   c. In the **Data Encryption** drop-down list, select **AES**.
   d. In the **Network Key** field, enter the secure paraphrase that matches the one entered on your Access Point.
   e. Click **OK** to close and save.
4. Select your network, and then click **Connect**.
5. If you are using DHCP, click **OK** and let the PCWS 2015 make an association with the selected Access Point.
6. If you are using a static IP address, do not click **OK**. Instead, do the following:
   a. Select **Internet Protocol (TCP/IP)**, and then click **Properties**.

      The Internet Protocol Properties dialog box opens.
   b. Select **Use the following IP address**, and then enter the IP, subnet, and gateway addresses.

c. Click **OK**.

7. Click **OK** to close and save.
8. Run the MICROS CAL normally.

Configuring the Microsoft Windows Embedded POSReady 2009 Wireless PCWS 2015 Using the Ralink WLAN Utility

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

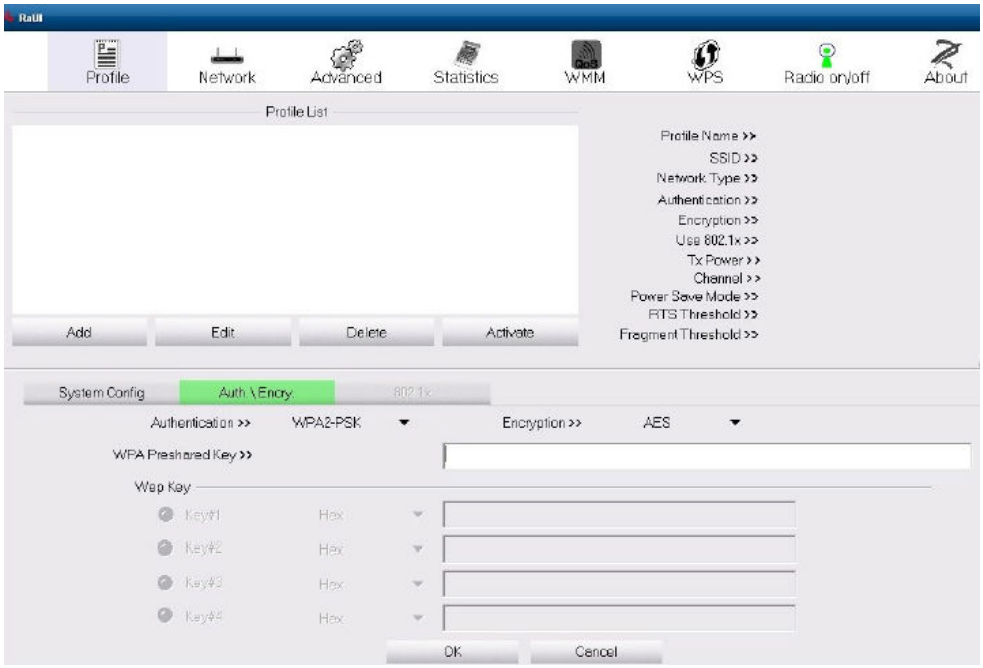
To connect the POSReady 2009 Wireless PCWS 2015 to a wireless network using (WPA-PSK) Wi-Fi Protected Access with Pre-Shared Key with the Ralink WLAN Utility and Ralink Configuration Tool:

1. Start the **Ralink WLAN Utility**.

   After the installation of the wireless network module, this utility automatically opens.

2. Click the **Profile** tab, and then click the **Add** button.
3. Click the **System Config** secondary tab.
4. In the **SSID** field, enter the SSID for your Access Point. Note that this is case sensitive.
5. Click the **Auth/Encry** secondary tab.

Figure 13-2 The Authorization and Encryption tab of Ralink WLAN Utility Tool for the PCWS 2015



6. If your Access Point is using WPA2-PSK Personal Mode:

a. For **Authentication**, select **WPA2-PSK**.

b. For **Encryption**, select**AES**.

c. In the **WPA Preshared Key** field, enter the secure paraphrase that matches the one entered on your Access Point.

d. Click **OK**.

7. If your Access Point is setup with WPA2 Enterprise Mode using AES Encryption and EAP Authentication:

a. For **Authentication**, select **WPA2**.

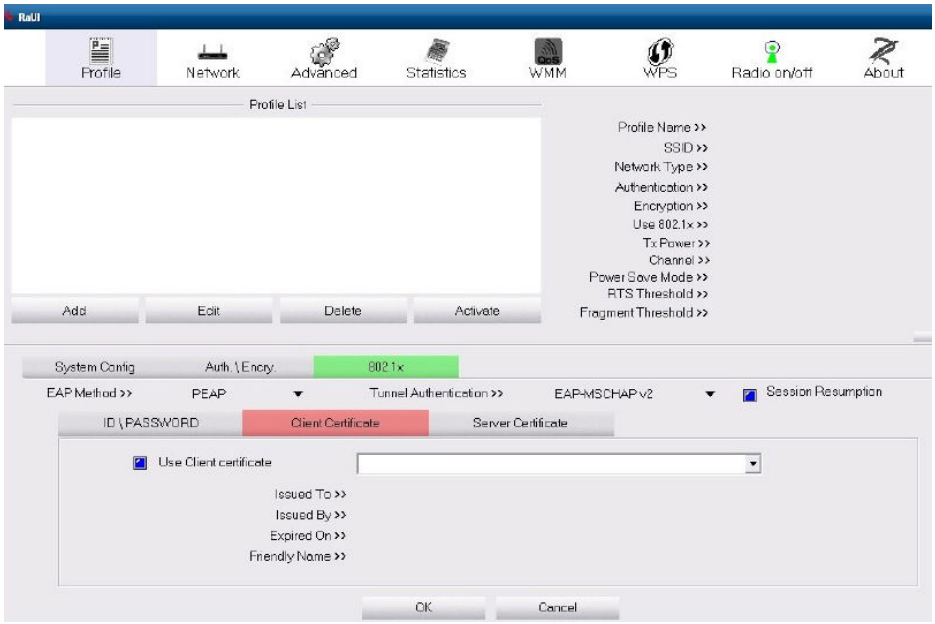
b. For **Encryption**, select**AES**.

c. Click the **802.1x** secondary tab.

d. Click the **Client Certificate** subtab, and then select **Use Client Certificate**.

e. Select the certificate, and then click **OK**.

Figure 13-3 The 802.1x tab of Ralink WLAN Utility Tool for the PCWS 2015



8. Select the profile you created, and then click **Activate**.

9. If you are using DHCP:

a. Verify that you have an IP address, sub mask, and default gateway assigned.

b. Click **OK** to close the Ralink Configuration Utility.

c. Run the MICROS CAL normally.

10. If you are using a static IP address:

a. Click **OK** to close the Ralink Configuration Utility.

b. Click **Start**, click **Settings**, and then click **Network Connections**.

c. Right-click **Wireless Network Connection**, and then click **Properties**.

The Internet Protocol Properties dialog box opens.

d. Select **Use the following IP address**, and then enter the IP, subnet, and gateway addresses.

e. Click **OK** twice to close and save.

f. Run the MICROS CAL normally.

Pre-Configuration Requirements for the Microsoft Windows 7 Wireless PCWS 2015

This section explains the steps necessary to connect a Microsoft Windows 7 Wireless PCWS 2015 for PCI compliance. When configuring, use the highest encryption level available to the device. It is recommended that the PCWS 2015 always be used at a minimum of WPA2-AES.

Before you can connect the Microsoft Windows 7 Wireless PCWS 2015 to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Verify that the PCWS 2015 has minimum CAL version 3.1.3.115 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
3. Verify that the Mini-PCI Wireless Card was installed on the PCWS 2015. This must be installed before connecting the Wireless PCWS 2015 to a wireless network. If you need to request this part, reference the following part number (PN) and description:
   - PN: 400633-225-PT
   - Description: SparkLAN WMIR-200N; WIRELESS (802.11a/b/g/n) UPGRADE KIT WS5/WS5A/PCWS2015, INCLUDES MINI-PCI CARD,ANTENNAS, AND INSTALLATION INSTRUCTIONS.

     Note that this card is capable of using WPA2 encryption with AES. Its configuration is PCI compliant when using WPA2 encryption and placed behind a Firewall.

   For installation instructions, contact your Oracle MICROS representative.
4. Ensure that your site has a WPA2-AES compatible Access Point.
5. If using PEAP, have an Authentication device (for example, IAS Server or the WS2000).
6. Have a USB keyboard for the workstation.

Configuring the Microsoft Windows 7 Wireless PCWS 2015 and the Mini-PCI Wireless Card

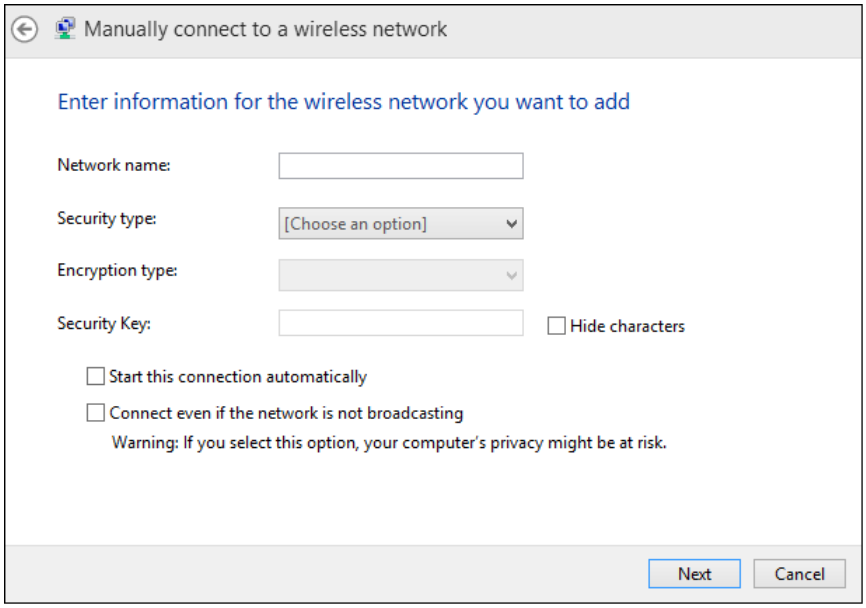
All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

Follow this procedure if you are using the 802.11i WPA2-Personal security method.

To connect the Microsoft Windows 7 Wireless PCWS 2015 to a wireless network using (WPA-PSK) Wi-Fi Protected Access with Pre-Shared Key:

1. Click **Start**, click **Control Panel**, and then click **Network and Internet**.
2. Click **Network and Sharing Center**.
3. Click **Set up a new connection or Network**.
4. Click **Manually connect to a wireless network**, and then click **Next**.

Figure 13-4 Manually Connect to a Wireless Network for the Microsoft Windows 7 PCWS 2015



5. In the **Network Name** field, enter the SSID for your Access Point. Note that this is case sensitive.
6. In the **Security Type** drop-down list, select **WPA2-Personal**.
7. In the **Encryption Type** drop-down list, select **AES**.
8. In the **Security Key** field, select **Hide Characters**, and then enter the secure paraphrase that matches the one entered on your Access Point.
9. Select **Start this connection automatically**.
10. Select **Connect even if the network is not broadcasting**.

    Microsoft Windows recommends against connecting to Access Points that do not broadcast; however, the *PCI White Paper v2.0* Section 4.2.1 states that while suppressing SSID is not required, broadcasting an SSID that advertises the organization's name or is easily identifiable with the organization is not recommended. Default SSID values should always be changed.
11. Click **Next**.

    If you are using DHCP, the PCWS 2015 automatically makes an association with the selected Access Point.
12. If you are using a static IP address:
    a. In the **Network and Sharing Center**, click **Wireless Network Connection (SSID)**, and then click **Properties**.

b. Select **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**.

   The Internet Protocol Properties dialog box opens.

c. Select **Use the following IP addresses**, and then enter the proper IP, subnet, and gateway addresses.

13. Click **OK** twice to close and save. You are now associated with your Access Point.
14. Run the MICROS CAL normally.

14

Configuring the Wireless Keyboard Workstation 270

The Keyboard Workstation 270 (KW270) is pre-installed with the Microsoft Windows Embedded CE 6.0 operating system. It supports an optional wireless networking module comprised of a USB wireless card.

Pre-Configuration Requirements for the Wireless KW270

Before you can connect the KW270 to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Verify that the KW270 has minimum CAL version 13.1.3.68 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
3. Verify that the USB Wireless Card was installed on the KW270. This must be installed before connecting the KW270 to a wireless network. If you need to request this part, reference the following part number (PN) and description:
   - PIN: MD0018-002 -PT
   - Description: USB Wireless Card

     Note that this card is capable of using WPA2 encryption with AES. Its configuration is PCI compliant when using WPA2 encryption and placed behind a Firewall.

   The *Installing the KW270 USB WiFi Option* document contains installation instructions.
4. Ensure that your site has a WPA2 compatible Access Point.
5. If using PEAP, have a RADIUS Server (for example, Internet Authentication Service).
6. Have a USB keyboard for the workstation.

Configuring the Wireless KW270 and the USB Wireless Card

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the Wireless KW270 to a wireless network:

1. Power on the KW270. If the card has never been configured, the Wireless Configuration dialog box opens.

Figure 14-1 Adding a New Wireless Network for the KW270

2. If your Wireless network appears in the list, double-click it; otherwise, double-click **Add New**.

   The Wireless Network Properties dialog box opens.

> **Note:**
>
> The size of the dialog boxes vary and may exceed the dimensions of the screen. When this occurs, items at the bottom of the dialog box, such as buttons, are hidden or cut off. To see these items, move the dialog box up as far as possible.

3. On the Wireless Network Properties dialog box, enter the following:
   a. In the **Network Name (SSID)** field, enter the SSID for your Access Point. Note that this is case sensitive.
   b. In the **Encryption** drop-down list, select **AES**.
   c. In the **Authentication** drop-down list, select **WPA2**.
   d. In the **EAP Type** drop-down list, select **PEAP**.

      This is your IEEE 802.1X authentication. PEAP is a security method that requires a user name and password before being able to join the network.
   e. Click the **Properties** button. The Authentication Settings dialog box opens.
      - If you are using a certificate to validate the RADIUS server, select **Validate Server**, click **Select**, select the certificate, and then click **OK** to close and save.

- If you are not using a certificate, deselect **Validate Server**, and then click **OK** to close and save.

4. Click **OK** in the top right of the Wireless Network Properties dialog box to save.
5. Select your network, and then click **Connect**.

   Once you have a wireless network association, you can keep the Wireless network card on the default **DHCP** setting.
6. To set a static IP address:
   a. Click **Start**, click **Settings**, and then click **Network and Dial-Up Connections**.
   b. Double-click the **RT2501USB1** icon, and then enter a static IP address, subnet mask, and gateway if using a router.
   c. Run the MICROS CAL normally.

15
Configuring the MC40

The MC40 by Zebra (formerly the Motorola MC40) uses Microsoft Windows Embedded Mobile 7, which is capable of utilizing the WPA and WPA2 encryption security standards. The MC40 is shipped from Oracle MICROS with the CAL pre-loaded and with a pre-installed, embedded wireless networking module.

Pre-Configuration Requirements for the MC40

Before you can connect the Motorola MC40 to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Read the product warranty and enclosed documentation that shipped with your Motorola MC40.
3. Verify that the Motorola MC40 has minimum CAL version 15.1.3.115 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
4. Ensure that your site has a WPA2 compatible Access Point.
5. Have a fully charged battery.
    a. Attach the battery to the MC40 according to the enclosed instructions.
    b. Charge the battery for several hours to make sure you have sufficient battery time to configure the MC40 and to run CAL.

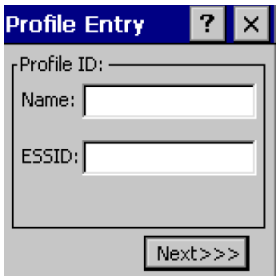
Configuring the MC40

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the MC40 to a wireless network:

1. Click the **Fusion**  icon at the bottom of the screen, and then select **Manage Profiles** from the menu.
2. Hold the stylus on the **Motorola Wireless Out of Box Magic** profile, and then select **Delete** to remove this profile. If this profile does not exist, go to the next step.
3. Hold the stylus on the empty space in the window, and then select **Add**. The Wireless LAN Profile Entry dialog box opens.

Figure 15-1 The Wireless LAN Profile Entry Dialog Box for the MC40



4. Enter a **Profile Name** and the **ESSID** (case sensitive) of the Access Point to which you are connecting, and then click **Next**.
5. Select **Infrastructure** as the **Operating Mode**.
6. If applicable, select the operating **Country**.
7. Click **Next**.
8. Select the **Security Mode** used by your Infrastructure.

   At a minimum, WPA2 must be used.
9. If required, select the **Authentication Type**.

   Some sites require a stronger security than WPA2-PSK. At these sites, there is an Authentication device that requires you to type a password or provide a certificate.
10. Click **Next**.
11. Ensure that the **Fast Roaming Options** are deselected, and then click **Next**.
12. For **Encryption Type**, select **AES**.
13. Select **Pass-phrase**, select **For added security – Mask characters entered**, and then click **Next**.
14. Enter the **WPA Pre-Shared Key** pass-phrase that matches your infrastructure, and then click **Next**.
15. On the IP Address window, if you are using DHCP, ensure that **Obtain Device IP Address Automatically** is selected.
16. If you are using a static IP address, deselect **Obtain Device IP Address Automatically**, and then enter the IP, subnet, and gateway addresses.
17. Click **Next**.
18. Select a **Battery Usage Mode**, and then click **Next**.

    The default **Fast Power Save** is recommended.
19. Select the **Performance Settings**.

    The default **Optimize for Data** is recommended.
20. Click **Save**.

    Your device is now connected to your wireless network. Note that the Fusion  icon now displays the signal strength. If your signal becomes too weak or you are disconnected, this icon will change accordingly.
21. Warm boot the MC40 and allow the MICROS CAL to run as normal.

16

Configuring the MC55A

The MC55A by Zebra (formerly Motorola MC55A) uses Microsoft Windows Embedded Handheld 6.5, which is capable of utilizing the WPA and WPA2 encryption security standards. The MC55A is shipped from Oracle MICROS with the CAL pre-loaded and with a pre-installed, embedded wireless networking module.

Pre-Configuration Requirements for the MC55A

Before you can connect the MC55A to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Read the product warranty and enclosed documentation that shipped with your Motorola MC55A.
3. Verify that the Motorola MC55A has minimum CAL version 15.1.3.115 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
4. Ensure that your site has a WPA2 compatible Access Point.
5. Have a fully charged battery.
    a. Attach the battery to the MC55A according to the enclosed instructions.
    b. Charge the battery for several hours to make sure you have sufficient battery time to configure the MC55A and to run CAL.

Configuring the MC55A

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the MC55A to a wireless network:

1. Click **Start**, click **Settings**, click **Connections**, and then click **Wireless Manager**.

   The Wireless Manager opens.
2. Ensure that **Wi-Fi** is set to **On**.
3. Return to the Home screen.
4. Select the Wi-Fi row, and then click **Fusion Menu** at the bottom of the screen.

Figure 16-1 MC55A Fusion Menu Button

5. Click **Manage Profiles**.
6. Hold the stylus on the **Motorola Wireless Out of Box Magic** profile, and then select **Delete** to remove this profile. If this profile does not exist, go to the next step.
7. Hold the stylus on the empty space in the window, and then select **Add**.

   The Wireless LAN Profile Entry dialog box opens.

Figure 16-2 MC55A Add Wireless LAN Profile

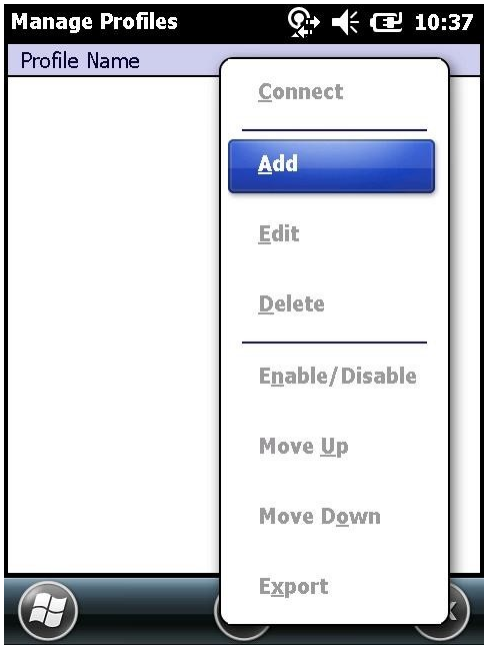
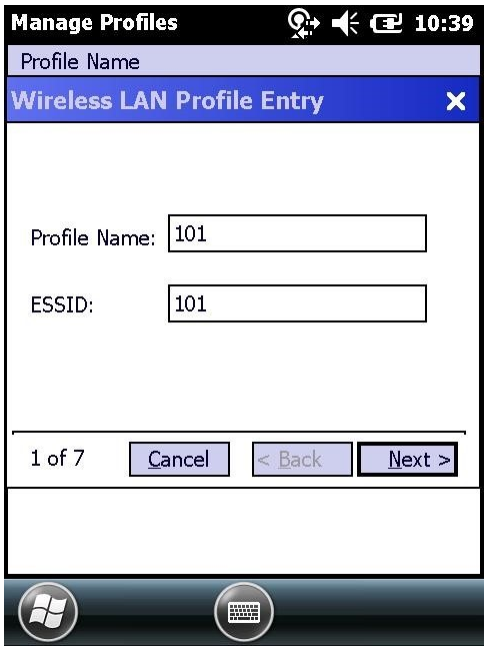


Figure 16-3 MC55A Wireless LAN Profile Entry

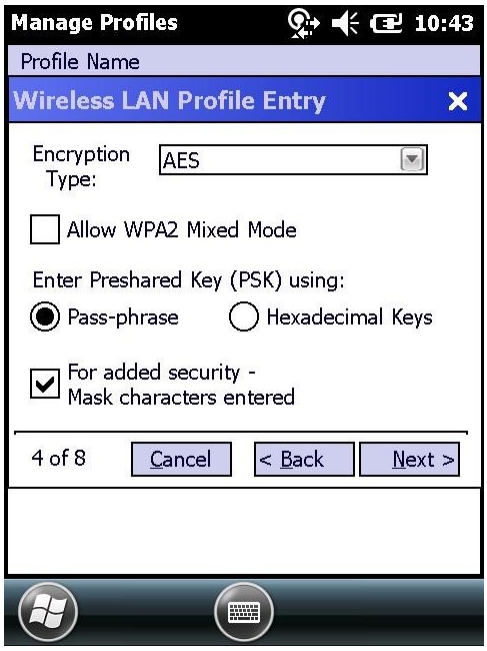


8. Enter a **Profile Name** and the **ESSID** (case sensitive) of the Access Point to which you are connecting, and then click **Next**.
9. Select **Infrastructure** as the **Operating Mode**.
10. If applicable, select the operating **Country**.
11. Click **Next**.
12. Select the **Security Mode** used by your Infrastructure.

    At a minimum, WPA2 must be used.
13. If required, select the **Authentication Type**, and then click **Next**.

    Some sites require a stronger security than WPA2-PSK. At these sites, there is an Authentication device that requires you to type a password or provide a certificate.
14. For **Encryption Type**, select **AES**.
15. Select **Pass-phrase**, select **For added security – Mask characters entered**, and then click **Next**.

Figure 16-4 MC55A Wireless LAN Profile Encryption Type



16. Enter the **WPA Pre-Shared Key** pass-phrase that matches your infrastructure, and then click **Next**.
17. On the IP Address window, if you are using DHCP, ensure that **Obtain Device IP Address Automatically** is selected.
18. If you are using a static IP address, deselect **Obtain Device IP Address Automatically**, and then enter the IP, subnet, and gateway addresses.
19. Click **Next**.
20. Set the **Transmit Power** to **Automatic**, and then click **Next**.
21. Select a **Battery Usage Mode**, and then click **Save**.

    The default **Fast Power Save** is recommended.
22. Click **OK** to close and save.
23. Warm boot the MC55A and allow the MICROS CAL to run as normal.

17
Configuring the DT430

The DT430 uses Microsoft Windows Embedded CE 6, which is capable of utilizing the WPA and WPA2 encryption security standards. The DT430 is shipped from Oracle MICROS with the CAL pre-loaded and with a pre-installed, embedded wireless networking module.

Pre-Configuration Requirements for the DT430

Before you can connect the DT430 to a wireless network, make sure to:

1. Read the PCI DSS Wireless Guideline Informational Supplement version 2.0.
2. Read the product warranty and enclosed documentation that shipped with your DT430.
3. Verify that the DT430 has minimum CAL version 15.1.3.115 installed. If CAL needs to be updated, contact your Oracle MICROS representative.
4. Ensure that your site has a WPA2 compatible Access Point.
5. Have a fully charged battery.
    a. Attach the battery to the DT430 according to the enclosed instructions.
    b. Charge the battery for several hours to make sure you have sufficient battery time to configure the DT430 and to run CAL.

Configuring the DT430

All network configuration and security settings are dependent upon the site's infrastructure and configuration of the wireless network. If you encounter problems with the wireless network, see your site administrator.

To connect the DT430 to a wireless network:

1. On the Home screen, double-click the **Laird Connection Manager (LCM)** icon.
2. On the Configuration tab:
    a. Ensure that **Wi-Fi** is selected.
    b. Ensure that the **Active Profile** is set to **Default**.
    c. Click **Scan**.

Figure 17-1 Configuration Tab of the Laird Connection Manager

3. Double-click a wireless network, and then click **Yes** to create a new profile.
4. If the SSID does not have a name, enter a unique name for the profile, and then click **OK**.
5. In Manage Profiles, the Profile tab is pre-populated with the settings of the selected wireless network by default.
6. To view the default global settings, click the **Global** tab.

   These settings are dependent upon the site's infrastructure. Contact your site administrator before adjusting.
7. To save the profile and any changes made to the global settings:
   a. Click **Commit**.
   b. In the upper-right corner of the dialog box, click **OK**.
8. On the Configuration tab:
   a. Set the **Active Profile** to your newly created profile, and then click **Scan**.
   b. Close the Scan dialog box.

      The device is now connected to the selected wireless network.
9. To view the status and strength of the wireless connection, click the **Status** tab.
10. To close the LCM, click **OK** in the upper-right corner of the dialog box.