



M7250P
PoE Powered
Gigabit Ethernet Media Converter
1000BASE-TX TO 1000BASE-SX/LX
Installation Guide

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TRADEMARKS

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FCC NOTICE

This device complies with Class B Part 15 the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received including the interference that may cause.

CE NOTICE

Marking by the symbol indicates compliance of this equipment to the EMC directive of the European Community. Such marking is indicative that this equipment meets or exceeds the following technical standards:

EMC Class B

EN 61000-6-3/2001:

EN55022:98/A1:2000/A2:2003 Class B

EN61000-3-2:2000

EN61000-3-3:1995/A1:2001

EN 55024:1998/A1:2001/A2:2003

IEC 61000-4-2:2001

IEC 61000-4-3:2002/A1:2002

IEC 61000-4-4:1995/A1:2000/A2:2001

IEC 61000-4-5:2001

IEC 61000-4-6:1996/A1:2001

IEC 61000-4-11:2001

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All VERSITRON products are covered by a **Lifetime Warranty** against defects in materials and workmanship. This coverage is applicable to the original purchaser and is not transferable.

We repair, or at our option, replace parts/products that, during normal usage and operation, are proven to be defective during the time you own the products, provided that said products and parts are still manufactured and/or available. Such repair/replacement is subsequent to receipt of your product at our facility and our diagnostic evaluation and review of the unit. **Advance replacements are not provided as part of the warranty coverage.**

This warranty does not cover damage to products caused by misuse, mishandling, power surges, accident, improper installation, neglect, alteration, improper maintenance, or other causes which are not normal and customary applications of the products and for which they were not intended. No other warranty is expressed or implied, and VERSITRON is not liable for direct, indirect, incidental or consequential damages or losses.

In the unlikely event a warranty issue should arise, simply contact us at 302-894-0699 or 1-800-537-2296 or via email at fiberlink@versitron.com to obtain a Return Material Authorization (RMA) number, along with instructions for returning your product.

Note: This warranty is effective for commercial products as of January 1, 2001 and for GSA products as of July 1, 2006.

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1. Introduction

The M7250P 1000BASE-T to 1000BASE-SX/LX media converter series provides 1000Mbps Gigabit Ethernet copper-to-fiber media conversion, allowing for 1000Base-T-1000Base-X over multimode or optional single-mode fiber optical media.

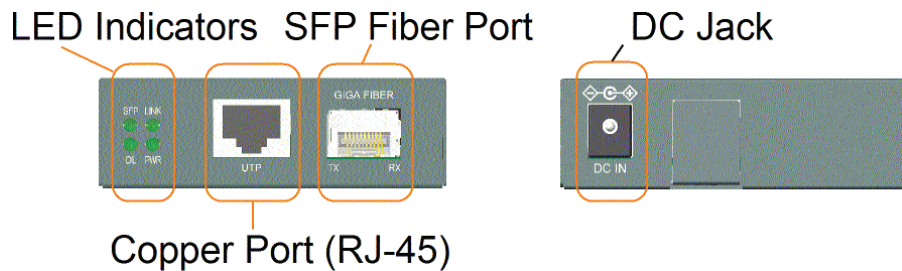


Because of 802.3af compliance, the converters can draw the power via Cat.5 cable connected to a PoE PSE switch or mid-span injector in addition to being powered by typical external power adapter,. This feature makes the converter ideal for remote areas of a network without AC power outlets.

1.1 Features

- Gigabit copper to fiber conversion: 1000Base-TX to 1000Base-SX/LX over multi-mode or single-mode fiber
- SFP design: For flexibility, an SFP (Mini-GBIC) connector is provided for the fiber port to accommodate any type of SFP fiber transceiver when needed.
- Support full wire speed copper to fiber conversion
- Auto MDI/MDI-X detection function on the copper port
- Auto-negotiation support
- Plug and play : no configuration settings is required
- Link Fault Pass Through: this function allows link fault status passes through between copper link and fiber link transparently.
- Far End Fault function on fiber port
- Transparent conversion to any type of packet frame
- No packet length limitation
- Diversified mounting support : desktop mounting, wall mounting, optional Din-Rail support
- Support wide range of fiber options : multimode fiber, single mode fiber (short reach up to long reach), Bi-directional single fiber, and CWDM optical
- Low power consumption
- IEEE 802.3af compliant PoE PD (Powered Device) design

1.2 Specifications



Twisted-Pair Interface (Copper Port)

Connector	Shielded RJ-45
Signal Compliance	IEEE 802.3ab 1000BASE-T std.
Pin Assignments	Auto MDI/MDI-X detection
Data Speed	1000Mbps
Configuration	Auto-negotiation support
Cable Types	Category 5 or higher UTP
Link Distance	Up to 100 meters

Fiber Optic Interface (Fiber Port)

Signal Compliance	IEEE 802.3z 1000BASE-SX/LX std.
Connector	SFP for pluggable fiber transceiver
Data Speed	1000Mbps, full duplex
Cable Types	MMF - 50/125, 62.5/125 mm SMF - 9/125 mm
Link Distance	MMF up to 500m SMF -model dependent
Eye Safety compliance	IEC825 Class 1

PoE (Power over Ethernet)

Standard	IEEE 802.3af PD (Powered Device)
Power Reception	TP port RJ-45 Pin 1,2,3,6 or Pin 4,5,7,8
Input Voltage	36 ~ 57VDC via Cat.5
Power Classification	Class 1

DC Power Input

Interface	DC Jack (-D6.3mm/+D2.0mm)
Operating Voltages	DC input +6.7V ~ +57V
Power Consumption	max 2W @+7.5VDC input
Power Supply Options	External AC-DC power adapters Input options: AC 100V/120V/230V/240V Rated output: DC7.5V 500mA min.
Powered by USB	via USB-to-DC-Plug cable (optional) on DC input jack

Mechanical

Dimension (base)	W 108mm x D 72.5mm x H 23mm
Housing	Enclosed metal with no fan
Weight	205g

LED Indicators

PWR	ON	Power on
	OFF	Power off
SFP	ON	SFP transceiver is installed.
	OFF	No SFP transceiver is installed.
LINK	ON	Copper-fiber link up
	OFF	Copper-fiber link down
	BLINK	Copper-fiber link with data traffic
OL	ON	Fiber port optical signal detected
	OFF	Fiber port no optical signal

Environmental

Operating Temperature	-5 ~ 55°C
Storage Temperature	-40 ~ 85°C
Relative Humidity	5% ~ 90%

Approval

FCC	Part 15 Class B
CE/EMC	EMI EN50081-1 Class B, EMS EN55024
Safety	IEC60950 (CE/LVD)

2. Installation

2.1 Unpacking

Check that the following components have been included:

- Installation guide (or contained in the product CD)
- M7250P Media Converter

If any item is missing or damaged, please contact VERSITRON.

2.2 Safety Cautions

To reduce the risk of bodily injury, electrical shock, fires, and damage to the product, observe the following precautions.

- Do not service any product except as explained in your system documentation.
- Opening or removing covers may expose you to electrical shock.
- Only a trained service technician should service components inside these compartments.
- If any of the following conditions occur, unplug the product from the electrical outlet and replace the part or contact your trained service provider:
 - The power cable, extension cable, or plug is damaged.
 - An object has fallen into the product.
 - The product has been exposed to water.
 - The product has been dropped or damaged.
 - The product does not operate correctly when you follow the operating instructions.
- Do not push any objects into the openings of your system. Doing so can cause fire or electric shock by shorting out interior components.
- Operate the product only from the type of external power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult your service provider or local power company.

2.3 Mounting the Device

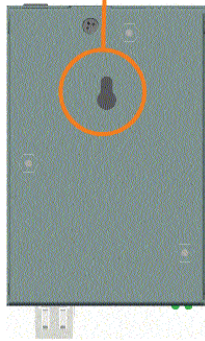
Desktop Mounting

The media converter can be mounted on a desktop or shelf. Make sure that there is proper heat dissipation from and adequate ventilation around the device. Do not place heavy objects on the device.

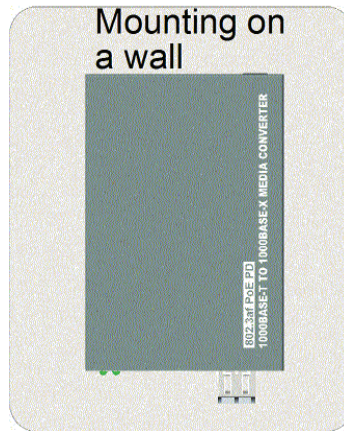
Wall Mounting

The media converter also can be mounted on a wall. On bottom of the device, wall mounting hole is provided for wall mounting.

Mounting hole on bottom case



Mounting on a wall

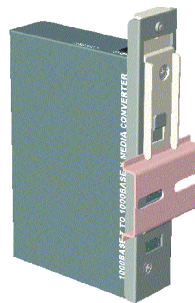


Din-rail Mounting

For a Din-Rail chassis, the media converter can support mounting on a Din-Rail. An optional Din-Rail bracket, DRB-1 can be purchased separately. The following figures show an example after bracket installation:



Din-Rail mounting bracket

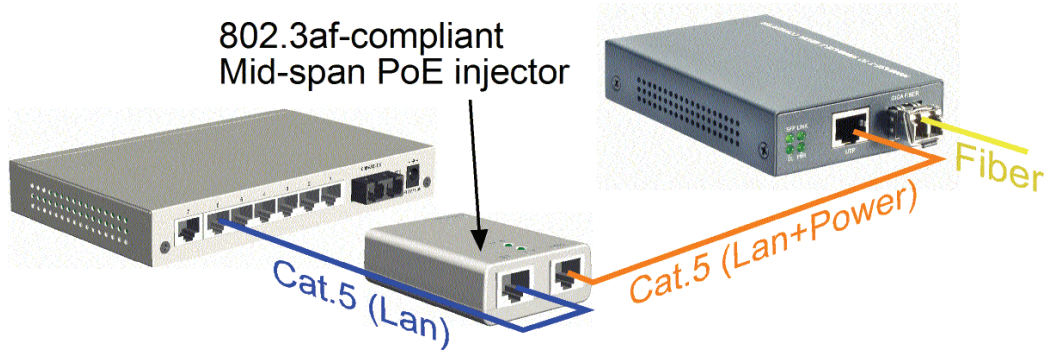


Din-Rail installation

2.4 Powered by PoE over Cat.5

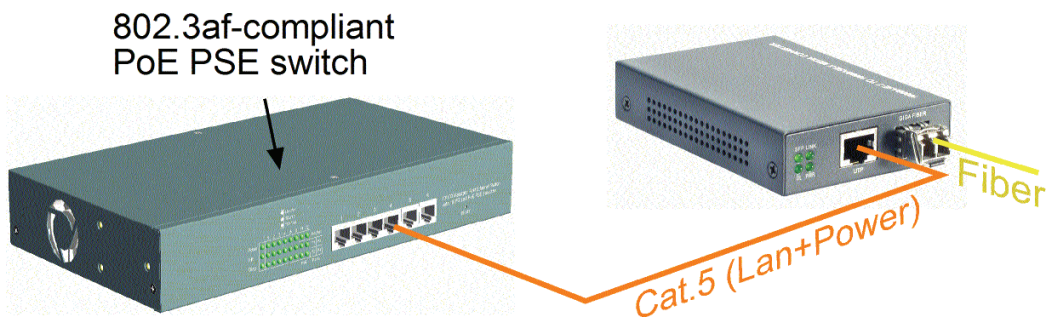
Power supply by a Mid-Span PoE Injector

The following figure illustrates the converter being powered by PoE delivered from a remote mid-span PoE injector over Cat.5.



Power supply by a PoE PSE Switched Port

The following figure illustrates the converter being powered by PoE delivered from a remote PoE PSE switch over Cat.5.



Note:

1. The Cat.5 used can be the standard Cat.5 cable for Ethernet connection.
2. Check the power LED on the converter to see whether the power is received on the Cat.5.
3. For compatibility, the remote PoE PSE used must be IEEE 802.3af compliant.

2.5 Powered by External Power Adapter

The converter can support being powered by an external power adapter as an alternative when PoE power is not available on Cat.5. Before you begin the installation, check the AC voltage of your area. The AC power adapter, which is used to supply the DC power for the unit should have the AC voltage matching the commercial power voltage in your area.

The AC Power Adapter Specifications



AC input power: AC power voltage of your area,
Rated input options -
AC120V/60Hz, AC230V/50Hz,
AC100V/50-60Hz, Rated AC240V/50Hz
Rated output- DC7.5V 500mA min.

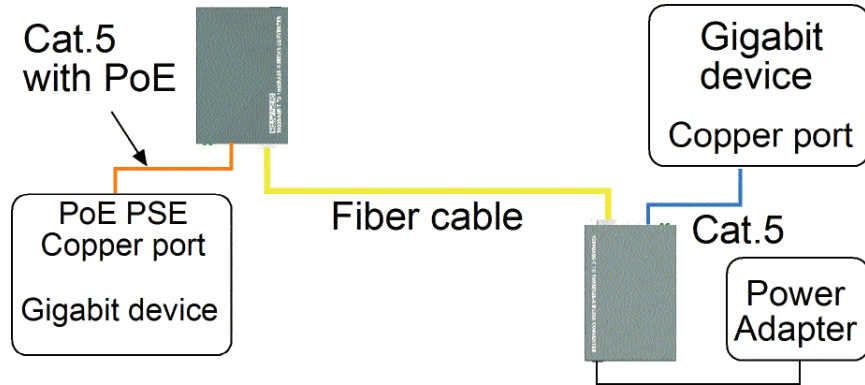
Steps to apply the power to the converters are:

1. Connect power adapter DC plug to the DC input jack located on the back of the converter before connecting to the AC outlet.
2. To ensure against accidental disconnection, tie the DC cable with the cable tie located the back of the converter.
3. Connect the power adapter to the AC outlet.
4. Check Power LED indication.

3. Applications

3.1 Extending Connection Distance

Use two media converters connected with an appropriate fiber cable to extend the connection distance between two Gigabit copper devices as shown below:



3.2 Connecting to a Fiber Gigabit Ethernet Port

The converter can also connect to a remote fiber Gigabit Ethernet port over a fiber cable. It extends the connection distance between a copper port and a fiber port as shown below:

