LANTRONIX®

ION 6-Slot Chassis
(ION106-A and ION106-D)

User Guide

Intellectual Property

Warranty

For details on the Lantronix warranty policy, go to http://www.lantronix.com/support/warranty.

Contacts

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For a current list of our domestic and international sales offices, go to www.lantronix.com/about/contact.

Disclaimer

Revision History

Rev	Date	Description of Changes
11/1/18	D	Update for ION106 FW v1.3.16 which adds support for RMPS (Remote Manage Power Supply) and Local Management of Cards in a Remote Un-managed Chassis. ION106 FW v1.3.16 requires IONMM FW v 1.4.2.
1/28/22	E	Initial Lantronix rebrand.
8/9/23	F	Update IEC 60950-1 to IEC 62368-1. Add IEC 60417-6042 (2010-11) and IEC 60417-6172 (2012-09). Add package label and device label, add "Disconnect all power sources" note, update Technical Support contact info, and add power supply specs.
11/2/23	G	Update Power Supply art and Certifications. Note that Focal Point and Point System are EoL.

Contents

1. Introduction

The ION106-x is an intelligent, multi-service integration platform that offers first-rate solutions for integrating, optimizing and navigating networks. By cost-effectively integrating copper and fiber equipment with infrastructure, the ION Platform equips networks for the bandwidth, distance, and security demands of today, tomorrow, and every point in between. Designed for service providers, data centers, and core network applications, the ION Platform provides the secure network management of fiber interface points required for both carrier-class and enterprise-class services.

Lantronix' ION media converters provide a quick, inexpensive method for connecting new or embedded fiber with copper-based networking devices that have RJ-45 ports. The Lantronix ION solutions let you easily integrate copper and fiber in order to extend networks within a building, between buildings, or throughout a campus where multiple points of fiber integration and secure network management of the fiber interface devices is essential.

An end-to-end fiber integration solution can be achieved by pairing the modules in an ION chassis with the modules in another ION chassis, or a Lantronix' stand-alone device. To take full advantage of all the features and functions available with the ION Chassis, an ION Management Module (IONMM or IONMM-232) is required.

The IONMM connects to the chassis backplane and communicates with the individual cards in the ION Chassis. Each slide-in module for the ION Chassis has specific features and functions that are controlled via the IONMM. A network administrator can configure, monitor and troubleshoot ION slide-in modules remotely via the IONMM.

Product Description

The ION106-x is intended for installing up to six ION slide-in cards (SICs) or five SICs and an IONMM module. The ION106-x can house and power six single-wide ION media converters or three "double-wide" converters such as the C6120-1013. These Lantronix slide-in cards (SICs) are supported for 100Base, 10/100, 1000Base, 10/100/1000, 10Gig Eth, T1/E1/J1 and DS3-T3/E3.

Product Numbers

The ION106-x models are described below.

Product #	Description
ION106-A	6-Slot ION Chassis with (1) AC power supply.
ION106-D	6-Slot ION Chassis with (1) DC power supply.
ION106-AAB	6-Slot ION Chassis with (2) AC power supplies.
ION106-AAMB	6-Slot ION Chassis with (2) AC power supplies and (1) ION Management Module.

Options

The ION106-x options listed below are sold separately.

Product #	Description
IONMM	Management Module for the ION Chassis with a USB Type B CLI port.
IONMM-232	Management Module for the ION Chassis with a RS232 RJ-45 CLI port.
IONPS6-A	Optional second AC power supply for the ION106-x. Redundant AC power supply for ION 6-Slot Chassis, 100 to 250 VDC input.
IONPS6-D	Optional second DC power supply for the ION106-x. Redundant DC power supply for ION 6-Slot Chassis, -21 to -72 VDC and +21 to +72 VDC input.
IONRE6-23	23-Inch Rack Mount Ears for the 6-Slot ION Chassis. (19" ears included with ION106.)
IONFP	ION Blank face plate; required for all empty slots (4 face plates included with ION106)

Features

Management Features:

- Provides 6 slots for installing Lantronix media converters
- Occupies 1 unit of rack space (1RU)
- Has 2 bays for hot-swappable power supplies
- Supports IONMM or IONMM-232 with management access via CLI, Web UI, and SNMP
- Redundant power supplies provide instant fail-over
- Management VLAN
- Based on Public MIBs; Multiple community strings
- Two 10/100 Ethernet interfaces and one USB Console port
- TFTP upgrade/backup of slide-in modules
- Import/Export configuration files in human readable/editable format
- RMPS (Remote Manage Power Supply) feature
- Local Management of Cards in a Remote Un-managed Chassis

Security Features:

When the optional management module is used, the following security features are available, letting you control access to the ION Chassis via the ION Management Module, ensuring that only authorized personnel can view and change the settings to the slide-in modules.

- Management VLAN
- SSL
- SSH
- 802.1x
- SNMPv1, v2c, and v3

Access Methods:

- Web-browser: Access the ION Management Module using a standard web browser such as Internet Explorer or Mozilla Firefox.
- CLI (Command Line Interface): CLI access can be done via telnet remotely or via the local console port on the ION Management Module.

- SNMP: Since the ION platform is based on public MIBs you can easily manage the ION with a standard network management system (NMS) such as SNMPc, HPOV or any other standard SNMP platform.

Specifications

ION106-x Chassis Specifications

The ION106-x chassis was designed to meet these specifications:

Standards	IEEE 802.3 2012
Certifications	UL Listed, EN55032 Class A, EN55035, UKCA, CE Mark, FCC Class B, CISPR Class A, EN 61000-3-3:2013/A2:2021, EN IEC 62368-1:2020, EN 62368-1:2020/A11:2020
Safety Compliance	N/A
Power Consumption	10 W
Power Source	Supplied from installed Power supply module (IONPS6-A or IONPS6-D). Two open bays for ION 6-slot power supply modules supporting: AC: 100-250VAC DC: -21 to -72VDC and +21 to +72VDC Note: Power supply module supplies +12VDC maximum to each card slot in the chassis. Only one power supply module is required to power the chassis and the installed modules; the optional second power supply module provides redundancy for instant fail-over.
Weight	ION106-A with one Power Supply: 9.4 lbs. ION106-A with two Power Supplies: 10.1 lbs.
Dimensions	Width: 17" [430 mm] x Depth: 10" [254 mm] x Height: 1.75" [44.45 mm]
Operating Temp	0°C to 50°C (32° F to 122° F)
Storage Temp	-40°C to +85°C (-40° F to 185° F)
Operating Humidity	5% to 95% (non-condensing)
Altitude	0-10,000 feet
MTBF	IONPS6-D: MTBF to be greater than 65,000 MIL-HDBK-217F Hours. MTBF to be greater than 178,750 Bellcore Hours. IONPS6-A: MTBF to be greater than 65,000 MIL-HDBK-217F Hours. MTBF to be greater than 178,750 Bellcore Hours. ION106-x with no power supply: MTBF to be greater than 250,000 MIL-HDBK-217F Hours MTBF to be greater than 687,500 Bellcore Hours ION106-x with 1 power supply: Bellcore >165,000 hrs. ION106-x with 2 power supplies: Bellcore >82,500 hrs.
Warranty	Lifetime limited warranty

IONPS6-A and IONPS6-D Power Supply Specifications

Application	Up to 2 power supply modules can be used in the ION106 Chassis,
Status LEDs	Power On LEDs for each installed power supply module in the ION106 chassis
Dimensions	Width: 1.63" [41.4 mm] x Depth: 3" [76.2 mm] x Height: 9.75" [247.7 mm]
Power Input	IONPS6-A: 100-240 VAC, 47-63 Hz, 1.2A, and 120 - 300 VDC input
	IONPS6-D: -21 to -72 VDC and +21 to +72 VDC input
Environment	Operating Temp: 0°C to 50°C Storage Temp: -40°C to 70°C Humidity: 5% to 95% (non-condensing) Altitude: 0 – 10,000 ft. (with de-rating)
Weight	0.94 lbs. [0.43 kg]
MTBF	Greater than 65,000 Hours (MIL-HDBK-217F) Greater than 178,750 Hours (Bellcore)
Certifications	UL listed, EN55022 Class A, EN55024, CE Mark, FCC Class A, CISPR Class A
Warranty	Lifetime

ION106-x Chassis Dimensions
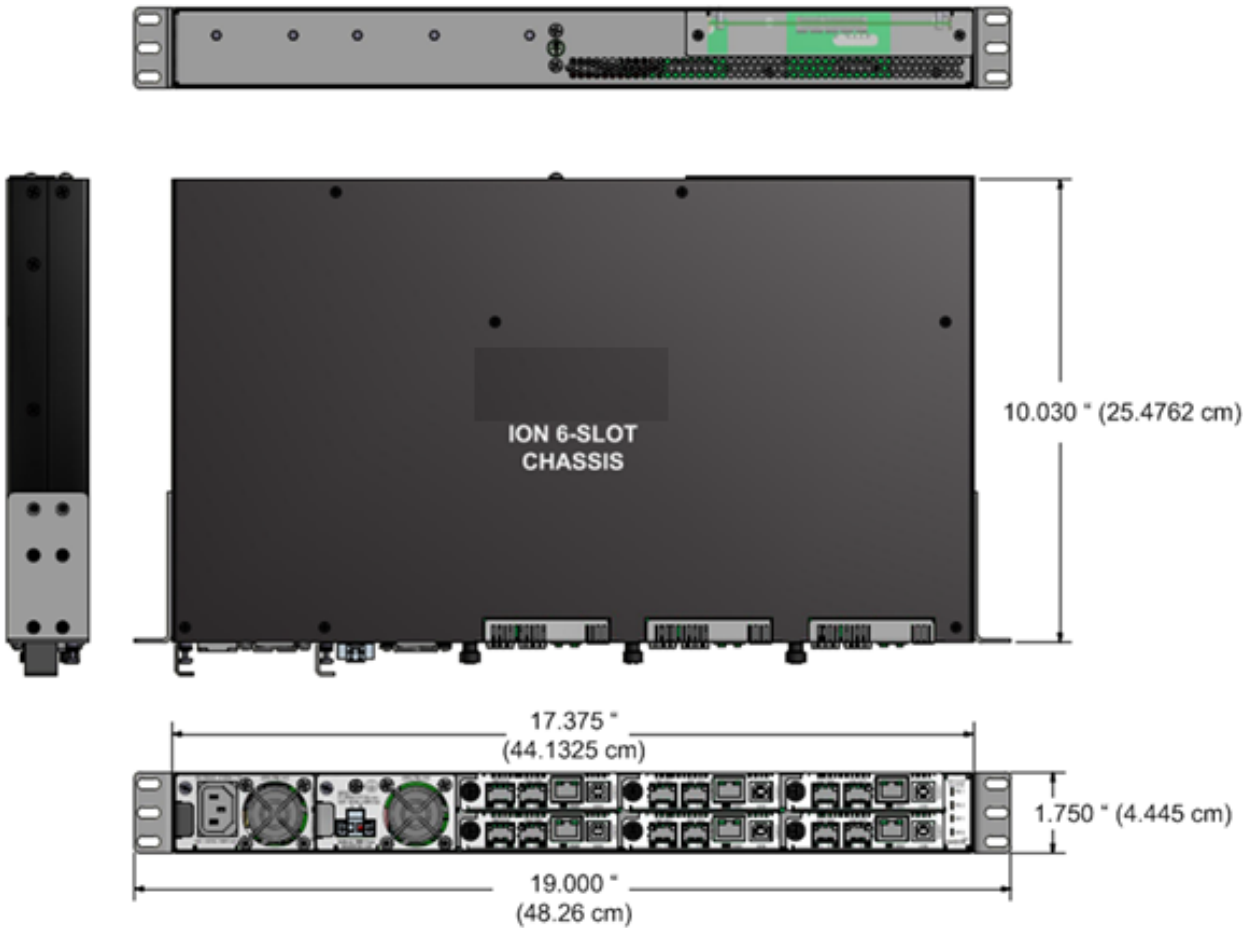
Package Contents

Contact your sales representative if you have not received the following items. Save the packaging for possible future use.

- One ION106-x Six-Slot ION Chassis with one power supply
- Four IONFP blank Face Plates with #4 Screws (TN 6531)
- Four rubber feet
- One Documentation Post Card (33504)
- One Poly bag
- One Power Cord included: the country specific power cord has an extension after the SKU: -NA = North America, -LA = Latin America, -EU = Europe, -UK = United Kingdom, -SA = South America, -JP = Japan, -OZ = Australia, -BR = Brazil. For example, ION106-A-NA is the power cord for North America.

About This Manual

The purpose of this manual is to provide the information needed to install the ION106-x to the point of operation. Note that there are separate manuals for the ION slide-in-cards and options.

Related Manuals and Online Help

A printed documentation card is shipped with each device. Context-sensitive Help screens, as well as cursor-over-help (COH) facilities are built into the Web interface. For Lantronix Documentation, Firmware, App Notes, etc. go to https://www.lantronix.com/technical-support/. For SFP manuals see Lantronix SFP webpage. Note that this manual provides links to third party web sites for which Lantronix is not responsible.

Other ION system and related device manuals are listed below.

1. Product Documentation Postcard, 33504
2. ION Management Module (IONMM) Install Guide, 33420 and User Guide, 33457
3. IONMM-232 Install Guide, 33725
4. ION System x323x Remotely Managed NID User Guide, 33342
5. ION Systems CLI Reference Manual, 33461
6. ION x222x & x32xx Multi-port NIDs Installation Guide, 33433
7. ION System NID User Guides (33432, 33457, 33472, 33493, 33494, 33495, 33496)
8. IONADP Point System Card Adapter for ION Chassis, 33413
9. Release Notes (firmware version specific)

Note: Information in this document is subject to change without notice. All information was deemed accurate and complete at the time of publication. Transition Networks is now Lantronix. Some products/firmware items are still in process of being re-branded and may still reflect the Transition Networks name/logo.

Cautions and Warnings

Definitions

Cautions indicate that there is the possibility of poor equipment performance or potential damage to the equipment. Warnings indicate that there is the possibility of injury to a person. Cautions and Warnings appear here and may appear throughout this manual where appropriate. Failure to read and understand the information identified by this symbol could result in poor equipment performance, damage to the equipment, or injury to persons.

 Cautions

 Do not ship or store devices near strong electrostatic, electromagnetic, magnetic, or radioactive fields.

Caution: When handling the devices observe electrostatic discharge precautions. This requires proper grounding (i.e., wear a wrist strap).

Caution: Copper based media ports, e.g., Twisted Pair (TP) Ethernet, USB, RS232, RS422, RS485, DS1, DS3, Video Coax, etc., are intended to be connected to intra-building *(inside plant)* link segments that are not subject to lightening transients or power faults. They are **not** to be connected to inter-building *(outside plant)* link segments that are subject to lightening.

Caution: **Do not** install the devices in areas where strong electromagnetic fields (EMF) exist. Failure to observe this caution could result in poor performance.

Caution: Read the installation instructions before connecting the chassis to a power source. Failure to observe this caution could result in poor performance or damage to the equipment.

Caution: Only trained and qualified personnel should install or perform maintenance on the devices. Failure to observe this caution could result in poor performance or damage to the equipment.

Caution: Do not let optical fibers come into physical contact with any bare part of the body since they are fragile, and difficult to detect and remove from the body.

Caution: Do not bend any part of an optical fiber/cable to a diameter that is smaller than the minimum permitted according to the manufacturer's specification (usually about 65 mm or 2.5 in)!

Disconnect all power sources.

This device has or supports more than one power source (e.g., different voltages/frequencies or as redundant power). For the removal of all power from the device, please be aware of the following per IEC 60417-6042 (2010-11) and IEC 60417-6172 (2012-09):

Caution: Shock hazard

Caution: Disconnect all power sources

Débranchez toutes les sources d'alimentation.

Cet appareil possède ou prend en charge plus d'une source d'alimentation (p. ex., différentes tensions/fréquences ou comme alimentation redondante). Pour la suppression de toute alimentation de l'appareil, veuillez tenir compte des dispositions suivantes conformément aux normes CEI 60417-6042 (2010-11) et CEI 60417-6172 (2012-09) :

Mis en garde : Risque de choc

Attention : Débranchez toutes les sources d'alimentation Attention : Débranchez toutes les sources d'alimentation

 Warnings

Warning: Use of controls, adjustments or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

Warning: Visible and invisible laser radiation when open. **Do not** look into the beam or view the beam directly with optical instruments. Failure to observe this warning could result in an eye injury or blindness.

Warning: DO NOT connect the power supply module to external power before installing it into the chassis. Failure to observe this warning could result in an electrical shock or death.

Warning: Select mounting bracket locations on the chassis that will keep the chassis balanced when mounted in the rack. Failure to observe this warning could allow the chassis to fall, resulting in equipment damage and/or possible injury to persons.

Warning: Do not work on the chassis, connect, or disconnect cables during a storm with lightning. Failure to observe this warning could result in an electrical shock or death.

Warning: Shock hazard exists if power supply is ejected while powered on.

Warning: These products are not intended for use in life support products where failure of a product could reasonably be expected to result in death or personal injury. Anyone using this product in such an application without express written consent of an officer of Lantronix does so at their own risk and agrees to fully indemnify Lantronix for any damages that may result from such use or sale.

Attention: this product, like all electronic products, uses semiconductors that can be damaged by ESD (electrostatic discharge). Always observe appropriate precautions when handling.

 Warning: Potential for damage to equipment or personal injury.

 Warning: Risk of Electrical Shock

  Functional grounding point

 Protective grounding point

CAUTION: Copper based media ports, e.g., Twisted Pair (TP) Ethernet, USB, RS232, RS422, RS485, DS1, DS3, Video Coax, etc., are intended to be connected to intrabuilding (inside plant) link segments that are not subject to lightening transients or power faults. Copper based media ports are NOT to be connected to interbuilding (outside plant) link segments that are subject to lightening transients or power faults. Failure to observe this caution could result in damage to equipment.

 Warning: Only the proper Service Personnel will have access to remove and replace the Power Supply modules.

2. Installation

ION106-x installation can involve mounting the chassis, installing the ION SICs, grounding the Chassis, and powering the Chassis. Installing an optional second Power Supply may also be involved. **Note**: Make cable connections before connecting Power. The ION106-x is described and shown below.
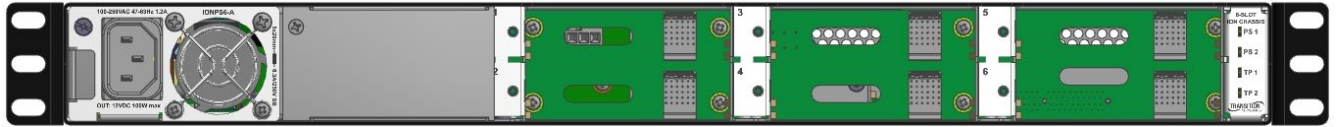
Mounting Options

The ION106-x can be mounted in a standard 19-inch equipment rack or on a desktop or shelf. Mounting instructions for each type are provided below.

The ION106-x comes with four rubber feet that you can use for desktop installation. The **IONRE6-23** option provides two 23-Inch Rack Mount Ears for the 6-Slot ION Chassis rack mounting. See the related option install guide for additional information.

Desktop or Shelf Mounting

1. Attach the four adhesive rubber feet to the bottom of the first switch.
2. Set the device on a flat surface near an AC power source, making sure there are at least two inches of space on all sides for proper air flow.
3. If installing a single chassis only, go to Grounding the Chassis on page 15.
4. If installing multiple chassis, attach four adhesive feet to each one. Place each device squarely on top of the one below, in any order.

Rack Mounting (Optional)

Before rack mounting the ION106-x, please pay attention to the following factors:

- **Temperature**: Since the temperature within a rack assembly may be higher than the ambient room temperature, check that the rack-environment temperature is within the specified operating temperature range (0 °C to +50 °C).
- **Mechanical Loading**: Do not place any equipment on top of a rack-mounted unit.
- **Circuit Overloading**: Be sure that the supply circuit to the rack assembly is not overloaded.
- **Grounding**: Rack-mounted equipment should be properly grounded.

Follow the steps below for rack mounting the ION106-x:

1. Attach the brackets to the device using the screws provided in the Mounting Accessory.
2. Mount the device in the rack (via Rack-Mount kit), using four rack-mounting screws (not provided). Secure the lower rack-mounting screws first so the brackets aren't bent by the ION106-x weight.
3. If installing a single chassis only, go to Grounding the Chassis on page 15.
4. If installing multiple chassis, mount them in the rack, one below the other, in any order.
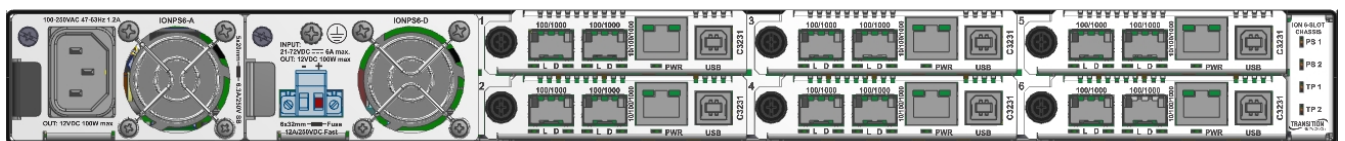
Slot Numbering

The ION106-x front panel components and slot numbering are shown below.
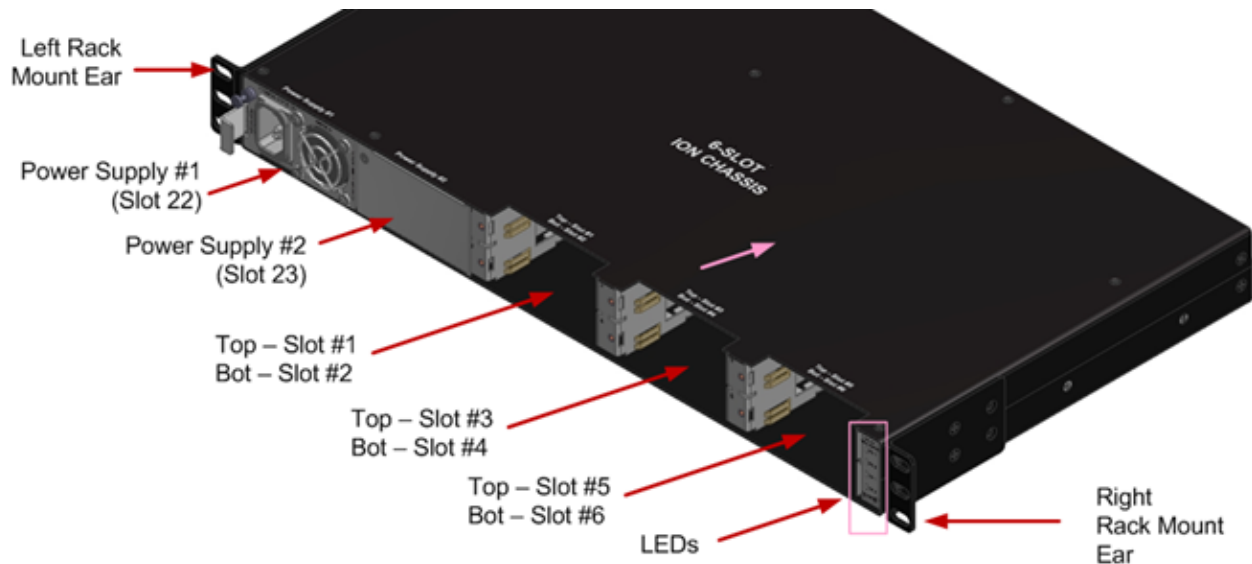
Grounding the Chassis

The ION106-x chassis comes equipped with dual, #6-32 x ¼" SEMS (bonded screw-washer combo), ¾" spaced grounding screws, located on its back panel. They require a grounding conductor wire terminated with a two-hole, compression-type, grounding connector (not provided). The grounding wire (must be a copper conductor) is not included with the chassis and must be provided by the customer/installer.

The electrical-conducting path from the ION106-x chassis must:

- Flow via the grounding screws, to the common bonding network (CBN) for telecom installations, or to an alternative approved grounding system (if required) for non-telecom installations.
- Be of sufficiently low impedance to conduct fault currents likely to be imposed on the chassis.
- Enable proper operation of any over-current protection devices.
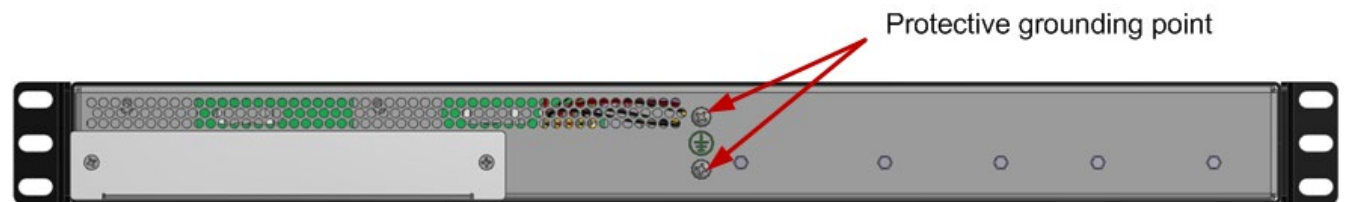
Rack Mount C. GND (Chassis Ground) Note: a device bonded to metallic shelf that houses ION106-x jacks should be bonded directly by either 1) and independent conductor to the central office ground via rack ground bar, or 2) connection to the rack itself, or 3) other metal-to-metal bond to ground. To connect the ION106-x to a ground point on the rack, follow your organization's or IT department's standard procedure or the US NFPA 70®: National Electrical Code.

Grounding Wire Size

The wire size of the Protective Earth (ground) conductor should be greater than or equal to the wire size of the power source conductors. The power-source conductor wire size is installation dependent and sized to accommodate acceptable IR losses between the power source and the device terminal block.

Connecting the Ground Wire

The conductor must be fastened using the included #6-32 x ¼" SEMS Screws (bonded screw-washer combo) antirotation fasteners. The torque requirement for the connector lug-nut fasteners is specified by the connector's manufacturer.

Grounding Method

The conductor must be fastened to the Chassis, using the included #6-32 SEM screws. To properly ground the ION106-x chassis:

1. Obtain one (1) two-hole, compression-type, grounding connector.
2. Attach the grounding conductor to the Chassis by, using the included #6-32 SEMS Screw-washer combo.
3. Attach the opposite end of the grounding conductor to the common-bonding network (CBN) for telecom, or to earth ground (if required) for non-telecom installations.

Installing ION Slide-In Cards (SICs)

CAUTION: Wear a grounding device and observe electrostatic discharge precautions when installing slide-in cards into the 6-slot chassis. Failure to observe this caution could result in damage to the slide-in cards.

Note: The maximum power delivery capacity for the ION106-x Six Slot chassis is 8.5 watts per slot.

To install a slide-in-card into the ION106-x chassis:

1. Refer to the manuals for the slide-in card to ensure that any DIP switches or jumpers on the module's circuit board are set correctly for the site installation.
2. Carefully align the slide-in card to the chassis installation guides and slide it fully into the installation slot, as shown below.
3. Ensure that the slide-in card is firmly seated inside the chassis.
4. Push in and rotate the attached panel fastener screw to secure the slide-in card to the ION106-x chassis frame.
5. Repeat steps 1-4 to install one or more additional ION slide-in cards.
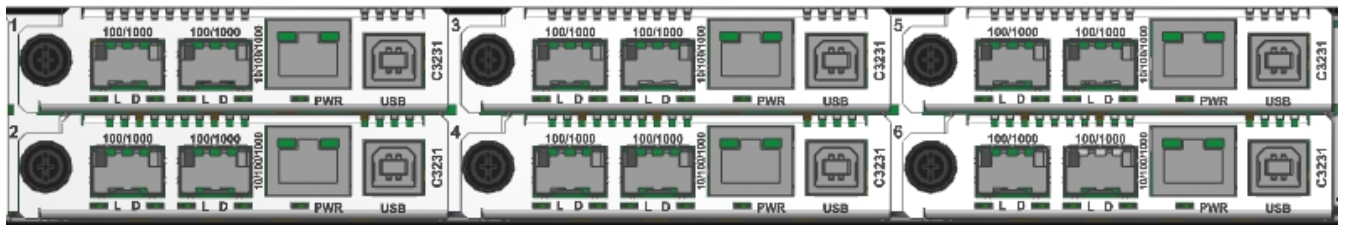
6. If only one card is being installed in the chassis, it is suggested that the Face Plate (provided) is used to cover up the unused slot.

Installing a Second Power Supply

The ION106-x ships with one power supply standard, either an AC or DC version. An optional second Power Supply, again either AC or DC, may be installed in the field.
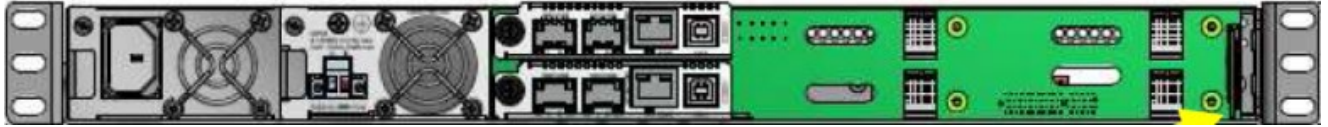
Warning: power supply must <u>not</u> be powered during installation. The unit can be powered while installing or removing a power supply (just the supply being serviced must not be powered).

Warning: Risk of electrical shock.

Power Supply "Hot Swap" Feature: After the Power Supply module(s) are installed you can replace a Power Supply module without powering down the ION106-x. This lets you change the configuration or repair a module without interrupting ION106-x overall operation.

You can insert and remove a power supply, while another power supply is powering the ION106-x, however, the supply being inserted/removed cannot be connected to a power source while it's being inserted / removed from the ION106-x. In other words: a power source should only be applied to a power supply after the supply has been installed in the chassis, and that power source should be disconnected from a power supply before the power supply is removed from the chassis.

For multiple power sources: Energy hazard if both power supply modules are not disconnected. Disconnect both power sources before servicing.

Warning: Only the proper Service Personnel will have access to remove and replace the Power Supply modules.

Powering the Chassis (AC Power Supply)

To supply power to the ION106-x chassis with an optional
IONPS6-A AC Power Supply:

1. Disconnect all Power sources before servicing.
2. Remove the blank face plate.
3. Slide the AC power supply into the desired slot.
4. Using a small Phillips head screwdriver, tighten the Panel Fastener Phillips head screw to hold the
   Power Supply securely to the chassis.
5. Connect the AC Power Cord (provided) to the AC receptacle.
6. Re-connect the Power sources removed in step 1 above.

Caution: Shock hazard. Disconnect all power sources before servicing.

Avertir: Risque d'electrocution. Debranchez toutes les sources d'alimentation avant l'entretien.
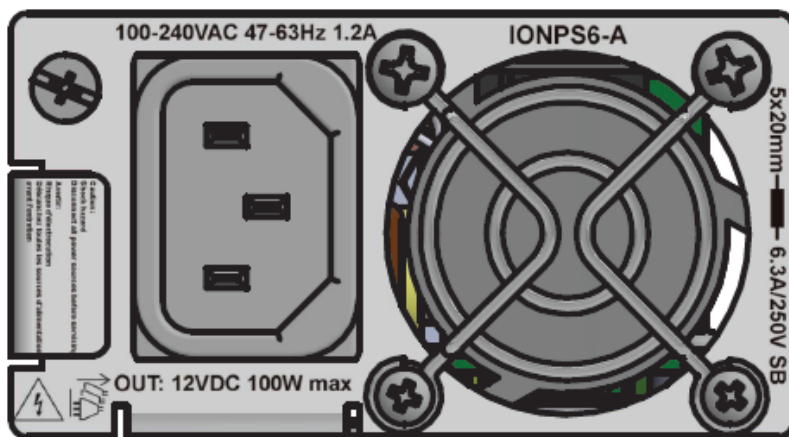
Powering the Chassis (DC Power Supply)

Equipment for restricted access locations: This equipment intended only for installation in a RESTRICTED ACCESS LOCATION.

Note: Make cable connections before connecting Power.

Disconnect all Power sources before servicing.

To supply power to the ION106-x chassis with an optional IONPS6-D DC Power Supply:

1. Disconnect all Power sources before servicing.
2. Remove the blank face plate.
3. Slide the DC power supply in to the desired slot.
4. Using a small Phillips head screwdriver, tighten the Panel Fastener Phillips head screw to hold the Power Supply securely to the chassis.
5. Connect the Power Wires to the Terminal Block (see next page).
6. Re-connect the Power sources disconnected in step 1 above.

Caution: Shock hazard. Disconnect all power sources before servicing.

Avertir: Risque d'electrocution. Debranchez toutes les sources d'alimentation avant l'entretien.
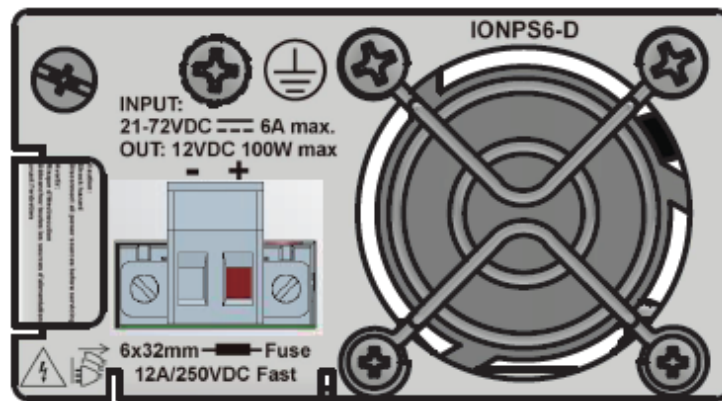
Removing and Replacing the AC or DC Power Supply

⚠️ **Warning**: Only the proper Service Personnel will have access to remove and replace the Power Supply modules.

When removing and replacing the AC (IONPS6-A) or DC (IONPS6-D) Power Supply:

1. Remove the Power Input Source to the Power Supply module.
2. Undo the Panel Fastener. Using a small Phillips head screwdriver, loosen the Panel Fastener Phillips head screw holding the Power Supply to the chassis.
3. Pull the Power Supply from the Chassis and set the Power Supply aside.
4. Wait approximately 1 minute before handling Power Supply, due to possible stored energy in the Power Supply assembly.

Power via the DC INPUT (Euro Block) Connector

Connecting Power Wires to the Terminal Block:

1. Strip the wires to the proper length.

2. Insert the positive and negative power wires into **V+** and **V-** contacts respectively of the Terminal Block (note polarity on the ION106-x chassis). Make sure the wires are secure. See the figure below.

3. Insert the positive and negative power wires into **V+** and **V-** contacts respectively into the power source; make sure the wires are secure. See the figure below. Insert the positive and negative power wires into **V+** and **V-** contacts respectively into the power source; make sure the wires are secure. See the figure below.
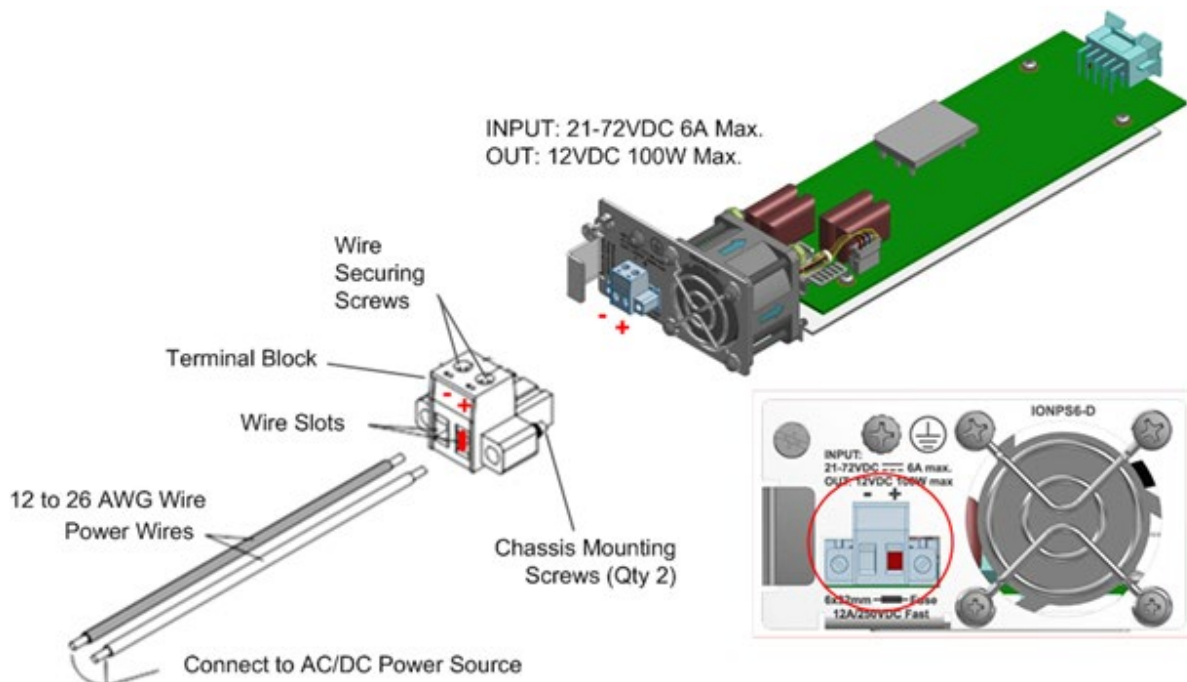
4. Tighten the two screws to secure the Terminal Block to the ION106-x chassis.
5. Turn the power source ON and observe that the front panel **PWR** (power) LED is lit, indicating that power is applied to the ION106-x.

Master/Slave Mode

Only one power supply is needed to power the ION106-x chassis; however, there is a second slot to house a redundant power supply module. If a redundant power supply is used, please note that:

1. Both power supplies cannot be put in Slave mode.
2. If there is only one power supply it will set itself to Master mode.

In **Master** mode, a power supply will continuously attempt to power to the chassis.
In **Slave** mode, a power supply will primarily stand by. It will continuously sense whether the chassis is being powered by another supply, and only attempt to provide power if the Master supply stops providing sufficient power.

Power Supply Master and Slave Status and States

#	PS-1	PS-2	PS-1	PS-2
1	present_powered	present_powered	Master	Slave
2	present_powered	present_not_powered	Master	Slave
3	present_not_powered	present_powered	Slave	Master
4	not_present	present_powered	none	Master
5	present_not_powered	not_present	Master	none

Monitoring the ION 6-Slot Chassis LEDs

The ION106-x LEDs are shown and described below.

PS 1: Power Supply 1 status - Slot 1:
- Green On (lit) = Power applied to PS1.
- Red On (lit) = Fault on PS1.

PS 2: Power Supply 2 status - Slot 2:
- Green On (lit) = Power applied to PS2.
- Orange On (lit) = Fault on PS2.

TP 1: For future use.

TP 2: For future use.

PS Status LED Summary

LED	Present and Powered	Present Not Powered	Not Present	Present Not Operational
PS1	Green	Blinking Green	Red	Red
PS2	Green	Blinking Green	Red	Red

Installing IONMM and Slide-In Cards

Refer to Section 2: Installation of the *ION Management Module (IONMM) User Guide* to install the IONMM in an ION Chassis, and access and initially set up the IONMM through either a local serial interface (USB) or a remote Ethernet connection (Telnet session or Web interface). Refer to the applicable ION slide in card (SIC) install guide for install instructions for the various ION SICs.

The ION106-x chassis also supports the insertion and use of Point System™ Converter Cards via the ION Adapter (IONADP). Note that ION cards are managed by the IONMM but Point System Cards must be managed by the Point System MMU management card

Checking Power Supply Status

After the module(s) are installed you can use the CLI or web GUI to verify SIC and Power Supply module status.

For More Information

See Related Manuals and Online Help on page 10 for information on ION slide in cards:

- Pre-Installation
- DIP Switch settings
- Installation and Setup
- Cabling
- Cable Specifications
- Cable Types

- Installing slide-in-cards and SFP/SFP+ Devices
- Operation (CLI and Web GUI)
- Power and Status LEDs
- Management (CLI or web GUI)
- Troubleshooting

Replacing Power Supply Fuses

The IONPS6-A fuse must be a 5x20mm 6.3A/250V SB fuse. The IONPS6-D fuse must be a 6x32mm 12A/250VDC FAST fuse. See the figure below for fuse locations.

Replacing the IONPS6-A Fuse

CAUTION: Ensure that the IONPS106-A has been disconnected from the external power source and the ON/OFF switch is at "O." Failure to observe this caution could result in Power Supply damage or failure.

Caution: for continued protection against risk of fire, replace with same type and Rating of fuse: 6x32mm 12A/250VDC FAST. Disconnect power source before servicing.

To replace the fuse in the IONPS6-A:

1. Disconnect the AC power cord from the external power source and from the IONPS6-A.
2. Insert a small flat blade screwdriver into the groove on the front, inside edge of the fuse holder.
3. Carefully pry the fuse from the fuse holder and remove the fuse.
   Note: The replacement fuse must be the same amperage and voltage rating. See Caution above.
4. Insert the replacement fuse into the fuse holder.
5. Slide the IONPS6-A fully into the IONPS6-x chassis.
6. Connect the power cord to the IONPS6-A and to the external power.

Replacing the IONPS6-D Fuse

CAUTION: Ensure that the IONPS106-D has been disconnected from the external power source. Failure to observe this caution could result in Power Supply damage or failure.

Caution: for continued protection against risk of fire, replace with same type and Rating of fuse: 5x20mm 6.3A/250V SB. Disconnect power source before servicing.

To replace the fuse in the IONPS6-D:
1. Disconnect power from the external power source and from the IONPS6-A.
2. Use a fuse puller to carefully remove the old fuse.
   Note: The replacement fuse must be the same amperage and voltage rating. See Caution above.
3. Insert the new fuse into the fuse holder.
4. Slide the IONPS6-D fully into the IONPS6-x chassis.
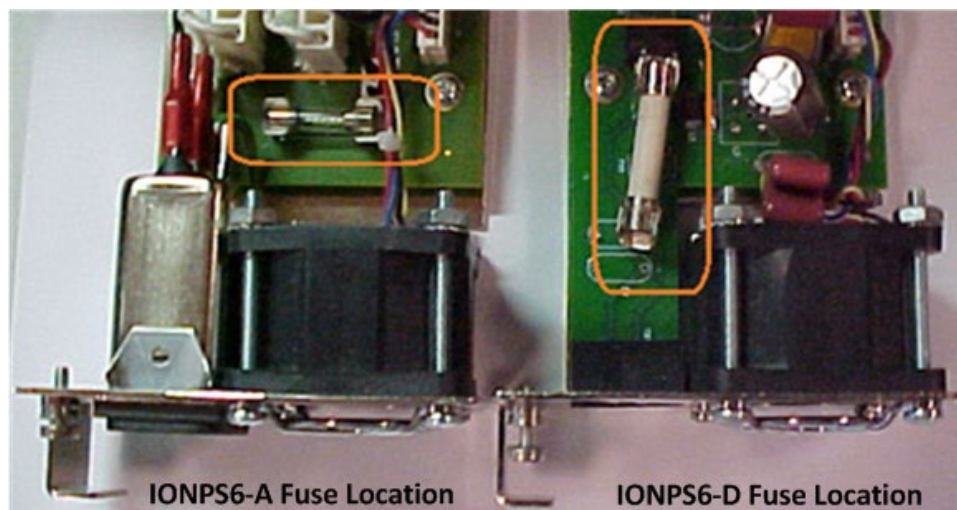5. Connect the power cord to the IONPS6-D and to the external power.

IONPS6-A Fuse Location   IONPS6-D Fuse Location

3. Configuration via Web GUI

Install the IONMM module to access the ION106-x chassis.

Accessing the IONMM: The IONMM can be accessed by using either a local serial interface via a USB connection or through an Ethernet network connection. The network connection can be done via a Telnet session or a Web graphical user interface (GUI).

Using a Local Serial Interface (USB): The IONMM can be connected to a local management station (PC) through a serial interface using a USB connection. The IONMM is controlled by entering Command Line Interface (CLI) commands at the local management station.

See the *IONMM Install Guide* (33420) for additional details on CLI and Web GUI access.

ION106-x Stack

The ION Stack displays by default. The Stack node consists of a standalone ION chassis, its local devices (e.g., an IONMM, and one or more C3230, C3231, IONPS6-A and/or IONPS6-D power supplies, and the remote device attached to the local chassis via the slide-in-cards.

The ION System pane displays the Stack Name (the default is "ION stack") and the Stack Members table, which provides information on Chassis (1), Type (e.g., ION106), and a Description (e.g., ION Chassis).
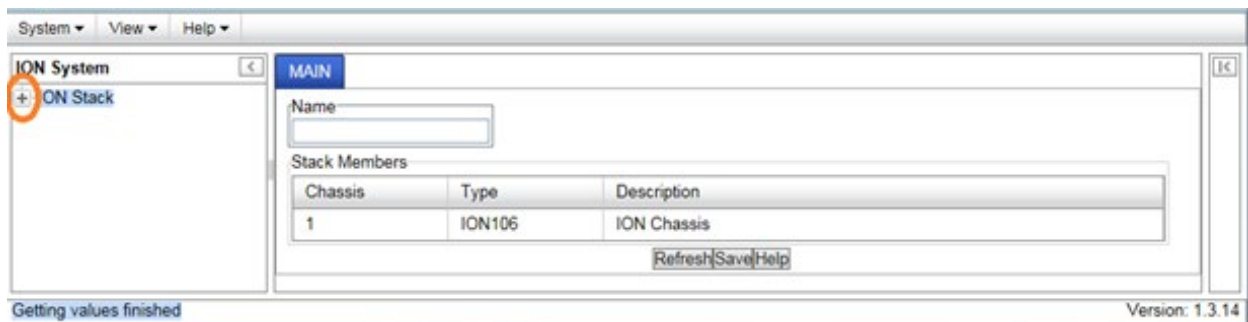
Click the plus sign [**+**] next to ION Stack to unfold the "ION Stack" node in the left tree view and refresh chassis and device status. The ION stack parameters are described below.

Parameter	Associated MIB Variable	Description
Name	*xxxxxxxxxx*	View / edit the ION stack name. The default is blank. Enter up to 64 ASCII printable characters, except the space character.
Chassis	*xxxxxxxxxx*	Displays the ION chassis instance (i.e., *1*).
Type	*xxxxxxxxxx*	Displays the ION chassis model type (e.g., *ION106*),
Description	*xxxxxxxxxx*	Displays the ION stack description (i.e. *ION Chassis*).

Buttons

Refresh: Click to update page data. **Save**: Click to save the updated page data. **Help**: Display online help.

ION106-x Chassis

The ION Management Module (IONMM) connects to the chassis backplane and communicates with the individual cards in the ION Chassis. Each slide-in-module for the ION Chassis has specific features and functions that are controlled via the IONMM. A network administrator can configure, monitor and troubleshoot ION slide-in-cards remotely via the IONMM.

Click the plus sign [**+**] next to Chassis to unfold the chassis devices.

The Model Information section details the Serial Number, Model Name, Software Revision, Hardware Revision, and Bootloader Revision of the system.

Model Information

Parameter	Associated MIB Variable	Description
Serial Number	*entPhysicalSerialNum(11)*	The Lantronix (TN) serial number string for the ION106-x chassis physical entity. The serial number of the chassis itself. Each individual Slide-In Card also has its own serial number.
Model Name	*entPhysicalModelName(13)*	The specific ION106-x chassis model (e.g., *ION106-A*). The Lantronix model name identifier string for the ION106-x chassis physical entity. The exact model name of this device (e.g., *ION106-D*). When contacting Technical Support, please be sure to give this name.
Software Revision	*entPhysicalSoftwareRev(10)*	The current ION106-x chassis software version (e.g., v *1.3.14*). The Lantronix software revision string for the ION106-x chassis physical entity.

Parameter	Associated MIB Variable	Description
Hardware Revision	*entPhysicalHardwareRev(8)*	The current power supply hardware version (e.g., v *1.1*). The Lantronix hardware revision string for the ION106-x chassis physical entity.
Bootloader Revision	*entPhysicalFirmwareRev(9)*	The current Chassis bootloader version (e.g., v *0.1.0*).

Chassis Members

The Chassis Members table lists the Stack's Chassis Member(s) Slot number, Slot Status, Description, and Power Status as described below.

Parameter	Associated MIB Variable	Description
Slot		The chassis slot index number (i.e., 1-6).
Slot Status		Indicates whether a chassis slot is *Empty* or *Occupied*. A 2-high SIC such as the C6120 will show one slot as *Empty* and the adjacent slot as *Occupied*.
Description		The card type. All descriptions start with "*ION BPC Media Conversion Card*" followed by the actual card type (e.g., *IONMM* or *C3220-1040* or *S6120-1013*).
Power Status	*entPhySensorOperStatus(5)*	The current slot power status. This is the operational status of the sensor. For the IONMM, the status displays (e.g., *OK*, which is a read only field). The other cards in the chassis slots provide buttons for **Off** and **Reset**. You can click the **Off** button to remove power from the slot. You can click the **Reset** button to reset (reboot) the card in the slot.

Buttons

Refresh: Click to update page data.

Help: Click to display online help for the page.

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IONPS6-x Power Supply Device Details

Click the plus sign [+] next to IONPS6-A or IONPS6-D to unfold the device details. A status reading of voltage, current, power, fan rpm, and temperature is reported once per second. Select an index item and click the **Edit** button, edit the desired parameter(s), and then click the **Save** button.

The following attributes of the IONPS6-x are manageable via SNMP or the Web interface. A few other configuration settings are not part of the MIB and therefore can be changed only at the Command Line Interface. See the *ION System CLI Reference* manual for more information.

Model Information

Parameter	Associated MIB Variable	Description
Serial Number	*entPhysicalSerialNum(11)*	The Lantronix serial number string for the IONPS6-A physical entity or *N/A* if not available.
Model	*entPhysicalModelName(13)*	The specific ION power supply model (e.g., *IONPS6-A* or *IONPS6-D*). The Lantronix model name identifier string for the IONPS6-x physical entity.
Software Revision	*entPhysicalSoftwareRev(10)*	The current power supply software version (e.g., v *1.3.14*). The Lantronix software revision string for the IONPS6-A physical entity.
Hardware Revision	*entPhysicalHardwareRev(8)*	The current power supply hardware version (e.g., v *1.1*). The Lantronix hardware revision string for the IONPS6-A physical entity.
Bootloader Revision	*entPhysicalFirmwareRev(9)*	The current power supply hardware version (e.g., v *0.1.0*). The Lantronix firmware revision string for the IONPS6-A physical entity.

Buttons

Refresh: Click to update page data. **Help**: Click to display online help for the page.
Help: Click to display online help for the page.

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Sensors and Fan(s)

The IONPS6-x power supply fan speed automatically increases as the temperature sensed increases.

Parameter	Associated MIB Variable	Description
Temperature	*entPhySensorValue(4)*	The existing power supply temperature (e.g., *25˚C*). The most recent measurement obtained by the agent for this sensor.
Temperature Status	*entPhySensorOperStatus(5)*	The existing power supply temperature status (e.g., *OK*). The operational status of the sensor.
Voltage	*entPhySensorValue(4)*	The existing power supply voltage (e.g., *12000 miliVolts*). The most recent measurement obtained by the agent for this sensor.
Voltage Status	*entPhySensorOperStatus(5)*	The existing power supply voltage status (e.g., *OK or Nonoperational*). The operational status of the sensor.
Power	*entPhySensorValue(4)*	The existing power supply power reading (e.g., *49 Watts*). The most recent measurement obtained by the agent for this sensor.
Power Status	*entPhySensorOperStatus(5)*	The existing power supply power status (e.g., *OK*). The operational status of the sensor.
Fan Speed	*entPhySensorValue(4)*	The existing power supply fan speed in revolutions per minute (e.g., *5639 RPM*). The most recent measurement obtained by the agent for this sensor (in RPM).
Fan Status	*entPhySensorOperStatus(5)*	The existing power supply fan status (e.g., *OK*). The operational status of the sensor.

Miscellaneous

Parameter	Associated MIB Variable	Description
Module Type	*xxxxxxxxxxx*	The currently installed IONPS module type, either: *AC Module* = IONPS6-A, or *AC Module* = IONPS6-D
Master/Slave Mode	*ionEntSensorExtOperMode(4)*	The current power supply mode (*Master* or *Slave*). Displays/sets the operational mode of the power supply when redundant PS modules exist (read / write). The Slave power supply is the fail-over or redundant (backup) power supply.

Buttons

Refresh: Click to update page data.

Help: Click to display online help for the page.

Temperature Sensor

The IONPS6-x Temperature Sensor page is shown and described below. Select an index item and click the **Edit** button, edit the desired parameter(s), and then click the **Refresh** button.

Parameter	Associated MIB Variable	Description
Temperature	*xxxxxxxxxxx*	Displays the most recent temperature measurement obtained by the agent for this sensor.
Temperature Status	*xxxxxxxxxxx*	Displays the operational status of the physical sensor: **OK**: indicates the agent can obtain the sensor value. **Unavailable**: indicates that the agent presently cannot obtain the sensor value. **Nonoperational**: indicates that the agent believes the sensor is broken. The sensor could have a hard failure (disconnected wire), or a soft failure (e.g., out-of-range, jittery, or wildly fluctuating readings).
Threshold Settings		
Index	*ionEntSensorThresholdIndex(1)*	An index that uniquely identifies an entry (row) in the Sensor Threshold Table. Select an index line / number that uniquely identifies an entry in the Threshold Table. The index permits the same sensor to have several different threshold values set.
Severity	*ionEntSensorThresholdSeverity(2)*	The Severity field indicates the severity of this threshold: **Other**: a severity other than one listed below. **Minor**: Minor Problem threshold. **Major**: Major Problem threshold. **Critical**: Critical problem threshold. A system might shut down the sensor associated FRU automatically if the sensor value reaches this threshold.

Parameter	Associated MIB Variable	Description
Relation	*ionEntSensorThresholdRelation(3)*	Sets / indicates the relation between sensor value (Sensor Value) and threshold value (Sensor Threshold Value), required to trigger the alarm. Valid values are: **Less Than**: if the sensor value is less than the threshold value. **Less Or Equal**: if the sensor value is less than or equal to the threshold value. **Greater Than**: if the sensor value is greater than the threshold value. **Greater Or Equal**: if the sensor value is greater than or equal to the threshold value. **Equal To**: if the sensor value is equal to the threshold value. **Not Equal To**: if the sensor value is not equal to the threshold value.
Value	*ionEntSensorThresholdValue(4)*	This field indicates the value of the threshold (read only). See the individual parameter descriptions above for details.
Notification	*ionEntSensorThresholdNotificationEnable(6)*	Controls generation of Sensor Threshold Notification for this threshold. When 'true', generation of Sensor Threshold Notification is enabled for this threshold. When 'false', generation of Sensor Threshold Notification is disabled for this threshold.
Last Evaluation	*ionEntSensorThresholdEvaluation(5)*	Indicates the result of the most recent threshold evaluation. The Last Evaluation field displays 'True' if parameters were included in the most recent measurement, otherwise displays 'False'.

Buttons

Refresh: Click to update page data.

Help: Click to display online help for the page.

Edit: Click to modify page data. A save is required to retain the new data.

Voltage Sensor

The IONPS6-x Voltage Sensor page is shown and described below. Select an index item and click the **Edit** button, edit the desired parameter(s), and then click the **Refresh** button.

Parameter	Associated MIB Variable	Description
Voltage	*entPhySensorValue(4)*	The current power supply voltage (e.g., *12 miliVolts*). The most recent measurement obtained by the agent for this sensor.
Voltage Status	*entPhySensorOperStatus(5)*	The current power supply voltage status (e.g., OK *or Nonoperational*). The operational status of the sensor.
Threshold Settings		
Index	*ionEntSensorThresholdIndex(1)*	An index that uniquely identifies an entry (row) in the Sensor Threshold Table. Select an index line / number that uniquely identifies an entry in the Threshold Table. The index permits the same sensor to have several different threshold values set.
Severity	*ionEntSensorThresholdSeverity(2)*	The Severity field indicates the severity of this threshold: **Other**: a severity other than those listed below. **Minor**: Minor Problem threshold. **Major**: Major Problem threshold. **Critical**: Critical problem threshold. A system might shut down the sensor associated FRU automatically if the sensor value reaches this threshold.
Relation	*ionEntSensorThresholdRelation(3)*	Sets / indicates the relation between sensor value (Sensor Value) and threshold value (Sensor Threshold Value), required to trigger the alarm. Valid values are: **Less Than**: if the sensor value is less than the threshold value.

Parameter	Associated MIB Variable	Description
		Less Or Equal: if the sensor value is less than or equal to the threshold value. **Greater Than**: if the sensor value is greater than the threshold value. **Greater Or Equal**: if the sensor value is greater than or equal to the threshold value. **Equal To**: if the sensor value is equal to the threshold value. **Not Equal To**: if the sensor value is not equal to the threshold value.
Value	*ionEntSensorThresholdValue(4)*	This field indicates the value of the threshold (read only). See the individual parameter descriptions above for details.
Notification	*ionEntSensorThresholdNotificationEnable(6)*	Controls generation of Sensor Threshold Notification for this threshold. When 'true', generation of Sensor Threshold Notification is enabled for this threshold. When 'false', generation of Sensor Threshold Notification is disabled for this threshold.
Last Evaluation	*ionEntSensorThresholdEvaluation(5)*	Indicates the result of the most recent threshold evaluation. The Last Evaluation field displays 'True' if parameters were included in the most recent measurement, otherwise displays 'False'.

Buttons

Refresh: Click to update page data.

Help: Click to display online help for the page.

Edit: Click to modify page data. A save is required to retain the new data.

Power Sensor

The IONPS6-x Power Sensor page is shown and described below. Select an index item and click the **Edit** button, edit the desired parameter(s), and then click the **Refresh** button.

Parameter	Associated MIB Variable	Description
Power	*entPhySensorValue(4)*	The current power supply power reading (e.g., *3606 Watts*). The most recent measurement obtained by the agent for this sensor.
Power Status	*entPhySensorOperStatus(5)*	The current power supply power status (e.g., *OK*). This is the operational status of the sensor.
Threshold Settings		
Index	*ionEntSensorThresholdIndex(1)*	An index that uniquely identifies an entry (row) in the Sensor Threshold Table. Select an index line / number that uniquely identifies an entry in the Threshold Table. The index permits the same sensor to have several different threshold values set.
Severity	*ionEntSensorThresholdSeverity(2)*	The Severity field indicates the severity of this threshold: **Other**: a severity other than those listed below. **Minor**: Minor Problem threshold. **Major**: Major Problem threshold. **Critical**: Critical problem threshold. A system might shut down the sensor associated FRU automatically if the sensor value reaches this threshold.
Relation	*ionEntSensorThresholdRelation(3)*	Sets / indicates the relation between sensor value (Sensor Value) and threshold value (Sensor Threshold Value), required to trigger the alarm. Valid values are: **Less Than**: if the sensor value is less than the threshold value.

Parameter	Associated MIB Variable	Description
		Less Or Equal: if the sensor value is less than or equal to the threshold value. **Greater Than**: if the sensor value is greater than the threshold value. **Greater Or Equal**: if the sensor value is greater than or equal to the threshold value. **Equal To**: if the sensor value is equal to the threshold value. **Not Equal To**: if the sensor value is not equal to the threshold value.
Value	*ionEntSensorThresholdValue(4)*	This field indicates the value of the threshold (read only). See the individual parameter descriptions above for details.
Notification	*ionEntSensorThresholdNotificationEnable(6)*	Controls generation of Sensor Threshold Notification for this threshold. When 'true', generation of Sensor Threshold Notification is enabled for this threshold. When 'false', generation of Sensor Threshold Notification is disabled for this threshold.
Last Evaluation	*ionEntSensorThresholdEvaluation(5)*	Indicates the result of the most recent threshold evaluation. The Last Evaluation field displays 'True' if parameters were included in the most recent measurement, otherwise displays 'False'.

Buttons

Refresh: Click to update page data.

Help: Click to display online help for the page.

Edit: Click to modify page data. A save is required to retain the new data.

Error: With power supply off, Power Status still displays "OK".

Meaning: On the 6-slot and the 19-slot chassis, the Power is shown as 0 Watts and the Voltage Status is "*Nonoperational*" but Power Status shows "OK". On the 19-slot the Power Status shows "*Nonoperational*".
This doesn't affect functionality or traps.

Recovery: None. Be aware that this is a known issue and will be fixed in an upcoming release.

Fan

The IONPS6-x Fan page is shown and described below. Select an index item and click the **Edit** button, edit the desired parameter(s), and then click the **Edit** button.

Parameter	Associated MIB Variable	Description
Fan Speed	*entPhySensorValue(4)*	The current power supply fan speed in revolutions per minute (e.g., *5181RPM*). The most recent measurement obtained by the agent for this sensor (in RPM).
Fan Status	*entPhySensorOperStatus(5)*	The current power supply fan status (e.g., *OK*). The operational status of the sensor.
Threshold Settings		
Index	*ionEntSensorThresholdIndex(1)*	An index that uniquely identifies an entry (row) in the Sensor Threshold Table. Select an index line / number that uniquely identifies an entry in the Threshold Table. The index permits the same sensor to have several different threshold values set.
Severity	*ionEntSensorThresholdSeverity(2)*	The Severity field indicates the severity of this threshold: **Other**: a severity other than those listed below. **Minor**: Minor Problem threshold. **Major**: Major Problem threshold. **Critical**: Critical problem threshold. A system might shut down the sensor associated FRU automatically if the sensor value reaches this threshold.
Relation	*ionEntSensorThresholdRelation(3)*	Sets / indicates the relation between sensor value (Sensor Value) and threshold value (Sensor Threshold Value), required to trigger the alarm. Valid values are: **Less Than**: if the sensor value is less than the threshold value. **Less Or Equal**: if the sensor value is less than or equal to the threshold value.

Parameter	Associated MIB Variable	Description
		Greater Than: if the sensor value is greater than the threshold value. **Greater Or Equal**: if the sensor value is greater than or equal to the threshold value. **Equal To**: if the sensor value is equal to the threshold value. **Not Equal To**: if the sensor value is not equal to the threshold value.
Value	*ionEntSensorThresholdValue(4)*	This field indicates the value of the threshold (read only). See the individual parameter descriptions above for details.
Notification	*ionEntSensorThresholdNotification Enable(6)*	Controls generation of Sensor Threshold Notification for this threshold. When 'true', generation of Sensor Threshold Notification is enabled for this threshold. When 'false', generation of Sensor Threshold Notification is disabled for this threshold.
Last Evaluation	*ionEntSensorThresholdEvaluation (5)*	Indicates the result of the most recent threshold evaluation. The Last Evaluation field displays 'True' if parameters were included in the most recent measurement, otherwise displays 'False'.

Refer to the *IONMM User Guide* for additional information.

Buttons

Refresh: Click to update page data.

Help: Click to display online help for the page.

Edit: Click to modify page data. A save is required to retain the new data.

4. Configuration via CLI

Install the IONMM module to access the ION106-x chassis.

Accessing the IONMM: The IONMM can be accessed by using either a local serial interface via a USB connection or through an Ethernet network connection. The network connection can be done via a Telnet or Terminal Emulator session or a Web GUI. Refer to chapter 3. Configuration via Web GUI on page 24 for additional Web UI information.

Using a Local Serial Interface (USB): The IONMM can be connected to a local management station (PC) through a serial interface using the USB connection. The IONMM is controlled by entering command line interface (CLI) commands at the local management station running a Terminal Emulator program. Terminal Emulator session setups vary; basic setup via HyperTerm and Tera Term are discussed below. See the terminal emulator manuals and helps for more information specific to your OS, terminal emulator package, and version.

Operating Systems Supported

USB drivers for most Operating Systems are available on the Lantronix ION106 Product page. The Virtual COM port (VCP) drivers make the USB device appear as an additional COM port available to the PC. Application software can access the USB device the same way as it would access a standard COM port.

Installing the USB Driver in Windows 8.1

Note: The following driver installation instructions are for the Windows 8.1 operating system only. Installing the USB driver using another operating system is similar, but not necessarily identical to this procedure. The drivers are not required with the IONMM-232.

To install the USB driver on a computer with the *Windows 8.1* operating system:

1. Press the Windows key and type "startup". Choose "Change advanced startup options".
2. On the right side click on the "Restart now" button under Advanced startup.
3. Your PC will reboot and display the "Choose an Option" screen; choose "Troubleshoot".
4. At the Troubleshoot screen choose "Advanced options".
5. In the Advanced options screen choose "Startup Settings".
6. A list of Windows Startup Settings displays; click the "Restart" button. Your PC will reboot.
7. Your PC will boot into a Startup Settings screen. Select "7) Disable driver signature enforcement".
8. Your PC will reboot one more time and will not load normally.
9. Plug the USB into the PC and IONMM card and have the USB driver saved locally to the PC.
10. The install will fail again; right click on "My computer" and click "Manage" to get to "Device Manager".
11. In Device Manager, expand "Ports (COM& LPT)" to view your connection with an error on the driver.
12. Right click on the driver and choose "Update driver software".
13. You will get a pop up with two options; choose "Browse my PC for driver".
14. Point to the folder location where you have the driver installed and click "install".
15. You will receive another Windows Security pop up; choose "Install this driver software anyway".
16. The driver will install correctly and you will no longer see the error on the connection in Device Manager.
17. You will now be able to connect via USB to the device and log in. On a stand-alone device, be sure to set it to "Remote" so you can remotely manage the device.

Configuring HyperTerminal

After the USB driver has been installed you must set up the terminal emulator software (e.g., HyperTerminal) to use the USB COM port.

1. On the desktop, right-click on My Computer.
2. Select Manage. The Computer Management window displays.
3. Click Device Manager. The Device Manager window displays.
4. In the right panel, expand the list for Ports (COM & LPT). Note the USB COM port number; you will need to provide this information in step 8 below.
5. Launch the HyperTerminal software.
    a) Click Start.
    b) Select All Programs > Accessories > Communications.
    c) Click HyperTerminal. The Connection Description window displays.
6. Type in a name and select an icon that will be used for this connection.
7. Click OK. The Connect To window displays.
8. From the drop-down list in the Connect using field, select the COM port noted in step 4.
9. Click OK. The Port Settings window displays.
10. Set the COM port properties as follows:
    *   Bits per second: 115200
    *   Data bits: 8
    *   Parity: None
    *   Stop bits: 1
    *   Flow control: None

    Note: the IONMM can autodetect the rate (Bits per second setting).

11. Click **OK**. A blank HyperTerm window displays.
12. In the HyperTerm window, select File>Properties.
13. Click the Settings tab.
14. In the Emulation field, select VT100.
15. Click ASCII Setup....
16. Verify that Wrap lines that exceed terminal width is selected (checkbox is checked).
17. Click OK twice.
18. Login (see "Starting a USB Session" below).

Starting a USB Session in HyperTerminal

The following procedure describes how to access the IONMM via a USB connection.

1. Start the terminal emulator program (e.g., HyperTerminal).
2. After the emulator screen displays, press Enter. The login prompt displays. Note: if a "*Login incorrect*" message displays, ignore it.

   Note: If your systems uses a security protocol (e.g., RADIUS, SSH, etc.), you must enter the login and password required by that protocol.

3. Type your login (the default is ION). Note that the login is case sensitive (all capital letters)
4. Press Enter. The HyperTerminal password prompt displays.
5. Type your password (the default is private). Note that the password is case sensitive (all lower case letters).
6. Press Enter. The command line prompt displays.

You can now enter commands to set up the various configurations for the IONMM (see "Section 3: Configuration via CLI" on page 37. For a description of all available CLI commands see the ION System CLI Reference Manual, 33461.

Terminating a USB Connection

To terminate the USB connection, do the following.

1. At the command prompt, type quit.
2. Press Enter.
3. Click Call > Disconnect.
4. Click File > Exit.

Set Up Tera Term

1. In Windows 7 select Windows Start > HyperTerminal.
2. At HT - Properties - Connect To select the Settings tab.
3. At HT - Properties - Settings in the Emulation section select *VT100*.
4. Click the ASCII Setup button.
5. At ASCII Setup, make sure the *Wrap lines that exceed terminal width* checkbox is checked and click OK.
6. Click the Terminal Setup button.
7. At Terminal setup dialog configure the Tera Term parameters.
8. Click the **OK** button and enter CLI commands as described in the next section.

Set Up HyperTerminal

1. In Windows 7 select Windows Start > Tera Term. Select an existing connection and enter CLI commands, or create a new connection and continue to step 2 below.
2. At the Tera Term: New connection dialog, select the Serial radio button and COM Port, and click **OK**.
3. Select Setup > Terminal to display the Tera Term - Terminal setup dialog.
4. At Tera Term > Terminal setup select
5. Click the **OK** button and enter CLI commands as described in the next section.

CLI Commands

The IONPS106-x supports these CLI commands:

set slot power mode=(on/off/reset)

show slot info

show card info

show cardtype

set ps sensor threshold (stid = xx) (notif / relation / severity / value)

show power config (PS sensor / threshold config)

stat (show chassis topology)

The supported ION106-x CLI commands are described below. See the related *ION CLI Reference* for the full set of CLI command descriptions.

Command: **Set Slot Power Mode**

Syntax: **set slot** *xx* **power**=(on/off/reset)

Description: Set the current IONPS106-x power mode for a selected slot. The default is power on. You cannot set slot power on the power supply modules (slot 22 and 23).

Example: Configure the power mode for a selected slot.

```
Agent III C1|S1|L1D>set slot 2 power ?
  off
  on
  reset
Agent III C1|S1|L1D>set slot 2 power on
Agent III C1|S1|L1D>set slot 2 power off
Agent III C1|S1|L1D>set slot 2 power reset
Agent III C1|S1|L1D>show slot info
Chassis BPC information:

Serial number:     106005
Model name:        ION106
Software:          1.3.5
Hardware:          1.0.0
Bootloader:        0.1.1

Slot information:
slot      slot status        description                                  power status
-------------------------------------------------------------------------------------------
-
1         occupied           ION Management Module AGENT           on
2         occupied           ION Media Conversion Module C2220-1014    on
3         occupied           ION Media Conversion Module C3220-1040    on
4         occupied           ION Media Conversion Module C3230-1040    on
5         occupied           ION Media Conversion Module C6010-3040    on
6         occupied           ION Media Conversion Module C6210-3040    on
Agent III C1|S1|L1D>
```

Message: *Cannot set slot power on this card!*

Command: **Show Slot Information**

Syntax: **show slot info**

Description: Displays current ION Chassis slot information when entered from the IONMM. Power
                    supplies will not display in CLI. A "double-wide" converter such as the C6120-1013 will
                    show one slot as empty and the adjacent slot as occupied. This command is only valid on
                    an IONMM.

Examples: Display current slot information from the IONMM.

```
Agent III C1|S1|L1D>show slot info
Chassis BPC information:

Serial number:     106005
Model name:        ION106
Software:          1.3.5
Hardware:          1.0.0
Bootloader:        0.1.1

Slot information:
slot     slot status          description                                      power status
-------------------------------------------------------------------------------------------
-
1        occupied             ION Management Module AGENT                          on
2        occupied             ION Media Conversion Module C2220-1014               on
3        occupied             ION Media Conversion Module C3220-1040               on
4        occupied             ION Media Conversion Module C3230-1040               on
5        occupied             ION Media Conversion Module C6010-3040               on
6        empty                                                                     on
Agent III C1|S1|L1D>

Agent III C1|S1|L1D>show slot info
Chassis BPC information:

Serial number:     106005
Model name:        ION106
Software:          1.3.5
Hardware:          1.0.0
Bootloader:        0.1.1

Slot information:
slot     slot status          description                                  power status
-------------------------------------------------------------------------------------------
-
1        occupied             ION Management Module AGENT                      on
2        occupied             ION Media Conversion Module C2220-1014           on
3        occupied             ION Media Conversion Module C3220-1040           on
4        occupied             ION Media Conversion Module C3230-1040           on
5        occupied             ION Media Conversion Module C6010-3040           on
6        occupied             ION Media Conversion Module C6210-3040           on
Agent III C1|S1|L1D>
```

Command: **Show Card Information**

Syntax: **show card info**

Description: Displays current ION Chassis card information when entered from the IONMM or from the SIC.

Example: Display current card information from the IONMM (Agent III), and then from the C2220 SIC:

```
Agent III C1|S1|L1D>show card info
System name:        Agent III
Uptime:             00:39:28
CPU MAC:            00-c0-f2-20-de-7f
Port number:        2
Serial number:      9444
Config mode:        software
Software:           1.3.14
Bootloader:         1.2.1

Hardware:           1.0.0
Agent III C1|S1|L1D>go c=1 s=2 l1d
Agent III C1|S2|L1D>show card info
System name:        C2220-1014
Uptime:             00:34:29
CPU MAC:            00-c0-f2-21-02-b3
Port number:        2
Serial number:      11673589
Config mode:        software
Software:           1.3.1
Bootloader:         1.2.1

Hardware:           1.0.0
Agent III C1|S2|L1D>
```

Command: **Show Card Type**

Syntax: **show cardtype**

Description: Display the current slot's model number.

Example: Show the card type info for the IONMM card in slot 1, the power supplies in slots 22 and 23,   and the C3220 card in slot 3:

```
Agent III C1|S1|L1D>show cardtype
Card type:                    IONMM
Agent III C1|S1|L1D>go c=1 s=22 l1d
Agent III C1|S22|L1D>show cardtype
Card type:                    IONPS6-A
Agent III C1|S22|L1D>go c=1 s=22 l1p=1
Agent III C1|S22|L1P1>show cardtype
Error: this command should be executed on a device!
Agent III C1|S22|L1P1>go c=1 s=23 l1d
Agent III C1|S23|L1D>show cardtype
Card type:                    IONPS6-D
Agent III C1|S22|L1D>go c=1 s=3 l1d
Agent III C1|S3|L1D>show cardtype
Card type:                    C3220-1040
Agent III C1|S3|L1D>
```

Command:	**Set PS Sensor Threshold Parameters**

Syntax: **set sensor stid**=(notification/relation/severity/value)

Description: Sets the current IONPS106-x Sensor Threshold ID (stid) settings. Note that this command should be executed on a sensor. Access the power supply sensors as ports on the module. This is a port level command. The stid (Sensor Transaction ID) parameters are:

notification: select *true* to be informed of Temperature Sensor events, or select *false* to not receive notification of Temperature Sensor events. If this value is false (disabled), then no SensorThresholdNotification will be generated on this device. If this value is true (enabled), then whether a SensorThresholdNotification for a threshold will be generated or not depends on the instance value of SensorThresholdNotificationEnable for that threshold.

relation: Less Than (<), Less Or Equal (>), Greater Than (>), Greater Or Equal (>), Equal To (=), or Not Equal To (≠), where:

- lessThan: if the sensor value is less than the threshold value.
- lessOrEqual: if the sensor value is less than or equal to the threshold value.
- greaterThan: if the sensor value is greater than the threshold value.
- greaterOrEqual: if the sensor value is greater than or equal to the threshold value.
- equalTo: if the sensor value is equal to the threshold value.
- notEqualTo: if the sensor value is not equal to the threshold value.

Relation indicates the relation between sensor value (entSensorValue) and threshold value (ionEntSensorThresholdValue), required to trigger the alarm.

When evaluating the relation, entSensorValue is on the left of SensorThresholdRelation, and SensorThresholdValue is on the right (e.g., entSensorValue ≥ SensorThresholdValue).

severity: select minor, major, critical or other. Critical is the most severe, Major is the next most severe, and Minor is the least severe. The system might shut down the sensor associated FRU automatically if the sensor value reaches the Critical problem threshold.

value: defines the value of the threshold (e.g., for a Major threshold severity selection, set a relation of Greater than or equal to 65 as the requirement for notification). To correctly display or interpret this variable's value, you must also know the SensorType, SensorScale, and SensorPrecision. However, you can directly compare SensorValue with the threshold values given in the SensorThresholdTable without any semantic knowledge.

Example: Use the **?** to display valid values for each parameter:

```
Agent III C1|S23|L1P2>set sensor stid 1 notif ?
  disable
  enable
Agent III C1|S23|L1P2>set sensor stid 1 relation ?
  equalTo
  greaterOrEqual
  greaterThan
  lessOrEqual
  lessThan
  notEqualTo
Agent III C1|S23|L1P2>set sensor stid 1 severity ?
```

```
   critical
   major
   minor
   other
Agent III C1|S23|L1D>set sensor stid 1 value value ?
   <cr>
Agent III C1|S23|L1D>set sensor stid 1 value value
Error: Please input a digital number to specify sensor threshold value!
Agent III C1|S23|L1D>set sensor stid 1 value value 100
% Unknown command.
Agent III C1|S23|L1D>set sensor stid 1 value 100
Error: this command should be executed on a sensor!
Agent III C1|S23|L1D>go l1p=1
Agent III C1|S23|L1P1>set sensor stid 1 value 100
Agent III C1|S23|L1P1>
```

Note that this command should be executed on a sensor. Access the power supply sensors as ports (i.e., stid 1 = l1p1) as shown below:

```
Agent III C1|S23|L1D>set sensor stid 1 notif enable
Error: this command should be executed on a sensor!
Agent III C1|S23|L1D>go c=1 s=23 l1p=1
Agent III C1|S23|L1P1>set sensor stid 1 notif enable
Agent III C1|S23|L1P1>go c=1 s=23 l1p=2
Agent III C1|S23|L1P2>set sensor stid 1 notif enable
Agent III C1|S23|L1P2>
```

Note that the **relation** parameter is case-sensitive, with the two words run together, the first word in lower case, and the second word and third word in Upper case:

equalTo	greaterOrEqual	greaterThan	lessOrEqual	lessThan	notEqualTo

The message "*% Unknown command.*" displays if the **relation** parameter is entered incorrectly in terms of case and spacing.

Use the **show power config** command to display the related current status; see below for description.

Command: **Show PS Sensor / Threshold Information**

Syntax: **show power config**

Description: Displays the current IONPS6-x Temperature, Voltage, Power, and Fan data.

Example: Show the existing Power Supply Sensor and Fan information:

```
Agent III C1|S23|L1P1>show power config
Error: this command should be executed on a device!
Agent III C1|S23|L1P1>go c=1 s=23 l1d
Agent III C1|S23|L1D>show power config
Power supply sensors information:


Temperature Sensor:
        Type:                   celsius
        Scale:                  units
        Precision:              0
        Value:                  30
        Operation status:       ok
        Units display:          The data units displayed for temperature is units(9)

Threshold information:
index           severity        relation        value           evaluation      notifEnable
--------------------------------------------------------------------------------
1               other           lessThan        0               false           disable
2               minor           greaterThan     0               false           disable
3               major           greaterOrEqual 60               false           disable
4               critical        greaterOrEqual 70               false           enable


Voltage Sensor:
        Type:                   voltsAC
        Scale:                  milli
        Precision:              0
        Value:                  12000
        Operation status:       ok
        Units display:          The data units displayed for volts is milli(8)

Threshold information:
index           severity        relation        value           evaluation      notifEnable
--------------------------------------------------------------------------------
1               critical        lessThan        10000           false           enable
2               minor           greaterThan     10500           false           disable
3               major           greaterOrEqual 14000           false           disable
4               critical        greaterOrEqual 14500           false           enable


Power Sensor:
        Type:                   watts
        Scale:                  units
        Precision:              0
        Value:                  2
        Operation status:       ok
        Units display:          The data units displayed for watts is in units(9)

Threshold information:
index           severity        relation        value           evaluation      notifEnable
--------------------------------------------------------------------------------
1               critical        lessOrEqual     5               false           enable
2               minor           greaterThan     75              false           disable
```

```
3                   major              greaterOrEqual 65              false              disable
4                   critical           greaterOrEqual 75              false              enable


Relay:
        Type:                    zetta
        Scale:                   ration

        Precision:               0
        Value:                   6048
        Operation status:        ok
        Units display:

        Installed:               false
        State:                   dcModule
        Moduel type:             dcModule
        Oper mode:               slave


Fan-1:
        Type:                    rpm
        Scale:                   units
        Precision:               0
        Value:                   0
        Operation status:        ok
        Units display:           The data units displayed for Fan 1 in RPM is in units(9)

Threshold information:
index           severity        relation        value         evaluation      notifEnable
-----------------------------------------------------------------------------------------
1               critical        equalTo         0             false           enable
2               minor           greaterThan     2000          false           disable
3               major           greaterOrEqual 9500           false           disable
4               critical        greaterOrEqual 9999           false           enable


Fan-2:
Error: Get power operation status no such object.
Agent III C1|S23|L1D>
```

Message: *Error: Get power operation status no such object.*

Meaning: indicates that a second fan does not exist; the device is designed with a single fan.

Recovery: Information only. No action is required.

Message: *This is an unmanaged chassis!*

Meaning: When the ION106-x chassis performed a cold reboot, some layer 2 cards are no longer recognized. When the chassis powers up, the IONMM takes longer to initialize than the TDM cards (C6010, C6120, C6210).

Recovery: Upgrade the IONMM and TDM cards to the latest firmware version.

Command: **Show Chassis Topology Information**

Syntax: **stat**

Description: Display the current ION chassis stack configuration in terms of its slots, devices, and ports. A "double-wide" converter such as the C6120-1013 will not show in the first slot will display fully in the adjacent slot. In the example below, the S6120-1013 displays in slot 6, while it actually occupies slots 5 and 6.

Example: Show the existing ION chassis stack configuration.

```
Agent III C1|S23|L1D>stat
ION statck
       Chassis -- BPC
              [  1]   IONMM
                      Port 1
                      Port 2
              [  2]   C2220-1014
                      Port 1
                      Port 2
              [  3]   C3220-1040
                      Port 1
                      Port 2
              [  4]   C3230-1040
                      Port 1
                      Port 2
              [  6]   S6120-1013
                      Port 1
                      Port 2
                      Port 3
                      Port 4
                      Port 5
                      Port 6
              [ 22]   IONPS6-A
                      Temperature Sensor
                      Voltage Sensor
                      Power Sensor
                      Fan-1
                      Fan-2
              [ 23]   IONPS6-D
                      Temperature Sensor
                      Voltage Sensor
                      Power Sensor
                      Fan-1
                      Fan-2
Agent III C1|S23|L1D>
```

Message: *Error: The specified module does not exist*
Problem: The Point System Card sees ION106 as 18-slot Chassis. The Point System card sees the ION106-x chassis, but it sees the chassis as an 18-slot Point System chassis (CPSMC1800-100).

Message:
```
CPSMM100-120> stat
       Point System Agent Summary polltime=5.80(5.80)
       >CABINET: Serial=1 model=CPSMC1800-100 desc=""
       > [ 6] CPSMM100-120 - Base Management Module
       Link=Up Primary=Y IP=192.251.180.216 F/W="160114FD" S/N=11518753
```

Meaning: For Point System to work in the ION106 chassis, the BIA EEPROM must be initialized. The CPSMM100- 120 (Point System Management Module) firmware must be updated to include a 6-Slot chassis.
Resolution: Contact Tech Support for firmware and upgrade instructions.

SNMP Service and Function

The ION106-x can be managed with the SNMP protocol via the IONMM. The ION106-x supports SNMP V1, V2c, and V3. The ION106-x complies with IETF RFCs 1157, 1158, and 2578 for SNMP. See http://tools.ietf.org/html/ for details. The ION106-x implements these MIBs:

root/MIBS

Agent_III_private	public
ION-DEV-SYS-ACL-MIB.my	8021ag81.mib
ION-DEV-SYS-HTTPS-MIB.my	BRIDGE-MIB
ION-DEV-SYS-IONPSAL-MIB.my	DOT3-OAM-MIB.mib
ION-DEV-SYS-IPMGMT-MIB.my	ENTITY-MIB
ION-DEV-SYS-ipv6ACL-MIB.my	ENTITY-SENSOR-MIB.mib
ION-DEV-SYS-PROV-MIB.my	EtherLike-MIB
ION-DEV-SYS-RADIUS-MIB.my	IANA-MAU-MIB.mib
ION-DEV-SYS-SNMPMGMT-MIB.my	IEEE8021-CFM-MIB.mib
ION-DEV-SYS-SNTP-MIB.my	IEEE8021-CFM-V2-MIB.mib
ION-DEV-SYS-SSH-MIB.my	IEEE8021-TC-MIB.mib
ION-DEV-SYS-STATE-MIB.my	IF-MIB
ION-DEV-SYS-TACPLUS-MIB.my	LLDP-MIB.mib
ION-DEV-SYS-TFTP-MIB.my	MAU-MIB
ION-DEV-SYS-UPGRADER-MIB.my	NOTIFICATION-LOG-MIB.mib
ION-DEV-SYS-USER-MIB.my	P-BRIDGE-MIB.mib
ION-DEV-SYSLOG-MIB.my	Q-BRIDGE-MIB.mib
	RFC1213-MIB.mib
	RMON2-MIB
	RMON-MIB
	SNMP-COMMUNITY-MIB.mib
	SNMP-FRAMEWORK-MIB.my
	SNMP-NOTIFICATION-MIB.mib
	SNMP-TARGET-MIB.mib
	SNMP-USER-BASED-SM-MIB.my
	SNMP-VIEW-BASED-ACM-MIB.my
	TOKEN-RING-RMON-MIB
	TN-ION-BPC-MIB.smi
	TN-ION-CHASSIS-MIB.smi
	TN-ION-ENTITY-SENSOR-MIB.smi
	TN-ION-LOAM-EXT-MIB.smi
	TN-ION-MGMT-MIB.smi
	TN-ION-SOAM-EXT.smi
	TN-ION-SOAM-IDX-MIB.smi
	TN-ION-VLAN-MGMT-MIB.mib
	TN-PROV-BRIDGE-MIB.smi
	TRANSITION-SMI.my
	TRANSITION-TC.smi

5. Troubleshooting

If the ION106-x chassis fails, isolate and correct the failure by performing these steps.

1. Verify the "Specifications" on page 7 of this manual.
2. Verify the procedures in section . Installation on page 14 were followed.
3. If the ION106-x chassis **PS** LED is lit (orange) make sure the power cord, power outlet, and ION Power Supply are operational.
4. Make sure the power supply is properly installed in the ION106-x and in the grounded AC outlet.
5. Make sure the SICs are properly seated.
6. Make sure the fuse on the ION106-x is intact.
7. Make sure the Power Supply is inserted properly into the chassis and to the external power source.
8. Make sure the external power source provides power.
9. Check the power requirement for the installed slide-in card. For SIC information, see the related SIC manual.
10. Check if newer firmware is available and upgrade if necessary.
11. See the *IONMM User Guide* for general and specific troubleshooting.
12. Check the specific ION SIC for proper configuration (DIP switches or jumper settings, etc.).
13. Record model and system information as discussed below.
14. Contact Technical Support.

Label Information

The product label and packaging label provide important information:
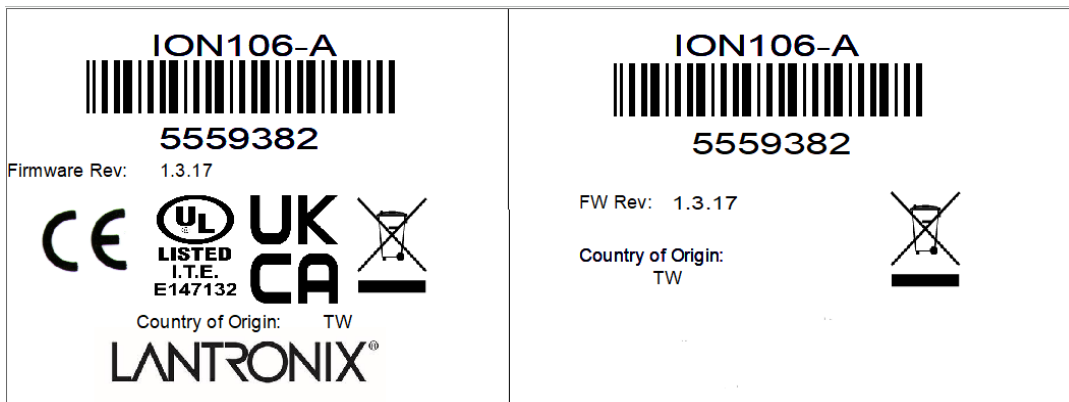
Product Label   Packaging Label

Record Model and System Information

After performing the troubleshooting procedures, and before calling or emailing Tech Support, please record as much information as possible in order to help the Tech Support Engineer.

1. Select the ION system Chassis **MAIN** tab. (From the CLI, use the commands needed to gather the information requested below, such as **show card info**, **show slot info**, **show system info**, **show ether config**, **show ip-mgmt config**, **show snmp config**, or others requested by the Tech Support Engineer.
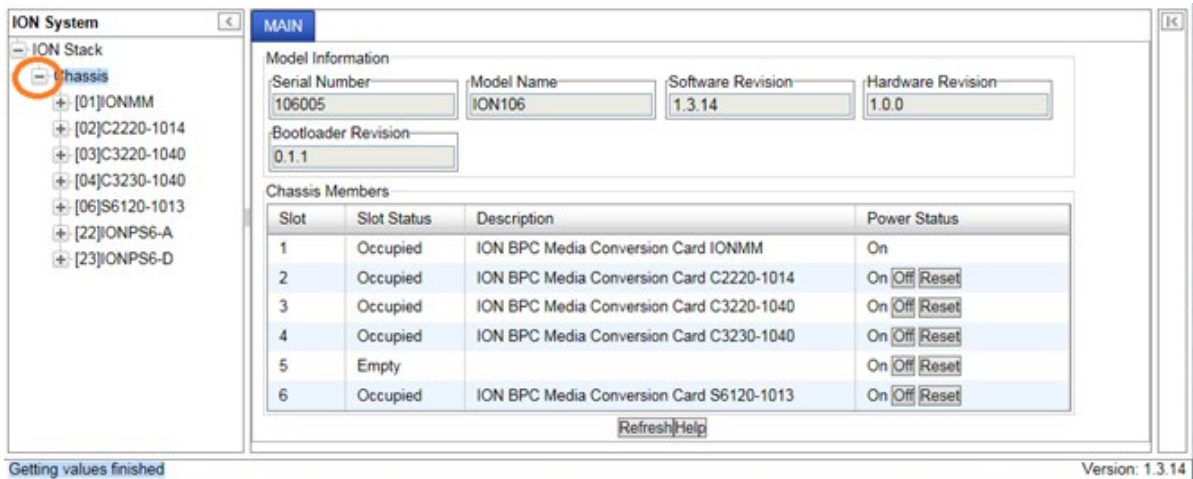
2. Record **Model Information** for your system: Serial Number: _____

    Model Name: _____   Software Revision: _____

    Hardware Revision: _____   Bootloader Revision: _____

3. Record the **System Configuration** information for your system.

    System Up Time: _____   Console Access: _____

    Number of Ports: _____   MAC Address: _____

    IP Address Mode: _____ _   IP Address: _____

    Slot Status, Description, and Power Status for each chassis slot (e.g., *Slot 1, Occupied, ION BPC Media Conversion Card IONMM, On*): _____

    _____

4. Provide additional Model and System information to your Technical Support Specialist.

    Your Lantronix service contract number: _____

    A description of the failure: _____

    _____

    Describe any action already taken to fix the problem (e.g., changing switch mode, rebooting, etc.):
    _____

    _____

The serial # and revision # of each involved Lantronix product in the network:

_____

_____

5. A description of your network environment (layout, cable type, etc.): _____

    _____

    _____

    _____

    Network load and frame size at the time of trouble (if known): _____

    The device history (i.e., have you returned the device before, is this a recurring problem, etc.):

    _____

    _____

6. Any previous Return Material Authorization (RMA) numbers: _____

    _____

ION106 Chassis Firmware Download Request

Firmware for the ION106 Chassis is available at the Lantronix webpage at
https://ltrxdev.atlassian.net/wiki/spaces/LTRXTS/pages/1985347585/Latest+firmware+for+the+ION106
+Media+Converter. Note that the Firmware files must be unzipped.

EU Declaration of Conformity

LANTRONIX®

CE

EU DECLARATION OF CONFORMITY

Manufacturer's Name: LANTRONIX INC.
Manufacturer's Address: 48 Discovery, Suite 250, Irvine, CA 92618 USA
Product Name: 6-Slot Rack Mount Chassis
Model Number: ION106-X

Manufacturer's Quality System:

TÜVRheinland®   ISO 9001:2015 Certificate No. 74 300 4282   TUV Rheinland

Applicable EU Directives:

Low Voltage Directive (2014/35/EU)

- EN IEC 62368-1:2020, EN IEC 62368-1:2020/A11:2020

EMC Directive (2014/30/EU)

- EN 55032:2015/A1:2020 (Class A)
- EN 55035:2017+A11:2020
- EN 61000-3-3:2013/A2:2021

EU Directive 2011/65/EU for Restriction of Hazardous Substance (RoHS2) with exemption 7(c)-I

- EN IEC 63000:2018

Statement of Conformity: The product specified above complies with applicable EU directive referenced, including the application of sound engineering practice.

Signature: _Eric Bass_   Date: July 13, 2023
Name: _____Eric Bass_____   Title: VP of Engineering

European Regulations

WARNING: This is a Class A product. In a domestic environment, this product could cause radio interference in which case the user may be required to take adequate measures.

Achtung ! Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten. In diesem Fäll ist der Benutzer für Gegenmaßnahmen verantwortlich.

Attention ! Ceci est un produit de Classe A. Dans un environment domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilsateur de prende les measures spécifiques appropriées.

 In accordance with European Union Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003, Lantronix will accept post usage returns of this product for proper disposal. The contact information for this activity can be found in the 'Contact Us' portion of this document.

 CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.

Der Anschluss dieses Gerätes an ein öffentlickes Telekommunikationsnetz in den EG-Mitgliedstaaten verstösst gegen die jeweligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

UK Declaration of Conformity

LANTRONIX®

UK CA

UK DECLARATION OF CONFORMITY

Manufacturer's Name: LANTRONIX INC.
Manufacturer's Address: 48 Discovery, Suite 250, Irvine, CA 92618 USA
Product Name: 6-Slot Rack Mount Chassis
Model Number: ION106-X

Manufacturer's Quality System:

TÜVRheinland   ISO 9001:2015 Certificate No. 74 300 4282   TUV Rheinland

Electrical Equipment Regulations 2016 (Safety)

- **EN IEC 62368-1:2020, EN IEC 62368-1:2020/A11:2020**

Electromagnetic Compatibility Regulations 2016 (EMC)

- **BS EN 55032:2015/A1:2020 (Class A)**
- **BS EN 55035:2017+A11:2020**
- **BS EN 61000-3-3:2013/A2:2021**

UK SI 2012 No. 3032 for Restriction of Hazardous Substance (RoHS2) with exemption 7(c)-I and 6(c).
1) 2011/65/EU Restriction of the use of Hazardous Substances in EEE (RoHS)
2) 2015/863/EU Change of Annex II from 2011/65/EU
3) Directive 2018/736/EU[7(c)-I] and 2018/741/EU[6(c)]
BS EN IEC 63000 : 2018

Statement of Conformity: The product specified above meets the test requirements of the relevant legislation of United Kingdom, including the application of sound engineering practice.

Signature: _Eric Bass_   Date: _July 13, 2023_

Name: _____Eric Bass_____   Title: VP of Engineering

North America and EU Declaration of Conformity

LANTRONIX®

SUPPLIERS DECLARATION OF CONFORMITY

Manufacturer's Name: LANTRONIX INC.
Manufacturer's Address: 48 Discovery, Suite 250, Irvine, CA 92618 USA
Product Name: 6-Slot Rack Mount Chassis
Model Number: ION106-X

North America

- **ANSI C63.4-2014,**
- **FCC Part 15 Subpart B**
- **Canada ICES-003 issue 7**
- **UL 62368-1 2nd**

European Union

- **EN 55032:2015/A1:2020 (Class A)**
- **EN 55035:2017+A11:2020**
- **EN 61000-3-3:2013/A2:2021**
- **EN IEC 62368-1:2020, EN IEC 62368-1:2020/A11:2020**

Signature: _Eric Bass_   Date: July 13, 2023

Name: _____ Eric Bass _____ Title: VP of Engineering

Electrical Safety Warnings

Electrical Safety
IMPORTANT: This equipment must be installed in accordance with safety precautions.

Elektrische Sicherheit
WICHTIG: Für die Installation dieses Gerätes ist die Einhaltung von Sicherheitsvorkehrungen erforderlich.

Elektrisk sikkerhed
VIGTIGT: Dette udstyr skal installers I overensstemmelse med sikkerhedsadvarslerne.

Elektrische veiligheid
BELANGRIJK: Dit apparaat moet in overeenstemming met de veiligheidsvoorschriften worden geïnstalleerd.

Sécurité électrique
IMPORTANT : Cet équipement doit être utilisé conformément aux instructions de sécurité.

Sähköturvallisuus
TÄRKEÄÄ : Tämä laite on asennettava turvaohjeiden mukaisesti.

Sicurezza elettrica
IMPORTANTE: questa apparecchiatura deve essere installata rispettando le norme di sicurezza.

Elektrisk sikkerhet
VIKTIG: Dette utstyret skal 57nstallers I samsvar med sikkerhetsregler.

Segurança eléctrica
IMPORTANTE: Este equipamento tem que ser instalado segundo as medidas de precaução de segurança.

Seguridad eléctrica
IMPORTANTE: La instalación de este equipo deberá llevarse a cabo cumpliendo con las precauciones de seguridad.

Elsäkerhet
OBS! Alla nödvändiga försiktighetsåtgärder måste vidtas när denna utrustning används.

Appendix A. Remote Manage Power Supply (RMPS) Feature

This feature is provided with ION C3220-1040 firmware version 1.3.17 or above and IONMM firmware version1.3.20 or above. ION Power supply support includes IONPS-D, IONPS-A, IONPS-D-R1 and IONPS-A-R1.

ION Chassis support includes the ION 6-slot chassis (ION106) or the ION 19-slot chassis (ION219) deployed as the remote chassis.

The RMPS feature lets you view and manage ION power supplies in a remote unmanaged chassis, in-band, over the fiber, using a pair of C3220-1040 converters. This feature improves visibility of equipment installed in areas with limited accessibility such as a service provider's customer site.
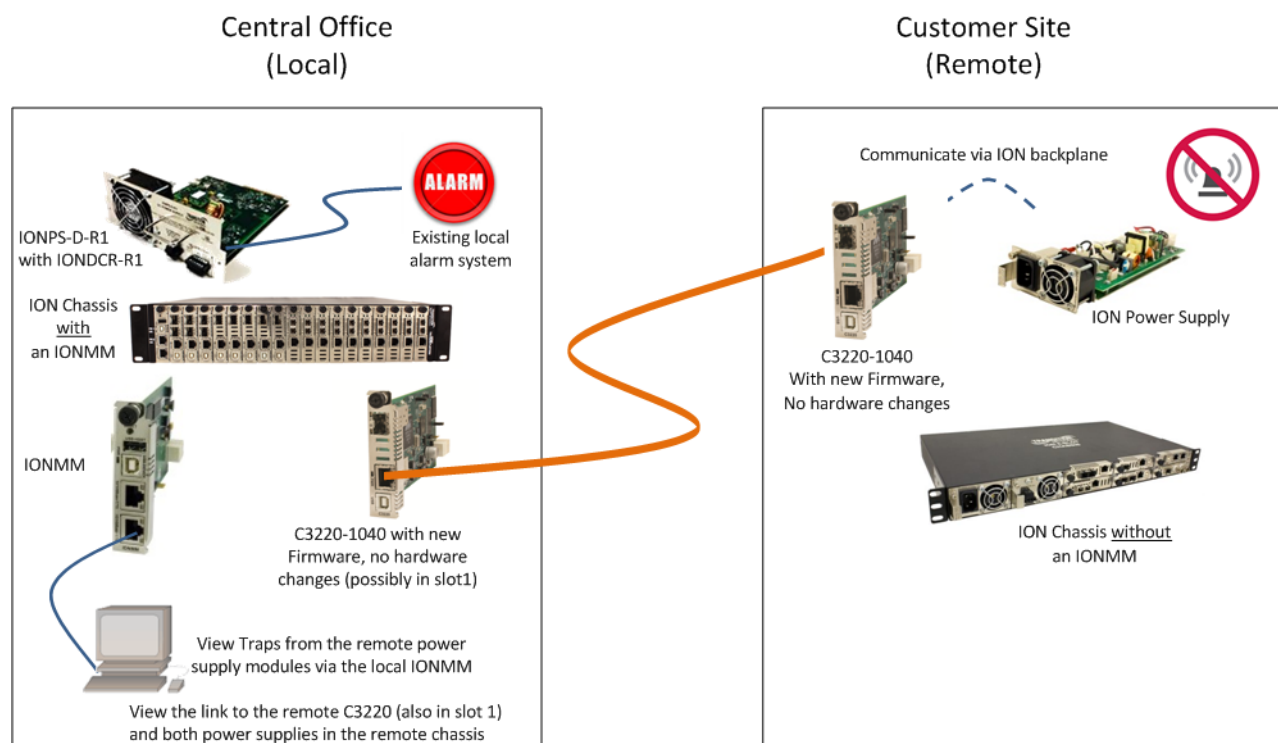
The RMPS feature depends on the particular chassis, power supply, and NID in terms of CLI and Web UI operation. See the related C3220-1040 manuals for details.

Appendix B. Local Management of Cards in a Remote Un-managed Chassis

ION C222x software v1.3.13 adds a new feature that allows a chassis card to be seen in an unmanaged chassis (UC). Remote firmware upgrade of cards in an UC is also supported. See the ION x222x/x32xx User Guide for more information.

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