NOTIFIER®
by Honeywell

NFN-GW-EM-3

Installation and Operation Manual

Document LS10017-000NF-E
6/5/2014 Rev: C3
P/N LS10017-000NF-E:C3 ECN 14-0243

Fire Alarm & Emergency Communication System Limitations

While a life safety system may lower insurance rates, it is not a substitute for life and property insurance!

An automatic fire alarm system—typically made up of smoke detectors, heat detectors, manual pull stations, audible warning devices, and a fire alarm control panel (FACP) with remote notification capability—can provide early warning of a developing fire. Such a system, however, does not assure protection against property damage or loss of life resulting from a fire.

An emergency communication system—typically made up of an automatic fire alarm system (as described above) and a life safety communication system that may include an autonomous control unit (ACU), local operating console (LOC), voice communication, and other various interoperable communication methods—can broadcast a mass notification message. Such a system, however, does not assure protection against property damage or loss of life resulting from a fire or life safety event.

The Manufacturer recommends that smoke and/or heat detectors be located throughout a protected premises following the recommendations of the current edition of the National Fire Protection Association Standard 72 (NFPA 72), manufacturer's recommendations, State and local codes, and the recommendations contained in the Guide for Proper Use of System Smoke Detectors, which is made available at no charge to all installing dealers. This document can be found at http://www.systemsensor.com/appguides/. A study by the Federal Emergency Management Agency (an agency of the United States government) indicated that smoke detectors may not go off in as many as 35% of all fires. While fire alarm systems are designed to provide early warning against fire, they do not guarantee warning or protection against fire. A fire alarm system may not provide timely or adequate warning, or simply may not function, for a variety of reasons:

Smoke detectors may not sense fire where smoke cannot reach the detectors such as in chimneys, in or behind walls, on roofs, or on the other side of closed doors. Smoke detectors also may not sense a fire on another level or floor of a building. A second-floor detector, for example, may not sense a first-floor or basement fire.

Particles of combustion or "smoke" from a developing fire may not reach the sensing chambers of smoke detectors because:

- Barriers such as closed or partially closed doors, walls, chimneys, even wet or humid areas may inhibit particle or smoke flow.
- Smoke particles may become "cold," stratify, and not reach the ceiling or upper walls where detectors are located.
- Smoke particles may be blown away from detectors by air outlets, such as air conditioning vents.
- Smoke particles may be drawn into air returns before reaching the detector.

The amount of "smoke" present may be insufficient to alarm smoke detectors. Smoke detectors are designed to alarm at various levels of smoke density. If such density levels are not created by a developing fire at the location of detectors, the detectors will not go into alarm.

Smoke detectors, even when working properly, have sensing limitations. Detectors that have photoelectronic sensing chambers tend to detect smoldering fires better than flaming fires, which have little visible smoke. Detectors that have ionizing-type sensing chambers tend to detect fast-flaming fires better than smoldering fires. Because fires develop in different ways and are often unpredictable in their growth, neither type of detector is necessarily best and a given type of detector may not provide adequate warning of a fire.

Smoke detectors cannot be expected to provide adequate warning of fires caused by arson, children playing with matches (especially in bedrooms), smoking in bed, and violent explosions (caused by escaping gas, improper storage of flammable materials, etc.).

Heat detectors do not sense particles of combustion and alarm only when heat on their sensors increases at a predetermined rate or reaches a predetermined level. Rate-of-rise heat detectors may be subject to reduced sensitivity over time. For this reason, the rate-of-rise feature of each detector should be tested at least once per year by a qualified fire protection specialist. Heat detectors are designed to protect property, not life.

IMPORTANT! Smoke detectors must be installed in the same room as the control panel and in rooms used by the system for the connection of alarm transmission wiring, communications, signaling, and/or power. If detectors are not so located, a developing fire may damage the alarm system, compromising its ability to report a fire.

Audible warning devices such as bells, horns, strobes, speakers and displays may not alert people if these devices are located on the other side of closed or partly open doors or are located on another floor of a building. Any warning device may fail to alert people with a disability or those who have recently consumed drugs, alcohol, or medication. Please note that:

- An emergency communication system may take priority over a fire alarm system in the event of a life safety emergency.
- Voice messaging systems must be designed to meet intelligibility requirements as defined by NFPA, local codes, and Authorities Having Jurisdiction (AHJ).
- Language and instructional requirements must be clearly disseminated on any local displays.
- Strobes can, under certain circumstances, cause seizures in people with conditions such as epilepsy.
- Studies have shown that certain people, even when they hear a fire alarm signal, do not respond to or comprehend the meaning of the signal. Audible devices, such as horns and bells, can have different tonal patterns and frequencies. It is the property owner's responsibility to conduct fire drills and other training exercises to make people aware of fire alarm signals and instruct them on the proper reaction to alarm signals.
- In rare instances, the sounding of a warning device can cause temporary or permanent hearing loss.

A life safety system will not operate without any electrical power. If AC power fails, the system will operate from standby batteries only for a specified time and only if the batteries have been properly maintained and replaced regularly.

Equipment used in the system may not be technically compatible with the control panel. It is essential to use only equipment listed for service with your control panel.

Telephone lines needed to transmit alarm signals from a premises to a central monitoring station may be out of service or temporarily disabled. For added protection against telephone line failure, backup radio transmission systems are recommended.

The most common cause of life safety system malfunction is inadequate maintenance. To keep the entire life safety system in excellent working order, ongoing maintenance is required per the manufacturer's recommendations, and UL and NFPA standards. At a minimum, the requirements of NFPA 72 shall be followed. Environments with large amounts of dust, dirt, or high air velocity require more frequent maintenance. A maintenance agreement should be arranged through the local manufacturer's representative. Maintenance should be scheduled monthly or as required by National and/or local fire codes and should be performed by authorized professional life safety system installers only. Adequate written records of all inspections should be kept.

Limit-D-1-2013

Installation Precautions

Adherence to the following will aid in problem-free installation with long-term reliability:

WARNING - Several different sources of power can be connected to the fire alarm control panel. Disconnect all sources of power before servicing. The control unit and associated equipment may be damaged by removing and/or inserting cards, modules, or interconnecting cables while the unit is energized. Do not attempt to install, service, or operate this unit until this manual is read and understood.

CAUTION - System Reacceptance Test after Software Changes. To ensure proper system operation, this product must be tested in accordance with NFPA 72 after any programming operation or change in site-specific software. Reacceptance testing is required after any change, addition or deletion of system components, or after any modification, repair or adjustment to system hardware or wiring.

All components, circuits, system operations, or software functions known to be affected by a change must be 100% tested. In addition, to ensure that other operations are not inadvertently affected, at least 10% of initiating devices that are not directly affected by the change, up to a maximum of 50 devices, must also be tested and proper system operation verified.

This system meets NFPA requirements for operation at 0°C to 49°C (32°F to 120°F) and at a relative humidity 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and all peripherals be installed in an environment with a nominal room temperature of 15-27° C/60-80° F.

Verify that wire sizes are adequate for all initiating and indicating device loops. Most devices cannot tolerate more than a 10% I.R. drop from the specified device voltage.

Like all solid state electronic devices this system may operate erratically or can be damaged when subjected to lightning-induced transients. Although no system is completely immune from lightning transients and interferences, proper grounding will reduce susceptibility. Overhead or outside aerial wiring is not recommended, due to an increased susceptibility to nearby lightning strikes. Consult with the Technical Services if any problems are anticipated or encountered.

Disconnect AC power and batteries prior to removing or inserting circuit boards. Failure to do so can damage circuits.

Remove all electronic assemblies prior to any drilling, filing, reaming, or punching of the enclosure. When possible, make all cable entries from the sides or rear. Before making modifications, verify that they will not interfere with battery, transformer, and printed circuit board location.

Do not tighten screw terminals more than 9 in-lbs. Over-tightening may damage threads, resulting in reduced terminal contact pressure and difficulty with screw terminal removal.

Though designed to last many years, system components can fail at any time. This system contains static-sensitive components. Always ground yourself with a proper wrist strap before handling any circuits so that static charges are removed from the body. Use static-suppressive packaging to protect electronic assemblies removed from the unit.

Follow the instructions in the installation, operating, and programming manuals. These instructions must be followed to avoid damage to the control panel and associated equipment. FACP operation and reliability depend upon proper installation by authorized personnel.

FCC Warning

WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause interference to radio communications. It has been tested and found to comply with the limits for class A computing devices pursuant to Subpart B of Part 15 of FCC Rules, which is designed to provide reasonable protection against such interference when devices are operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user will be required to correct the interference at his or her own expense.

Canadian Requirements

This digital apparatus does not exceed the Class A limits for radiation noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la classe A prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

Software Downloads

In order to supply the latest features and functionality in fire alarm and life safety technology to our customers, we make frequent upgrades to the embedded software in our products. To ensure that you are installing and programming the latest features, we strongly recommend that you download the most current version of software for each product prior to commissioning any system. Contact Technical Support with any questions about software and the appropriate version for a specific application.

Documentation Feedback

Your feedback helps us keep our documentation up-to-date and accurate. If you have any comments or suggestions about our on-line help or manuals, please e-mail us at FireSystems.TechPubs@honeywell.com.

On-Line Help – Please include the following information:

- Product name and version number (if applicable)
- Topic title
- The content you think should be corrected/improved
- Detailed suggestions for correction/improvement

Documents – Please include the following information:

- Document part number and title
- Page number and paragraph
- The content you think should be corrected/improved
- Detailed suggestions for correction/improvement

Please Note: If you have any technical issues, please contact Technical Services.

Manual Usage

This manual is written with the understanding that the user has been trained in the proper operations and services for this product. The information provided in this manual is intended to assist the user by describing the configurations and how they affect operations.

Table of Contents

Section 1 Product Overview

1.1 Operation

The NFN-GW-EM-3 serves as a bridge between an ONYXWorks® Workstation or ONYX®FIRSTVISION™ and the connected NFN or high-speed NFN network.

The NFN-GW-EM-3:

- Functions as a node on an NFN network and communicates the NFN network's panel and device data to the ONYXWorks® Workstation via an IP connection over an Ethernet network.
- Configured using the NFN-GW-EM-3 Configuration Web Page.
- Communicates with any ONYXWorks® Workstation software application on the NFN system.
- Has the ability to interact with Veri•Fire™ Tools to remotely upload/download data to a Fire Alarm Control Panel (FACP).

1.2 Functionality

The NFN-GW-EM-3 translates the protocols of supported Fire Alarm Control Panels (FACPs) to protocols used by the workstation.

1.3 Required Software

Google Chrome is required to configure the NFN-GW-EM-3.

1.4 Environmental Requirements

This product meets the following requirements for operation:

- Temperature - 0°C to 49°C (32°F - 120°F)
- Relative Humidity - 93 ±2% non-condensing at 32 ±2°C (90 ±3°F)

However, it is recommended that this product be installed in an environment with a normal room temperature of 15-27º C (60-80º F).

1.5 System Architecture

An Internet or Intranet IP network connection is used with the architectures described in Figures 1.1, 1.2, and 1.3.

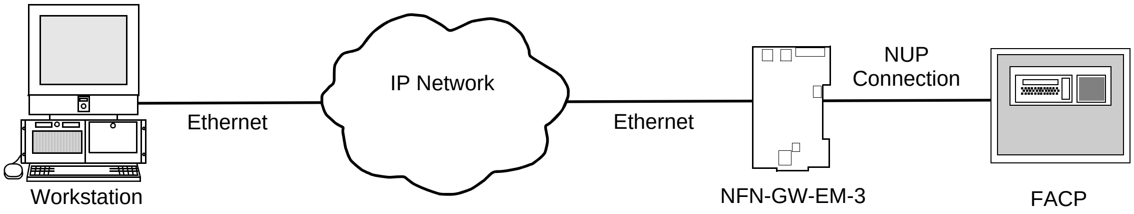


Figure 1.1 Direct Panel Architecture

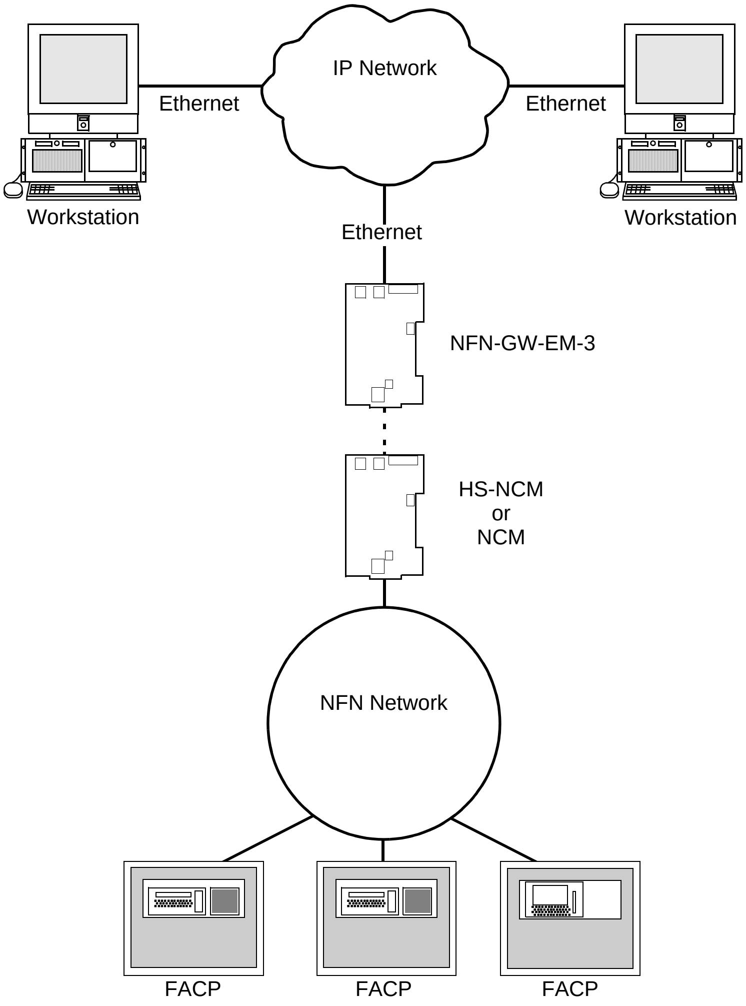


Figure 1.2 Single NFN Network Architecture

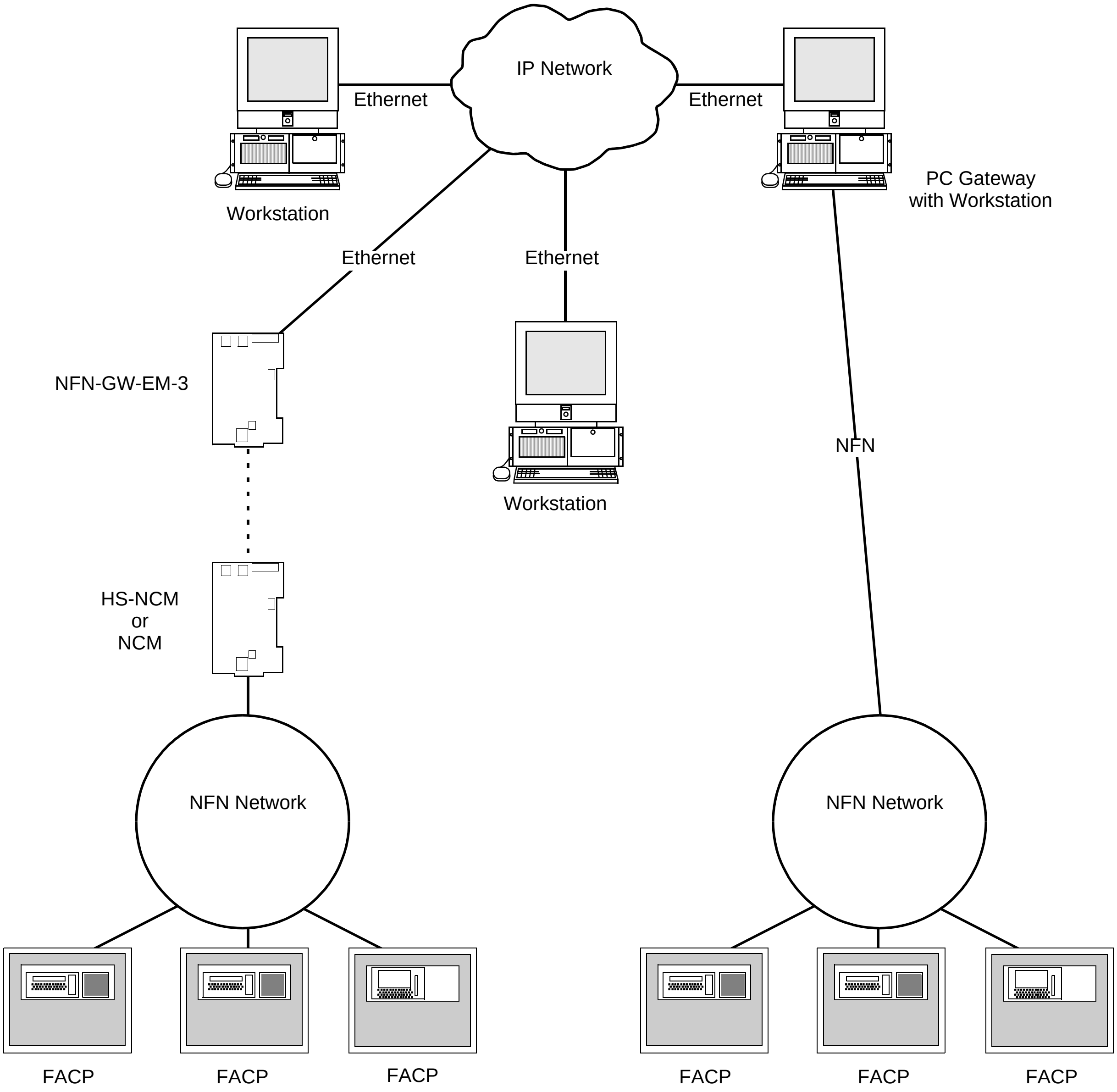


Figure 1.3 Multiple NFN Networks Architecture

1.5.1 Redundancy

A redundant gateway is a second gateway which communicates with an NFN network. If the main gateway cannot be reached, the system attempts to communicate with the network through the redundant gateway. For more information about configuring redundant gateways, refer to the *ONYXWorks Workstation Installation and Operation Manual*.

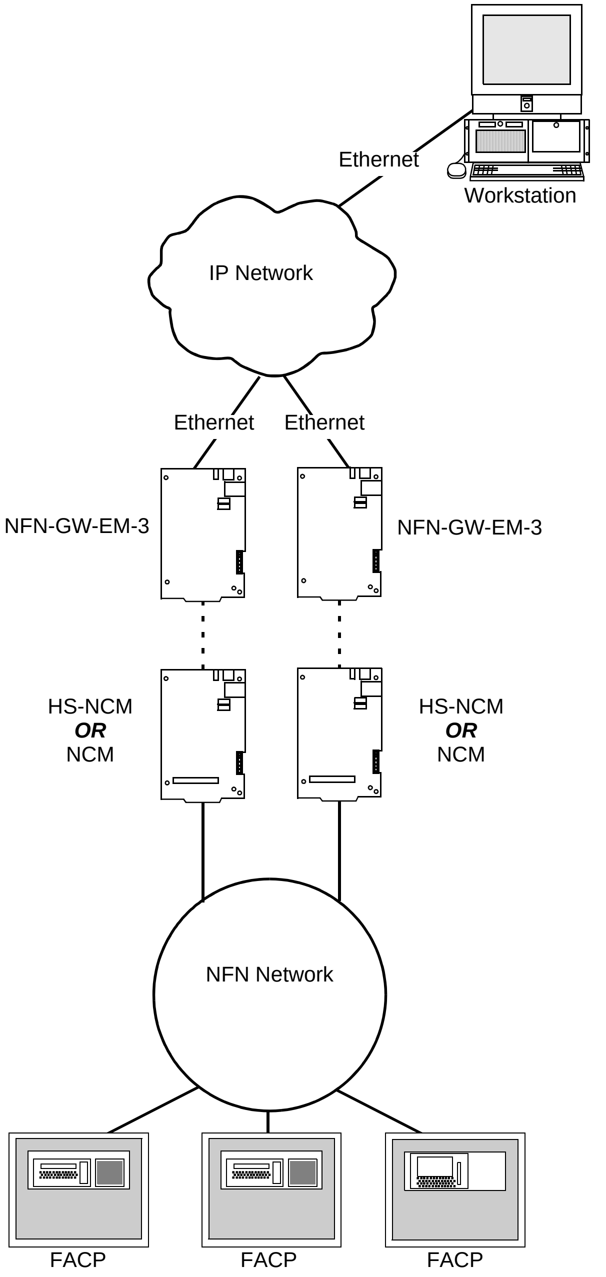


Figure 1.4 Redundant NFN-GW-EM-3s

1.6 IP Requirements

1.6.1 IP Port Settings

The following IP ports must be available to the NFN-GW-EM-3:

Port	Type	Direction	Purpose
80	TCP	In	Web Based Configuration
123	UDP	Out	SNTP
443	TCP	In	HTTPS communications
2017	TCP	In	Connection from Workstation (Events and Commands)
4016	TCP	In	Upgrade for embedded gateway
5000	TCP	In	VeriFire Tools Access
5100	TCP	In	Voice Paging

1.6.2 Bandwidth Usage

Worst Case Sustained Bandwidth	No. Workstations	Bandwidth
Typical	50	2520 Bytes/Sec = 20160 bit/Sec 0.020 Mb/Sec (Approx.)
Maximum	50+ Audio	14670 Bytes/Sec = 117360 bit/Sec 0.118 Mb/Sec (Approx.)

1.6.3 IP Restrictions

The following restrictions apply:

- Must have a static IP address. DHCP is not supported.
- Web access via an HTTP Proxy is not supported.

1.7 Agency Listings

1.7.1 Standards

■ **Compliance** - This product has been investigated to, and found to be in compliance with, the following standards:

National Fire Protection Association

• NFPA 72	National Fire Alarm Code

Underwriters Laboratories

• UL 864	Control Units for Fire Alarm Systems, Ninth Edition
• UL 2017	General Purpose Signaling Devices and Systems, First Edition
• UL 1076	Proprietary Burglar Alarm Units and Systems, Fifth Edition (Certified Applications Only)
• UL 2572	Mass Notification Systems, First Edition

Underwriters Laboratories Canada

• CAN/ULC S527 99	Standard for Control Units for Fire Alarm Systems, Second Edition
• CAN/ULC S559 04	Standard for Equipment for Fire Signal Receiving Centres and Systems, First Edition

■ **Installation** - This product is intended to be installed in accordance with the following:

Local

• AHJ	Authority Having Jurisdiction

National Fire Protection Association

• NFPA 70	National Electrical Code
• NFPA 72	National Fire Alarm Code
• NFPA 101	Life Safety Code

Underwriters Laboratories Canada

• CAN/ULC S524 06	Installation of Fire Alarm Systems, Fifth Edition
• CAN/ULC S561 03	Installation and Services for Fire Signal Receiving Centres and Systems, First Edition

Canada

• CSA C22.1	Canadian Electrical Code, Part I, Safety Standard for Electrical Installations

1.7.2 Agency Restrictions and Limitations

If this product is sharing on-premises communication equipment, the shared equipment shall be “listed for the purpose”. “Listed for the purpose” has been formally interpreted by NFPA (Formal Interpretation 72-99-1) for equipment on packet switched networks as being listed to the requirements applicable to general purpose communications network equipment.

1.8 Compatible Equipment

For additional documentation on this product, go to http://esd.notifier.com. This additional documentation for the NFN-GW-EM-3 may be used as reference only.

Table 1.1 Compatible Equipment

Type	Equipment
Fire Panels:	• NFS-320 • NFS2-640 • NFS2-3030
Network Cards:	• NCM-W, NCM-F • HS-NCM-W, HS-NCM-SF, HS-NCM-MF, HS-NCM-WSF, HS-NCM-WMF, HS-NCM-MFSF
Other Products:	• BACNET-GW-3 • CAP-GW • DVC • LEDSIGN-GW • MODBUS-GW • NCA-2 • NWS-3 • ONXYWORKS-WS • VESDA-HLI-GW

Section 2 Installation

2.1 Required Equipment

NFN-GW-EM-3 Assembly:

The following components are shipped with the NFN-GW-EM-3:

- NFN-GW-EM-3 printed circuit board
- Surge suppressor (P/N PNET-1)
- NUP-to-NUP Cable (P/N 75577) - Used to connect the NFN-GW-EM-3 board to an NCM-W or NCM-F board or supported panel.
- Wire Leads-to-NUP Cable (P/N 75583) - Used to connect 24V power from the NFN-GW-EM-3 board to an NCM-W or NCM-F board.
- USB Cable (P/N 75665) - Used to connect the NFN-GW-EM-3 board to an HS-NCM board:

  – HS-NCM-W
  – HS-NCM-WMF
  – HS-NCM-WSF
  – HS-NCM-MF
  – HS-NCM-SF
  – HS-NCM-MFSF

Network Components:

- High-speed Network Communication Module (HS-NCM) - Used to facilitate network communication between the NFN-GW-EM-3 and a High-Speed NFN network (sold separately)

  OR

- Network Communication Module (NCM) - Used to facilitate network communication between the NFN-GW-EM-3 and an NFN network (sold separately)

  OR

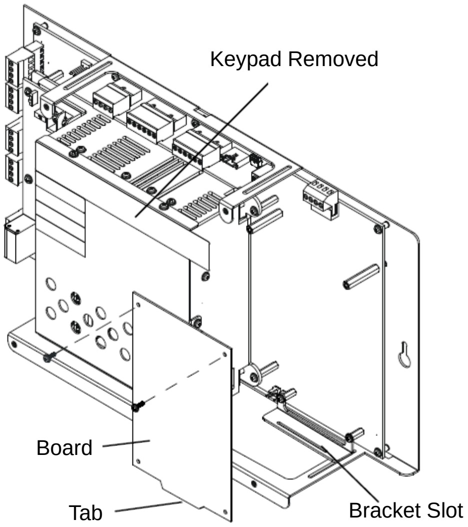
- Compatible FACP with NUP port

Customer Supplied Equipment:

- A computer to run a web browser - Used to configure the NFN-GW-EM-3. Refer to 1.3, "Required Software" for recommended browsers.
- Ethernet patch cable (with RJ45 connectors) for connecting NFN-GW-EM-3 to Local Area Network (LAN).

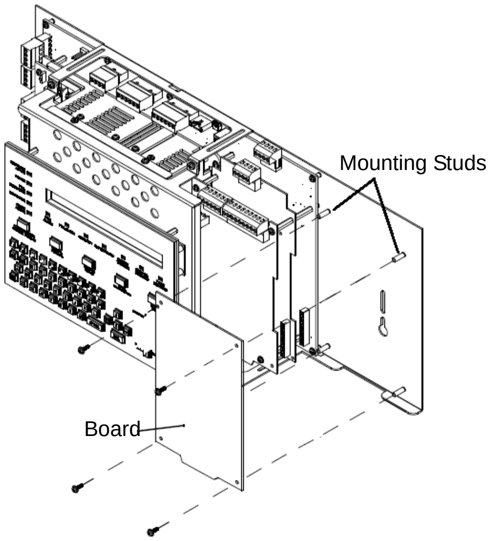
2.2 Board Installation

The NFN-GW-EM-3 may be installed in a CAB-3 or CAB-4 cabinet as shown below.



Install bracket on 1/2” standoffs. Place the board’s tab in the bracket slot, screw the board to the top of the standoffs. May be stacked in front of or behind another board using standoffs of adequate length to clear the rear board.

Figure 2.1 NFS-320 Series Installation



Mount in 4th column of the NFS2-640 Series chassis. Mount chassis to backbox before installing the board in rear position. May be mounted in front of another board using standoffs of adequate length to clear the rear board.

Figure 2.2 NFS2-640 Series Installation

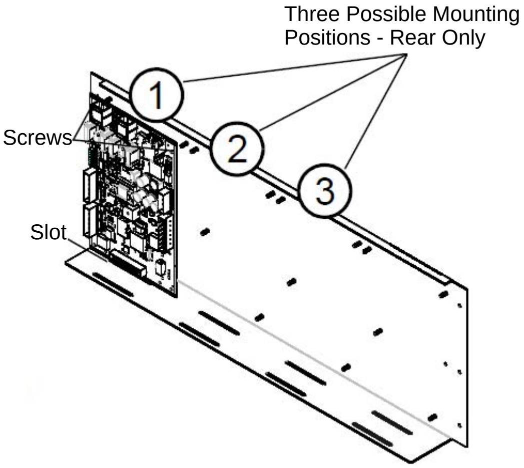


Figure 2.3 CHS-4L Installation

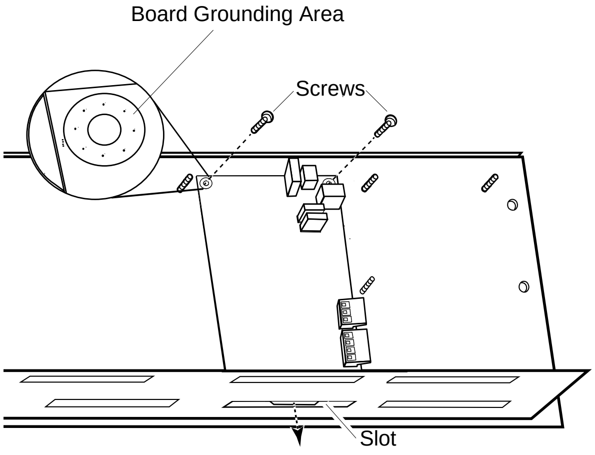


Figure 2.4 Securing the Board

2.3 Connections

2.3.1 Board Layout

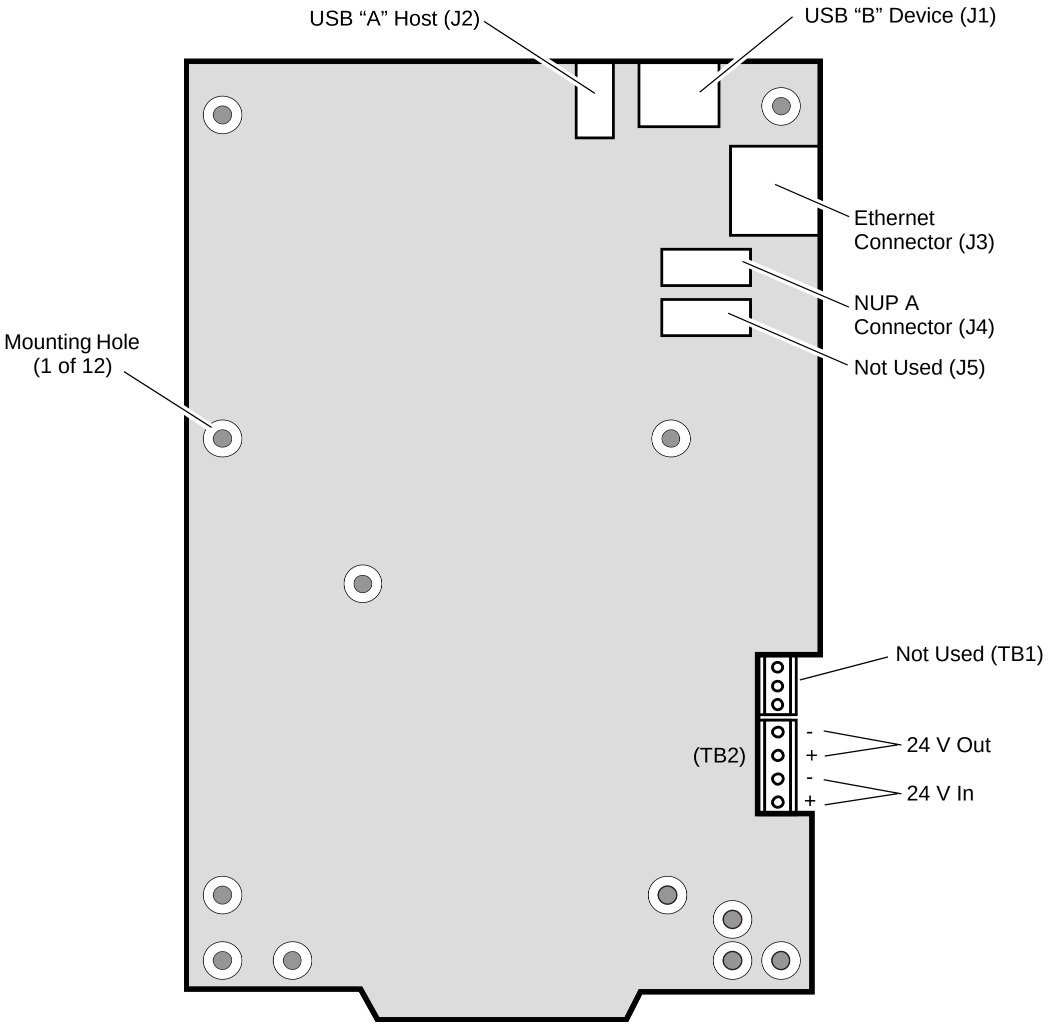


Figure 2.5 NFN-GW-EM-3 Connections

Table 2.1 Connection Specifications

Reference Designator	Description	Circuit Class	Specifications
TB2	DC Power	N/A	Nominal Voltage: 24 VDC, Regulated Current: 125 mA Locate in same cabinet or use close nipple fitting
J1	USB B	2	Locate in same cabinet or use close nipple fitting
J2	USB A	2	Locate in same cabinet or use close nipple fitting
J3	Ethernet	2	Line Impedance 100 ohm Max Distance 328.083 ft. (100 m)
J4	NUP A	2	RS-232 Locate in same cabinet or use close nipple fitting
• All wiring from the power supply is power limited, and a separation of at least 1/4-inch (6.35 mm) must be maintained between power limited and non-power limited wiring. • All interconnects are power limited. • Ethernet connections are power limited and supervised except for ground faults.			

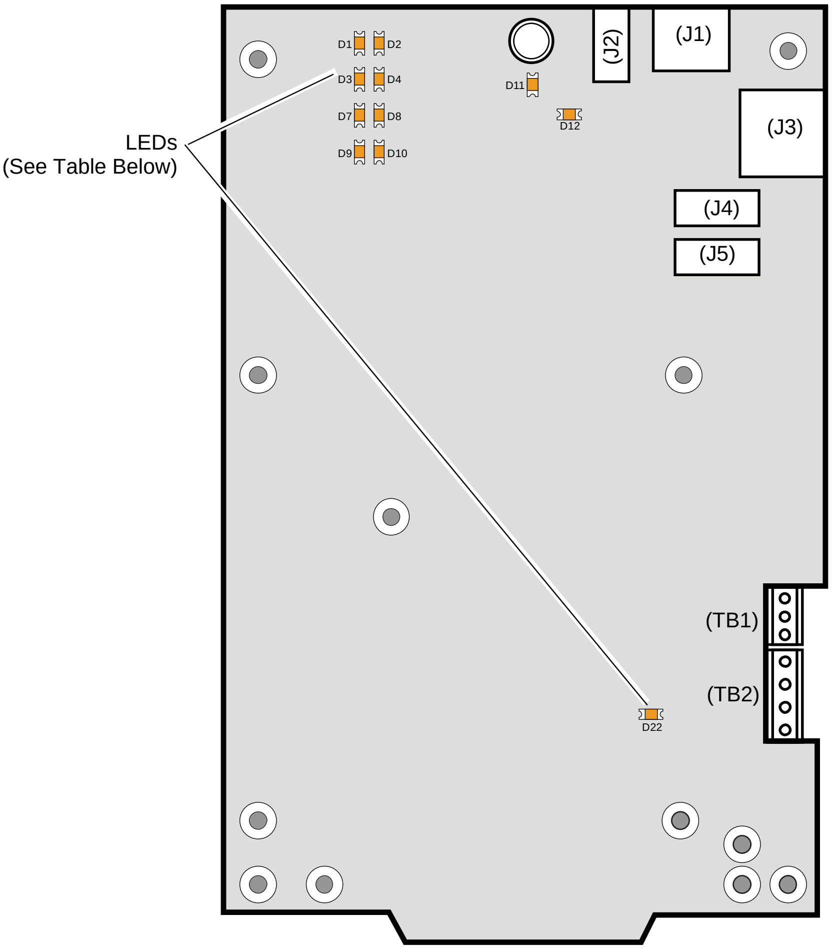


Figure 2.6 NFN-GW-EM-3 LEDs

Table 2.2 LED Definitions

Reference Designator	Label	Description
D1	ACTIVE	Active/Lit indicates that WinCE is running.
D2	NUPA RX	Blinks when data is received on the NUP A port (J4).
D3	PROGRAM	Not Used
D4	NUPB RX	Not Used
D7	USB B	Active/Lit indicates a device is connected to the USB B port (J1).
D8	NUPA TX	Blinks when data is sent on the NUP A port (J4).
D9	USB A	Active/Lit indicates a device is connected to the USB A port (J2).
D10	NUPB TX	Not Used
D11	DATA	Blinks to indicate data transmission to or from the Ethernet port (J3).
D12	LINK	Active/Lit indicates an Ethernet connection.
D22	WDT FAIL	Active/Lit indicates the system has undergone a reset due to a Watchdog circuit activating.

2.3.2 Connecting to a Standard NCM

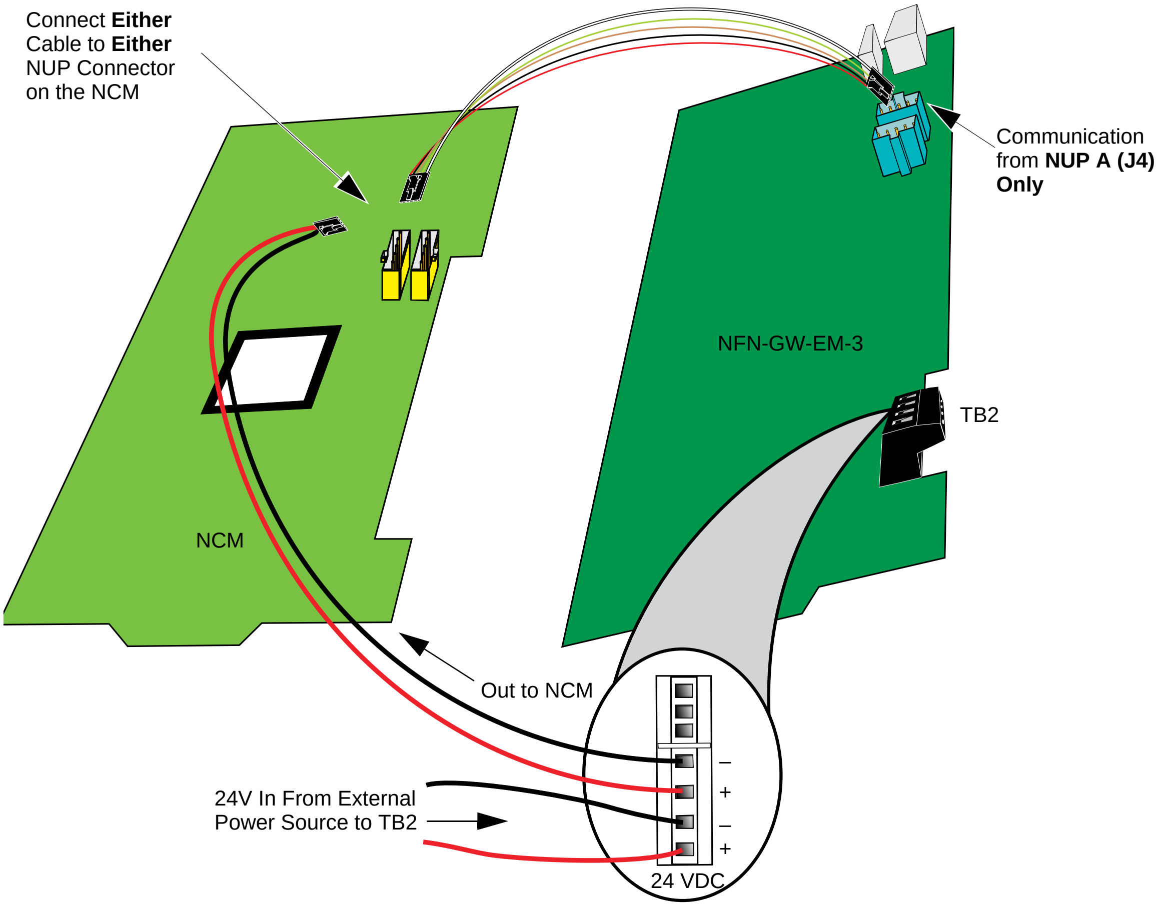

Connect **Either** Cable to **Either** NUP Connector on the NCM
Communication from **NUP A (J4) Only**
NFN-GW-EM-3
TB2
NCM
Out to NCM
24V In From External Power Source to TB2
–
+
–
+
24 VDC

Figure 2.7 Routing Power and Communication to a Standard NCM

Table 2.3 Standard NCM Connections

Type	Connection
NCM-W	Twisted pair wire
NCM-F	Fiber-optic cable

2.3.3 Connecting to an HS-NCM

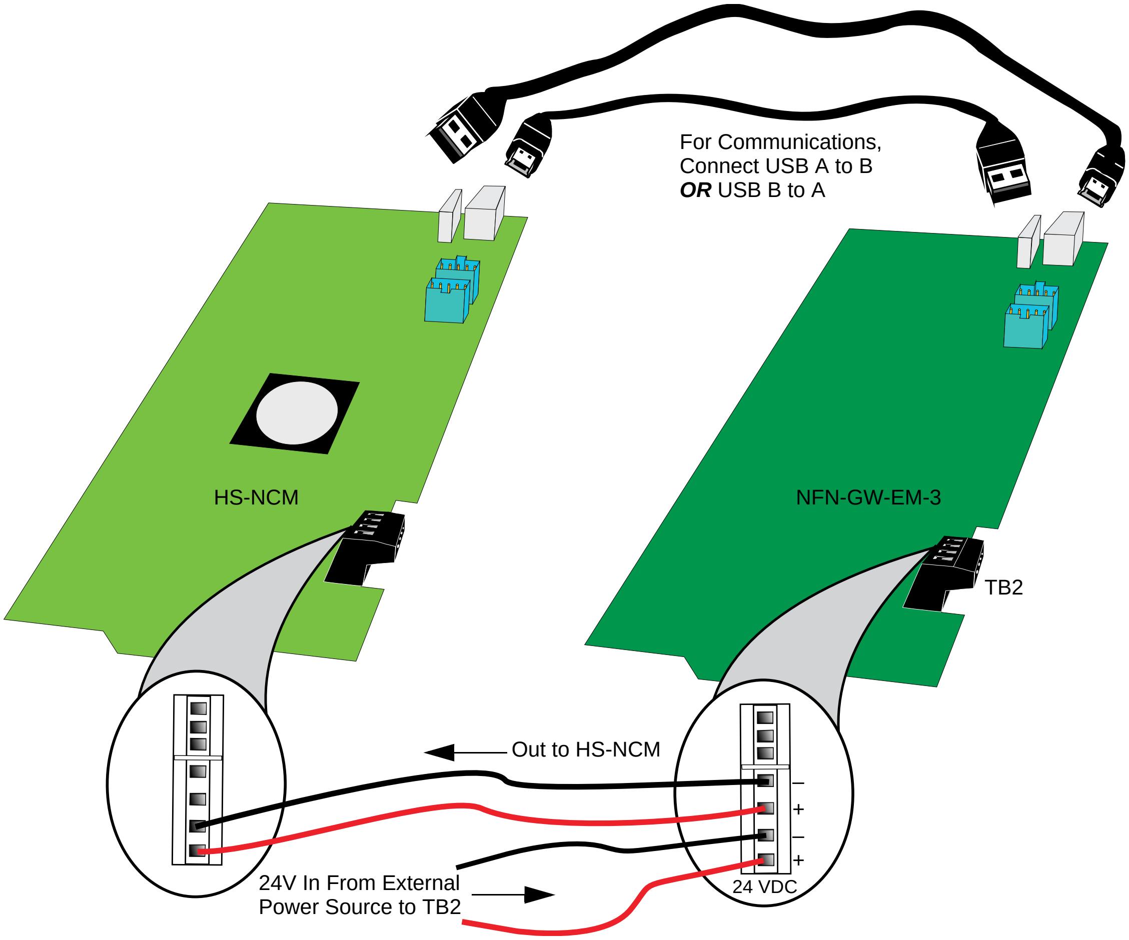


Figure 2.8 Routing Power and Communication to an HS-NCM

Table 2.4 HS-NCM Connections

Type	Connections
HS-NCM-W	Twisted pair wire
HS-NCM-SF	Single mode fiber-optic cable
HS-NCM-MF	Multimode fiber-optic cable
HS-NCM-WSF	Twisted pair wire, Single mode fiber-optic cable
HS-NCM-WMF	Twisted pair wire, Multimode fiber-optic cable
HS-NCM-MFSF	Multimode fiber-optic cable, Single mode fiber-optic cable

2.3.4 Connecting to a Fire Alarm Control Panel (FACP)

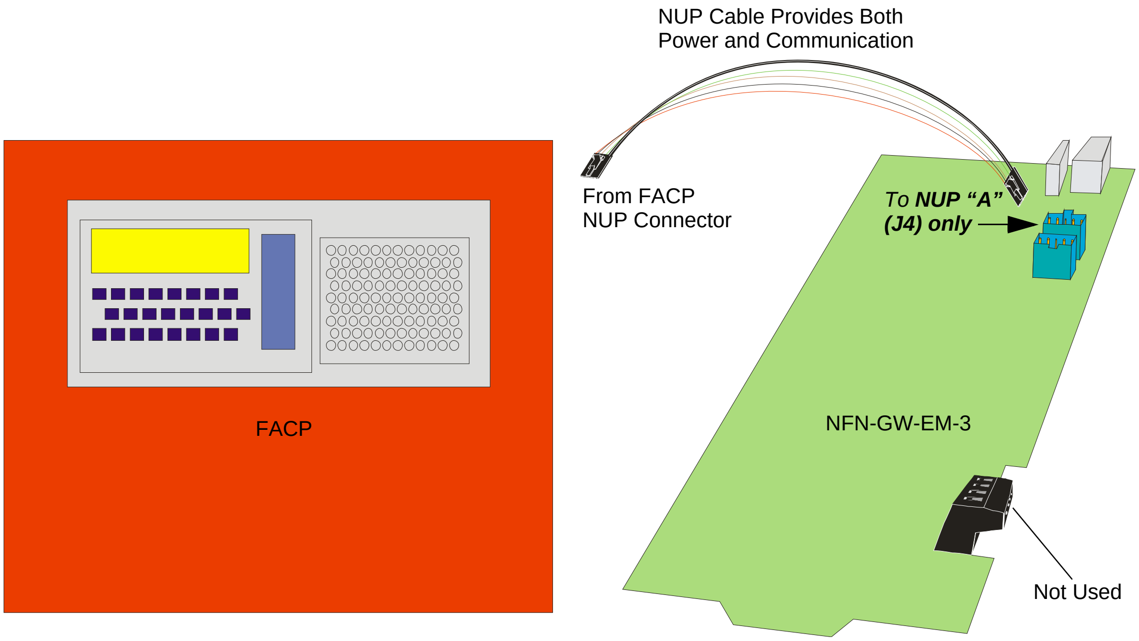


Figure 2.9 Connecting to an FACP via NUP Connector

2.3.5 Connecting to the PNET-1 Surge Suppressor

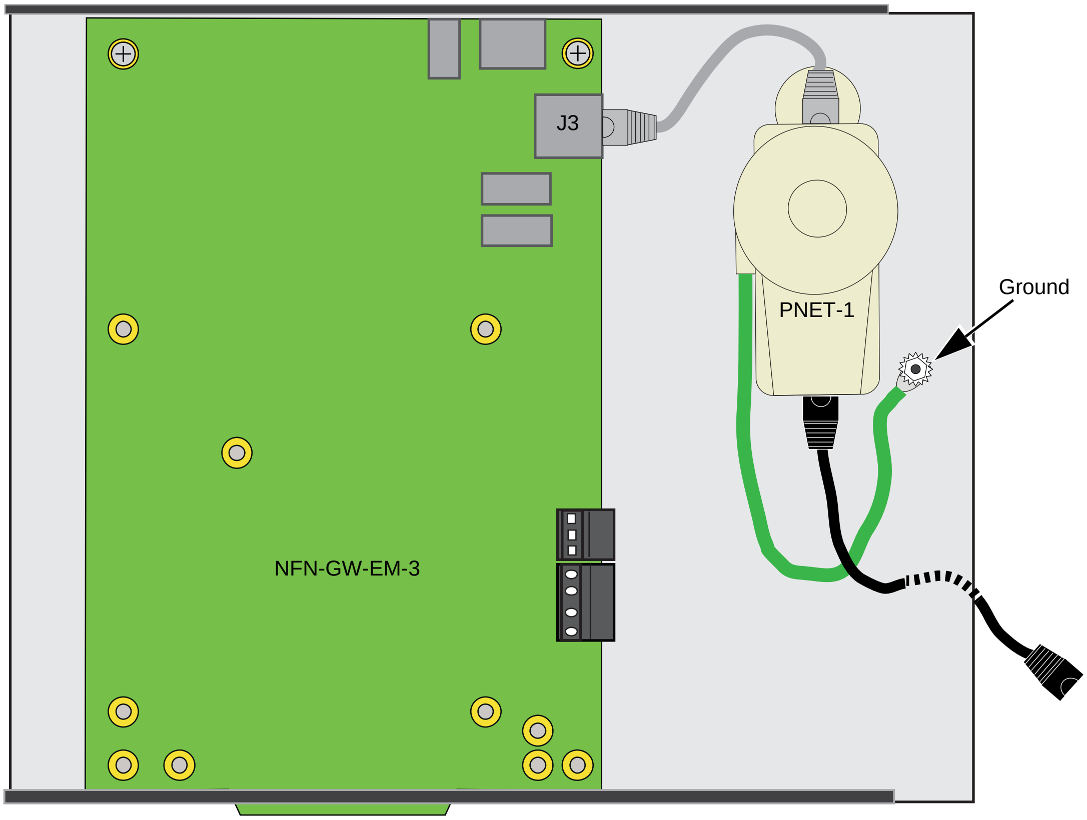


Figure 2.10 Connecting to the PNET-1 Surge Suppressor

2.4 System Power

Table 2.5 Power Requirements

Power	Requirement
Input Voltage (Nominal)	24 VDC
Input Current @ 24 VDC	125 mA

2.5 Testing and Maintenance

Testing and maintenance should be performed according to the *Testing and Maintenance* section of NFPA-72 and CAN/ULC S561-03.

Section 3 Configuration

3.1 Configuration Web Page

Configuration of the NFN-GW-EM-3 is via a web page running on the NFN-GW-EM-3. Supported web browsers are listed in 1.3, "Required Software".

The following information applies to IP settings:

- Each NFN-GW-EM-3 is shipped with a default IP address of 192.168.1.2 and a default node number of 240.
- The computer used to configure the NFN-GW-EM-3 must be able to establish an IP connection to the gateway. Consult with a network administrator if unsure how to make this connection.
- Connecting more than one NFN-GW-EM-3 for configuration prior to reconfiguring the IP address may result in an IP address conflict.

Refer to Appendix A:, "Gateway Settings"for instructions on resetting and reviewing the IP settings of the NFN-GW-EM-3.

3.2 Configuring the NFN-GW-EM-3

3.2.1 Logging into the Web Page

1. Start the web browser.
2. Navigate to the IP address of the NFN-GW-EM-3 (default http://192.168.1.2).
3. If a security warning appears, select the option to continue anyway. Please refer to 3.3, "Security Certificate" for more information.
4. When the login dialog box is displayed, enter the password and click **Login**. If a password has not been set, then you will be prompted to create the password. For details regarding the password, refer to **Tools > Set Device Password** in 3.2.3, "Main Menus".

3.2.2 Basic Configuration Tool Layout

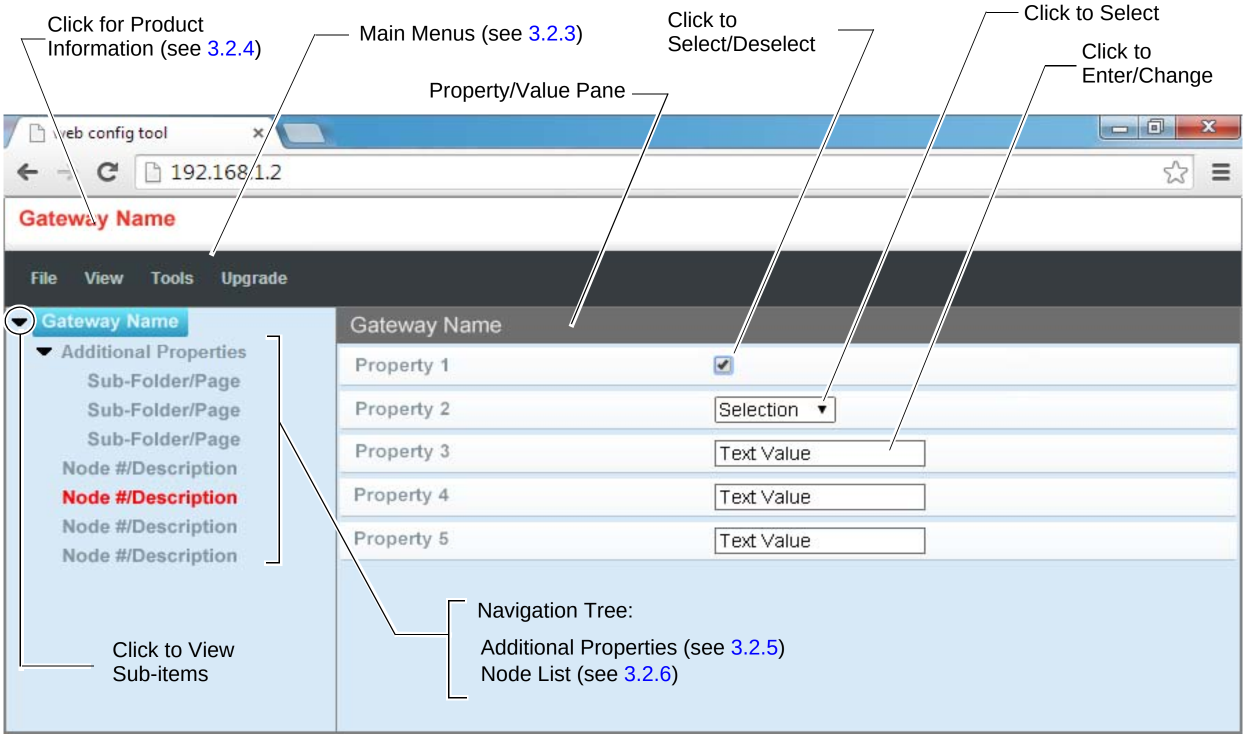


Figure 3.1 Basic Configuration Tool Layout

3.2.3 Main Menus

The configuration main menus are located at the upper left-hand area of the screen (see Figure 3.1).

Menu	Sub-Menu	Description
File	Reboot	Reboots the NFN-GW-EM-3.
View	Node Table	Displays a window containing software version information for all monitored nodes.
	Connected Clients	Displays a window containing IP address and description information for clients connected to the NFN-GW-EM-3.
Tools	Set Gateway Password	Displays a dialog box allowing the user to change the current password. • Passwords are case sensitive. • Alpha and numeric characters are supported. • One character minimum and 8 characters maximum.
	Backup...	Click to download a backup file (.bkp) from the gateway to the PC running the browser. Save or move the file to an appropriate location so it can be used, if necessary, to the restore gateway settings.
	Restore...	Browse to (or search for) the backup file on the PC running the browser. Click **Open** and then **Send**. An on-screen message indicates a successful restoration.
	Auto Detect Nodes	Select to have the gateway automatically detect all connected nodes.
	Send PFX Key File	Refer to 3.3, "Security Certificate".
Upgrade	Firmware	Browse to the file name that begins “NGNUW” and has the extension “.AR”. Click **Open** and then **Send.** An on-screen dialog indicates a successful upgrade. It is recommended that the browser be restarted after the upgrade.
	Language	Displays a dialog box from which the user can navigate to and select the desired language file.

3.2.4 Product Information

The following information displays when initially opening the configuration tool. It may also be accessed by clicking the first entry in the navigation tree (see Figure 3.1).

Property	Value
Type	Displays the gateway type by name.
Brand	Displays brand information.
Version	Displays the gateway version number.
Board Type	Displays the hardware model type.
Kernel Version	Displays additional software version information.
Boot Version	Displays additional software version information.
Current Time/Date	Displays the current date and time information after the gateway synchronizes the clock with the SNTP server.

3.2.5 Additional Properties

The Additional Properties folder is located in the navigation tree area of the configuration tool (see Figure 3.1).

Sub-Item	Property	Value
Time Zone Settings	GMT Reference	GMT Minute Offset - Click the value to set the offset (in minutes) to Greenwich Mean Time. Default is -300 (Eastern Standard Time).
		Observe DST - Click the value and select one of the following: • **Yes** - The gateway observes Daylight Savings Time. Designate the DST Begin and DST End times below. • **No** - The gateway does not observe Daylight Savings Time.
		Time Zone Reference - Click the value and select one of the following: • US Standard (Default) • EU Standard • Other Standard
	DST Begin	Displays when the "Other Standard" option is selected. Click the value and select the options describing when Daylight Savings Time Begins: • Series Reference - First to Fifth or Last • Day of Week • Month • Hour (24 hour time) • Hour Reference - Local Time or GMT
	DST End	Displays when the "Other Standard" option is selected. Click the value and select the options describing when Daylight Savings Time Ends: • Series Reference - First to Fifth or Last • Day of Week • Month • Hour (24 hour time) • Hour Reference - Local Time or GMT
SNTP Client Settings	Server or Workstation Address	Click the value and set the IP address for the time server.
IP Address Settings	IP Address	Click the value to change the IP address of the NFN-GW-EM-3. (Default is 192.168.1.2)
	SubNet Mask	Click the value to change the subnet address of the NFN-GW-EM-3. (Default is 255.255.255.0)
	IP Gateway	Click the value and enter the IP address of the IP Gateway for the host network. (Default is 0.0.0.0)
	MAC Address	Displays the MAC address of the gateway Ethernet port and is not configurable.
	Note: After configuring the IP address settings, click **Save** in the lower right corner of the window.	
NFN Settings	Mode	Displays the mode in which the NFN-GW-EM-3 is running. (Default is Supervising Station)
	Node	Click value to assign the NFN node number of the NFN-GW-EM-3. (Default is 240)
	Panel Label	Click value to enter panel label.
	Mass Notification Priority	Select **None** if Mass Notification is not used (Default). Select **Lower Than Fire** if fire alarms have priority over Mass Notifications. Select **Higher Than Fire** if Mass Notifications have priority over fire alarms.

Sub-Item	Property	Value
NFN Settings *(Cont'd)*	Send Time to Panels	When the checkbox is selected, the NFN-GW-EM-3 will send the time to the NFN network. (Default is with box checked)
	Channel A Threshold	Select **High** for a high-noise NFN network. Set to **Low** for a low-noise NFN network.
	Channel B Threshold	Select **High** for a high-noise NFN network. Set to **Low** for a low-noise NFN network.
	Style 7	• Select the checkbox for a Style 7 SLC (Signaling Line Circuit) configured NFN network. • Uncheck the checkbox for Style 4 SLC configured NFN network (Default).
NFN Information (Read Only)	Connection Port	Displays the type of connection port used (Serial, USB, etc.).
	Connection Type	Describes how the gateway is connected to the NFN.
	NCM Version	Displays the NCM version number. **Note:** NCM Version does not appear when there is no NFN connection.
	NCM Status Bits	Displays the NCM status, which can be: Piezo, UPS Failure, Network Fail Port A, Network Fail Port B, High Speed Audio, NCM Sniffer Mode Active, Local Connection Limit Exceeded, or None. **Note:** NCM Status Bits does not appear if when there is no NFN connection.
	Fire Network Time Policy	Displays one of the following depending on the type of time synchronization used: • **Send time**: The NFN-GW-EM-3 sets the time on the NFN network. • **Unsynced**: The NFN-GW-EM-3 and NFN network are not synchronized with each other.

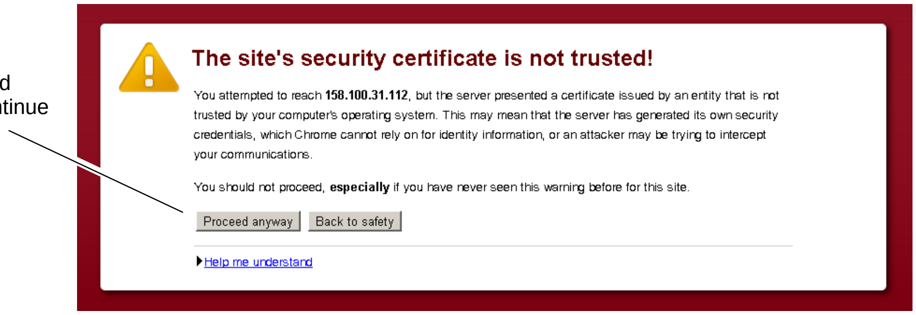
3.2.6 Node List

The node list is located in the navigation tree area of the configuration tool screen (see Figure 3.1). Click the desired node label to view information about that node. The information displayed is dependent on the node type. Labels for off-line nodes display in red text.

Property	Value
Node	Displays the NFN network node number of the monitored node.
Version	Displays version information about the node and the devices used to connect it to the NFN.

3.3 Security Certificate

The NFN-GW-EM-3 communicates with the browser using secure communications. When connecting to the NFN-GW-EM-3, the browser may display a security warning. An example is shown in Figure 3.2. The NFN-GW-EM-3 includes a self-signed security certificate which causes the browser to display the warning. The self-signed security allows the encrypted connection between the NFN-GW-EM-3 and the browser.



The site's security certificate is not trusted!

You attempted to reach **158.100.31.112**, but the server presented a certificate issued by an entity that is not trusted by your computer's operating system. This may mean that the server has generated its own security credentials, which Chrome cannot rely on for identity information, or an attacker may be trying to intercept your communications.

You should not proceed, **especially** if you have never seen this warning before for this site.

Select “Proceed anyway” to continue

Figure 3.2 Chrome Security Warning Example

The browser warning is displayed upon each connection to the NFN-GW-EM-3. The warning may be removed by obtaining a security certificate from a security authority. The certificate may originate from a local certificate authority or a commercial certificate authority if the NFN-GW-EM-3 is directly connected to the Internet with a unique IP address. Regardless of which type of certificate authority is selected, the IP address of gateway must be provided. The certificate is specific to the specified IP address. If the IP address is changed, a new certificate will be required. In addition, the certificates have an expiration date. For example, June 1, 2015. Once the certificate expires, a new certificate needs to be sent to the NFN-GW-EM-3. If the certificate expires, a different warning is displayed by the browser.

The security certificate must be in the PFX format. The PFX file is uploaded to the NFN-GW-EM-3 using the Tools menu in the NFN-GW-EM-3 configuration. The option "Send PFX Key File" completes the operation. It may also be necessary to install a file on the PCs which are used to configure the NFN-GW-EM-3 to fully resolve the security configuration.

The site network administrator may be able to assist with any additional details regarding security certificates.

Appendix A: Gateway Settings

NOTE: The procedures in this Appendix require the use of a USB flash memory drive.

A.1 Viewing Existing IP Settings

1. Connect the flash drive to the NFN-GW-EM-3.
2. Reboot the gateway.

   A file is created that matches the configured IP address of the gateway, followed by the extension "**.txt**" (e.g., **192.168.1.2.txt**). If the file already exists on the drive, it will be altered to match the Gateway configuration. The file contains additional information such as the MAC address of the gateway.
3. Connect the drive to a PC and view the files.

   The flash drive should contain a file that matches the configured IP address of the gateway, followed by the extension "**.txt**" (e.g., **192.168.1.2.txt**). If the file already exists on the drive, it has been altered to match the gateway configuration. The file contains additional information such as the MAC address of the gateway.

A.2 Resetting Factory Default Values

1. Connect the flash drive to a PC and create a file named "**default.ldc"**. The contents of the file is not significant; however, ensure that the file does not have an additional hidden file extension. This file will be automatically deleted from the flash drive by the gateway.
2. Eject the flash drive from the PC.
3. Disconnect power from the gateway.
4. Disconnect the communication cable to the Gateway USB port (if present) and connect the flash drive.
5. Reconnect the 24 VDC power supply to the gateway.
6. After approximately one minute, disconnect the flash drive from the USB port and (if necessary) reconnect the cable removed in Step 4.
7. Connect the flash drive to the PC and verify that the file named **192.168.12.txt** is on the drive.
   - If the file is on the flash drive, the reset has been accomplished.
   - If the file **is not** on the flash drive:
     - The flash drive may not have been connected during the reboot period or was removed early.
     - The flash drive is not seen as a valid drive by the hardware.
     - A software error has occurred and technical support may need to be contacted.

Manufacturer Warranties and Limitation of Liability

Manufacturer Warranties. Subject to the limitations set forth herein, Manufacturer warrants that the Products manufactured by it in its Northford, Connecticut facility and sold by it to its authorized Distributors shall be free, under normal use and service, from defects in material and workmanship for a period of thirty six months (36) months from the date of manufacture (effective Jan. 1, 2009). The Products manufactured and sold by Manufacturer are date stamped at the time of production. Manufacturer does not warrant Products that are not manufactured by it in its Northford, Connecticut facility but assigns to its Distributor, to the extent possible, any warranty offered by the manufacturer of such product. This warranty shall be void if a Product is altered, serviced or repaired by anyone other than Manufacturer or its authorized Distributors. This warranty shall also be void if there is a failure to maintain the Products and the systems in which they operate in proper working conditions.

MANUFACTURER MAKES NO FURTHER WARRANTIES, AND DISCLAIMS ANY AND ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS, TRADEMARKS, PROGRAMS AND SERVICES RENDERED BY MANUFACTURER INCLUDING WITHOUT LIMITATION, INFRINGEMENT, TITLE, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. MANUFACTURER SHALL NOT BE LIABLE FOR ANY PERSONAL INJURY OR DEATH WHICH MAY ARISE IN THE COURSE OF, OR AS A RESULT OF, PERSONAL, COMMERCIAL OR INDUSTRIAL USES OF ITS PRODUCTS.

This document constitutes the only warranty made by Manufacturer with respect to its products and replaces all previous warranties and is the only warranty made by Manufacturer. No increase or alteration, written or verbal, of the obligation of this warranty is authorized. Manufacturer does not represent that its products will prevent any loss by fire or otherwise.

Warranty Claims. Manufacturer shall replace or repair, at Manufacturer's discretion, each part returned by its authorized Distributor and acknowledged by Manufacturer to be defective, provided that such part shall have been returned to Manufacturer with all charges prepaid and the authorized Distributor has completed Manufacturer's Return Material Authorization form. The replacement part shall come from Manufacturer's stock and may be new or refurbished. THE FOREGOING IS DISTRIBUTOR'S SOLE AND EXCLUSIVE REMEDY IN THE EVENT OF A WARRANTY CLAIM.

Warn-HL-08-2009.fm

NOTIFIER®
by Honeywell

World Headquarters
12 Clintonville Road
Northford, CT 06472-1610 USA
203-484-7161
fax 203-484-7118

www.notifier.com