Netway
SPECTRUM

Fiber Solution

NetWaySP4P Series
Fiber Optic Transceivers with Built-in Power Supplies

Models Include:

NetWaySP4P
- 4-port Fiber Optic Transceiver with Built-in Power Supply for Composite Fiber (Powered) Cable

NetWaySP4P2
- 4-port Fiber Optic Transceiver with Power-Limited Outputs for Composite Fiber (Powered) Cable

Installation Guide

c(UL)us CE

Altronix®

More than just power.™

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

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Overview:

Altronix NetWaySP4P/NetWaySP4P2 Fiber Optic Transceivers provide four (4) 1Gb SFP ports and four (4) ports for up to 120W per port to be transmitted over composite fiber (powered) cable (fiber + copper combined) to NetWay Spectrum PoE Hardened Switches. NetWaySP4P/NetWaySP4P2 can be used for standard fiber cable applications as well.

Features:

Agency Listings:
- **UL/cUL**   UL 60950-1 (Information Technology Equipment).
- **CE**   European Conformity.

Input:
- 115VAC, 60Hz, 3.25A or 230VAC, 50/60Hz, 2A.

Power:
NetWaySP4P:
- Four (4) 56VDC non power-limited outputs up to 120W max. full power per port. Total power: 240W.
- IEEE 802.3af and IEEE 802.3at compliant (PoE/PoE+).
- Short circuit protection.

NetWaySP4P2:
- Four (4) 56VDC power-limited outputs up to 60W max. full power per port. Total power: 240W.
- Short circuit protection.

Fiber Port:
- Four (4) Gigabit SFP ports.
- Use with SFP module 1000Base-X (1Gb), compliant to Class 1 laser product (not included).

Ethernet:
- Four (4) Gigabit (1000Mbps) ports to switch.
- Wire type: 4-pair CAT5e and higher.
- Connectivity: RJ45, auto-crossover.
- Speed: Gigabit (1000Mbps).
- Distance: up to 100m.

Environmental:
- Refer to Environmental Conditions on *page 6*.

Battery Backup:
- Built-in battery charger *(optional rack mount battery enclosure - RE2).*
- Automatic switchover to stand-by battery when AC fails.

Compatible PoE Hardened Switches and Accessories:

NetWaySP3WPN:	3-port PoE Hardened Switch with (1) SFP port.
NetWay4EWPN:	4-port PoE Hardened Switch with (1) SFP port.
NetWay4E1WPN:	4-port PoE Hardened Switch with (1) SFP port.
NetWaySP4WPN:	4-port PoE Hardened Switch with (2) SFP ports.
NetWaySP8WPN:	8-port PoE Hardened Switch with (2) SFP ports.
RE2:	Rack Mount Battery Enclosure accommodates up to four (4) 12VDC/7AH batteries

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), local codes, and the authorities having jurisdiction. NetWaySP4P/NetWaySP4P2 is not intended to be connected to outside plant leads. These products are for indoor use only and must be installed within the protected premises. NetWaySP4P must be installed in a restricted access area. NetWaySP4P2, if battery bracket is removed, must be installed in a restricted access area *(Fig. 1b, pg. 3)*. The outputs are of a non-limited power source.

Fig. 1a   *Fig. 1b*

For non-limited power sources, additional protective circuitry and/or an appropriate fire enclosure for the products supplied by this device are required.

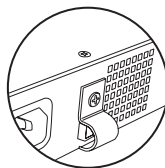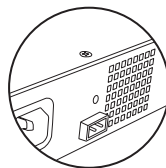1. Attach mounting brackets to the unit for rack or wall mount installation *(Fig. 4 or 5, pg. 8)*.
   Affix rubber pads to the unit for shelf installation *(Fig. 6, pg. 8)*.
2. Secure the unit in a rack or on a wall, or place unit on a shelf as desired.
   Note: The following factors should be taken 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 104ºF (40ºC).
   b. Take care to ensure that there is sufficient air flow around the unit and that obstructions do not impede it.
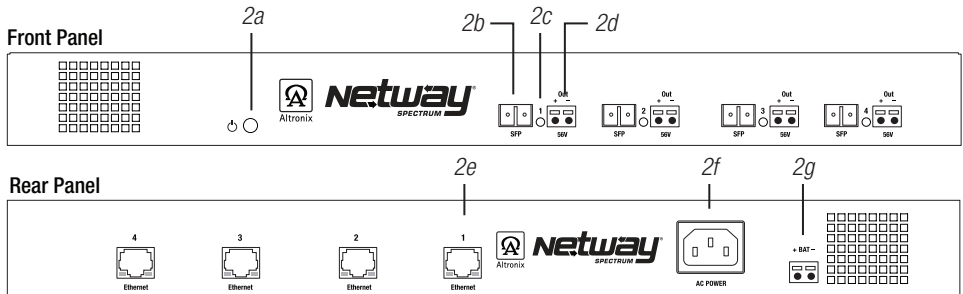   c. When mounting units in a rack, take care to avoid uneven loading which can cause a hazardous condition.

3. Plug the grounded AC line cord (included) into the IEC 320 connector of the unit *(Fig. 2f, pg. 4)*. 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. **Do not connect to a receptacle controlled by a switch.**
4. Connect structured cable from ethernet switch/NVR (network video server) to RJ45 jack marked [Ethernet 1-4] *(Fig. 2e, pg. 4)*.
   Note: All cabling and wire must be UL Listed and/or Recognized wire suitable for their application.
5. Connect Composite (Powered) Fiber cable: fiber portion to port marked [SFP 1-4], copper portion connects to output marked [OUT 56VDC, 1-4] *(Fig. 2b & 2d, pg. 4)*.
6. Connect opposite end of Composite (Powered) Fiber cable: fiber portion to SFP port on NetWay Spectrum Hardened Switch, copper portion connects to power input of NetWay Spectrum Hardened Switch, **carefully observing correct polarity** *(Refer to respective NetWay Spectrum PoE Switch Installation Guide).*
7. When the use of stand-by batteries is required, they must be sealed lead acid or gel type. Use 14 AWG or larger for all power connections. Connect four (4) 12VDC batteries in series to terminals marked [+ BAT –] *(Fig. 2h, pg. 4)*. **Note:** When batteries are not used, a loss of AC will result in a loss of output voltage.

Recommended Altronix SFP Modules:

Altronix P1MM, P1SM10, P1AB2K and P1GCE are hot-pluggable SFP fiber transceiver modules and are readily usable with all Altronix Spectrum fiber optic equipment for 1Gb transmission rates.

P1MM   For use with Multi-Mode Fiber for distances up to 550m.
P1SM10   For use with Single-Mode Fiber for distances up to 10km.
P1AB2K   For use with Single Strand Single-Mode Fiber for distances up to 2km.
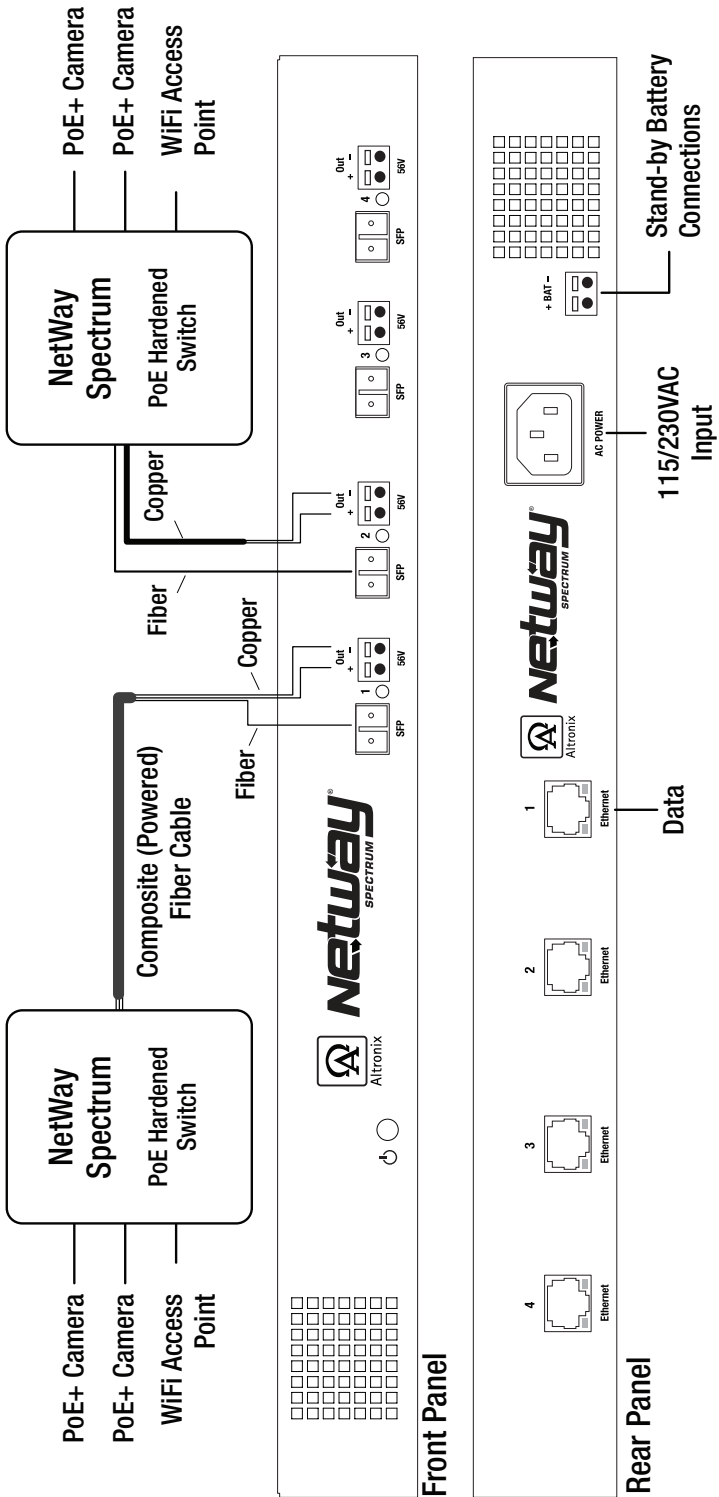**P1GCE**   For use with CAT5e or better for distances up to 100m.

Fig. 2

2a   LED indicates AC Power is present.
2b   1Gb SFP port.
2c   LED indicates fiber link.
2d   120W max output
2e   RJ45 connects to switch
2f   IEC 320 Connector: 115/230VAC (grounded line cord included).
2g   Built-in battery charger: Charges stand-by batteries for applications requiring back-up.
     (Optional rack mount battery enclosure available - RE2)

Typical Application:

Fig. 3

PoE+ Camera
PoE+ Camera
WiFi Access Point

NetWay Spectrum
PoE Hardened Switch

PoE+ Camera
PoE+ Camera
WiFi Access Point

NetWay Spectrum
PoE Hardened Switch

Copper

Fiber

Composite (Powered) Fiber Cable

Fiber

Copper

Out − +   56V   SFP   4
Out − +   56V   SFP   3
Out − +   56V   SFP   2
Out − +   56V   SFP   1

+ BAT −

AC POWER

Stand-by Battery Connections

115/230VAC Input

Front Panel

Altronix

1 Ethernet
2 Ethernet
3 Ethernet
4 Ethernet

Data

Rear Panel

Altronix

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Technical Specifications:

Parameter	Description
Number of Ports	Four (4) Gigabit SFP Ports and Four (4) Gigabit (1000Mbps) Ethernet Ports.
Power Outputs	**NetWaySP4P:** Four (4) 56VDC non power-limited outputs 120W max. **NetWaySP4P2:** Four (4) 56VDC power-limited outputs @ 60W each.
Input power requirements	115VAC, 60Hz, 3.25A or 230VAC, 50/60Hz, 2.0A.
Environmental Conditions	Operating Ambient Temperature (120W): – 40ºC to 50ºC (– 40ºF to 122ºF) Relative Humidity: 85%, +/– 5% Storage Temperature: – 40ºC to 85ºC (– 40ºF to 185ºF). Operating Altitude: – 304.8 to 2,000m.
Regulatory Compliance	UL/cUL Listed for Information Technology Equipment (UL 60950-1). I.T.E. 43KC CE European Conformity.
Weights (approx.)	Product: 3.8 lbs. (1.7kg)	Shipping: 6.0 lbs. (2.7kg)

The lightning flash with 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
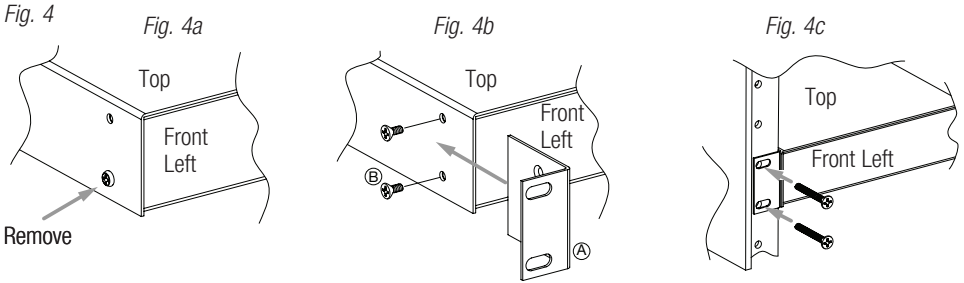**RISK OF ELECTRIC SHOCK**
DO NOT OPEN

CAUTION: To reduce the risk of electric shock do not open enclosure. There are no user serviceable parts inside.
Refer servicing to qualified service personnel.
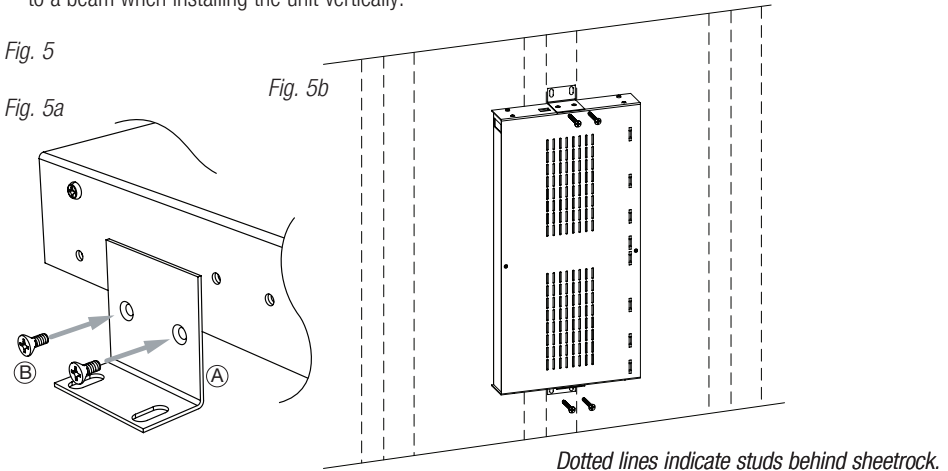
Notes:

Mounting Options:

Rack Mount Installation

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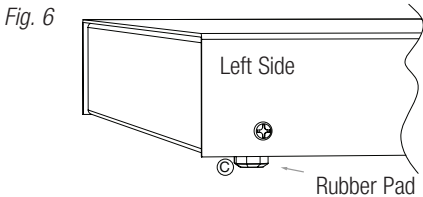3. Place unit into desired EIA 19" rack position and secure with mounting screws *(not included) (Fig. 4c)*.

Fig. 4

Fig. 4a

Top
Front
Left

Remove

Fig. 4b

Top
Front
Left

B
A

Fig. 4c

Top
Front Left

Wall Mount Installation

1. Install mounting brackets (A) on the left and right side of rack chassis using four (4) flat head screws (B) (included) *(Fig. 5a)*.
2. Place unit at desired location and secure with #6 size screws or larger *(not included) (Fig. 5b)*.
   Caution: It is necessary to make sure mounting screws are securely fastened to a beam when installing the unit vertically.

Fig. 5

Fig. 5a

*Fig. 5b*

B
A

Dotted lines indicate studs behind sheetrock.

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

Left Side

C
Rubber Pad

Mounting Hardware (Included):

A Two (2) mounting brackets

B Six (6) flat head screws for mounting brackets.

C Four (4) rubber pads.

Altronix is not responsible for any typographical errors.

MEMBER

NetWaySP4P / NetWaySP4P2 Installation Guide