

NetWay4ES - 4-Port Managed PoE/PoE+ Switch

NetWay4ESK - Kit includes: NetWay4ES and NetWay1E (84W Midspan Injector, 115VAC input)

NetWay4ESKV - Kit includes: NetWay4ES and NetWay1EV (84W Midspan Injector, 230VAC input)

Overview:

NetWay4ES is a 4-Port Managed PoE/PoE+ switch which is designed for installation at the IDF (Intermediate Distribution Frame). NetWay4ES allows for system expansion by accommodating up to four (4) IP cameras/devices over a single CAT-5 or higher structured cable. Power up to 84W is provided by NetWay1E midspan injector or 30W by NetWay8/NetWay16 midspan or any IEEE 802.3at standard midspan/endspan typically located at the MDF (Main Distribution Frame). Built-in IP management facilitates remote device reset/control and status monitoring.

Features:

Agency Listings:

- UL/CUL Listed for Information Technology Equipment (UL 60950-1).
- CE approved.

Input:

- Up to 84W is provided by NetWay1E/1EV midspan injector or 30W by NetWay8/NetWay16 midspan or any IEEE 802.3at standard midspan/endspan.

Power Output:

- Maximum power per port: PoE+ (30W).
- Total maximum power:
NetWay4ES - PoE+ (30W).
NetWay4ESK - 84W from NetWay1E/1EV.

Ethernet:

- Connectivity: RJ45, auto-cross-over.
- Wire type: 4-pair CAT-5 or higher structured cable.
- Distance: up to 100m.
- Speed: 10/100BaseT, half/full duplex, auto negotiation.

LED Indicators:

- Yellow - IP Link status, Green - 10/100Base-T/active.

Environmental:

- Operating Ambient Temperature :
NetWay1E/1EV: -40°C to 60°C (-40°F to 140°F).
NetWay4ES: 60W: -40°C to 75°C (-40°F to 167°F).
Greater than 60W: -40°C to 50°C (-40°F to 122°F).
- Storage Temperature: -40°C to 75°C (-40°F to 167°F).
- Humidity: 20 to 85%, non-condensing.

Applications:

- Remote installation and powering of a managed 4 port PoE+ switch. Star expansion of remote node to 4 PoE+ cameras/devices.

Mechanical:

- Dimensions (H x W x D approx.):
1.7" x 5.23" x 8.42" (43.18mm x 132.84mm x 213.87mm)

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/ANSI, and with all local codes and authorities having jurisdiction. Wiring should be UL Listed and/or Recognized wire suitable for the application. Midspan or endsan and NetWay4ES is not intended to be connected to outside plant leads and should be installed indoors within the protected premises. The midspan or endsan injector and NetWay4ES are intended for indoor use only.

1. **Midspan or endsan** installation: Please refer to the corresponding installation instructions.

2. **NetWay1E** installation (*Fig. 1, pg. 2*):

- a. Affix rubber pads to NetWay1E for shelf installation (*Fig. 6, pg. 7*).
- b. Plug the grounded AC line cord (included) into the IEC 320 connector of the NetWay1E unit. Plug unit into a reliable earth grounded socket. When using multiple units the sum of the individual name plate ratings should not exceed the supply circuit rating.

Note: Do not connect to a receptacle controlled by a switch.

- c. Connect structured cable from UL Listed ethernet switch or video server to RJ45 jack marked [IN] on NetWay1E (*Fig. 2, pg. 3*).
- d. PoE ON LED will illuminate indicating PoE device is turned on (*Fig. 2, pg. 3*).
- e. Connect a device that will provide a low voltage trigger input to terminals marked [– PoE Shutdown +] (12VAC-24VAC or 5VDC-24VDC) (*PoE Shutdown Voltage Range in Specifications*).

When voltage is applied, the PoE output will drop to zero volts. When the voltage is removed from the PoE shutdown terminals, the PoE output will supply power to PoE compliant devices (normal condition).

Note: Return to normal operation from shutdown can take about 4 seconds. When PoE is disabled devices may still present data signals on line pairs of the structured cable.

3. **NetWay4ES** installation:

a. Mounting:

- Affix rubber pads to NetWay4ES for shelf installation (Fig. 6, pg. 7).

b. Connect structured cable from NetWay4ES to RJ45 jack marked [OUT] to NetWay1E (Fig. 2, pg. 3) or midspan or endspan (Fig. 1, pg. 2).

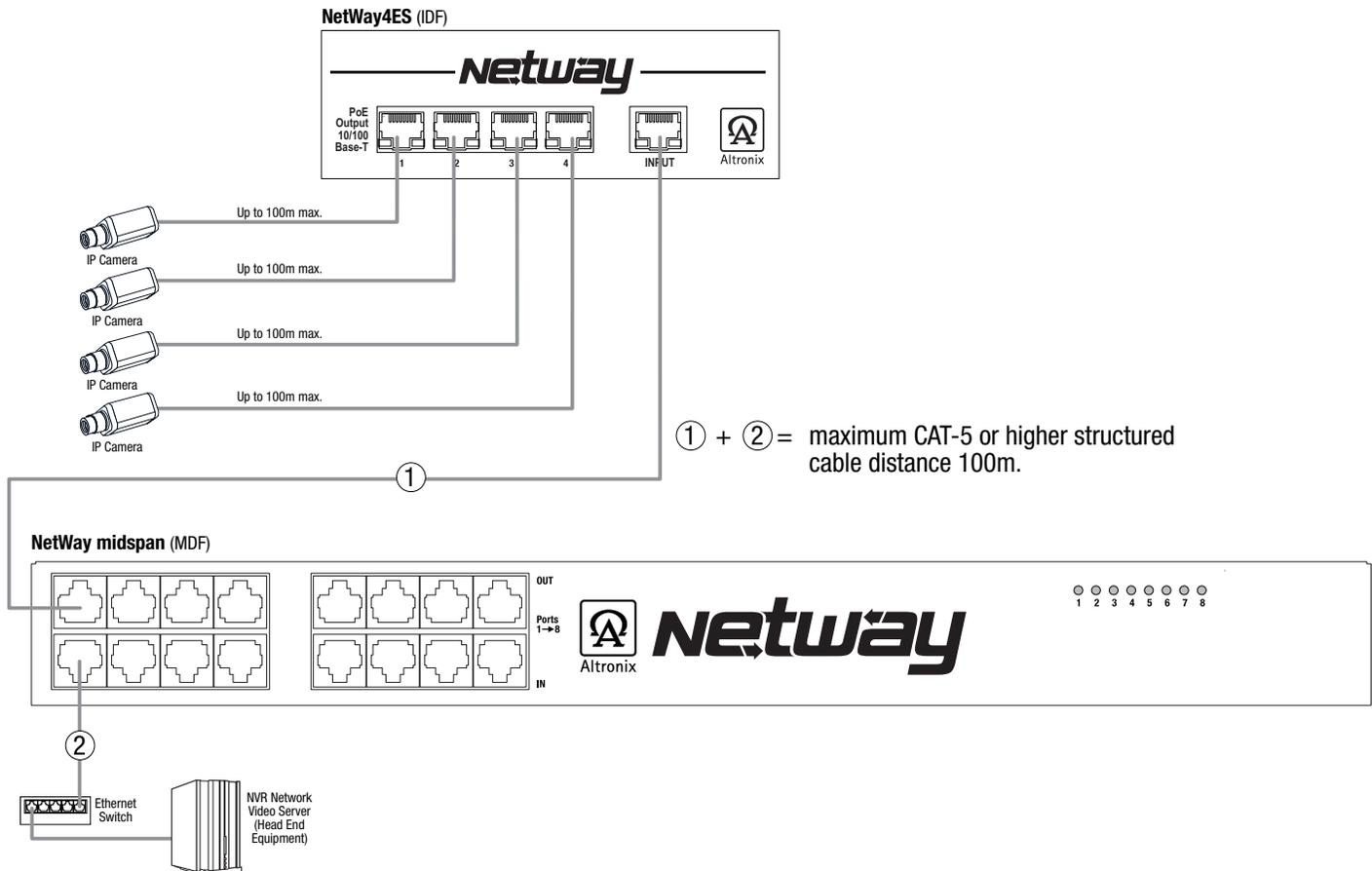
c. Connect IP cameras/devices to RJ45 jacks marked [1-4 PoE Output 10/100BaseT] (Fig. 2, pg. 3).

Technical Specifications:

Parameter	Description
Input power requirements	Maximum power per port: PoE+ (30W) Total maximum power: Dependent on power from midspan or endspan. NetWay4ESK Maximum power per port: PoE+ (30W) Total maximum power: 84W
Indicators	Yellow (RJ45 connector): On - Linked, Off - No Link, Blinking - Activity. Green (RJ45 connector): On - 100Base-TX, Off - 10Base-T.
Environmental Conditions	Operating Ambient Temperature (UL60950-1): NetWay1E/1EV: -40°C to 60°C (-40°F to 140°F). NetWay4ES: 60W: -40°C to 75°C (-40°F to 167°F). Greater than 60W: -40°C to 50°C (-40°F to 122°F). Relative humidity: 85%, +/- 5% Storage Temperature: Storage Temperature: -40°C to 75°C (-40°F to 167°F). Operating Altitude: -1000 to 6,561.679 ft. (-304.8 to 2000m).
Regulatory Compliance	UL/CUL Listed for Information Technology Equipment (UL 60950-1). CE approved.
Weights (approx.)	Product: 2.9 lbs. (1.32 kg), Shipping: 3.9 lbs. (1.77 kg)

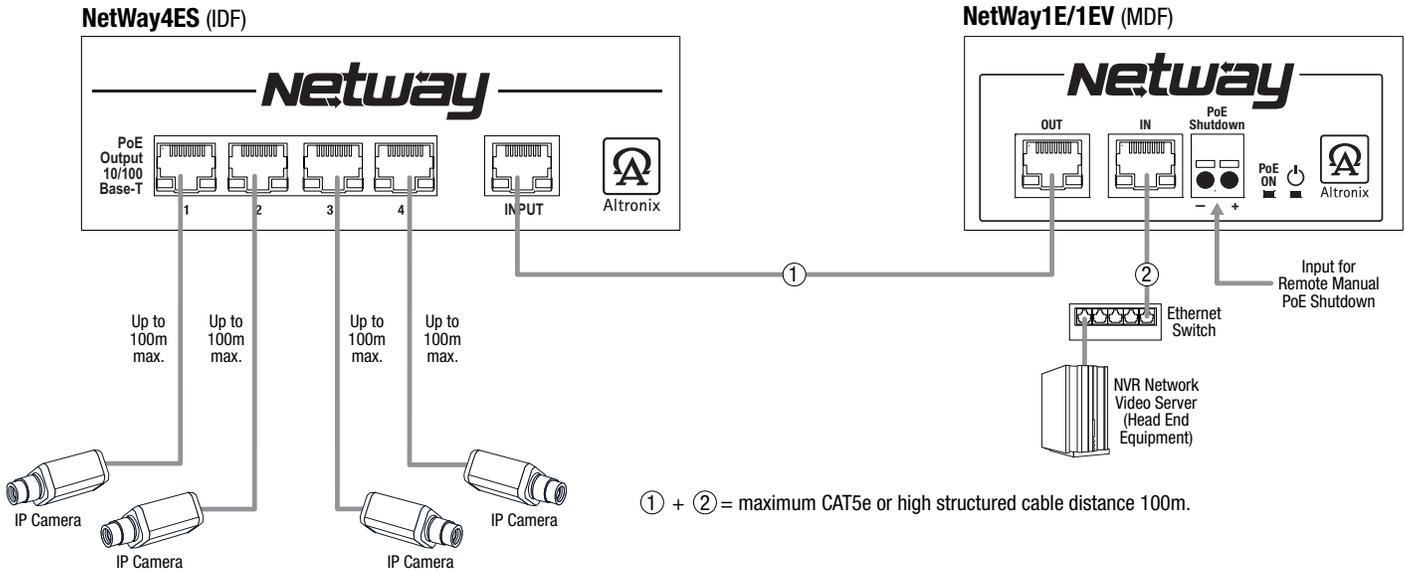
Typical Application:

Fig. 1 - NetWay4ES powered by NetWay8 midspan.



Typical Application:

Fig. 2 - NetWay4ES powered by NetWay1E midspan injector.



NetWay4ES 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 Local Area Connection of your laptop to DHCP mode.

For Windows XP:

- Open Network Connections by clicking **Start** button, then clicking Settings, then clicking **Network Connections**.
- Right click the **Local Area Connection**. Click **Properties**. Administrator permission required
If you are prompted for an administrator password or confirmation, type the password or provide confirmation.
- Double click **Internet Protocol (TCP/IP)** menu item.
- Choose the **Obtain an IP address automatically** option.
- Click **OK**. Close all windows.

For Windows Vista:

- Open Network Connections by clicking the **Start** button Picture of the Start button, clicking **Control Panel**, clicking **Network and Internet**, clicking **Network and Sharing Center**, and then clicking **Manage Network connections**.
- Right click the **Local Area Connection** icon, and then click **Properties**. Administrator permission required
If you are prompted for an administrator password or confirmation, type the password or provide confirmation.
- Click the **Networking** tab. Under this connection uses the following items, click either **Internet Protocol Version 4 (TCP/IPv4)** or **Internet Protocol Version 6 (TCP/IPv6)**, and then click **Properties**.
- To specify IPv4 IP address settings, click **Obtain an IP address automatically**, and then click **OK**.
- To specify IPv6 IP address settings, click **Obtain an IPv6 address automatically**, and then click **OK**.

For Windows 7:

- Open Network Connections by clicking the **Start** button Picture of the Start button, clicking **Control Panel**, clicking **Network and Internet**, clicking **Network and Sharing Center**, and then clicking **Change Adapter Settings**.
- Right click the **Local Area Connection** icon, and then click **Properties**. Administrator permission required
If you are prompted for an administrator password or confirmation, type the password or provide confirmation.
- Click the **Networking** tab. Under this connection uses the following items, click either **Internet Protocol Version 4 (TCP/IPv4)** or **Internet Protocol Version 6 (TCP/IPv6)**, and then click **Properties**.
- To specify IPv4 IP address settings, click **Obtain an IP address automatically**, and then click **OK**.
- To specify IPv6 IP address settings, click **Obtain an IPv6 address automatically**, and then click **OK**.

Step 2. Connect a laptop or PC to the Ethernet port of your NetWay4ES unit, or connect your NetWay4ES and laptop/PC to a DHCP router if NetWay4ES is in DHCP mode. The NetWay4ES 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 NetWay8M/16M IP address (the default IP address is 192.168.168.168), or enter the NetWay4ES host name if in DHCP mode (default host name is “NetWay4ES”,) into the address bar. Status page will be displayed.

Configuring NetWay4ES for network connection:

Since every Network Configuration is different, please check with your Network Administrator to see if your NetWay4ES should use static IP addresses, or DHCP assigned IP addresses and/an Inbound Port assignment prior to setting up network connection.

1. Click Network Settings link. when prompted for an administrative password, type and submit the default password (11111111) (Fig. 3, pg. 4).
2. Network Setup page will be displayed. You may now configure your NetWay4ES for network connection.



Fig. 4: NETWORK SETTING MENU.
This menu is for configuring the NetWay4ES units for a network connection (Fig. 3, pg. 4).



Network Type:

Static IP	User can set a fixed IP for network connection.
DHCP	DHCP server in LAN will automatically assign IP configuration for the network connection.
IP	This field shows the NetWay4ES current IP Address. A static IP address must be set manually. If DHCP this value will be assigned automatically.
Subnet Mask	This field shows the subnet mask for your network so the NetWay4ES will be recognized within the network. If DHCP is selected, this value will be assigned automatically.
Inbound Port	Port number for HTTP/WEB communication.
Host Name	Name of the NetWay4ES 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 NetWay4ES 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 NetWay4ES changes, you may have difficulties accessing your NetWay4ES locally and/or remotely. It is strongly recommended that you connect via host name when units configured as DHCP. Please do not set the DHCP address issued to the NetWay4ES 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 NetWay4ES. Useful information about router port forwarding can be found at www.portforward.com. Different routers may use different terms for port forwarding

function. For instance, D-Link calls it virtual server, Netopia calls it pinholes.

The default port for NetWay4ES 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 NetWay4ES 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 NetWay4ES, 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>.

Configuring NetWay4ES ports:

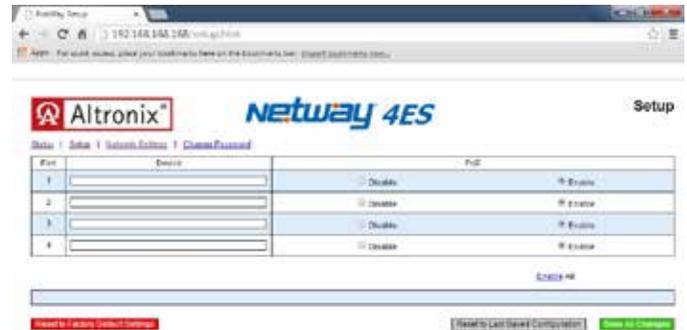
Fig. 5: SETUP MENU. This menu is for configuring the NetWay4ES ports (Fig. 5, pg. 5).

Port Identification:

NetWay4ES allows you to identify each port (ID up to 8 characters).

1. Type the desired ID into the text box in the Device column (Fig. 5, pg. 5) for each corresponding port.
2. Click **Save All Changes** to save the changes or proceed with programming.

Fig. 5



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. 5, pg. 5).
2. To enable one or more ports click on the **Enable** radio button(s) in the PoE column (Fig. 5, pg. 5).

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

3. Click **Save All Changes** to save the changes or proceed with programming.

Change Password:

1. Type the old password into the text box labeled **Enter Old Password** (Fig. 6, pg. 5).
2. Type the new password into the text box labeled **Enter New Password** (Fig. 6, pg. 5).
3. Retype new password into text box labeled **Confirm New Password** (Fig. 6, pg. 5).
4. Click **Submit** to save the password (Fig. 6, pg. 5).
5. To disable password click Disable Password button (Fig. 6, pg. 5).

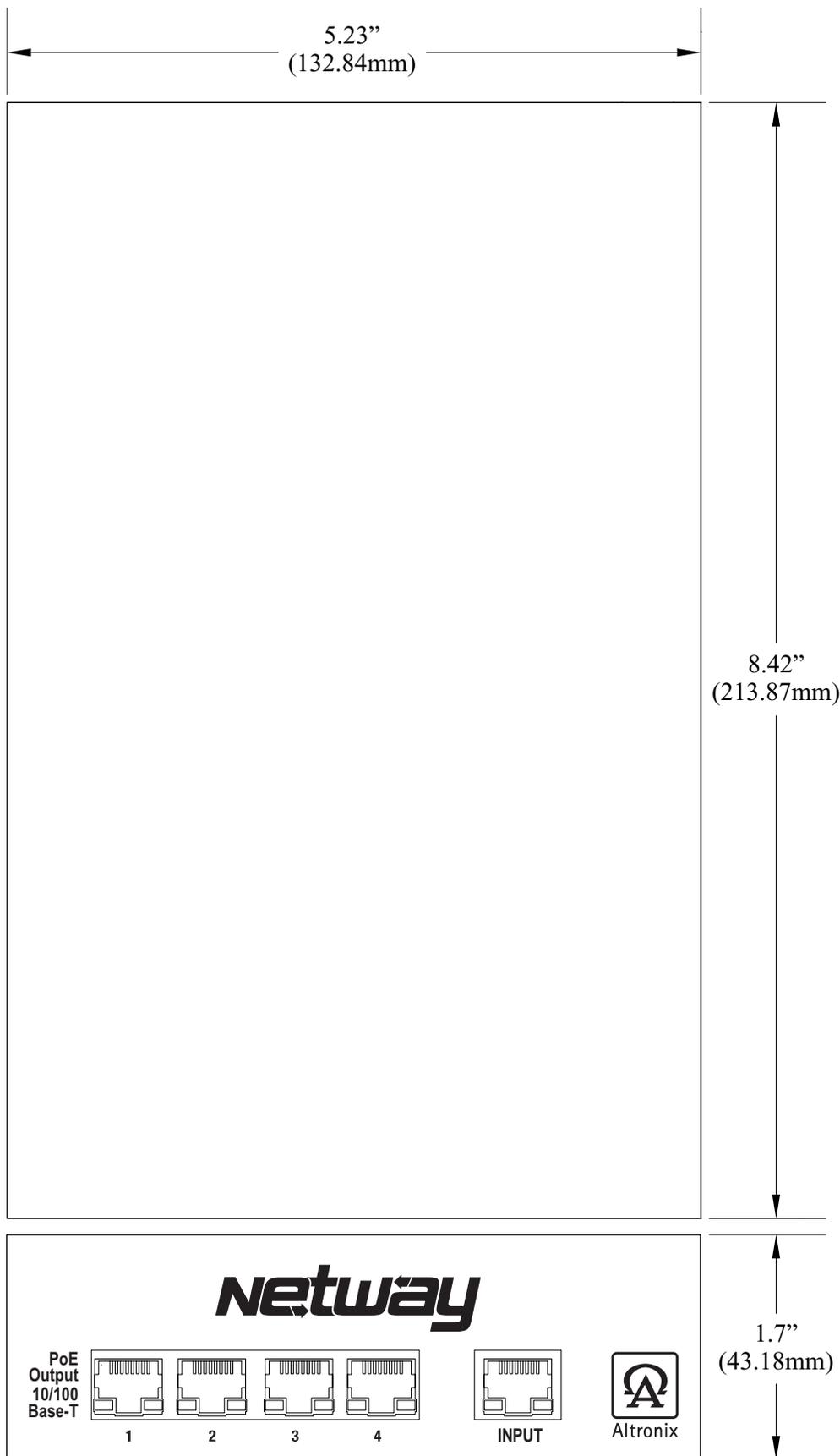
Fig. 6



NetWay4ES Chassis Mechanical Drawing & Dimensions (H x W x D approx.):

1.7" x 5.23" x 8.42" (43.18mm x 132.84mm x 213.87mm)

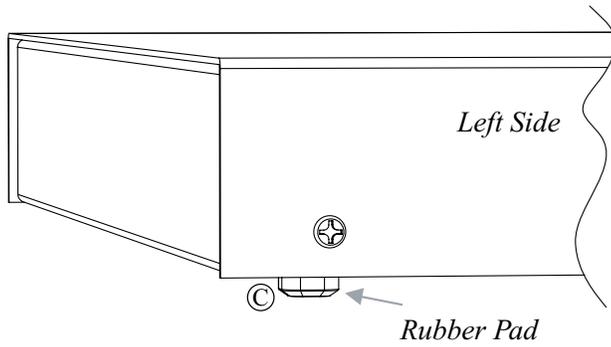
Fig. 5



Shelf Installation

- 1- Position and affix rubber pads (C) (included) at each corner on the bottom of the unit (*Fig. 6*).
- 2- Place unit in desired location.

Fig. 6



Mounting Hardware (Included):

- Four (4) rubber pads.

Notes:

Altronix is not responsible for any typographical errors.

140 58th Street, Brooklyn, New York 11220 USA, 718-567-8181, fax: 718-567-9056
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NetWay4ES/NetWay4ESK