

Altronix NetWay MV Series PoE Managed Midspan Solution for Standard Network Infrastructure Installation Guide

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NetWare MV Series PoE Managed Midspan Solution for Standard Network Infrastructure

NetWare MV Series

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PoE Managed Midspan Solution for Standard Network Infrastructure

Models Include:

NetWay8MV

- Eight (8) Port PoE Midspan Injector

NetWay16MV

- Sixteen (16) Port PoE Midspan Injector

DOC#: NETMV Rev. 050611	
Installing Company:	
Service Rep. Name:	_
Address:	
Phone #:	

Overview:

Altronix NetWay8MV/NetWay16MV Managed Midspans provide power and pass data for PoE-compliant cameras/ edge devices. Cameras/edge devices may be located up to 100m from the NetWayMV unit. A NetWayXT/NetWayXTX repeater module can be utilized to extend the distance an additional 100m for a total range of up to 200m. A maximum range of 600m is possible using multiple repeaters, based on a camera/device port requirements. NetWare Managed Midspans are capable of supporting non-PoE compliant fixed and PTZ IP cameras utilizing NetWay1512 or NetWay3012 adapters.

NetWayMV Specifications:

NetWay8MV:

- Eight (8) ports of cameras/edge devices over ethern et (CAT5) cable up to a distance of 100m per port.
- Input: 220VAC 60Hz, 1.5A).

NetWay16MV:

- Sixteen (16) ports of cameras/edge devices over ethe rnet (CAT5) cable up to a distance of 100m per port.
- Input: 220VAC 60Hz, 2.5A.

Common Specifications:

Agency Listings:

· CE European Conformity.

Power:

• The unit supplies PoE output voltage (55V), and up to 30W max. full power per port.

Total power:

NetWay8MV - 150W, NetWay16MV - 300W.

- IEEE 802.3af and IEEE 802.3at compliant (PoE Plus).
- All output circuits are power-limited.
- Short circuit protection.

Functions:

- Programmable PoE shutdown for each port.
 Utilized to reset cameras/edge devices (see Technical Specifications pg. 5).
- PoE manual shutdown (See Technical Specifications, pg. 5).
- Auto detection and protection of legacy non-PoE cameras/edge devices.

Features:

- LAN or laptop connection enables programming of PoE shutdown and port monitoring.
- User interface (Fig. 6, pg. 10).
- Illuminated master power disconnect circuit breaker with manual reset (switch).
- Individual port status LEDs.
- IEC 320 3-wire grounded line cord (detachable).
- The unit can be rack or shelf-mounted.
- 1U rack mount chassis for use in standard EIA 19" rack.

Accessories:

NetWay1512:

• 15W adapter for non-PoE compliant IP cameras.

NetWay3012:

25W adapter for non-PoE compliant IP fixed or PTZ cameras.

NetWayXT:

- PoE repeater module extends range 100m NetWayXTX:
- PoE+ repeater module extends range 100m.

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), local codes, and the authorities having jurisdiction. NetWayMV is not intended to be connected to outside plant leads. These products are for indoor use only and must be installed within protected premises.

- 1. Attach mounting brackets to the NetWayMV unit for rack or wall mount installation (Figs. 8 or 9, pg. 12). Affix rubber pads to NetWayMV for shelf installation (Fig. 10, pg. 12).
- 2. Secure the unit in a rack or place the unit on a shelf as desired.

Note: The following factors should be taken into consideration when installing these rack mount units:

- a. The unit is to be installed in a space where the maximum ambient temperature does not exceed 104°F (40°C).
- b. Take care to ensure there is sufficient airflow around the unit and that obstructions do not impede it.
- c. When mounting units in the rack, take care to avoid uneven loading which can cause a hazardous condition.
- 3. Set the illuminated master power disconnect circuit breaker to the (OFF) position (Fig. 1g, pg. 5).
- 4. Plug the grounded AC line cord (included) into the IEC 320 connector of the NetWayMV unit (Fig. 1h, pg. 5). Plug the unit into a reliable earth-grounded socket. When using multiple units, the sum of the individual nameplate ratings should not exceed the supply circuit rating. Do not connect to a receptacle controlled by a switch.
- 5. Connect structured cables from port marked [IN] on NetWayMV to the corresponding inputs of an ethernet switch or video server (Fig. 1b, pg. 5, Fig. 5, pg. 8).

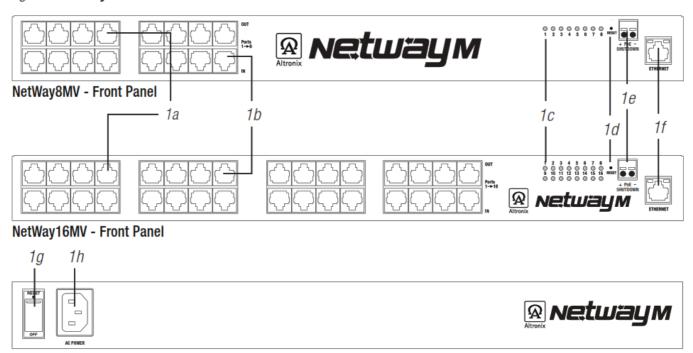
Note: All cabling and wire must be UL Listed and/or Recognized as wire suitable for their application.

- 6. Connect structured cables from port marked [OUT] on NetWayMV to PoE-compliant camera/edge devices (Fig. 1a, pg. 5, Fig. 5, pg. 8).
- 7. Upon completion of the wiring set illuminated master power disconnect circuit breaker to the RESET (ON) position (Fig. 1g, pg. 5).
- 8. Port status LEDs on the NetWayMV will initialize when PoE devices are connected as follows:
 - LED will illuminate when devices are IEEE 802.3af compliant.
 - LED will blink once and illuminate when devices are IEEE802.3at compliant (PoE Plus).
- 9. To utilize the PoE shutdown feature it is necessary to do the following:
 - a. Connect a device that will provide a low voltage trigger input (see Technical Specifications pg. 5) to terminals marked [+ -, PoE Shutdown] on the NetWayMV (Fig. 1e, pg. 5). When voltage is applied, the PoE shutdown enabled PoE port(s) will drop to zero volts. Removing the low voltage trigger input at the [+ -, PoE shutdown] terminals will allow the PoE port(s) to operate normally and supply power to PoE-compliant devices. Power will reset in approximately 4 seconds. Although there is no output voltage to power PoE devices during the shutdown, data signals may still be present on the data pair lines of the structured cable.
 - b. Individual ports must be programmed utilizing the user interface (see User Interface and Programming, pgs. 7 & 8).

Port Status and LED Flash Codes:

Port Status	Flash Codes	Description
All Ports Off	Sequential LED Port Scan	No devices connected
Port Off	OFF	LED OFF
Port On	ON	LED ON
Class 4 detection Port	Blinks 2 times	Enables power to PoE devices.
Non-compliant Device	2Hz	Will prevent the port from turning on.
Port Overload Fault	5Hz	Will prevent the port from turning on.
4 Port Overload Grouped	5Hz	4 LEDs. Will prevent ports from turning on.
8 Port Overload Grouped	5Hz	LEDs 1-8 Power Supply Overload for ports 1-8. LEDs 9-16 Power Supply Overload for ports 9-16.

Fig. 1 - NetWayMV Series



NetWay8M & NetWay16MV - Rear Panel

1a OUT 1-8 (NetWay8MV), OUT 1-16 (NetWay16MV): Structured cable to PoE-compliant cameras/edge devices.

1b IN 1-8 (NetWay8MV), IN 1-16 (NetWay16MV): Structured cable to an ethernet switch or video server.

1c LED(s) 1-8 (NetWay8MV), 1-16 (NetWay16MV): Port status LEDs.

1d Reset: Restores unit to factory settings.

1e + -, PoE Shutdown: Low voltage trigger input (see Technical Specifications pg. 6).

1f Ethernet: LAN or laptop connection enables NetWayMV programming and status monitoring.

1g Illuminated master power disconnect circuit breaker (switch):

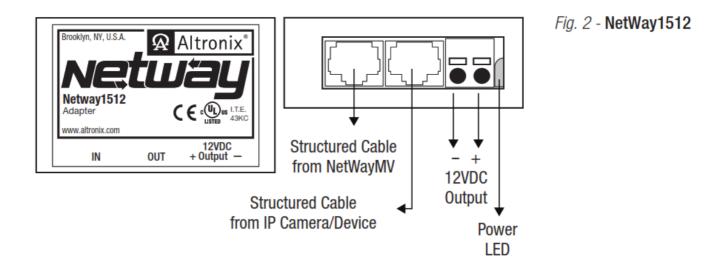
- OFF position Circuit breaker tripped. The switch is not illuminated.
- RESET (ON) position. Switch illuminated.

1h IEC 320 Connector: 220VAC, 60Hz (grounded line cord included).

Technical Specifications:

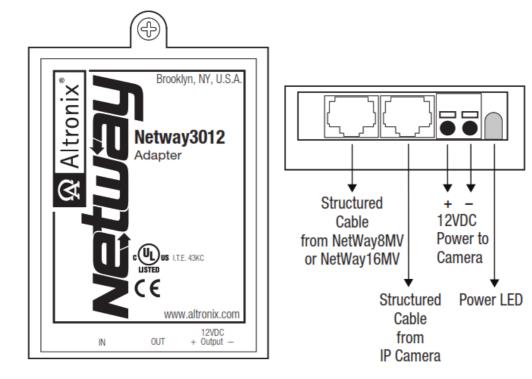
Parameter	Description
No. of Ports	NetWay8MV - Eight (8) Ports. NetWayl 6MV - Sixteen (16) Ports.
Input Power Require ments	NetWay8MV: 220VAC 60Hz, 1.5A. NetWay16MV: 220VAC 60Hz, 2.5A. Fuse: 4A/125V (NetWay16MV has 2 fuses). Note: To reduce the risk of fire, replace only with the same type and rating of the fuse.
Indicators	Port Status LED
PoE Shutdown Volta ge and Current Range	5VDC to 24VDC or 12VAC to 24VAC Minimum current: 2mA for 5VDC Minimum current for higher voltages: 10mA
Environmental Conditions	Operating Ambient Temperature: UL60950-1: -20°C to 40°C (-4°F to 104°F). UL294: -20°C to 49°C (-4°F to 120.2°F). Relative Humidity: 85%, +/ -5%. Storage Temperature: -20° to 70°C (-4°F to 158°F). Operating Altitude: -304.8 to 3,048m.
Regulatory Complian ce	CE European Conformity

Installing a NetWay1512 Adapter for 12VDC IP Cameras up to 13W:



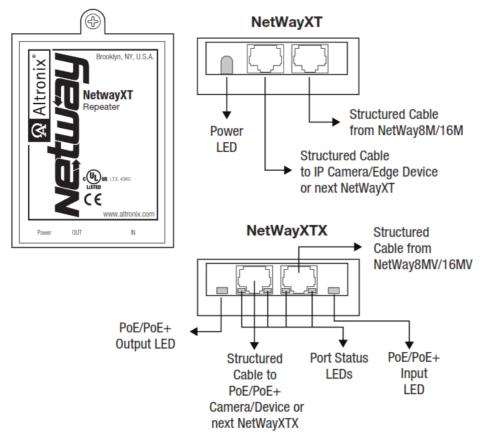
- 1. Mount NetWay1512 in proximity to the IP camera (Fig. 2, pg. 6). Affix one side of velcro (supplied) to NetWay1512 and place the second side of the velcro in the desired location.
- 2. Connect the structured cable from port marked [IN] on NetWay1512 to any ports marked [OUT] of NetWay8MV/NetWay16MV (Fig. 2, pg. 6, Fig. 1a, pg. 5).
- 3. Connect the structured cable from port marked [OUT] on NetWay1512 to the IP camera (Fig. 2, pg. 6).
- 4. Connect 12VDC output from NetWay1512 terminals marked [- 12VDC +] to the power input of the IP camera (Fig. 2, pg. 6). Polarity must be observed.
- 5. The power LED indicator will illuminate on NetWay1512 under normal conditions (Fig. 2, pg. 6).

Installing a NetWay3012 Adapter for 12VDC IP PTZ up to 25W:



- 1. Mount NetWay3012 in proximity to the IP camera utilizing a mounting hole (Fig. 3, pg. 6). Use a proper fastener and/or wall anchor when securing NetWay3012 to the wall.
- 2. Connect the structured cable from port marked [IN] on NetWay3012 to ports marked [OUT] of NetWay8MV/NetWay16MV (Fig. 3, pg. 6, Fig. 1a, pg. 5).
- 3. Connect the structured cable from port marked [OUT] on NetWay3012 to the IP fixed or PTZ camera (Fig. 3, pg. 6).
- 4. Connect 12VDC output from NetWay3012 terminals marked [+ 12VDC] to the power input of the IP camera (Fig. 3, pg. 6). Polarity must be observed.
- 5. The power LED indicator will illuminate on NetWay3012 under normal conditions (Fig. 3, pg. 6).

Installing a NetWayXT/NetWayXTX Repeater Module:



NetWayXT will work only with PoE devices. NetWayXTX will work with PoE/PoE+ devices.

- 1. Mount NetWayXT/NetWayXTX in the desired location utilizing the mounting hole (Fig. 4, pg. 7). Use a proper fastener and/or wall anchor when securing NetWayXT/NetWayXTX to the wall.
- 2. Connect the structured cable from port marked [OUT] on NetWare to port marked [IN] on the NetWayXT/NetWayXTX (Fig. 4, pg. 7, Fig. 1a, pg. 5).
- 3. Connect the structured cable from port marked [OUT] on NetWayXT/NetWayXTX to the PoE/PoE+camera/edge device or next NetWayXT/NetWayXTX repeater (Fig. 4, pg. 7).
- 4. Port status LEDs will illuminate on NetWayXT/NetWayXTX indicating the port is operational (refer to LED Definitions).
- 5. Power LED will illuminate indicating 12VDC output.

Port LED Definitions for NetWayXT Repeater:

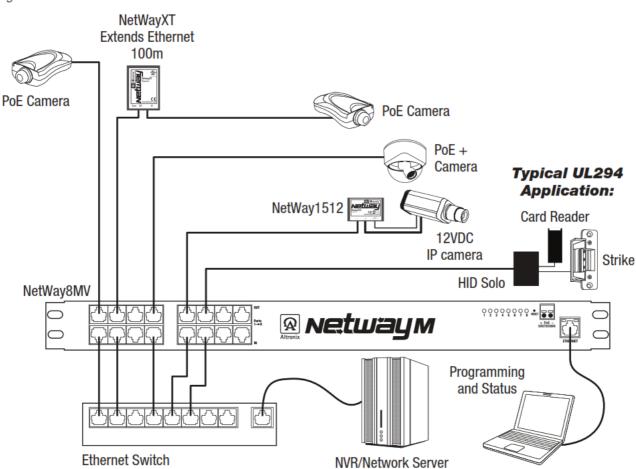
Status	Green LED	Yellow LED
OFF	Indicates it is connected as 10Base-T or no link.	Indicates no link.
ON	Indicates it is connected as 100Base-TX.	Indicates a link.
Blinking	_	Indicates activity.

Port LED Definitions for NetWayXTX Repeater:

Status	PoE/PoE+ Output LED	PoE/PoE+ Input LE D	Yellow LED
OFF	No PoE/PoE+ Output	No PoE/PoE+ Input	Indicates no link.
ON	Normal PoE/PoE+ Output	PoE/PoE+ Input	Indicates a link.
Blinking	_	_	Indicates activity.

NetWay8MV/NetWay16MV Typical Application:





NetWay8MV/NetWay16MV User Interface and Programming:

Note: A constant PC connection is not required for proper operations and is used as a local programming/monitoring tool only.

Step 1. Set the Local Area Connection of your laptop to Static IP mode.

The static IP address of the laptop must be assigned to the same network as the current IP address of NetWay8MV/NetWay16MV. The default IP address of NetWayMV units is 192.168.168.168.

This manual assumes that it has not been changed by the user.

For Windows XP:

- a. Open Network Connections by clicking the Start button, then clicking Settings, then clicking Network Connections.
- b. Right-click the Local Area Connection. Click Properties. Administrator permission is required If you are prompted for an administrator password or confirmation, type the password or provide confirmation.
- c. Double-click click Internet Protocol (TCP/IP) menu item.
- d. Choose the Use the following IP address option.
- e. Set the IP address to 192.168.168.15 (or another valid IP address on the same network).
- f. Click OK. Close all windows.

For Windows 7:

- a. Open Network Connections by clicking the Start button, clicking Control Panel, clicking Network and Internet, clicking Network and Sharing Center, and then clicking Change Adapter Settings.
- b. Right-click the Local Area Connection icon, and then click Properties. Administrator permission is required. If you are prompted for an administrator password or confirmation, type the password or provide confirmation.
- c. Click the Networking tab. Under this connection uses the following items, click either Internet Protocol Version 4 (TCP/IPv4) and then click Properties.
- d. Choose the Use the following IP address option.
- e. Set the IP address to 192.168.168.15 (or another valid IP address on the same network).
- f. Click OK. Close all windows.
- Step 2. Connect a laptop or PC to the Ethernet port of your NetWayMV unit.

The NetWayMV unit should be powered up at this moment.

- **Step 3.** Open a browser window (it is necessary to update your browser software to the latest version so that the pages display and function correctly).
- **Step 4.** Enter the NetWayMV IP address (the default IP address is 192.168.168.168) into the address bar. The status page will be displayed.
- **Step 5.** Click the Setup link. The setup page will be displayed. You may now program your NetWayMV.

All NetWayMV units come factory set:

- a. Ports Enabled.
- b. Ports PoE Shutdown Disabled.
- c. Power Allocation Mode Class restricted.

Port Priority:

NetWayMV port priority is designated 1 through 8, with 1 as the highest and 8 as the lowest port so that power will be allocated to the port with the highest priority first and the lowest priority last. This will ensure that ports with higher priority will continue to operate in the event the NetWayMV is overloaded.

NetWay8MV – Port priority is factory set at 1 through 8 for ports 1 through 8.

NetWay16MV – Port priority is factory set at 1 through 8 for ports 1 through 8 and 1 through 8 for ports 9 through 16.

Port Identification:

NetWayMV allows you to identify each port (ID up to 8 characters).

- 1. Type the desired ID into the text box for each corresponding port.
- 2. Click Submit to save the changes or proceed with programming.

PoE Port Setup:

Individual ports may be disabled if those ports are not used or to avoid the connection of unauthorized PoE devices.

- 1. To disable one or more ports click on the Disable radio button(s) in the PoE column (Fig. 6, pg. 10).
- 2. To enable one or more ports to click on the Enable radio button(s) in the PoE column (Fig. 6, pg. 10).

Note: To enable all ports to click on the Enable All link below the PoE column.

3. Click Submit to save the changes or proceed with programming.

PoE Port Shutdown:

Individual ports may be set for PoE shutdown. PoE shutdown affects only enabled ports and only occurs when a trigger input is applied to the PoE shutdown terminals on the NetWayMV.

- 1. To enable PoE shutdown for one or more ports click on the Enable radio button(s) in the PoE shutdown column (Fig. 6, pg. 10).
- 2. To disable PoE shutdown for one or more ports click on the Disable radio button(s) in the PoE shutdown column (Fig. 6, pg. 10).

Note: To enable or disable PoE shutdown for all ports click on the corresponding link below the PoE shutdown column.

3. Click Submit to save the changes or proceed with programming.

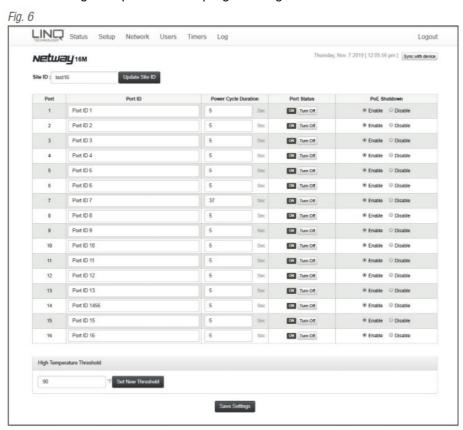
Power Allocation Mode:

NetWayMV features the ability to select how total power is allocated to the ports.

- Class Restricted Power Mode each port will be allocated the maximum rated power that the PoE device will broadcast.
- Dynamic Power Mode each port will supply the specific amount of power that the PoE device requires for operation.

Note: Be sure not to exceed the total power NetWay8MV/NetWay16MV is rated at.

- 1. Click on the corresponding radio button to set the Power Mode desired (Fig. 6, pg. 10).
- 2. Click Submit to save the changes or proceed with programming.



Configuring NetWay8MV/NetWay16MV for Network Connection:

Since every Network Configuration is different, please check with your Network Administrator to see if your NetWay8MV/NetWay16MV should use static IP addresses, or DHCP-assigned IP addresses and/or an Inbound Port assignment prior to setting up the network connection.

1. Click the Network Settings link.

If you are prompted for an administrative password, type and submit the password.

Note: Default settings have password requirements turned off.

2. The network Setup page will be displayed.

You may now configure your NetWay8MV/NetWay16MV for network connection.

Figure 6 is a screenshot of the NETWORK SETTING MENU. This menu is for configuring the NetWay8MV/ NetWay16MV units for a network connection.

Statio 🕶	
988 198.162.1.100	
Mask 255.255.255.0	
Port 80	
me AnyHostname	
e	ess 198.162.1.100 Mask 255.255.255.0 d Port 80

Network Type:

Static IP:	Users can set a fixed IP for network connection.
DHCP:	The DHCP server in LAN will automatically assign IP configuration for the network connection
IP:	This field shows the NetWay8MV/NetWay16MV current IP Address. A static IP address must be set manually. If DHCP this value will be assigned automatically.
Subnet Mas k:	This field shows the subnet mask for your network so the NetWay8MV/NetWay16MV will be recognized within the network. If DHCP is selected, this value will be assigned automatically.
Inbound Por t:	Port number for HTTP/WEB communication.
Host Name:	Name of the NetWay8MV/NetWay16MV device on the LAN

Additional information:

1. If using DHCP, all settings will be detected automatically.

While DHCP is a useful tool for determining the network settings, if you set up your NetWay8MV/ NetWay16MV in this manner its IP address may change at different times for different reasons, particularly after a power failure. If the IP address of the NetWay8MV/NetWay16MV changes, you may have difficulties accessing your NetWay8MV/NetWay16MV locally and/or remotely.

It is strongly recommended that you connect via hostname when units are configured as DHCP.

Please do not set the DHCP address issued to the NetWay8MV/NetWay16MV by the router as its static IP address unless you take specific steps that program your router to prevent such address conflicts.

- 2. If using a Static IP (recommended), you will need to input the information manually. In order for DDNS to work, you must enter valid data, compatible with your network, for all of the network setting fields:
 - IP address, Subnet Mask, Inbound Port, and Host Name.
- 3. If you are connecting through a router, make sure that you have 'opened up all the required network ports in the port forwarding section of your router's setup options. That is, you have directed the router to send any

incoming traffic using those IP ports to the LAN IP address of the NetWay8MV/NetWay16MV.

Useful information about router port forwarding can be found at www.portforward.com. Different routers may use different terms for port forwarding functions. For instance, D-Link calls it a virtual server, and Netopia calls it pinholes.

The default port for NetWay8MV/NetWay16MV is: 80

Note: Port 80 is the default port used for web browsing. Because of this, in order to prevent the average user from hosting a web server, most ISPs BLOCK traffic using port 80 from reaching the average site. If you only plan to monitor your NetWay8MV/NetWay16MV on a LAN, you can use port 80 and don't have to concern yourself with routers. However, if you desire remote access to your NetWay8MV/NetWay16MV, you MUST select functional ports and set up the port forwarding in your router. Other ports, such as 8080 and 8000 are sometimes blocked by ISPs as well. What port(s) should be used? There are 65,535 valid IP ports to choose from. These are broken down into three groups:

- Well Known Ports 0 through 1023
- Registered Ports 1024 through 49151
- Dynamic and/or Private Ports 49152 through 65535

So, rather than encounter a port conflict by choosing a port commonly used for another purpose (like port 25 for SMTP mail or port 448 for secure sockets), choose an 'unusual' port number. For example, add 50,000 to your house number: 50,123 is less likely to lead to a port conflict. For a list of the known and registered ports, see http://www.iana.org/assignments/port-numbers.

Reset Features:

Reset Password:

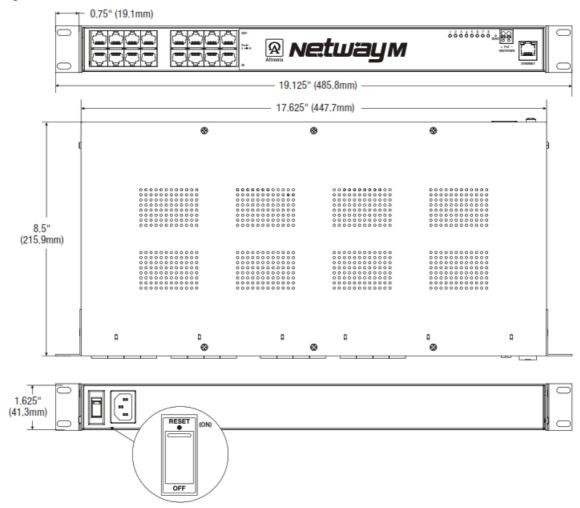
- 1. Set the illuminated master power disconnect circuit breaker to the (OFF) position (Fig. 1g, pg. 5).
- 2. Set the illuminated master power disconnect circuit breaker to the RESET (ON) position (Fig. 1g, pg. 5) while depressing the [RESET button] on the front of the NetWayMV (Fig. 1d, pg. 5).
- 3. NetWayMV status LEDs will display a flashing pattern that indicates the reset was successful (Fig. 1c, pg. 5).

Reset IP to Factory Settings:

- 1. During normal operation depress the [RESET button] on the front of the NetWayMV for approximately 1 second (Fig. 1d, pg. 5).
- 2. NetWayMV status LEDs will display a flashing pattern that indicates the reset was successful (Fig. 1c, pg. 5).
- 3. Factory settings are: DHCP server and the IP address is [192.168.168.168].

Notes:

NetWay8M/NetWay16M Rack Mount Chassis Mechanical Drawing and Dimensions:



The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of an insulated DANGEROUS VOLTAGE within the product's enclosure that may be of sufficient magnitude to constitute an electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



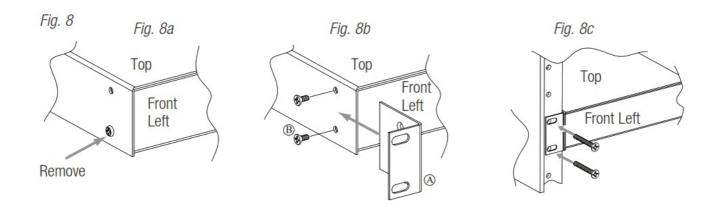
CAUTION: To reduce the risk of electric shock do not open the enclosure.

There are no user-serviceable parts inside. Refer servicing to qualified service personnel.

Mounting Options:

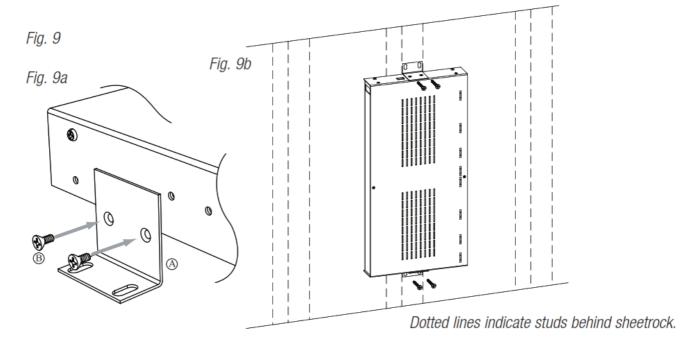
Rack Mount Installation

- 1. Remove and discard factory-installed screws from both sides of the rack chassis (Fig. 8a).
- 2. Install mounting brackets (A) on the left and right side of the rack chassis using the four (4) flat head screws (B) (included) (Fig. 8b).
- 3. Place the unit into desired EIA 19" rack position and secure it with mounting screws (not included) (Fig. 8c).



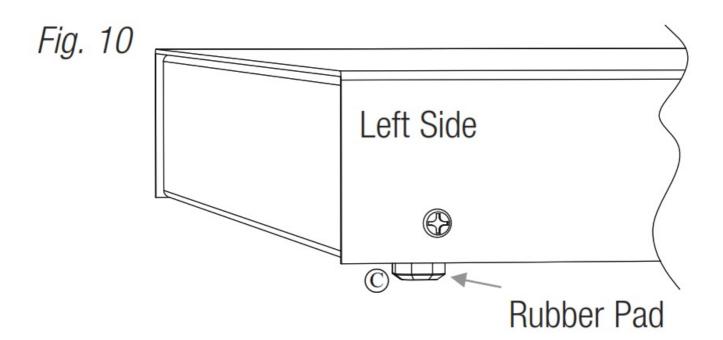
Wall Mount Installation

- 1. Install mounting brackets (A) on the left and right side of the rack chassis using four (4) flat head screws (B) (included) (Fig. 9a).
- Place the unit at the desired location and secure it with #6 size screws or larger (not included) (Fig. 9b).
 Caution: It is necessary to make sure mounting screws are securely fastened to a beam when installing the unit vertically.



Shelf Installation

- 1. Position and affix rubber pads (C) (included) at each corner on the bottom of the unit (Fig. 10).
- 2. Place the unit in the desired location.



Altronix is not responsible for any typographical errors.

Mounting Hardware (Included):

	Two (2) mounting brackets
4	Six (6) flat head screws for mounting brackets.
	Four (4) rubber pads.



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Documents / Resources

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NetWay8MV, NetWay16MV, NetWay MV Series PoE Managed Midspan Solution for Standard Network Infrastructure, NetWay MV Series Standard Network Infrastructure, Standard Network Infrastructure, Network Infrastructure, PoE Managed Midspan Solution for Standard Network Infrastructure, PoE Managed Midspan Solution, Managed Midspan Solution, PoE Midspan Solution, Midspan Solution

References

- Altronix Home
- Service Name and Transport Protocol Port Number Registry
- How To Set Up Port Forwarding Port Forward

Manuals+,