



HNC 4801 Controller for the HLP 4800 platform

VERSION 4.0

User Guide

Aurora Networks
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| 部件名称 (Part name) | 有毒有害物质或元素 (Hazardous Substance) | | | | | |
|---------------------------------------|---------------------------------|--------|--------|------------|------------|--------------|
| | 铅 (Pb) | 汞 (Hg) | 镉 (Cd) | 六价铬 (CrVI) | 多溴联苯 (PBB) | 多溴二苯醚 (PBDE) |
| 印刷线路板 (Printed Circuit Assemblies) | X | O | O | O | O | O |
| 机械组件 (Mechanical Subassemblies) | X | O | O | O | O | O |
| 光学组件 (Optical Subassemblies) | X | O | O | O | O | O |
| 电源 (Power Supplies) | X | O | O | O | O | O |
| 缆线 / 线束 (Cables, harnesses) | X | O | O | O | O | O |
| 屏幕 / 显示器 (Screens, Monitors) | X | O | O | O | O | O |
| 金属零件 (Metal Parts) | O | O | O | O | O | O |
| 塑料 / 发泡材料 (Plastics, foams) | O | O | O | O | O | O |
| 电池 (Batteries) | O | O | O | O | O | O |

O: 表示在该部件的所有均质材料中，此类有毒有害物质的含量均小于 SJ/T11363-2006 标准所规定的限量。

O: Indicates the content of the toxic and hazardous substances at the homogeneous material level of the parts is below the limit defined in SJ/T11363 2006 standard.

X: 表示至少在该部件的某一均质材料中，此类有毒有害物质的含量超出 SJ/T11363-2006 标准规定的限量。

X: Indicates that the content of the toxic and hazardous substances in at least one of the homogeneous materials of the parts is above the limit defined in SJ/T11363 2006 standard.

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North America

| Standards | Agency Approval |
|---|-----------------|
| EMI: FCC Part 15, Subpart B, ICES-003, Issue 2, Class A | FCC |
| Safety: UL 60950-1, CSA 60950-1 | cTUV-us Mark |

Europe

| Standards | Agency Approval |
|------------------------------------|----------------------|
| EMI/EMC: EN55022, Class A, EN55024 | CE |
| Safety: EN 60950-1, EN60825-1 | TUV-GS or T-Mark, CE |

Japan

| Standards | Agency Approval |
|--------------------|-----------------|
| EMI: VCCI V-3 2009 | VCCI |

Australia and New Zealand

| Standards | Agency Approval |
|--------------------------|-----------------|
| EMI: AS/NZS CISPR22:2006 | N/A |

Documentation Conventions

This manual uses some special symbols and fonts to call your attention to important information. The following symbols appear throughout this manual:



DANGER: The Danger symbol calls your attention to information that, if ignored, can cause physical harm to you.



CAUTION: The Caution symbol calls your attention to information that, if ignored, can adversely affect the performance of your Harmonic product, or that can make a procedure needlessly difficult.



LASER DANGER: The Laser symbol and the Danger alert call your attention to information about the lasers in this product that, if ignored, can cause physical harm to you.



NOTE: The Note symbol calls your attention to additional information that you will benefit from heeding. It may be used to call attention to an especially important piece of information you need, or it may provide additional information that applies in only some carefully delineated circumstances.



TIP: The Tip symbol calls your attention to parenthetical information that is not necessary for performing a given procedure, but which, if followed, might make the procedure or its subsequent steps easier, smoother, or more efficient.

In addition to these symbols, this manual uses the following text conventions:

- **Typed Command:** indicates text you enter at the keyboard.
- **Buttons and Menus:** indicates a button to click, or a menu item to select.
- **<Esc> + <E>:** a key or key sequence to press.
- **LCD Screen Output:** shows LCD console output.
- **Screen Output:** shows text that is displayed to you on a computer screen.
- **Bold:** indicates the definition of a new term.
- *Italics:* used for emphasis and document references.
- [Links](#): used for cross-references, and hyperlinked cross-references in online documents.

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1.1 About this Book

This instruction manual is a complete guide to installing, configuring, and operating the HNC 4801 controller module for the HLP 4800 platform. Please read the entire document before beginning installation.

- Chapter 1 (this chapter) gives an overview of this book.
- Chapter 1, *Overview*, gives an overview of the HNC 4801.
- Chapter 3, *Installing the HNC 4801*, describes the installation procedure.
- Chapter 4, *Using the Front Panel Interface*, describes the front panel user interface.
- Chapter 5, *Using the WEB Interface*, describes the WEB interface.
- Chapter 6, *Maintenance and Contacting Harmonic Support*, has information about maintenance, and how to contact Harmonic, Inc.
- Appendix A, *Technical Specifications*, provides technical specifications.

Chapter 2

Overview

The HNC 4801 controls the communication bus of the HLP 4800 platform, enabling local and remote communication for system monitoring and control. The controller also provides the logic to operate the HNC 4801 front panel display.

The HNC 4801 is field-upgradeable and hot-swappable for ease of use. These actions are not service-affecting for the application modules.

Install the HNC 4801 in the dedicated controller slot of the HLP 4800, shown in [Figure 2-1](#) on page 9. The HLP 4800 measures three rack units in height and accommodates primary and backup power supplies, one HNC 4801 controller, and up to 10 of Harmonic's standard 1.3" wide plug-in modules.

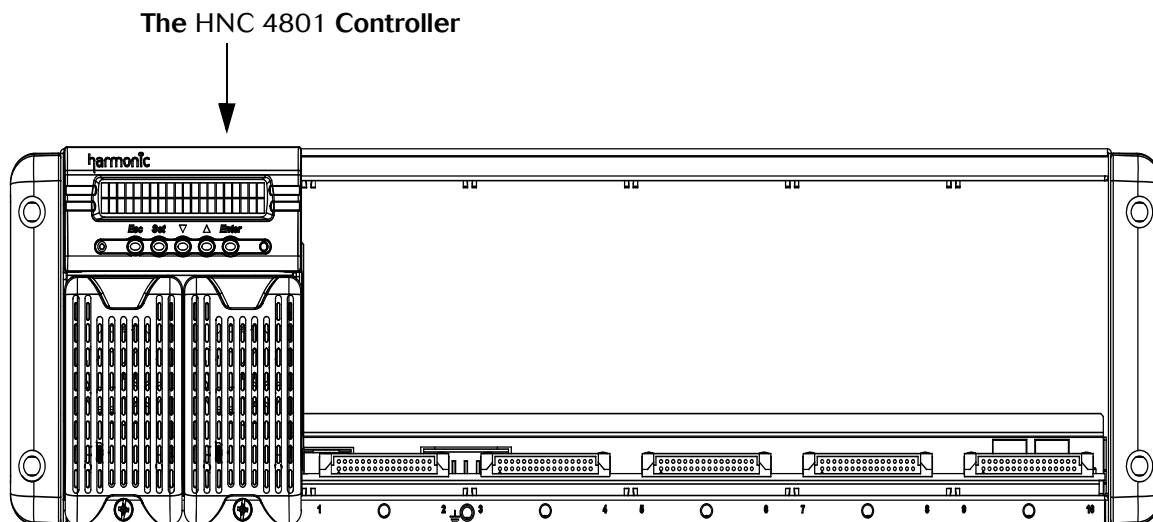


Figure 2-1: HLP 4800 Front View

For local control and monitoring of the HLP 4800 power supplies and application modules, the HNC 4801 is equipped with an easy to use five-key interface and 40-character display.

With the optional software license FW-HNC 4801-WEB/SNMP, the HNC 4801 becomes a Web-based SNMP proxy agent that you can use to remotely configure and control the HLP 4800 application modules.

The HNC 4801 can detect alarms and send this information to a higher-level network management station. With a valid login and password, you can access the HNC 4801 from anywhere on the network using a standard Web browser.

2.1 HNC Front Panel

After the HNC 4801 is installed in the dedicated controller slot of the HLP 4800, you can use the momentary push buttons and forty-character display on the front panel to control and monitor the HNC 4801 and the HLP 4800 plug-in modules.

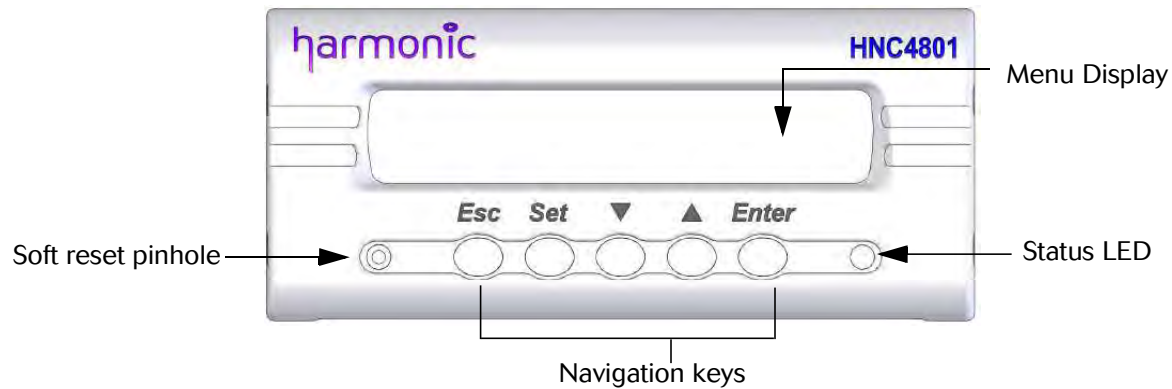


Figure 2–2: HNC 4801 front panel

2.1.1 Front Panel LED

There is one status LED on the front panel. The Status LED indicates the alarm state of the HNC 4801 and associated modules. Solid green indicates the unit is operating normally; red indicates an active alarm.

2.1.2 Front Panel Soft Reset

There is a controller soft-reset pinhole on the front panel. Access it using a bent paper clip.

2.2 Navigation Keys and Menu System.

2.2.1 The Menu System

There are six high-level menus on the HNC, and four navigation keys to select among them.

The menu system high-level choices are:

- System Ready
- Module Selection
- Address
- Contrast
- Backlight

Figure 2–3 shows the menus, starting with System Ready.

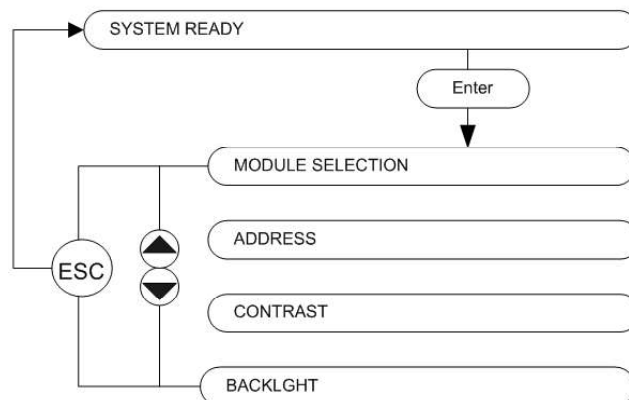


Figure 2–3: Front panel menus

Use the navigation keys to move through the menus and submenus:

- **Down-arrow** moves down the list.
- **Up-arrow** moves up the list.
- **Enter** moves you deeper into the menu structure.
- **ESC** returns to your previous selection. HNC Rear Panel

2.3 HNC Rear Panel

The HNC 4801 rear panel is shown in [Figure 2-4](#).

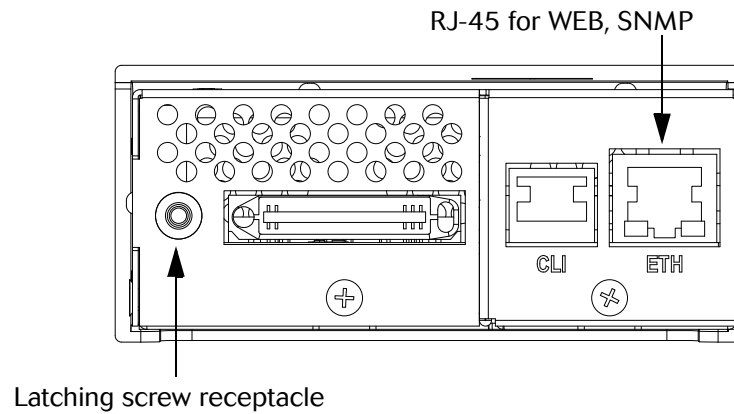


Figure 2-4: HNC Rear Panel

Chapter 3

Installing the HNC 4801

This chapter provides information on installing and setting up the HNC 4801 controller. Please read all the instructions before beginning installation.

This chapter describes:

- How to receive and inspect the HNC 4801
- How to mount the unit



CAUTION: ESD ALERT: Follow strict Electrostatic Discharge (ESD) precautions when handling or working on Harmonic equipment and related components.

3.1 Tools and Accessories

The following tools are necessary for installation and are not included with the CPS 4801:

- #2 Phillips screwdriver

3.2 Receiving and Inspecting

As you unpack your unit, inspect the shipping container and equipment for damage. Save the shipping material for future use. If the container or the equipment is damaged, notify both the freight carrier and Harmonic. See [Chapter 7, Maintenance and Contacting Harmonic Support](#) for contact information.



CAUTION: To protect yourself from potential injury and to protect the equipment from further damage, do not perform any operational tests if the equipment appears to be damaged.

3.3 Getting Ready

Before installing the HNC 4801, mount the HLP 4800 in an EIA standard 19-inch rack, as described in the *HLP 4800 User's Guide*.

3.4 Installing the HNC 4801

Insert the HNC 4801 module into the dedicated controller slot in the HLP 4800 platform as shown in [Figure 2–1](#) on page 9.

Once the module is seated, lock the unit into position by fitting the HNC rear panel module locking screw (see [Figure 3–1](#) on page 13) into the opening in the HNC rear panel.

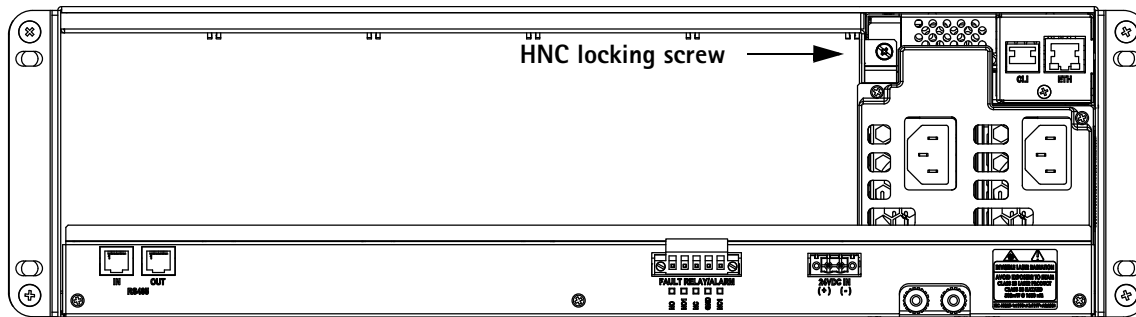


Figure 3–1: Locking screw fits into HNC rear panel

3.4.1 Powering the HLP 4800

To install and power the CPS4800 power supply see the *CPS 4801 User's Guide*. After you have successfully installed the CPS 4801 power supply, proceed to [Chapter 4, Using the Front Panel Interface](#).

Chapter 4

Using the Front Panel Interface

This chapter introduces the details of the HNC 4801 front panel interface.

You can use the front panel interface to monitor and control the operation of the HNC 4801 controller and HLP 4800 application modules. The front panel gives you access to all the adjustments and status information for the HLP 4800 platform, using a simple menu system.

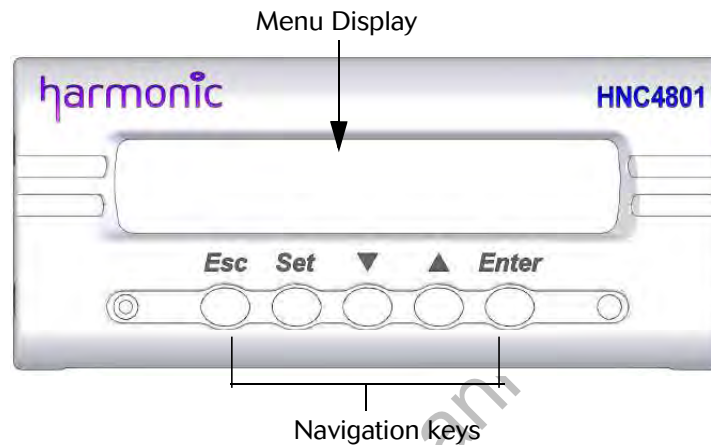


Figure 4-1: The HNC front panel

4.1 The Top-Level Menu System

The top level menu system has six choices, as shown in [Figure 4-2](#). Use the **up-arrow** and **down-arrow** to move between selections. Use the **Enter** button to enter a selection; if there are submenus, they will open.

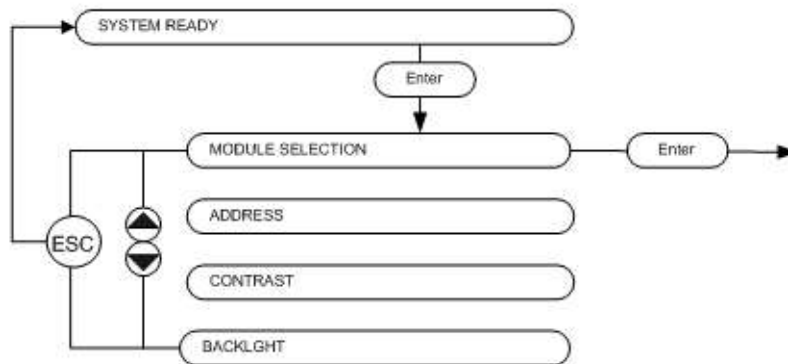


Figure 4-2: Front panel interface: menu

The top-level menu choices are:

System Ready.

Module Selection. Moves through the menu tree for the module installed in the HLP 4800, starting with the HNC 4801 controller and continuing with power supplies and module.

Address. Sets the platform address. This feature is not currently used.

Contrast. Sets the contrast of the display. While holding the **Set** button, press the **up-** or **down-arrow** to increase or decrease the contrast. Press **Enter** to save the new setting.

Backlight. Sets the backlight intensity of the display. While holding **Set**, press the **up-arrow** to increase, or the **down-arrow** to decrease the backlight. Press **Enter** to save the new setting.

When you enter the Module Selection Menu, you can navigate through the modules that are installed in the HLP 4800 platform. The first selection is the PLATFORM CONTROLLER-HNC 4801. Navigating up, the next modules are power supply 1 and power supply 2, followed by the modules in slot 1A through 10B. If a power supply or module is not present, the slot is skipped.

4.1.1 The PLATFORM CONTROLLER Module

The PLATFORM CONTROLLER - HNC 4801 submenu is shown in [Figure 4-3](#) on page 15.

Pressing the **Enter** key on the PLATFORM CONTROLLER HNC4800 button brings you to the PLATFORM CONTROLLER STATUS submenu. (See [page 16](#).)

There are two other Platform submenus:

- The DIAGNOSTICS menu (See [page 17](#).)
- The CONFIGURATION menu (See [page 17](#).)

To enter a sub menu, use the **up-** and **down-arrows** to navigate to its field, then press the **Enter** key.

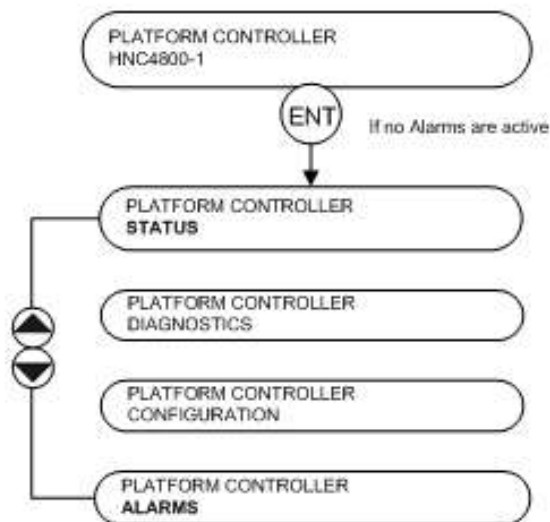


Figure 4-3: Platform Controller submenu

4.1.1.1 Platform Controller Alarm Submenu

An alarm will only appear in this submenu if - and only if - the corresponding alarm is active. An example of the menu is shown in [Figure 4-4](#) on page 16.

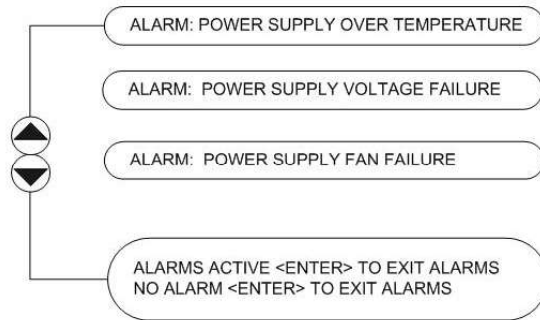


Figure 4-4: Platform Alarms submenu

4.1.1.2 Platform Controller Status Submenu

The Status submenu tells you several things:

- The current date and time
- The serial number of the HNC 4801
- Firmware version of the HNC 4801
- Whether SNTP is enabled or disabled
- The IP address
- The subnet mask
- Default gateway
- MAC address

To exit the Status menu, use **up-** and **down-**arrows to navigate to the last item, then press **Enter**.

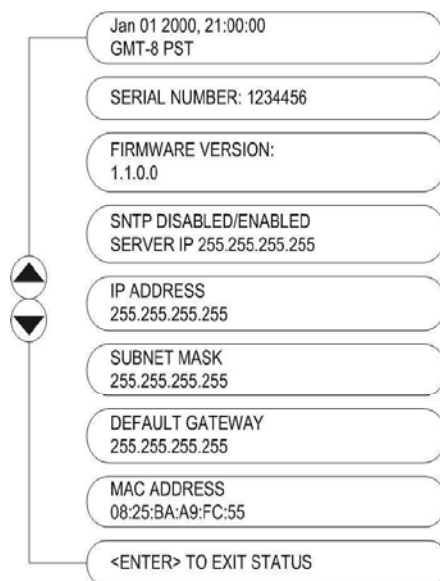


Figure 4-5: Platform Controller's Status submenu

4.1.1.3 Platform Controller Diagnostics Submenu

The Diagnostic submenu tells you the temperature of the HNC 4801.

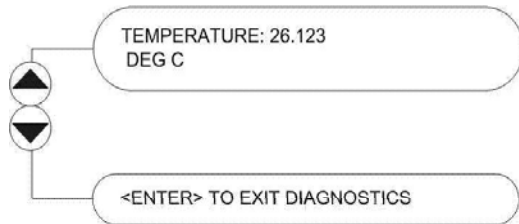


Figure 4–6: Platform Controller's Diagnostics submenu

To exit the Diagnostics menu, use the **up-** and **down-**arrows to navigate to the last item, and press **Enter**.

4.1.1.4 Platform Controller Configuration Submenu

Use the Configuration submenu to set configuration parameters.

Use the **up-** and **down-**arrows to navigate the submenu to the configuration parameter you want to set. When it highlights, follow the bracketed instructions to change the values:

- **<S+E >** means to press **Set** and **Enter** simultaneously to select the active field.
- **<S+U/D>** To change the value in a field, press **Set** and an **Up-arrow** to increment the value, or **Set** and a **Down-arrow** to decrement the value.
- **<S+E/U/D>** means to enter by pressing **Set** and **Enter** simultaneously, then change the value by simultaneously pressing **Set** and an **Up-arrow** or **Down-arrow**.
- **<Enter>** to save a changed value.

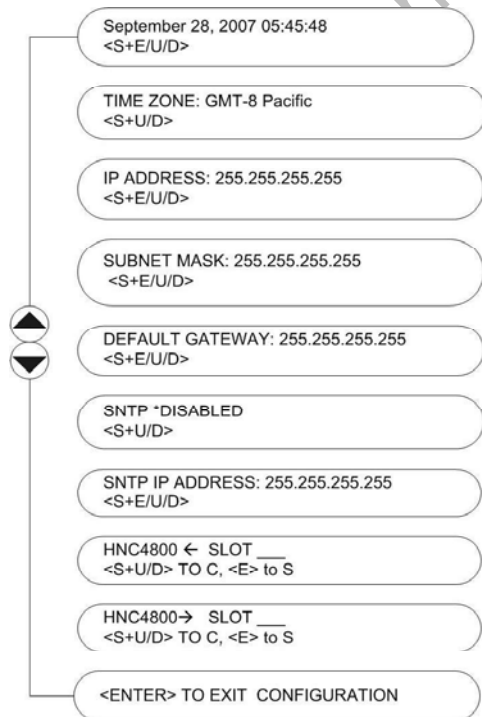


Figure 4–7: Platform Controller's Configuration submenu

4.1.2 Setting the HNC 4801 Clock

The HNC 4801 clock can be managed locally or externally through SNTP (Simple Network Time Protocol).

To manually set the clock:

1. From the Platform Controller submenu, navigate to the HNC 4801 CONFIGURATION submenu and press **Enter**.
2. Press the **down-arrow** until the display reads **SNTP**, then simultaneously press **Set** and the **Up-arrow** key, or **Set** and the **Down-arrow** key to disable SNTP.
3. Navigate to the time zone display in the HNC 4801 CONFIGURATION submenu. Simultaneously, press **Set** and one of the **arrow** keys to adjust the time zone.
4. Press **Enter** to save and exit the time zone configuration.
5. Navigate to the time display of the HNC 4801 CONFIGURATION submenu. Press **Set** and **Enter** to select the field. Then press **Set** and the **Up-** or **Down-arrow** key, to adjust a field: month, day, year, hour, minute, or second.
6. Press **Enter** to save the configuration and exit the **TIME** menu.

SNTP. Simple Network Time Protocol is the internet protocol used to synchronize the HNC 4801 clock to an external time reference. The setting toggles between disabled and enabled.



NOTE: To use the SNTP feature, the HNC 4801 must be properly installed, as described in [Chapter 3, Installing the HNC 4801](#). The HNC 4801 must be connected to your IP network as described in [5.1.2 Connecting the Ethernet Cable](#) on page 22. Also, IP addresses must have been assigned to the HNC 4801 as described in [4.1.4 Assigning IP Addresses](#) on page 20.

SNTP IP address. The external time reference can be either a server managed internal to your network or one available on the internet. If you do not know the preferred IP address of your SNTP, contact your system administrator.

To set the clock using an SNTP server:

1. Navigate to the HNC 4801 CONFIGURATION submenu and enter.
2. Press the down-arrow until the display reads SNTP, then simultaneously press **Set** and the **up-** or the **down-arrow** to select **enable SNTP**. Press **Enter** to accept the change.
3. Press the **down-arrow** until the display reads SNTP IP ADDRESS, then simultaneously press the **Set** and **Enter** keys.
4. Simultaneously, press the **Set** and an **arrow** key to adjust the first field. Simultaneously, press the **Set** and **Enter** keys to navigate to each additional field.
5. Press **Enter** to save the selections and exit SNTP IP ADDRESS.

4.1.3 Module Memory

Store module configuration parameters in the HNC 4801 slot memory using the module memory feature.

These commands are associated with the module memory feature:

HNC4801 ← SLOT ____
<S+U/D> TO C, <E> to S

and

HNC4801 → SLOT ____
<S+U/D> TO C, <E> to S

To select the slot parameters to be stored in the HNC 4801slot memory, use **S+U/D** on the menu button: HNC4801 ← SLOT ____
<S+U/D> TO C, <E> to S. Then, press the **Enter** key to execute.

To select the slot location to accept stored HNC 4801slot configuration parameters, use **S+U/D** to select the slot location: HNC4801 → SLOT ____
<S+U/D> TO C, <E> to S Then, press the **Enter** key to execute.

The following modules are supported.

- ❑ PWL4XXX (firmware version 1.38 and higher)
 - AGC/MGC
 - RF PAD
- ❑ HRR4104
 - OPTICAL ALARM
 - OPTICAL ALARM LIMIT
 - INPUT WAVELENGTH
 - MUTE
 - AGC MODE
 - AGC PAD SETPOINT
 - AGC OPT SETPOINT
 - AGC PAD MAXIMUM
 - AGC PAD MINIMUM
 - MAN RF PAD
- ❑ RDR4002
 - LINK LOSS ALARM
 - OPTICAL ALARM
 - OPTICAL ALARM LIMIT
 - WAVELENGTH
 - BER ALARM
 - BER ALARM LIMIT
 - RF PAD
 - RF MUTE
- ❑ SPL7XXX
 - AGC/MGC
 - TRANSMISSION DISTANCE
 - RF PAD
 - RF LOW ALARM LIMIT
- ❑ HLD7X05T
 - POWER REDUCTION AT LOW RF
 - FIBER LENGTH
 - RF PAD
- ❑ HLD7209T
 - RF PAD

4.1.4 Assigning IP Addresses

You must assign IP addresses to the HNC 4801, so that NMSs and web browsers can communicate with it. Use the front panel to assign the IP address, subnet mask, and default gateway.



NOTE: IP addresses are unique. If you do not know the IP addresses of the HNC 4801, contact your system administrator.

To manually assign an IP address:

1. Navigate to the HNC 4801 CONFIGURATION submenu and enter.
2. Press the **down-arrow** until the display reads IP ADDRESS, then simultaneously press the **Set** and **Enter** buttons.
3. Simultaneously press the **Set** and the **up-** or **down-arrow** buttons to adjust the first field. Simultaneously press **Set** and **Enter** to navigate to each additional field and adjust as needed.
4. Press **Enter** to save and exit the IP ADDRESS.
5. Repeat this process for the SUBNET MASK and the DEFAULT GATEWAY.

After entering the IP address for the first time only, the HNC must be power cycled to complete the configuration.

4.2 Power Supply Monitoring

The HNC 4801 offers enhanced monitoring capability when paired with the new CPS 4801 power supply or standard monitoring when paired with an older CPS4800 power supply.

The CPS 4801 can be configured for standard mode or monitored mode by using a selector switch on the side of the power supply. For more details refer to the CPS 4801 User's Guide. The power supply ships with the selector switch in standard mode. In standard mode, the CPS 4801 operates with the HNC 4801 and only reports power supply presence and power supply status to the controller. In monitored mode when used with the HNC 4801, the power supply reports model, serial number, temperature, output voltage, and fan speed.



NOTE: Monitored mode is not compatible with the HNC 4800. In that configuration, the power supply powers the HLP 4800 but the HNC 4800 reports no power supply installed. Only configure the CPS 4801 for monitored mode when pairing it with an HNC 4801.

4.2.1 CPS 4801 in Standard Mode or a CPS 4800

When you enter the Module Selection Menu, you can navigate through the modules that are installed in the HLP 4800 platform. The first selection is the PLATFORM CONTROLLER-HNC 4801. Navigating up, the next modules are power supply 1 and power supply 2, followed by the modules in slot 1A through 10B. If a power supply or module is not present the slot is skipped.

A CPS 4801 in standard mode or a CPS 4800 only report status ("No Alarm" or "Power Supply Malfunction" are the two messages).

4.2.2 CPS 4801 in Monitored Mode

When the CPS 4801 is in monitored mode, pressing the ENTER key with POWER SUPPLY 1 (or 2) selected brings you to the POWER SUPPLY submenu.

An example of the menu is shown in [Figure 4–8](#).

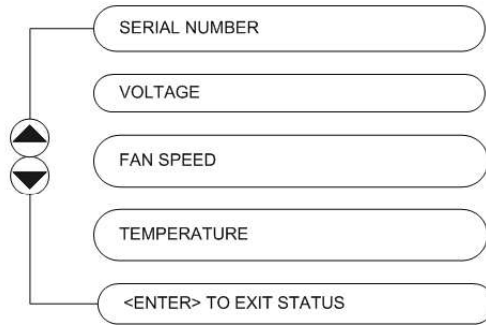


Figure 4–8: Power Supply Submenu

4.2.2.1 Power Supply Status Submenu

The Status submenu provides the following information:

- Serial number
- Voltage
- Fan Speed
- Temperature

An example of the menu is shown in [Figure 4–8](#).

4.2.2.2 Power Supply Alarm Submenu

An alarm will only appear in this submenu if - and only if - the corresponding alarm is active. An example of the menu is shown in [Figure 4–9](#).

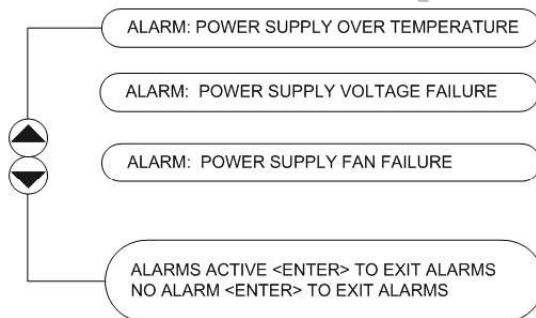


Figure 4–9: Power Supply Alarm Submenu

Chapter 5

Using the WEB Interface

This chapter introduces the HNC 4801 web interface.

Once the HNC 4801 is operating, the web interface provides a convenient means of managing it. The HNC 4801 has an embedded HTTP server, which allows you to remotely view the status of alarms and settings, or make adjustments to the HNC 4801. With the purchase of a software license, you can use a web browser or a network management system to monitor and control the HNC 4801.

5.1 Requirements

You can access the HNC 4801 web interface from any computer that is connected to the same IP network and has an Internet Explorer web browser 6.0 or higher.

To use the web interface, these criteria must be met:

- The HNC 4801 must be properly installed, as described in [Chapter 3, Installing the HNC 4801](#).
- You must have purchased a software license from Harmonic. (See [5.1.1 Purchasing the Software License](#).)
- You need to know the HNC 4801's IP address. The HNC 4801 must be connected to your IP network as described in [5.1.2 Connecting the Ethernet Cable](#).
- IP addresses must have been assigned to the HNC 4801 as described in [5.1.3 Assigning IP Addresses](#).

5.1.1 Purchasing the Software License

To use the WEB/SNMP interface you must purchase FW-HNC 4801-WEB/SNMP. For more information or to obtain a quotation, please contact your Harmonic Sales Representative or call Harmonic at 1-800-730-4099 (in the US and Canada) or from outside the US and Canada at +1-408-542-2771 for further assistance.

5.1.2 Connecting the Ethernet Cable

To connect the Ethernet cable, follow these steps:

1. Connect an Ethernet cable between the HNC 4801's RJ-45 Ethernet port and your TCP/IP network. The Ethernet port is located on the rear panel of the HNC 4801, as shown in [Figure 2-4](#).
2. Verify that the green Link LED is illuminated, which means there is a connection. The Link LED is located on the Ethernet port on the rear panel.

5.1.3 Assigning IP Addresses

Assign the IP address to the HNC 4801 so that NMSs and web browsers can communicate with it.

Use the front panel to assign the IP address, subnet mask, and default gateway.



NOTE: IP addresses are unique. If you do not know the IP addresses of the HNC 4801, contact your system administrator.

To assign an IP address:

1. Navigate to the HNC 4801 CONFIGURATION submenu and press **Enter**.
2. Press the **down-arrow** until the display reads IP ADDRESS, then simultaneously press **Set** and **Enter**.
3. To adjust the first field, simultaneously press **Set** and the up- or **down-arrow**. To navigate through the fields, simultaneous press the **Set** and **Enter** buttons.
4. Press **Enter** to save changes and exit the IP ADDRESS menu.
5. Repeat this process for the SUBNET MASK and the DEFAULT GATEWAY.



NOTE: For proper configuration, power cycle the HNC 4801 after setting the IP address for the first time.

5.1.4 Passwords

Once the HNC 4801 is operating, the web interface provides a convenient way to managing the HFC network, networked devices, and the HNC itself. The HNC 4801 provides two levels of access to the web interface. This allows your company to give different levels of access to different people, based on their job function or other criteria.

No one can access the HNC 4801 web interface without entering a user name and password. There are two user names: **Config**, and **Monitor**. Each user name has an associated password, and each user name provides a different level of HTTP (web) access.

Table 5–1 shows the two user names that allow access to the HNC 4801 web interface, the default passwords, and the functions permitted by each level of HTTP access control. **Read** access lets you view the settings. **Write** access lets you change the settings.

Table 5–1: HNC 4801 web user information

| User Name | Default Password | functions Permitted |
|-----------|------------------|---|
| Config | config | Full read and write access to all functions. |
| Monitor | monitor | Read-only access to everything. No write access |



NOTE: The user name and password are case-sensitive.

5.2 Accessing and Using the Web Interface

Follow these steps to access the web interface for the HNC 4801 from your browser.



NOTE: For best results, use the most current Internet Explorer browser with Compatibility Mode disabled.

1. Using a computer that is connected to the same TCP/IP network as the HNC 4801, launch an Internet Explorer web browser.
2. In the web browser's Address (URL) field, type the IP address of the HNC 4801, then press Enter. Your browser connects to the HNC 4801, and the web interface login page appears, as shown in *Figure 5–1*.

System Log On

| | |
|------------|--|
| User Name: | |
| Password: | |

Figure 5–1: Web log on screen

3. Enter the appropriate user name and password.
4. Click **Log On**. The current alarm table of the HNC 4801 web interface appears in your browser, as shown in [Figure 5–2](#).

harmonic HLP4800 10.21.4.54 User: Config 1 Alarms / 0 Warnings LogOff 2012-5-11, 1

Platform Nodes Monitoring

Current Alarm Event Log SNMP Trap

Refresh Export CSV File

| Module Address | Module Name | Alarm Description | TimeStamp | Severity |
|----------------|-------------|-------------------------------|-----------------------|----------|
| 202:1-A | SPL7110C | RF SIGNAL LOW, CHECK RF INPUT | 2012-5-11, 13:47:15.0 | Major |

Figure 5–2: HNC 4801 web interface: Monitoring page

5. Pressing the Platform button brings you to the platform page.

harmonic HLP4800 10.21.4.54 User: Config 1 Alarms / 0 Warnings LogOff 2012-5-11, 13:50:35

Platform Nodes Monitoring

HLP4800

| | | | | | | | | | | | | | | | | | | | |
|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| HNC | SPL | PWL | None | None | None | None | None | None | None | None | None | None | None | None | None | None | None | None | None |
| PS-1 | None | | | | | | | | | | | | | | | | | | |
| | 1-A | 2-A | 3-A | 3-B | 4-A | 4-B | 5-A | 5-B | 6-A | 6-B | 7-A | 7-B | 8-A | 8-B | 9-A | 9-B | 10-A | 10-B | |

Refresh Set Expected Modules To Actual

Figure 5–3: HNC 4801 web interface: HLP Platform page

5.3 Areas and Features of the Web Interface

[Table 5–2](#) summarizes the features of the HNC 4801 web interface. Use this table as a handy quick reference.

The left column of the table shows the areas of the web interface. The right column tells you which functions you can carry out within each of these areas and provides a reference for further information.

The web interface always includes the navigation links at the top of your browser. To access these areas of the web interface, click the links at the top of your browser.

Table 5–2: Features of the HNC 4801 web interface

| Web Interface Area | Enables You To: |
|--------------------|---|
| Platform | <ul style="list-style-type: none"> - View and change the parameters of attached modules. - View and change custom names and custom labels. - Manage expected modules vs. actual modules. See 5.4 HLP Platform Management . |
| Nodes | <ul style="list-style-type: none"> - View node module parameters. - View and change node description. - Activate, Deactivate, or delete nodes. - Add nodes to manage. |
| Monitoring | Current Alarms <ul style="list-style-type: none"> - View current alarm status. - Jump directly to alarmed modules. See 5.5 Viewing Current Alarms . |
| | Event Log <ul style="list-style-type: none"> - View the Event Log. See 5.6 Viewing the Event Log . |
| | SNMP Trap <ul style="list-style-type: none"> - Add and delete SNMP trap targets. See section 5.7 Adding Trap Destinations . |
| LogOff | <ul style="list-style-type: none"> - As a security measure, Harmonic recommends that you always terminate your session by clicking LogOff. |

5.4 HLP Platform Management

This section describes how to use the HNC 4801 web interface to manage networked devices.

To complete many of the functions described in this chapter, you must log into the HNC 4801 web interface using the **Config** username.

5.4.1 Configuring Platforms and Plug-in Modules

To configure platforms and plug-in modules, select the Platform tab at the top of your browser, which is shown in [Figure 5–3](#).

The HLP platform page shows the plug-in modules installed in the platform and alarm state. To view the details of a specific plug-in module, click the module name in the HLP 4800 chassis. A device details page opens, as shown in [Figure 5–4](#).

202:1-A-SPL7110C

| Property | Value |
|--------------------|---------------|
| Model Name | SD17110C |
| Firmware | V1.023 |
| Manufacturer | Harmonic Inc. |
| Description | SPL7110C E01 |
| Vendor Type | SupraLink |
| Class | Module |
| Field replaceable? | Yes |
| Serial No. | 1209001 |
| Parent Module | None |

| Environment | |
|-----------------|---------|
| Heat Sink Temp. | 25.7 9C |
| Fan Speed | Auto |

| RF | |
|-----------|------|
| Pad Level | 0 dB |
| Comp. RF | 0 V |

| Mode | |
|--------------|-----|
| AGC/MSC Mode | MGC |

| Transmission Distance | |
|-----------------------|-------|
| Distance | 40 Km |

| Laser | |
|--------------|------------|
| Output Power | 9.7 dBm |
| Wavelength | 1560.61 nm |

| Alarm Description | TimeStamp | Severity |
|-------------------------------|----------------------|----------|
| RF SIGNAL LOW, CHECK RF INPUT | 2012-5-11 13:47:19.0 | Major |

Refresh Set Values

Figure 5-4: Device details page of web interface

To change the configuration of the plug-in module, follow these steps:

1. Open the device details page.
2. Enter new values in the fields.
3. Click the **Set Values** button, and the changes will take effect.

For information on the configuration options, see the manual for the plug-in module.

5.4.2 Setting The Custom Name

To set the module's custom name, click the slot number on the HLP 4800 chassis, shown in [Figure 5-3](#).

A custom attributes page appears, as shown in [Figure 5-5](#).

Slot 1 Info

| Attribute | Value |
|-------------|---------------|
| Asset ID | Not specified |
| Custom Name | Not specified |
| Contact | Not specified |
| Location | Not specified |
| Phone No. | Not specified |
| Notes | Not specified |

Refresh Set Values

Figure 5-5: The custom attributes page

Five attributes are pre-configured and labeled for your use:

- Asset ID
- Custom Name

- ❑ Contact
- ❑ Location
- ❑ Phone No.
- ❑ Notes.

To change the values within the attributes, type the text you want, then click the **Set Values** button so that the changes take effect.

The first 5 characters of the Custom Name field are displayed on the Platform page as shown in figure [Figure 5–6](#). This provides a convenient way to identify each slot in the platform.



Figure 5–6: First 5 Characters of the Custom Name

5.4.3 Managing Expected Modules vs. Actual Modules

When a platform is activated, the HNC 4801 automatically detects the plug-in modules installed in the platform.

You can manually set all the modules' expected type from the HLP Platform page by selecting the **Set Expected Modules to Actual** button shown in [Figure 5–3](#).

The expected module information is displayed on the module detail page.

The HNC 4801 then expects to find these modules in the same slots from that point forward. If the actual module installed in a slot is different from the expected module, the HNC 4801 and module continue to function properly, and the HNC 4801 sends an SNMP trap to all management systems with notification of the module type mismatch.

5.5 Viewing Current Alarms

The Current Alarm list shows all alarms on the network at the current time, including the module address, module type, alarm description, and date and time of alarm occurrence. To view the list of current alarms on the platform, select the monitoring link at the top of your browser. The Current Alarm Table appears as shown in [Figure 5–7](#).

The screenshot shows the Harmonic HLP4800 monitoring interface. At the top, there is a header with the Harmonic logo, the device name 'HLP4800', the IP address '10.20.16.229', the user 'User: Config', a notification icon with '1 Alarms / 1 Warnings', a 'LogOff' button, and the date/time '2011-12-9, 16:51:2.0'. Below the header is a navigation menu with 'Platform', 'Nodes', and 'Monitoring' (selected). Under 'Monitoring', there are sub-links for 'Current Alarm', 'Event Log', and 'SNMP Trap'. Below the navigation menu are two buttons: 'Refresh' and 'Export CSV File'. The main content is a table with the following data:

| Module Address | Module Name | Alarm Description | TimeStamp | Severity |
|----------------|-------------|-------------------------------|-----------------------|----------|
| 256:2 | PWL4911S | RF SIGNAL LOW, CHECK RF INPUT | 2011-12-9, 15:53:46.0 | Minor |

Figure 5–7: The Current Alarm Table

In the Current Alarm Table, the alarms are sorted according to their underlying MIB (management information base) numbering.

The alarm descriptions are color-coded. The colors and their meanings are shown in [Table 5–3](#).

The Current Alarms list does not refresh automatically. If you want the list to refresh, click the Refresh Values button.

To view a module’s configuration details, click the address of the module, and the web browser will navigate to the device details page for that module.

Table 5–3: Alarm descriptions: color coding

| Color | Severity |
|--------|----------------------------------|
| Red | Major |
| Yellow | Minor |
| Green | Nominal (alarm has been cleared) |

5.6 Viewing the Event Log

The Event Log shows past network events, including the date and time, the address, and a description of each event. To view the Event Log, select the Event Log link, located under the monitoring link, at the top of your browser. The Event Log appears as shown in [Figure 5–8](#).

| Record No. | Module Address | Module Type | Severity | TimeStamp | Description |
|------------|----------------|---------------------|----------|-----------------------|-------------------------------|
| 1029 | 256:2 | PWL4911S | Minor | 2011-12-9, 15:53:46.0 | RF SIGNAL LOW, CHECK RF INPUT |
| 1028 | 256:2 | PWL4911S | Nominal | 2011-12-9, 15:53:44.0 | Module Inserted |
| 1027 | 256:1 | PWL4110S | Nominal | 2011-12-9, 15:53:41.0 | Module Inserted |
| 1026 | 256 | HNC4800-5F | Nominal | 2011-12-9, 15:53:41.0 | Module Inserted |
| 1025 | 256 | FORTRESS CONTROLLER | Nominal | 2011-12-9, 15:52:50.0 | SW Update Succeeded |
| 1024 | 256:1 | PWL4110S | Nominal | 2011-12-9, 15:12:57.0 | RF SIGNAL LOW, CHECK RF INPUT |
| 1023 | 256:2 | PWL4911S | Nominal | 2011-12-9, 15:11:41.0 | -3Vdc Power Supply |
| 1022 | 256:2 | PWL4911S | Nominal | 2011-12-9, 15:11:41.0 | -15Vdc Power Supply |
| 1021 | 256:2 | PWL4911S | Nominal | 2011-12-9, 15:11:41.0 | 5Vdc Power Supply |
| 1020 | 256:2 | PWL4911S | Nominal | 2011-12-9, 15:11:41.0 | 15Vdc Power Supply |
| 1019 | 256:2 | PWL4911S | Nominal | 2011-12-9, 15:11:41.0 | 12/24Vdc Switched |
| 1018 | 256:2 | PWL4911S | Minor | 2011-12-9, 15:11:41.0 | RF SIGNAL LOW, CHECK RF INPUT |
| 1017 | 256:2 | PWL4911S | Major | 2011-12-9, 15:11:30.0 | -3Vdc Power Supply |
| 1016 | 256:2 | PWL4911S | Major | 2011-12-9, 15:11:30.0 | -15Vdc Power Supply |
| 1015 | 256:2 | PWL4911S | Major | 2011-12-9, 15:11:30.0 | 5Vdc Power Supply |
| 1014 | 256:2 | PWL4911S | Major | 2011-12-9, 15:11:30.0 | 15Vdc Power Supply |
| 1013 | 256:2 | PWL4911S | Major | 2011-12-9, 15:11:30.0 | 12/24Vdc Switched |
| 1012 | 256:2 | PWL4911S | Nominal | 2011-12-9, 15:11:27.0 | Module Inserted |
| 1011 | 256:1 | PWL4110S | Minor | 2011-12-9, 15:11:10.0 | RF SIGNAL LOW, CHECK RF INPUT |
| 1010 | 256:1 | PWL4110S | Nominal | 2011-12-9, 15:10:57.0 | Module Inserted |

Figure 5-8: Event Log

The following types of events are shown in the log:

- Devices added to or removed from the HLP chassis
- Alarms

The Event Log displays up to 10 events per page, up to a maximum of 100 events in total, across ten pages. To view additional pages, click the link to **Previous** or **Next** or select an available page number from the drop-down list, then click the “Go to Page” button.

To clear the Event Log, click the **Clear Event Log** button.



NOTE: The event log updates in a cyclic-buffer manner, meaning that after 100 events have been logged, the 101st event will overwrite the first event, then the 102nd event will overwrite the next event, and so on.

5.7 Adding Trap Destinations

Whenever the HNC 4801 detects an alarm in the HLP 4800 platform, it immediately sends an SNMP trap to all management system IP addresses listed in the HNC 4801’s trap destination table.

Each element management system must have an IP address. Before you begin adding trap destinations, you need to know these IP addresses. For instructions on assigning or determining the IP address of an element management system, refer to the manual for the element management system you are using.

To view the Trap Destination table, select the **SNMP Trap** link, located under the monitoring link, at the top of your browser. The Trap Destination table appears as shown in [Figure 5–9](#) on page 30.



Figure 5–9: Trap Destination

To add a trap destination, first click the **Add** button. The entry appears, as shown in [Figure 5–10](#).



Figure 5–10: Add Trap Destination Configuration Login

Fill in the fields with the name and IP address of the element management system. You can use any name you want, as long as it is unique.

Click the **Submit** button. The List Of Trap Destinations reappears and includes the new name and IP address, as shown in [Figure 5–11](#)



Figure 5–11: Add Trap Destination List

Contact Harmonic Technical Support to locate the Harmonic Alarm MIB (management information base) files for the HNC 4801. Copy the MIBs for the HNC 4801 into your NMS's MIB compiler.

Add the HNC 4801 as an SNMP trap target in your NMS, so that the NMS receives SNMP notifications from the HNC 4801.

5.8 Adding the HNC 4801 to an NMS

Once the HNC 4801 is operating, you can use a network management system (NMS) to monitor and control it. This section describes how to connect the HNC 4801 to an NMS.

For instructions on installing, configuring, and operating an NMS, please refer to the documentation for the NMS.

The HNC 4801 controller has an embedded SNMP agent that enables communication between the HNC 4801 and any devices that support SNMP versions 1 or 2c.

To connect the HNC 4801 to an NMS:

1. Complete the installation procedures described in [Chapter 3, Installing the HNC 4801](#). To connect to an NMS, the HNC 4801 must be connected to your IP network and IP addresses must have been assigned as described in [3.1 Tools and Accessories](#).
2. Determine the IP address of the HNC 4801.
3. The default access rights for SNMP versions 1 and 2c are shown in [Table 5–4](#).
4. Locate and compile the Harmonic MIB (management information base) files for the HNC 4801 using your NMS's MIB compiler.

Table 5–4: Default Access Rights for SNMPv1 and SNMPv2c

| Community String | Rights |
|------------------|------------|
| getString | Will read |
| setString | Will write |

Chapter 6

Digital Return Node Monitoring

This chapter introduces the HNC 4801 digital return node monitoring feature.

Digital return node monitoring is a part of Harmonic's network management solution. It provides real time equipment status and immediate notification of new alarms located in the outside plant. The system consists of several key components:

- NMD node monitoring module forms an interface between the HLN 314X optical node and the NDT return path transmitter
- NDT node digital transmitter collects the node parameters from the NMD and transmits them to the headend
- RDR return path digital receiver collects the monitored parameters from the node
- HNC network controller in the HLP 4800 chassis manages the node parameters and alarm thresholds

The NMD 5000 node monitoring module provides monitoring of the Harmonic HLN 3144 PWRBlazer™ Scaleable Node and HLN 3142 PWRBlazer II node when paired with the NDT 3XXXC/E digital return transmitter and the RDR 4002C/E digital return receiver. Data collection and presentation is managed by the HNC 4801 SNMP/WEB interface in the HLP 4800 platform.

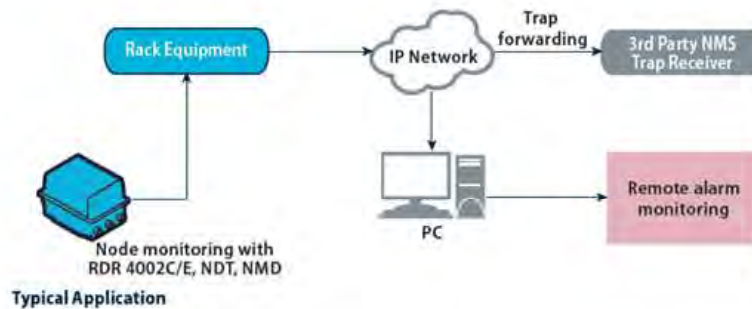


Figure 6–1: Node Monitoring Components

6.1 Applications

The system consists of the following applications:

- The NMD 5000 will automatically identify the modules installed in the node and report the model numbers of these modules to the element management system. All information from the modules is converted into a serial data stream and transmitted to the NDT 3XXXC/E transmitter across two serial buses built into the node.
- The HNC 4801 controller provides support for the user to define alarm thresholds for many analog values, including optical received power, some RF levels, and AC/DC voltages.
- Integral tamper switch immediately notifies the element management system if the node is opened.
- Simple plug and play installation, with only 1 cable required to install the NMD 5000 in the node.

6.2 Requirements

You can access the HNC 4801 web interface from any computer that is connected to the same IP network and has an Internet Explorer® web browser 6.0 or higher. See [Chapter 5, Using the WEB Interface](#).

To use the web interface, the following criteria must be met:

- Properly install the HNC 4801, as described in [Chapter 3, Installing the HNC 4801](#).
- Purchase a software license from Harmonic. See [5.1.1 Purchasing the Software License](#).
- Know the HNC 4801's IP address. The HNC 4801 must be connected to your IP network as described in [5.1.2 Connecting the Ethernet Cable](#).
- Assign an IP addresses to the HNC 4801 as described in [5.1.3 Assigning IP Addresses](#).
- Properly mount the NMD 5000 in a node. See [NMD 5000 User Guide](#).
- Connect the node NDT to an RDR 4002 that is installed in the HLP 4800 platform. See the [NDT and RDR User Guides](#).

6.3 Activating a Discovered Node

This procedure will go through the process step-by-step to activate a monitored node for the HNC 4801. [Table 5–2](#) summarizes the features of the HNC 4801 web interface. Use the Node Tab to add a node to active monitoring.

1. Login to the HNC 4801 with the procedure described in [5.2 Accessing and Using the Web Interface](#).
2. Select the **Discovered Nodes** link, located under the Nodes tab.

The HNC automatically discovers all of the MAC addresses of the NMD's transmitted to the RDR's installed in the HLP 4800 platform and presents them in a drop-down menu for selection.

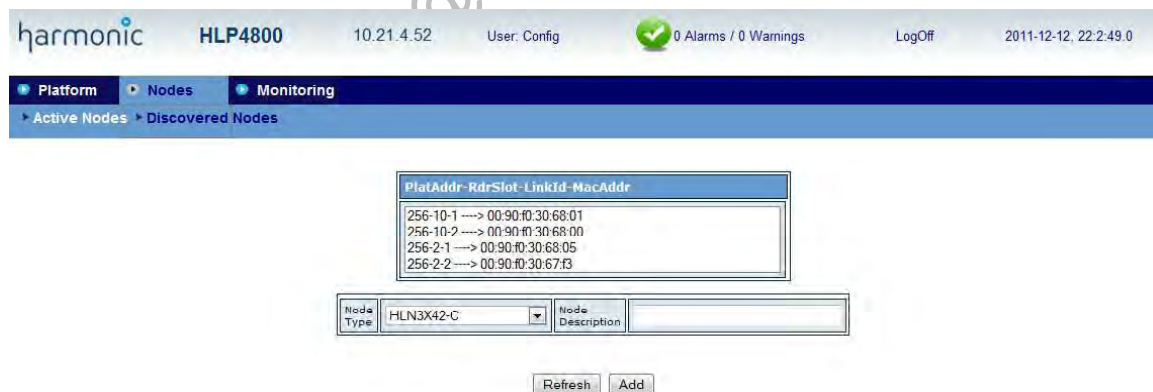


Figure 6–2: Discovered Nodes Tab

3. Select the MAC address to add.
4. Select the node type. The choices are HLN3X42-C, HLN3X42-E, HLN3X44-GREEN-PCB, or HLN3144-COPPER-PCB.

5. Enter a description for the node.

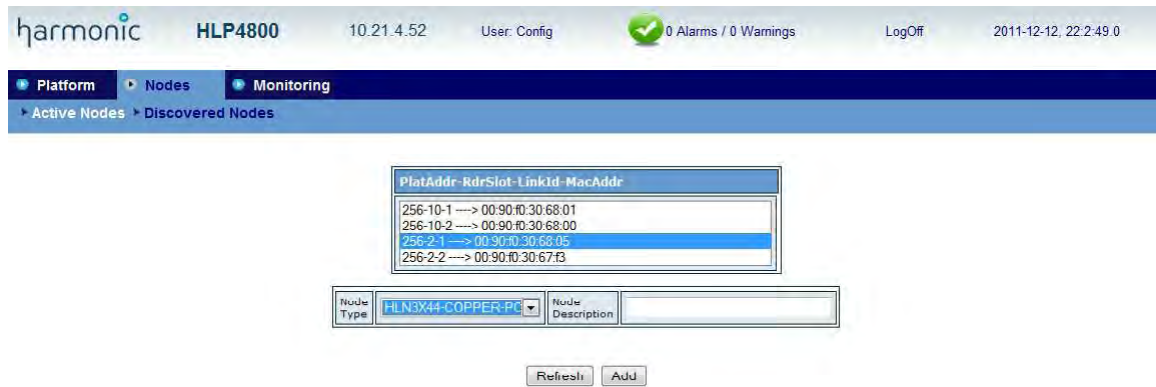


Figure 6–3: Add a Node Description

6. Click **Add** to add the node to the Active Node page.
7. Navigate to the **Active Nodes** tab to see the node with status **Added**.

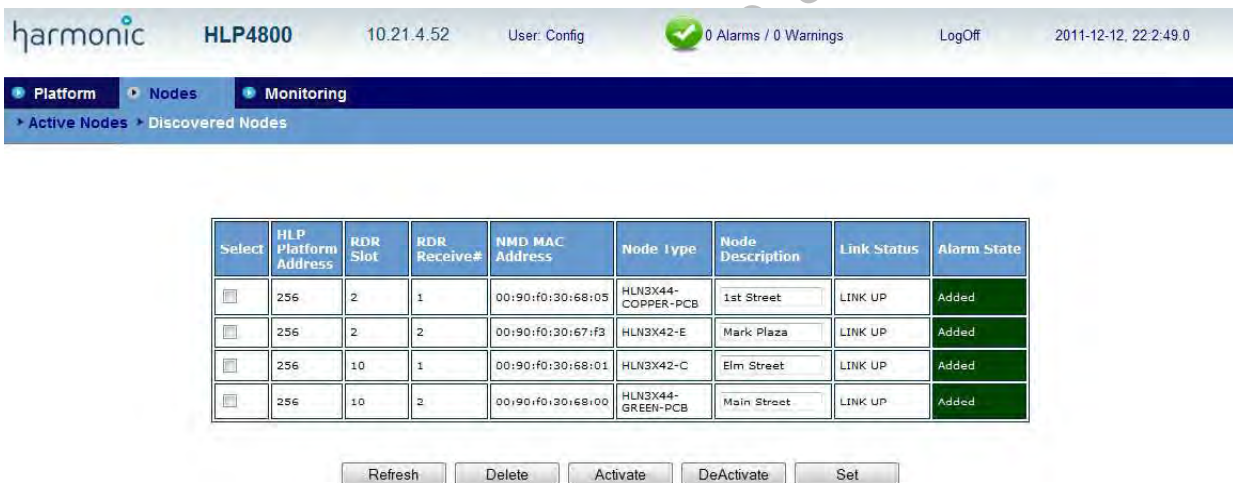


Figure 6–4: View Node Status

- Check the Select box and click **Activate** to activate the node.

| Select | HLP Platform Address | RDR Slot | RDR Receive# | NMD MAC Address | Node Type | Node Description | Link Status | Alarm State |
|--------------------------|----------------------|----------|--------------|-------------------|--------------------|------------------|-------------|-------------|
| <input type="checkbox"/> | 256 | 2 | 1 | 00:90:f0:30:68:06 | HLN3X44-COPPER-PCB | 1st Street | LINK UP | Nominal |
| <input type="checkbox"/> | 256 | 2 | 2 | 00:90:f0:30:67:f3 | HLN3X42-E | Mark Plaza | LINK UP | Nominal |
| <input type="checkbox"/> | 256 | 10 | 1 | 00:90:f0:30:68:01 | HLN3X42-C | Elm Street | LINK UP | Nominal |
| <input type="checkbox"/> | 256 | 10 | 2 | 00:90:f0:30:68:00 | HLN3X44-GREEN-PCB | Main Street | LINK UP | Nominal |

Refresh Delete Activate DeActivate Set

Figure 6–5: Activate the Node

- To Delete or DeActivate the node, check the Select box by the node and then click **Delete** or **DeActivate**.
- To change the Node Description, check the Select box, type the node description and click **Set**.

6.4 HLN Node Management

This section describes how to use the HNC 4801 web interface to manage networked devices. To complete many of the functions described in this chapter, you must log into the HNC 4801 web interface using the Config username.

6.4.1 Viewing Nodes

To view nodes and node modules, select the **Active Nodes** tab, located under the Nodes tab, at the top of your browser, as shown in [Figure 6–5](#).

The Active Nodes page lists the nodes connected to the platform, including a table with each node's MAC address, node type, node description, link status, and alarm state. Additionally, the HLP platform address, RDR slot, and RDR receiver are listed.

To view the details of a specific node, click the link to the device in the NMD MAC address column. A node details page opens, as shown in [Figure 6–6](#).

harmonic **HLP4800** 10.21.4.52 User: Config ✔ 0 Alarms / 0 Warnings LogOff 2011-12-12, 22:2:49.0

Platform Nodes Monitoring

Active Nodes Discovered Nodes

00:90:f0:30:68:05 - HLN3X44-COPPER-PCB Node 1st Street Detail

| HLP Platform Address | RDR Slot | RDR Receiver# |
|----------------------|----------|---------------|
| 256 | 2 | 1 |

| Tamper Switch Status |
|----------------------|
| Closed |

| Slot Descr. | Custom Name | Actual Module | Expected Module | Module Alarm State |
|------------------------|-------------|---------------|-----------------|--------------------|
| Right Output Module | | Nom3821d2 | None | Nominal |
| Left Output Module | | None | None | Nominal |
| Left AB Switch | | None | None | Nominal |
| Right AB Switch | | Ncm3xxx | None | Nominal |
| Primary Power Supply | | Nps38XX | None | Nominal |
| Redundant Power Supply | | Nps38XX | None | Nominal |
| Receiver 4 | | Ndt3147C31 | None | Nominal |
| Receiver 3 | | Nrm3111D | None | Nominal |
| Receiver 2 | | Nrm3811 | None | Nominal |
| Receiver 1 | | Nrm3811 | None | Nominal |
| Transmitter 4 | | Ndt3249XC23 | None | Nominal |
| Transmitter 3 | | None | None | Nominal |
| Transmitter 2 | | None | None | Nominal |
| Transmitter 1 | | None | None | Nominal |



| Node Alarm Description | Time Stamp | Severity |
|-------------------------|------------|----------|
| Alarm table is empty... | | |
| Alarm table is empty... | | |

[Back](#)

Last Updated Time : 2011-12-12, 22:15:27.0

Figure 6–6: Node Details

Starting from the top of the page, is the HLP platform address, RDR slot, and RDR receiver#. Next is the status of the node tamper switch. The main section includes the details of the installed node modules, including module description, custom name, actual module, expected module, and module alarm state. After that there is a static block diagram of the node slot definitions. Last, is the listing of all active alarms for the node.

6.4.2 Setting The Custom Name

To set the module's custom name, click the **Slot Descr.** link which is located in the first column of the node details page, shown in [Figure 6–5](#). A custom attributes page displays, as shown in [Figure 6–7](#).

The screenshot shows the Harmonic HLP4800 monitoring interface. At the top, there is a header with the Harmonic logo, device ID 'HLP4800', IP '10.21.4.52', user 'User: Config', status '0 Alarms / 0 Warnings', and a 'LogOff' button. Below the header is a navigation menu with 'Platform', 'Nodes', and 'Monitoring' selected. Under 'Monitoring', there are links for 'Active Nodes' and 'Discovered Nodes'. The main content area is titled 'Slot 256:2:1:14: Info' and contains a table with the following structure:

| Attribute | Value |
|-------------|----------------------|
| Contact | <input type="text"/> |
| Location | <input type="text"/> |
| Phone No. | <input type="text"/> |
| Custom Name | <input type="text"/> |

Below the table are two buttons: 'Refresh' and 'Set Values'. At the bottom of the page, there is a link for 'Module Page'.

Figure 6–7: Attributes Page

Four attributes are pre-configured and labeled for your use:

- Contact
- Location
- Phone No.
- Custom Name.

The field Custom Name is displayed on the node details page. To change the values within the attributes, type the text you want, then click **Set Values** so that the changes take effect.

6.4.3 Managing Expected Modules vs. Actual Modules

When a node is activated, the HNC 4801 automatically detects the plug-in modules installed in the node. You can manually set all the modules' expected type from the node detail page by selecting the **Set Expected Modules to Actual** button shown in [Figure 6–6](#). The HNC 4801 then expects to find these modules in the same slots from that point forward. If the actual module installed in a slot is different from the expected module, the HNC 4801 and module continue to function properly, and the HNC 4801 sends an SNMP trap to all management systems with notification of the module type mismatch.

6.4.4 Viewing Node Modules

You can set high and low threshold limits for some monitored node module parameters. If the parameter crosses a threshold, an alarm is raised by the HNC 4801. To view the details of a plug-in module and set alarm thresholds, follow these steps:

1. Open the device details page by selecting the module in the Actual Module column.
2. Enter new high or low alarm threshold values in the fields.

3. Click **Set Values** , and the changes will take effect.

The screenshot shows the Harmonic HLP4800 monitoring interface. The top navigation bar includes the Harmonic logo, HLP4800, version 10.21.4.52, user 'User: Config', a green checkmark icon with '0 Alarms / 0 Warnings', 'LogOff', and the timestamp '2011-12-12, 22:18:21.0'. Below the navigation bar, the 'Monitoring' tab is selected, showing 'Active Nodes' and 'Discovered Nodes'. The main content area is titled 'Redundant Power Supply at 00:90:f0:30:68:05 Details'. It contains a table of properties and values, a table of voltage thresholds, and an empty alarm table. The 'Set Values' button is highlighted.

| Property | Value |
|----------------------|------------------------|
| Model Name | NPS38XX |
| Node Type | HLN3X44-COPPER-PCB |
| Node Description | 1st Street |
| Slot Description | Redundant Power Supply |
| HLP Platform Address | 256 |
| RDR Slot | 2 |
| RDR Receiver# | 1 |
| Node Module Slot | 9 |

| 24V DC Voltage | | 12V DC Voltage | |
|----------------|---------|----------------|---------|
| 24V DC Voltage | 25.05 V | 12V DC Voltage | 12.79 V |
| Low Threshold | 22 V | Low Threshold | 11 V |
| High Threshold | 26 V | High Threshold | 13 V |

| 5V DC Voltage | | AC Voltage | |
|----------------|-------|----------------|---------|
| 5V DC Voltage | 5.5 V | AC Voltage | 63.33 V |
| Low Threshold | 4 V | Low Threshold | 0 V |
| High Threshold | 5.5 V | High Threshold | 100 V |

| Alarm Description | Time Stamp | Severity |
|-------------------------|------------|----------|
| Alarm table is empty... | | |
| Alarm table is empty... | | |

Refresh Set Values

Node Page Last Updated Time : 2011-12-12, 22:18:27.0 Setup Custom Variables

Figure 6–8: Set Values

6.5 Viewing Current Node Alarms

The Current Alarm list shows all node and platform alarms on the network at the current time, including the module address, module type, alarm description, and date and time of alarm occurrence. For node alarms, the address is referenced to the RDR receiver which is monitoring that particular node.

To click through to the module in alarm, click the Module Address in the Current Alarm Table.

To view the list of current alarms on the platform, select the Current Alarm link at the top of your browser. The Current Alarm Table displays as shown in [Figure 5–7](#).

Chapter 7

Maintenance and Contacting Harmonic Support

7.1 Maintenance

There are no user-serviceable parts in the HNC 4801.

7.2 Upgrading the HNC 4801 Software

Harmonic will provide software updates as new features are released. You can upgrade the software via TFTP. The software upgrade process does not affect the operation of the HLP4800 modules.

7.3 Contacting Harmonic Support

The Harmonic Customer and Technical Support groups are available to help you with any questions or problems you may have regarding Harmonic products.

For assistance from within the U.S. and Canada, call toll free:

1.888.673.4896

For assistance from outside the U.S. and Canada, call:

1.408.490.6477

The fax number is 408.490.6770.

The email address is techhelp@harmonicinc.com.

The corporate address for Harmonic Inc. is:

Harmonic Inc.
4300 North First St.
San Jose, CA 95134, U.S.A.
Attn: Customer Support

The corporate telephone numbers for Harmonic Inc. are:

Tel. 1.800.788.1330 (from the U.S. and Canada)
Tel. +1.408.542.2500 (outside the U.S. and Canada)
Fax.+1.408.490.6770

The web address for Harmonic Inc. is www.harmonicinc.com.

Appendix A

Technical Specifications

A.1 Technical Specifications

User Interface

| | |
|-------------|---|
| Front Panel | Five control buttons Bi-state status LED: Normal = green, alarm = red 40-character alphanumeric display Software reset pinhole |
| Rear Panel | RJ-45 Ethernet connection |

Network Management

| |
|--|
| SNMP protocol v1, v2c |
| HTTP protocol HTTP 1.1 (with Web browser-based authentication) |

Power Requirements

| | |
|-------------|-----|
| Consumption | 4 W |
|-------------|-----|

Environmental

| | |
|-----------------------------|-----------------------------------|
| Operating temperature range | 0° to +50° C +32° to +122° F |
| Storage temperature range | -40 to +70° C -40° to +1158° F |
| Relative humidity | Maximum 95% non-condensing |

Physical

| | |
|---|--|
| Dimensions | 10 cm W x 4.4 cm H x 31.5 cm D 3.9" W x 1.73" H x 12.4" D |
| Weight | 0.8 kg / 1.8 lbs |
| Mounting HLP 4800 platform; dedicated controller slot | |

Part Numbers

| | |
|------------------------|------------------------|
| HLP 4800 | Chassis |
| HNC 4801 | Display and controller |
| CPS 4801-AC | AC power supply |
| CPS 4801-DC | DC power supply |
| FW-HNC 4801 - WEB/SNMP | WEB/SNMP license |

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