LANTRONIX®

PremierWave®
Evaluation Board Quick Start
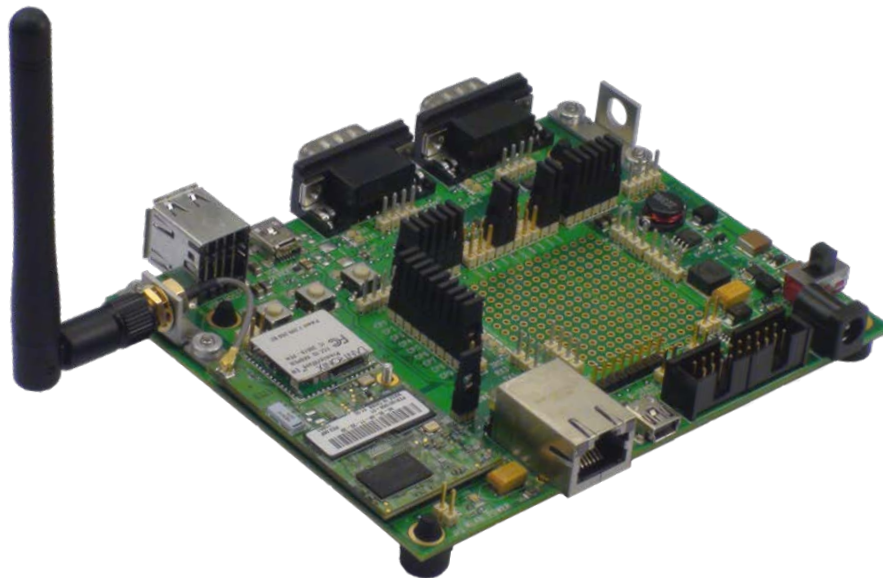
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Disclaimer and Revisions

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

♦ Reorient or relocate the receiving antenna.

♦ Increase the separation between the equipment and receiver.

♦ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

♦ Consult the dealer or an experienced radio/TV technician for help.

This device complies 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. This device is intended only for OEM Integrators.

Revision History

Date	Rev.	Comments
January 2011	A	Initial Document.
July 2011	B	Updated with WebManager information, for v7.2 release.
July 2014	C	Updated to include the PremierWave SE1000 embedded system on module.

For the latest revision of this product document, please check our online documentation at www.lantronix.com/support/documentation.

Table of Contents

Introduction

Thank you for purchasing the Lantronix® PremierWave® evaluation board or development kit.

This quick start guide describes the procedures for initial connection to the PremierWave device through either a network connection or serial port. This user guide can be used for the PremierWave EN and PremierWave SE1000 embedded system on modules.

Once a connection is established you can use the command line interface (CLI) for configuration and control.

Evaluation Board Contents

♦ PremierWave Evaluation Board

♦ 12V wall-mount power supply AC/DC, 1A

Development Kit Contents

♦ PremierWave Evaluation Board

♦ 12V-wall-mount power supply AC/DC, 1A

♦ Ethernet cable 10 ft

♦ Type-A to Mini Type-B USB cable

♦ RS-232, DB9F/F, 10 ft, null modem cable

♦ Antenna - 2.4 GHz/5 GHz 2.15 dbi reverse polarity SMA*

♦ SMA to UFL adapter cable*

Notes: *Items listed in the development kit are only available with the PremierWave EN model. The PremierWave device must be purchased separately.*

What You Need to Know

Hardware Address

You need to know the unit hardware address (also known as MAC address) to identify the unit in the Device Installer search list. It is on the product label in the format: XX-XX-XX-XX-XX-XX, where the XXs are unique numbers assigned to the product.

The product label denotes the hardware MAC address for the Wired Ethernet interface for PremierWave. The hardware MAC address for the WLAN interface (if available) is the next MAC address in the sequence.

E.g. If product label hardware MAC address is 00:20:4A:9D:01:80, then the WLAN MAC address is 00:20:4A:9D:01:81.

Hardware Address (Ethernet):   _____-_____-_____-_____-_____-_____

Hardware Address (WLAN):   _____-_____-_____-_____-_____-_____

IP Address

Your PremierWave will need a unique IP address on your network. By default, the PremierWave device is assigned an IP address by your DHCP server. If no DHCP server is available, the PremierWave will generate an AutoIP address (169.254.xxx.xxx).

If you are planning to use a static IP address, make note of it. The system administrator generally provides the IP address, subnet mask, and gateway. The IP address must be within a valid range, unique to your network, and in the same subnet as your PC.

IP Address: _____ _____ _____ _____

Subnet Mask: _____ _____ _____ _____

Gateway: _____ _____ _____ _____

Note: The factory default mode for PremierWave EN keeps the Wireless LAN interface enabled and the Ethernet interface disabled. The IP settings above get applied to the active interface (WLAN interface – factory default mode).

Connecting a PremierWave Device—Network Method

Choose the desired connection method for your PremierWave, and then follow the instructions in the corresponding section. You have three options for connecting to PremierWave:

1. Wired connection via Ethernet cable.

2. Wireless connection via Wireless router (Infrastructure)*

3. Wireless connection via Wireless card (Adhoc – factory default)*

Notes: *Options listed above are only applicable to the PremierWave EN model.*

Option 1: Wired connection via Ethernet

1. Connect the PC to the PremierWave Evaluation Board with a cross-over cable or a hub/switch and two RJ45 cables. Make sure there is no router between the PC and the Evaluation Board.
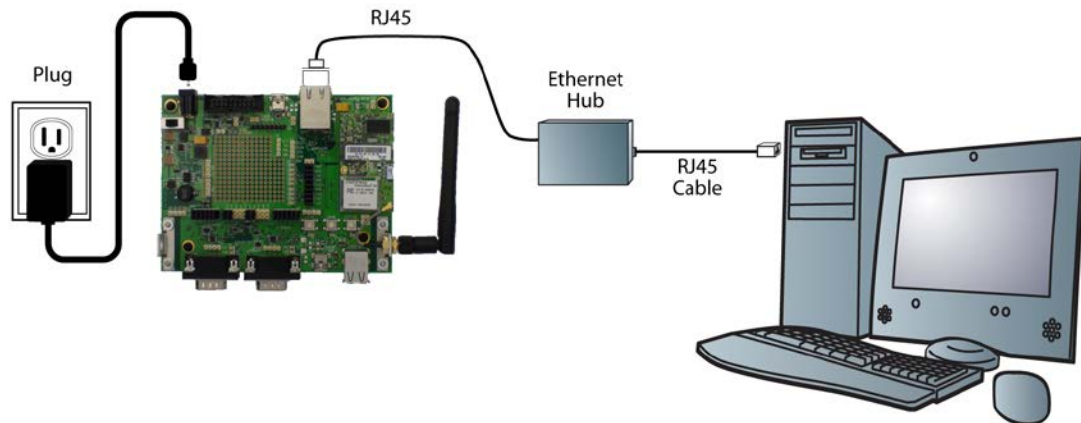
2. Select the appropriate power plug adaptor for your geographical location. Insert it into the slot on the Universal Power Supply; then plug the power supply into an outlet.

3. Connect the output plug of the power supply to the PremierWave Evaluation Board.

4. Move the power switch on the Evaluation Board to **ON**. This is the last step in 'connection.' The PremierWave is ready for configuration.

5. Continue with .

Option 2: Wireless connection via Access Point or Wireless Router (PremierWave EN model only)

1. Ensure the PC communicates with the access point (AP) or wireless router (WR) and that the AP or WR is running correctly.

2. Ensure the PC is on the LAN (not the WAN) side of the AP or WR.

3. Make sure there is no other router between the PC and the AP or WR.

4. Change the AP or WR configuration as follows:

    a. Set the Network name (SSID) to the **Lantronix Initial Infra Network**.

    b. Disable all wireless security (no encryption, no/open authentication).

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5. Select the appropriate power plug adaptor for your geographical location. Insert it into the slot on the Universal Power Supply; then plug the power supply into an outlet.

6. Connect the output plug of the power supply to the PremierWave Evaluation Board.

7. Move the power switch on the Evaluation Board to **ON**. This is the last step in 'connection.' The PremierWave is ready for configuration.

8. Continue with *Installing DeviceInstaller on page 9*.

Option 3: Wireless connection via Wireless card (factory default for PremierWave EN model only)

1. Ensure the wireless card is running correctly. Change the wireless card configuration as follows:

   a. Set Network name (SSID) to **Lantronix Initial Adhoc Network**.

   b. Select **AdHoc/Peer-to-Peer Mode** network.

   c. Disable all wireless security (no encryption, no/open authentication).

2. Select the appropriate power plug adaptor for your geographical location. Insert it into the slot on the Universal Power Supply; then plug the power supply into an outlet.

3. Connect the output plug of the power supply to the Evaluation Board. The final setup should look like this:
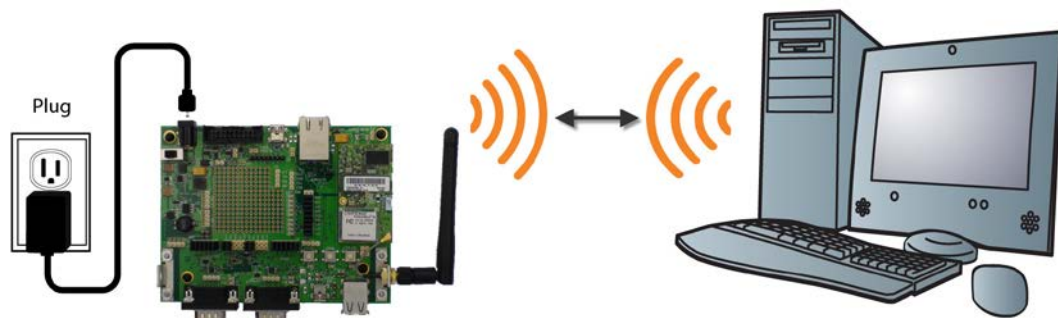

4. Move the power switch on the Evaluation Board to **ON**. This is the last step in 'connection.' The PremierWave is ready for configuration.

5. Continue with *Installing DeviceInstaller on page 9*.

Connecting a PremierWave Device—Serial Method

In the event that the equipment required for a network connection is not available for the initial configuration of PremierWave, the serial method can be used.

1. Connect one end of the supplied DB9F/F serial cable to the serial port on the laptop or desktop.

2. Connect the other end of the supplied DB9F/F serial cable to Port 1 on the PremierWave Evaluation Board.

3. Select the appropriate power plug adaptor for your geographical location. Insert it into the slot on the Universal Power Supply; then plug the power supply into an outlet.

4. Connect the output plug of the power supply to the PremierWave Evaluation Board. If the final serial connection setup looks like the image to the right, PremierWave is ready for configuration.

5. Refer to the PremierWave User Guide for information on configuring the PremierWave using this method.
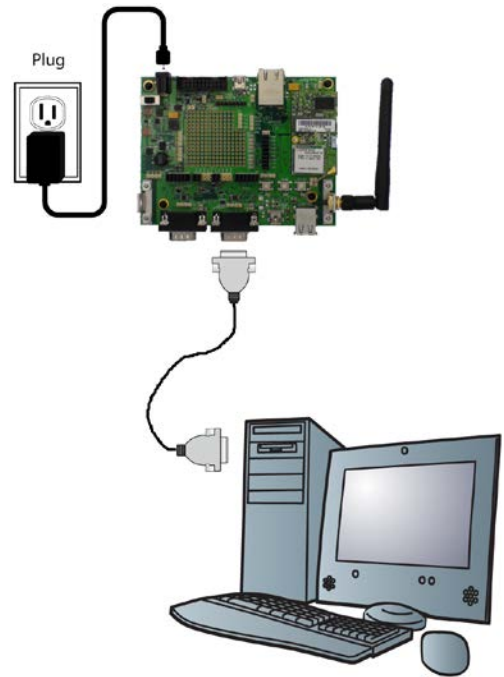
Installing DeviceInstaller

Use DeviceInstaller to configure the IP address and other network parameters.

Note: You will need a Windows PC running Lantronix DeviceInstaller 4.3.0.3 or higher.

1. Download the latest version of DeviceInstaller from www.lantronix.com/downloads.

2. Run the executable to start the installation process

3. Respond to the installation wizard prompts. (If prompted to select an installation type, select **Typical**.)

*Note: For more information about DeviceInstaller, click **Help > Contents…** in the menu bar of the software.*

Assigning an IP Address

The unit IP address is set for DHCP by default at the factory. The hardware address is on the product label. Assign a static IP address if you do not want the network to assign an IP address to the PremierWave or do not have a DHCP server on the network.

1. Click Start→Programs → Lantronix→DeviceInstaller→DeviceInstaller. If your PC has more than one network adapter, a message appears. Select an adapter and click OK.

2. Click the **Search** icon and select the unit from the list of Lantronix device servers on the local network. (In case no DHCP server is available, it can take 30 seconds before an AutoIP address is generated and the unit is detectable).

3. Click the **Assign IP** icon .

4. Select **Assign a specific IP address** and click **Next**.

5. Enter the IP address.
   The Subnet mask appears automatically based on the IP address.
   You may change it. On a local network, you can leave the Default gateway blank (all zeros).

6. Click **Next**.

7. Click **Assign** and wait several seconds until a confirmation message appears.

8. Click **Finish**.

9. Select the PremierWave from the main window list and click **Tools➔Ping**. The results appear in the Status area.
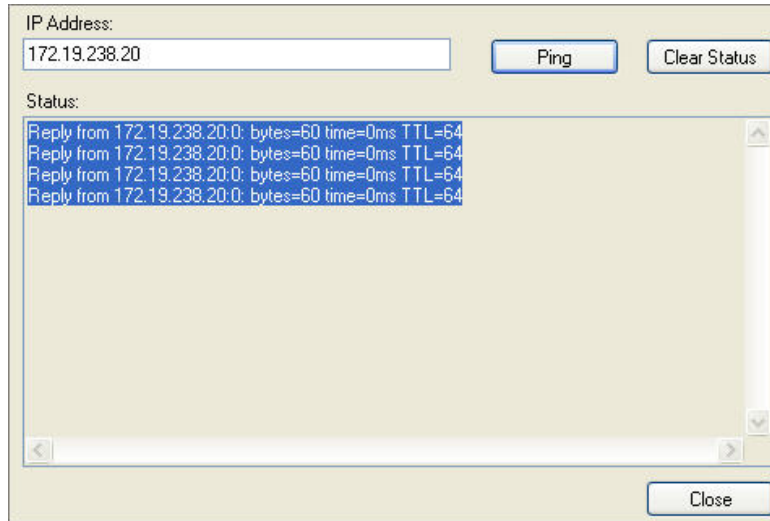
10. Click **Clear Status** to clear the window to ping the device again.

Note: If you do not receive "Reply" messages, ensure the IP address assigned is valid for the particular network segment you are working with. For a wireless unit, ensure the PremierWave is visible on the network created by the laptop or desktop PC's wireless card.

11. Click **Close**.

Configure Your PremierWave Device

From DeviceInstaller, it is easy to access the CLI, via the Telnet Configuration tab, or start the Lantronix browser-based tool, Web Manager, to configure the PremierWave. For detailed information on configuration, see the *PremierWave EN Embedded System on Module User Guide* and *PremierWave EN Embedded System on Module Command Reference* if you are using the PremierWave EN model, or the *PremierWave SE1000 Embedded System on Module User Guide* and *PremierWave SE1000 Embedded System on Module Command Reference* if using the PremieWave SE 1000 system on module.

For the CLI Access via Telnet Configuration

1. In DeviceInstaller, select the unit and then the **Telnet Configuration** tab.

2. Press the **Connect** icon. The Lantronix CLI shell appears.

3. If line authentication for CLI is enabled, enter your user name and password**.** The default user name is **admin** and the default password is **PASS**.

4. Use the CLI commands to configure the device.

5. Commit any changes with the **write** command.

For the Web Manager Access

1. In DeviceInstaller, select the unit and then the **Web Configuration** tab.

2. Press the **Go** icon. The Lantronix Web Manager login window appears.

3. Enter your **User Name** and **Password** and click **OK**. The default user name is **admin** and the default password is **PASS**.

4. Use the menu on the left to navigate to the sub-pages where you can configure the device.

5. Commit any changes with the **Submit** button, on every sub-page, that immediately stores and applies the new settings. Some settings (e.g. network) require a reboot to become effective, which will be indicated once changes are submitted for the relevant settings. WLAN pages also have an **Apply** button that only applies the new settings but does not store them in Flash.

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