

IONMM-232

ION Management Module

Install Guide

Part Number 33725
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Revision History

Date	Rev	Notes
7/20/17	A	Initial release at IONMM-232 Software Revision 1.3.18.
2/16/22	B	Update storage temp specs. Initial Lantronix rebrand.

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Cautions and Warnings

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 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

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

Caution: When handling chassis Network Interface Devices (NIDs) 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 NIDs in areas where strong electromagnetic fields (EMF) exist. Failure to observe this caution could result in poor NID 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 ION210-A chassis. Failure to observe this caution could result in poor performance or damage to the equipment.



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 stare 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.

1 Introduction

The purpose of this manual is to provide you with information necessary to install, configure and use the ION Management Module (IONMM-232) from Lantronix.

Product Description

The ION Management Module (IONMM-232) is a single slot design slide-in module that allows you to configure and manage all of the other ION family slide-in cards (SICs) installed in an ION Chassis and remotely connected standalone modules. The IONMM-232 can also manage standalone ION family network interface devices (NIDs) that are configured as remote devices (connected to a slide-in module in the ION chassis). The IONMM-232 connects directly to the chassis backplane and communicates with the individual ION SICs installed within that ION Chassis. Only management traffic is sent across the ION Chassis backplane in order to maintain security of management access and information. No customer data traffic is shared on the backplane. The purpose of all other ION SICs is to provide a network interface to various devices.

A simple ION System configuration is shown below.

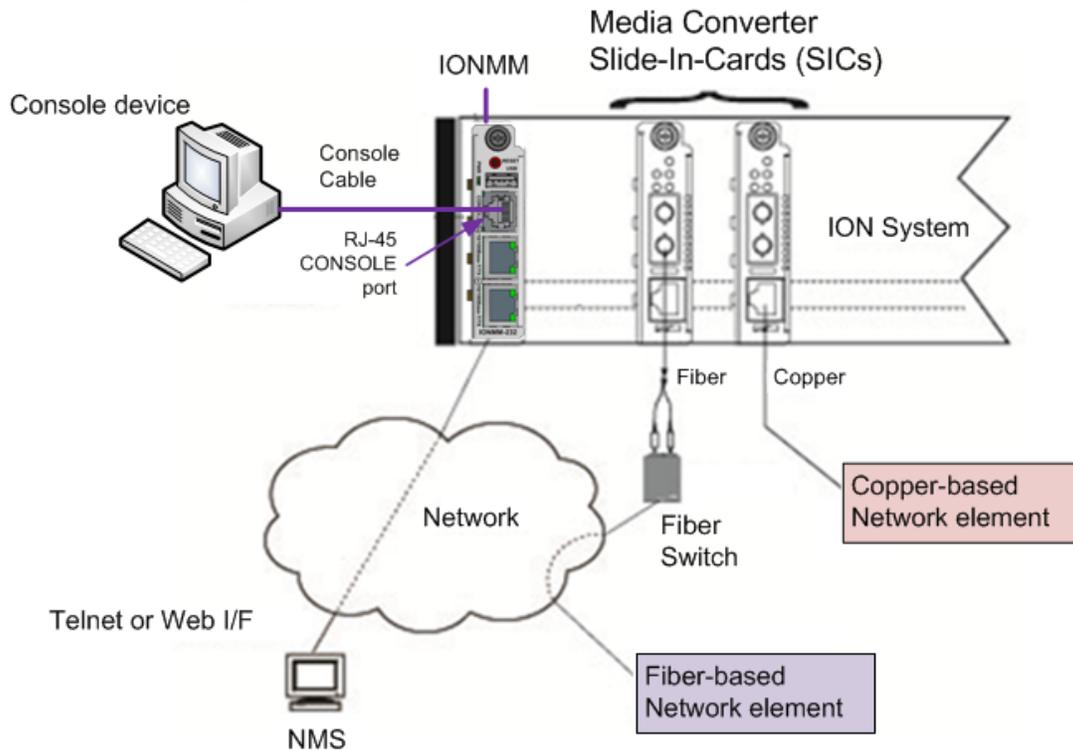


Figure 1: Sample ION System Configuration

Each slide-in-card for the ION Chassis has specific features and functions that can be controlled via the IONMM-232. A network administrator can configure, monitor and troubleshoot ION modules remotely via the IONMM-232. Remote access to management information helps reduce operating expenses by reducing technician dispatches and lowering the mean-time-to-repair by proactively looking for potential issues and receiving detailed SNMP traps if a problem occurs.

Features

The IONMM-232 is an ION Management Module with an RJ-45 Serial RS-232 CLI port providing:

- Management VLAN
- SSL
- SSH
- 802.1x/RADIUS
- SNMPv1 & v2c, and v3
- ACL Rules
- Management Features:
 - Variety of management access methods including; telnet, web, SNMP
 - Based on Public MIBs
 - TFTP upgrade/backup/restore of slide-in modules
 - Import/Export configuration files in human readable/editable format
 - Multiple community strings
 - Sntp

Physical Specifications

The IONMM-232 is an IONMM with an RJ-45 CLI Port that communicates via RS-232. With the introduction of the new IONMM-232, ION Management modules are now available in two versions. The IONMM with its USB Type B console port, and the IONMM-232 with its RJ-45 serial RS232 console port.

IONMM-232 physical specifications are provided below.

Standards	IEEE Std. 802.3, IEEE Std. 802.1X
Ports	One CONSOLE connector (RJ-45 RS-232 CLI port), Two 10/100 Mbps RJ-45 ports for network connectivity, and One USB 2.0 Type A port (reserved for future use).
Dimensions	Width: 0.86" (22 mm) x Depth: 6.5" (165 mm) x Height: 3.4" (86 mm)
Power Consumption	2 Watts under normal operation (the USB-HOST port is not currently used)
Environment	Operating Temp: 0°C to +50°C (+32° to +122°F). Storage Temp: 0° to +85°C (-40° to +185°F) 5% - 95% humidity (non-condensing). 0 to 10,000 ft. altitude. (Environment specs are dependent on the chassis chosen.)
Shipping Weight	1 lb. [0.45 kg]
Compliance	EN55022 Class A, EN55024, CE Mark
MTBF	MTBF to be greater than 250,000 MIL-HDBK-217F Hours MTBF to be greater than 687,500 Bellcore Hours
Warranty	Limited Lifetime Warranty

Related Documents

The ION system and related manuals are listed below.

1. ION Management Module (IONMM and IONMM-232) User Guide, 33457
2. ION219-A 19-Slot Chassis Installation Guide, 33412
3. ION106-x Six Slot Chassis User Guide, 33658
4. ION002-AD User Guide, 33612
5. ION001-A Install Guide, 33419
6. ION Systems CLI Reference Manual, 33461
7. ION System x3230 Remotely Managed NID User Guide, 33342
8. ION x222x & x32xx Multiport NIDs Installation Guide, 33433

Package Contents

Unpack the contents of the IONMM-232 package and verify them against the checklist below.

- IONMM-232 Slide-In-Card
- Documentation Postcard
- Anti-static bag with label
- Optional Cable-CCC-06 Cisco DB9 to RJ45 Console Cable, Blue (sold separately)

Please contact your local dealer if any item is missing or damaged. See the [IONMM-232 webpage](#) for optional accessories, features, specifications, ordering information, etc.

2 Installation

This section describes how to install the ION Management Module in an ION Chassis. This section also describes the procedures to access the IONMM-232 through either a local serial interface (USB) or a remote Ethernet connection (Telnet session or Web interface).

Installing the ION Management Module

The ION Management Module is to be installed only in a Lantronix ION chassis (ION001, ION002, ION006, and ION219). For a complete list of ION platform products, go to the Lantronix website at <https://www.transition.com>.

Note: While the IONMM-232 can be hot-swapped in any slot in the chassis system, Lantronix recommends that an organization use the same slot in every chassis, thereby normalizing any maintenance procedures and techniques. Typically, this is done in slot 1 of the chassis as depicted in the figure below.

Use the procedure below to install the IONMM-232 in the ION Chassis.



Wear a grounding device and observe electrostatic discharge precautions when installing the IONMM-232 into the ION Chassis. Failure to observe this caution could result in damage to or failure of the IONMM-232.

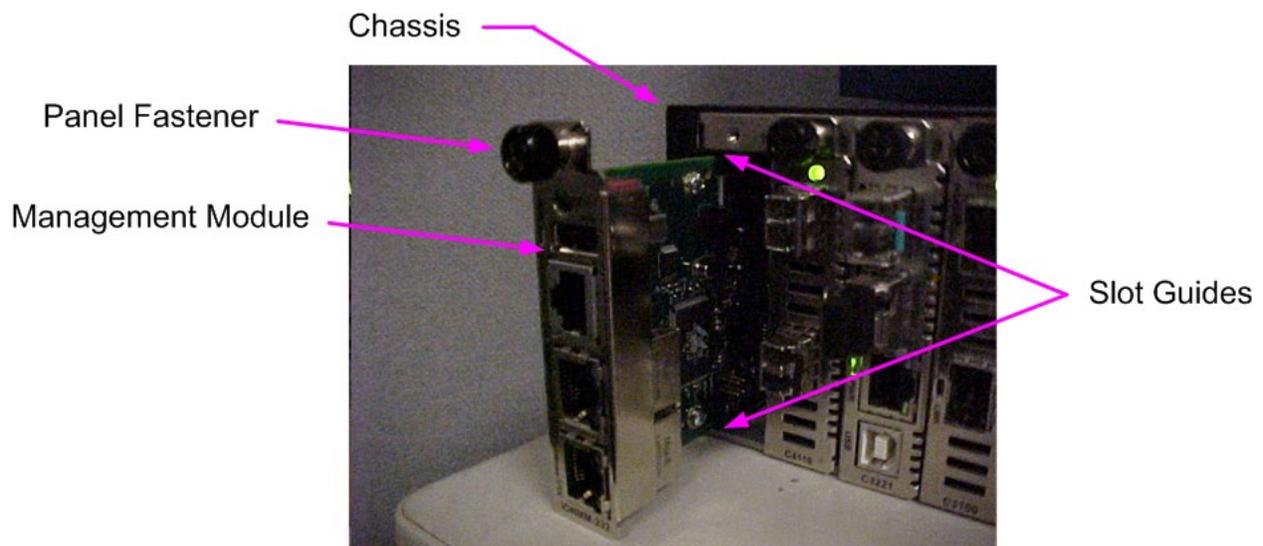


Figure 3: IONMM-232 Installation in 19-Slot Chassis

Install Procedure

Note: The IONMM-232 is a “hot swappable” device and can be installed with power on in the chassis.

1. Locate an empty slot in the ION System chassis.
2. Grasp the edges of the IONMM-232 by its front panel.
3. Align the IONMM-232 with the upper and lower slot guides, and carefully insert the card into the installation slot.
4. Firmly seat the IONMM-232 against the chassis back panel.
5. Push in and rotate clockwise the panel fastener screw to secure the IONMM-232 card.
6. Connect the IONMM-232 CONSOLE connector to the PC via the Console cable for CLI access.
7. Connect one of the two 10/100 Ethernet RJ-45 ports (Port 1 or Port 2) to the PC via Ethernet cable for network connectivity (Web UI or Telnet).
8. See “[Accessing the Management Module](#)” on page 13.

Connectors and LEDs

The IONMM-232 connections and LEDs are shown in Figure 4 and described in Table 3.

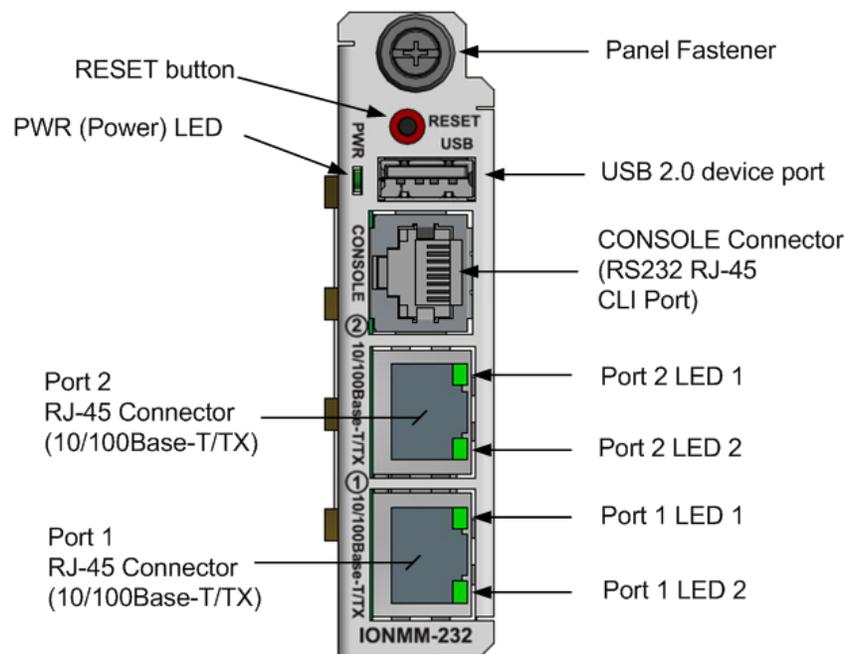


Figure 4: IONMM-232 Connectors and LEDs

Table 3: IONMM-232 Connector and LED Descriptions

Connector/LED	Description
RESET button	Pressing this button reinitializes the IONMM-232.
USB Connector	One USB 2.0 Type A port used to connect the IONMM-232 to a PC for a direct serial interface so a system administrator can access and control the IONMM-232 using CLI commands. USB Type-A port for config file backup and restore (future support)
CONSOLE port	One CONSOLE connector (RS-232 CLI port).
RJ-45 connectors (Port 1 and Port 2)	Two connectors for Ethernet 10/100Base-T. The RJ-45 connectors allow the network administrator to manage the chassis through a remote computer using either remote Telnet session or the Web interface. Note: Port1 is the lower port and Port 2 is the upper port.
PWR (Power) LED	When lit, indicates there is power to the IONMM-232.
LED 1	Yellow – operation is 10 MBps, 10Base-T. Green – operation is 100 MBps, 100Base-T.
LED 2	On indicates duplex mode: <ul style="list-style-type: none"> • Yellow – half-duplex • Green – full duplex Blinking indicates link activity.

Accessing the IONMM-232

The IONMM-232 can be accessed by using either the CONSOLE port or via an Ethernet network connection. The network connection can be via a Telnet session or a Web graphical user interface (GUI).

Using the CONSOLE Port

The IONMM-232 can be connected to a local management station (PC) through a serial interface using the CONSOLE port. The IONMM-232 is controlled by entering command line interface (CLI) commands at a local management station. Using the **CONSOLE** Port requires a PC and a Terminal emulator program (e.g., Tera Term or HyperTerminal) on the PC.

Operating Systems Supported

The ION system supports all the major Oses at their latest versions/releases.

Configuring HyperTerminal

Follow the steps below to 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**
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. Check that **Wrap lines that exceed terminal width** is selected.
17. Click **OK** twice.
18. Login (see “[Starting a USB Session](#)” below).

Starting an RS-232 Session

The following procedure describes how to access the IONMM-232 via an RS-232 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 system 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:** the login is case sensitive.
4. Press **Enter**. The HyperTerminal password prompt displays.



5. Type your password (the default is **private**). **Note:** the password is case sensitive.
6. Press **Enter**. The command line prompt displays.

You can now enter commands to set up the various configurations for the IONMM-232. For a description of all available CLI commands see the *ION Systems CLI Reference Manual, 33461*.

Using an Ethernet Network

The IONMM-232 can be managed remotely through the Ethernet network via either a Telnet session or a Web interface. Before this is possible you must set up the IP configuration for the IONMM-232.

Important: It is recommended that you initially set up the IP configuration through the serial interface (USB connection). See “[Setting Up the IP Configuration](#)” section of the IONMM User Guide. Otherwise, in order to communicate with the IONMM-232 across the network for the first time, you must change the network settings (IP address, subnet mask and default gateway address) of your PC to coincide with the defaults of the IONMM-232 (see “Appendix B” in the IONMM-232 User Guide).

Make note of the original settings for the PC as you will need them after setting the IP configuration for the IONMM-232.

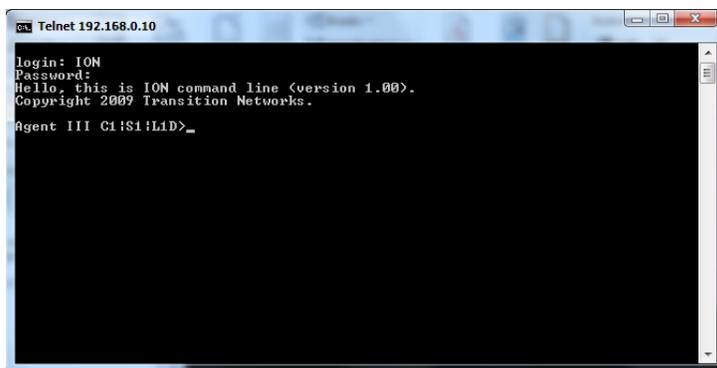
Starting a Telnet Session

The IONMM-232 can be controlled from a remote management station via a Telnet session over an Ethernet connection. The IONMM-232 is controlled and configured through CLI commands. The following describes the procedure to connect to and access the IONMM-232 via a Telnet session.

1. Click **Start**.
2. Select, **All Programs>Accessories**.
3. Click **Command Prompt**. The command line window displays.
4. At the command line type: **telnet <xx>** where xx = the IP address of the IONMM-232
5. Press **Enter**. The login prompt displays.

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

6. Type your login (the default is **ION**). **Note:** the login is case sensitive.
7. Press **Enter**. The password prompt displays.
8. Type your password (the default is **private**). **Note:** the password is case sensitive.
9. Press **Enter**. The command line prompt displays.



You can now enter commands to set up the various configurations for the IONMM-232. For a description of all available CLI commands see the *ION Systems CLI Reference Manual, 33461*.

Web Browsers Supported

The ION system supports current versions of most popular web browsers (e.g., Mozilla Firefox, Google Chrome, Opera, Safari, and Internet Explorer).

Starting the Web Interface

The IONMM-232 can be controlled and configured from a remote management station via a Web graphical user interface (GUI) over an Ethernet connection. Information is entered into fields on the various screens of the interface. **Note:** fields that have a grey background cannot be modified.

A Web session can be used to connect to and set up the IONMM-232.

Important:

- Do not use the back button to navigate the screens. This will cause the connection to drop.
- Do not use the back space key in grayed out fields. This will cause the connection to drop.
- For DHCP operations, a DHCP server must be on the network and available.

To sign in to the IONMM-232 via the Web:

1. Open a web browser.

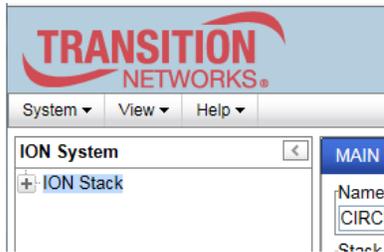


2. In the address (URL) block, type the IP address of the IONMM-232 (the default is 192.168.0.10).
3. Click **Go** or press **Enter**. The ION System Sign in screen displays.

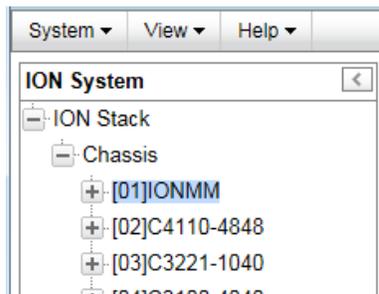
A screenshot of the "Sign in to ION System Web Interface" page. At the top left is the "TRANSITION NETWORKS" logo. The main heading is "Sign in to ION System Web Interface". Below this are two input fields: "User Name:" and "Password:". A "Sign in" button is located below the password field.

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

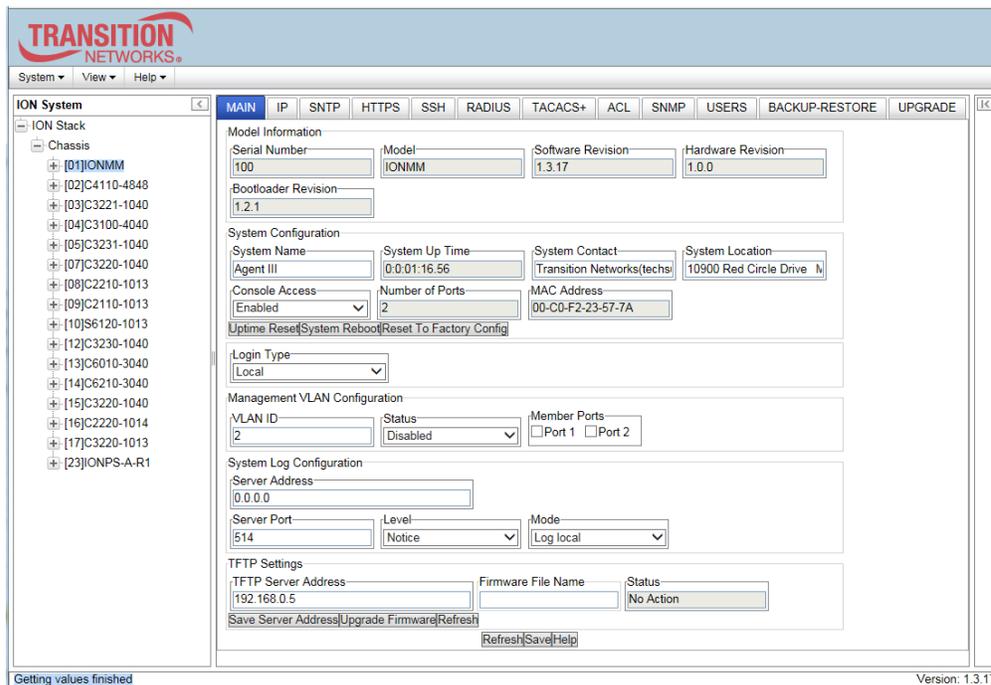
4. Type the User Name (the default is **ION**). **Note:** the System name is case sensitive.
5. Type the Password (the default is **private**). **Note:** the password is case sensitive.
6. Click **Sign in** or press **Enter**. The opening screen displays.



7. Click the plus sign [+] next to **ION Stack**. This unfolds "ION Stack" node in the left tree view and will refresh device status.
8. Click the plus sign [+] next to **Chassis** to unfold the chassis devices. **Note:** the IONMM-232 shows up as an IONMM in the management tree view.



9. Click **IONMM-232**. The IONMM-232 **MAIN** tab screen displays.



10. You can use the various tabs to configure the system. For configuration information, see "Setting Up the IP Configuration" section of the IONMM User Guide.

3 Troubleshooting

This section provides problem determination processes, a description of problem conditions that may occur or messages that may be displayed, and where and how to get technical support.

Troubleshooting Procedure

1. Press the **Reset** button on the IONMM-232. Does the fault resolve itself?

NO

- Proceed to step 2.

2. Is the **PWR** (Power) LED lit?

NO

- Is the IONMM-232 inserted properly into the chassis?
- Is the chassis properly connected to the external power source?
- Contact Technical Support.

YES

- Proceed to step 3.

3. Is a Link established?

NO

- If the USB port is being used, check it for proper connection.
- If the CONSOLE port is being used, check it for proper connection.
- Contact Technical Support..

YES

- Proceed to step 4.

4. Is Port 2 LED 1 LED lit?

YES

- The BIA (burned in address) has not gone through the read cycle.
- Contact Technical Support.

NO

- Proceed to step 5.

5. Is Port 2 LED 2 LED lit?

NO

- If there is no network activity, proceed to step 6.
- Check the RJ-45 cascade cable(s) for proper connection.
- Contact Technical Support.

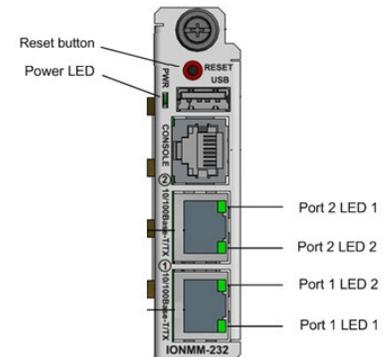
YES

- Proceed to step 6.

6. Is Port 2 LED 2 LED lit?

NO

- The processor inside the management module has not initialized.
- Contact Technical Support.

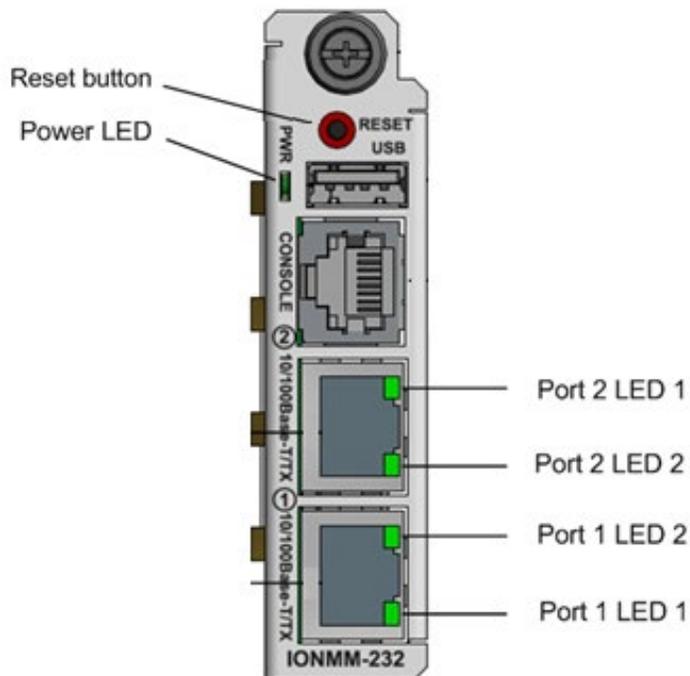


Note: To isolate faults involving data transmission, see the “Troubleshooting” section of the IONMM User Guide. For other fault conditions, continue to the next pages.

Problem Conditions

Cannot access the IONMM-232 via USB port

1. Check that the USB cable is connected to the IONMM-232 and to the PC/workstation.
2. Check that the terminal emulator software is configured and running properly. See “[Configuring HyperTerminal](#)” on page 12.
3. Check that the serial access is not disabled.
 - a) Access the IONMM-232 via the Web interface (see “[Starting the Web Interface](#)” on page 15).
 - b) Select the **MAIN** tab.
 - c) Locate the **System Configuration** section.
 - d) If **Enabled** is not showing in the **Console Access** field, select it and click **Save**.
4. Restart the local management station (PC).
5. Power cycle the IONMM-232.
6. If the problem persists, contact Technical Support.



Cannot access the IONMM-232 via Telnet

1. Check whether SSH is enabled.
 - a) Access the IONMM-232 through either a USB connection (see [“Starting a USB Session”](#) on page 11) or the Web interface (see [“Starting the Web Interface”](#) on page 15).

Note: if you are unable to access the IONMM-232 through the Web interface, go to [step 3](#).

- b) From the CLI, type: **show ssh config** and press **Enter**.
 - c) From the Web interface, select the **SSH** tab and check the **SSH Server Status field**.
2. Is SSH enabled?

Yes	No
Access the IONMM-232 using SSH security or disable SSH (see “Configuring SSH” in the <i>IONMM-232 User Guide</i>). Is access restored? <ul style="list-style-type: none"> • Yes – end of procedure. • No – continue with step 3. 	Continue with step 3 .

3. Check whether Management VLAN is enabled.
 - a) At the USB command prompt, type: **show mgmt vlan config**
 - b) Press **Enter**.
4. Is Management VLAN enabled?

Yes	No
<ol style="list-style-type: none"> a) Make sure that the management station/PC is part of the same VLAN as the IONMM-232. b) Make sure that the correct port is being used on the IONMM-232. c) Is access restored? <ul style="list-style-type: none"> • Yes – end procedure. • No – continue with step 5. 	Continue with step 5 .

5. If the problem persists, contact Technical Support.

Cannot access the IONMM-232 via the Web

1. Does the sign in screen display?

Yes	No
Sign in using the default User Name (ION) and Password (private). Note: both are case sensitive.	Continue with step 2 .

2. Verify that the default User Name and Password have not been changed.
3. Check with your IT department that the network is up and running.
4. Check that the network cable is connected to the IONMM-232 and the network port.
5. Check the IP addressing. At the command prompt, type **show ip-mgmt config** and press **Enter**. Verify the assigned IP address, Gateway IP address, and sub-net mask.
6. Check if HTTPS is enabled.
- a) Access the IONMM-232 through either a USB connection (see [“Starting a USB Session”](#) on page 13) or a Telnet session (see [“Starting a Telnet Session”](#) on page 14).
- Note:** if you are unable to access the IONMM-232 through the Telnet interface, go to [step 7](#).
- b) At the command prompt, type: **show https config** and press **Enter**.
7. Is HTTPS enabled?

Yes	No
Access the IONMM-232 through HTTPS or disable HTTPS (see “Configuring HTTPS” in the IONMM-232 User Guide). Is access restored? <ul style="list-style-type: none"> • Yes – end procedure. • No – continue with step 7. 	Continue with step 8 .

8. Check if Management VLAN is enabled. At the USB command prompt, type **show mgmt vlan config** and press **Enter**.

9. Is Management VLAN enabled?

Yes	No
a) Make sure that the management station/PC is part of the same VLAN as the IONMM-232. b) Make sure that the correct port is being used on the IONMM-232. c) Is access restored? <ul style="list-style-type: none"> • Yes – end procedure. • No – continue with step 10. 	Continue with step 10 .

10. Disable the Management VLAN function. At the USB command prompt, type **set mgmt vlan state=disable** and press **Enter**.

11. If the problem persists, contact Technical Support.

Management Module does not power on

1. Does the chassis have power?

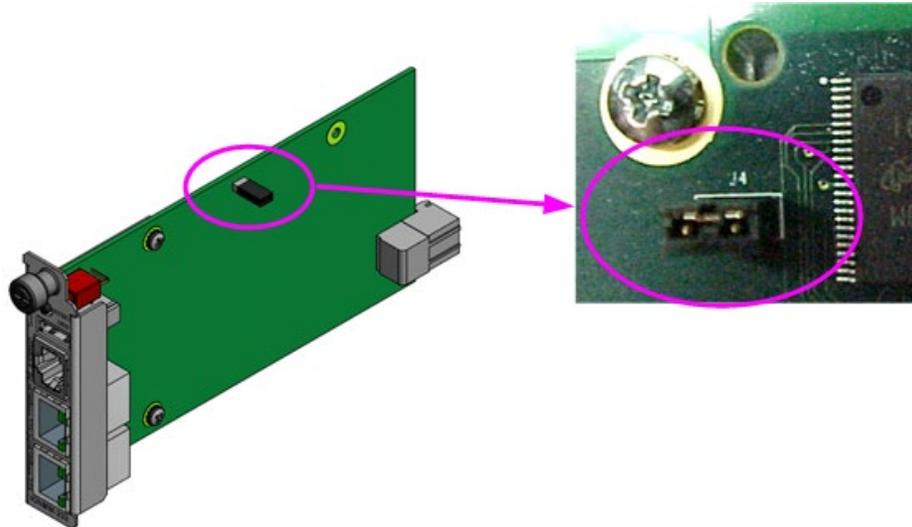
Yes	No
Check that the IONMM-232 is seated properly in the chassis.	a) Check that the ION chassis power cord is plugged into the unit and the wall socket. b) Move the IONMM-232 to a different chassis slot.

2. If the problem persists, contact Technical Support.

HW/SW Jumper (J4)

The IONMM-232 PCB has a Hardware / Software mode Jumper at J4.

Warning: Do not use this Jumper unless directed by a Lantronix Tech Support specialist.



Note: The factory default setting is Software Mode. If changed to Hardware Mode, access via Web UI or CLI is lost.

CLI Command to set USB-Port State: `set usb-port state (disable/enable)`

```

Telnet 192.168.0.10
Agent III C1!S1!L1D>set usb-port
state
Agent III C1!S1!L1D>set usb-port state
disable
enable
Agent III C1!S1!L1D>set usb-port state enable
Agent III C1!S1!L1D>show usb-port stat
USB port state:          enable
Agent III C1!S1!L1D>_

```

CLI Command to show Config mode (hardware / software): `show card info`

```

Telnet 192.168.0.10
Agent III C1!S1!L1D>show card info
System name:      Agent III
Uptime:          00:05:08
CPU MAC:         00-c0-f2-23-57-7a
Port number:     2
Serial number:   100
Config mode:     software
Software:       1.3.17
Bootloader:     1.2.1

Hardware:        1.0.0
Agent III C1!S1!L1D>

```

CLI Command to set switch mode: `set switch mode (local / remote)`

```

Telnet 192.168.0.10
Agent III C1!S1!L1D>set switch
mode
Agent III C1!S1!L1D>set switch mode
local
remote
Agent III C1!S1!L1D>set switch mode _

```

CLI Command to list files in tftpboot (-ls)

```
IONMM-12157809 C1|S19|L1D>backup module-list 1,2,3,4,5,6,7,8
Processing...
Backup finished
IONMM-12157809 C1|S19|L1D>ls -la /tftpboot
drwxrwxr-x  2 root  root    0 Mar 28 13:47 .
drwxr-xr-x 19 root  root    0 Dec 31 1969 ..
-rw-r--r--  1 root  root    0 Mar 28 13:47 IONstackName-1-0-0-backplane.config
-rw-r--r--  1 root  root   83 Mar 28 13:47 IONstackName-1-0-0-backplane.config.err
-rw-r--r--  1 root  root  278 Mar 28 13:47 IONstackName-1-1-1-C2110-1040.config
-rw-r--r--  1 root  root 3102 Mar 28 13:47 IONstackName-1-19-1-IONMM.config
-rw-r--r--  1 root  root 2796 Mar 28 13:47 IONstackName-1-23-1-IONPS-A.config
-rw-r--r--  1 root  root 10078 Mar 28 13:47 IONstackName-1-3-1-C2220-1040.config
-rw-r--r--  1 root  root  247 Mar 28 13:47 IONstackName-1-4-1-C3110-1040.config
-rw-r--r--  1 root  root 2237 Mar 28 13:47 IONstackName-1-5-1-C3210-1040.config
-rw-r--r--  1 root  root 10382 Mar 28 13:47 IONstackName-1-6-1-C3220-1040.config
lrwxrwxrwx  1 root  root    29 Dec 31 1969 last_sys.log -> /agent3/conf/log/last_sys.log
lrwxrwxrwx  1 root  root   16 Jan 17 10:07 sys.log -> /var/log/sys.log
lrwxrwxrwx  1 root  root   32 Dec 31 1969 taskmonitor.log -> /agent3/conf/log/taskmonitor.log
IONMM-12157809 C1|S19|L1D>
```

CLI Command to display *config.err* file in tftpboot (-ls)

```
IONMM-12157809 C1|S19|L1D>cat /tftpboot/IONstackName-1-0-0-backplane.config.err
AGENT PM ERROR: the model type cannot be supported by Provision Module until now.
AGENT PM ERROR: the model type cannot be supported by Provision Module until now.
AGENT PM ERROR: the model type cannot be supported by Provision Module until now.
AGENT PM ERROR: the model type cannot be supported by Provision Module until now.
IONMM-12157809 C1|S19|L1D>
```

4 Contact and Compliance Information

Recording Model Information and System Information

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

1. Select the ION system **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 as request by the Support Specialist.

2. Record the **Model Information** for your system.

Serial Number: _____ Model: _____

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: _____

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

Your Lantronix service contract number: _____

A description of the failure: _____

A description of any action(s) already taken to resolve the problem (e.g., changing switch mode, rebooting, etc.): _____

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

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.):

Any previous Return Material Authorization (RMA) numbers: _____

Compliance Information

CISPR22/EN55022 Class A & B + EN55024

CE Mark

FCC Regulations

This equipment has been tested and found to comply with the limits for a Class A & B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

Canadian Regulations

This digital apparatus does not exceed the Class A & B limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A & B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

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 öffentliches Telekommunikationsnetz in den EGMitgliedstaaten verstößt gegen die jeweiligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

Declaration of Conformity

Manufacture's Name: Lantronics, Inc.

Manufacture's Address: 48 Discovery, Suite 250, Irvine, California 92618 USA

Declares that the products: IONMM-232

Conforms to the following Product Regulations:

FCC Part 15 Class A, EN 55032:2012, EN 55024:2010

Directive 2014/30/EU

Low-Voltage Directive 2014/35/EU

IEC /EN 60950-1:2006+A2:2013

2011/65/EU EN 50581:2012

With the technical construction on file at the above address, this product carries the CE Mark

With the technical construction on file at the above address, this product carries the CE Mark I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Place: Irvine, California

Date: April 27, 2022

Signature: *Fathi Hakam*

Full Name: Fathi Hakam

Position: Vice President of Engineering

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Technical Support

Online: <http://www.transition.com/support>.

Sales Offices

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