IE-Giga-MiniMc TX/SFP

With LFPT Switch

USER MANUAL

B+B SmartWorx

Powered by ADVANTECH

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FCC RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B computing 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 the user will be required to correct the interference at his own expense. Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

The use of non-shielded I/O cables may not guarantee compliance with FCC RFI limits. This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.

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

ABOUT THIS MANUAL

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ABOUT THE IE-GIGA-MINIMC TX/SFP, W/ LFPT SWITCH

The IE-Giga-MiniMc TX/SFP provides a single conversion between 10/100/1000 Base-T twisted pair and 1000 Base-SX/FX fiber. This device auto negotiates speed and duplex on the copper port and the fiber is fixed at 1000Mbps. Supports jumbo frames up to 10240 MTU.

The IE-Giga-MiniMc TX/SFP is an SFP port-base model, includes one 10/100/1000Mbps RJ-45 connector and one SFP port, designed to support MSA compliant 100Mbps or 1000Mbps SFPs. The device will read the SFP and run at the speed for which the SFP was designed. SFPs can be purchased from B+B SmartWorx to accommodate single-mode or multi-mode fiber in single strand or dual strand configurations.

The IE-Giga-MiniMc TX/SFP includes LFPT, a diagnostic feature that is can be enabled via a DIP switch on the back of the unit. This feature forces a port "down" state on one port when link is lost on the other port. The result is the link fault passes through the device. Understanding LFPT is critical to operating the device. More information, refer to the Link Fault Pass Through (LFPT) section.

INSTALLING IE-GIGA-MINIMC TX/SFP, W/ LFPT SWITCH

The IE-Giga-MiniMc TX/SFP can be installed in the following ways:

- As a stand-alone unit
- DIN rail mounting
- Wall mount bracket
- IE-PowerTray/18 option
- Dual USB cable

As a standalone, the IE-Giga-MiniMc TX/SFP uses a universal external switching power cube with 100 – 240 ±10% VAC input and 5VDC output.

NOTE: Some options require items that are sold separately, available from B+B SmartWorx.

HARDWARE MOUNTING

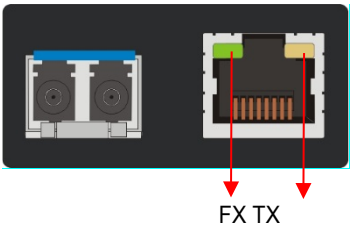
The IE-Giga-MiniMc TX/SFP can be mounted on a DIN rail or using wall mount brackets (shown below).

DIN rail clips (part number# 806-39105) and wall mount brackets (part number# 895-39229) are available for purchase from B+B SmartWorx.

The DIN rail clips include screws to allow installation onto a DIN rail. Install the screws into DIN rail clips, which should be mounted parallel or perpendicular to the DIN rail. Snap the converter onto the clips. To remove the converter from the DIN rail, use a flat-head screwdriver inserted into the slot to gently pry the converter from the rail.

LED OPERATION

The IE-Giga-MiniMc TX/SFP includes two LEDs, located on the RJ-45 connector.



LED functions are as follows (above illustration is representative):

FX LNK/ACT	Glows green when a link is established on the fiber port; blinks green when activity is detected on the fiber port. Off when a fault is detected.
TX LNK/ACT	Glows amber when a link is established on the copper port; blinks amber when activity is detected on the copper port. Off when a fault is detected.

POWERING THE IE-GIGA-MINIMC TX/SFP

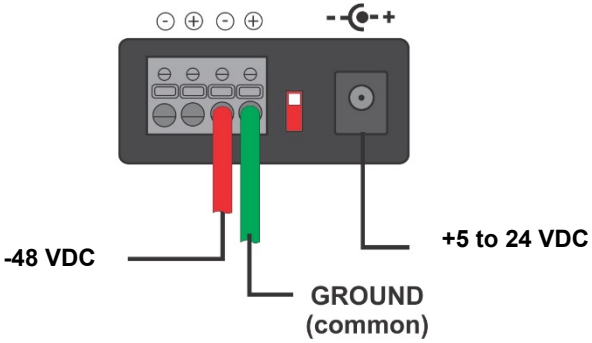
The IE-Giga-MiniMc TX/SFP includes multiple powering options:

- Country-specific, high-reliability AC power adapter (included)
- 4-terminal DC power block
- IE-PowerTray/18 for rack mounting (optional)

NOTE: Some options require items that are sold separately, available from B+B SmartWorx.

DC TERMINAL BLOCK WIRING INSTRUCTIONS

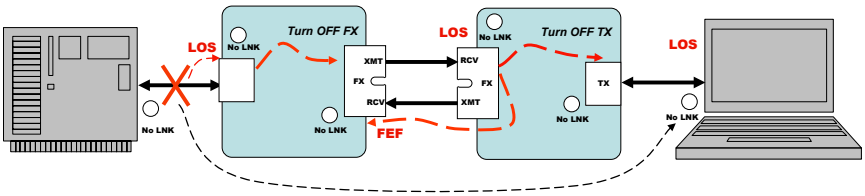
The IE-Giga-MiniMc TX/SFP can be powered via the DC terminal block. From a power source, connect to any one positive and any one negative terminal on IE-Giga-MiniMc TX/SFP.



NOTE: When using stranded wire, the leads must be tinned, and equivalent to a 16 AWG solid conductor. The IE-Giga-MiniMc TX/SFP is protected against mis-wiring; If mis-wired, the IE-Giga-MiniMc TX/SFP will not function. The IE-Giga-MiniMc TX/SFP is internally connected to the negative DC power terminals.

LINK FAULT PASS THROUGH (LFPT)

LFPT is a troubleshooting feature that combines TX and FX LinkLoss from both the local and remote B+B SmartWorx devices. This feature, when enabled, by setting the DSW on the back to ON, will pass a link fault through the device at each segment. Therefore, if a link fails on one side of the media converter, the media converter will force the link down on its link partner.



SPECIFICATIONS

Ethernet Connections

- 10/100/1000 BaseT
- Auto Negotiation
- Auto Cross
- Flow Control
- 10240 MTU
- Full Line-Rate Forwarding

DC Input Voltage

7 to 50 VDC on DC terminal block
5 VDC on DC jack

AC Wall Adapter

100 to 240 ±10% VAC input, 5 VDC output, 2 A max.

Power Tray 18-Slot AC for Miniature Converters (option)

125W, 20A@5V

Power Consumption

600 mA

Operating Temperature

-40 to +85 °C (-40 to +185 °F) DC terminal block
-10 to +50 °C (+14 to +122 °F) with supplied AC wall adapter

Storage Temperature

-35 to +85 °C (-31 to +185 °F)

Humidity

5 to 95% (non-condensing); 0 to 10000 ft. altitude

Dimensions

2.11H x 4.57W x 8.51D cm (0.83H x 1.80W x 3.35D inches)

FIBER OPTIC CLEANING GUIDELINES

Fiber Optic transmitters and receivers are extremely susceptible to contamination by particles of dirt or dust, which can obstruct the optic path and cause performance degradation. Good system performance requires clean optics and connector ferrules.

1. Use fiber patch cords (or connectors, if you terminate your own fiber) only from a reputable supplier; low-quality components can cause many hard-to-diagnose problems in an installation.
2. Dust caps are installed at B+B SmartWorx to ensure factory-clean optical devices. These protective caps should not be removed until the moment of connecting the fiber cable to the device. Should it be necessary to disconnect the fiber device, reinstall the protective dust caps.
3. Store spare caps in a dust-free environment such as a sealed plastic bag or box so that when reinstalled they do not introduce any contamination to the optics.
4. If you suspect that the optics have been contaminated, alternate between blasting with clean, dry, compressed air and flushing with methanol to remove particles of dirt.

ELECTROSTATIC DISCHARGE PRECAUTIONS

Electrostatic discharge (ESD) can cause damage to any product, add-in modules or stand-alone units, containing electronic components. Always observe the following precautions when installing or handling these kinds of products.

1. Do not remove unit from its protective packaging until ready to install.
2. Wear an ESD wrist grounding strap before handling any module or component. If the wrist strap is not available, maintain grounded contact with the system unit throughout any procedure requiring ESD protection.
3. Hold the units by the edges; do not touch the electronic components or gold connectors.
4. After removal, always place the boards on a grounded, static-free surface, ESD pad or in a proper ESD bag. Do not slide the modules or stand-alone units over any surface.

WARNING! Integrated circuits and fiber optic components are extremely susceptible to electrostatic discharge damage. Do not handle these components directly unless you are a qualified service technician and use tools and techniques that conform to accepted industry practices.

SAFETY CERTIFICATIONS

UL/cUL:
Listed to Safety of Information Technology Equipment, including Electrical Business Equipment.

CE Directives:
2014/30/EU – Electromagnetic Compatibility Directive
2011/65/EU – Reduction of Hazardous Substances Directive (RoHS)
2012/19/EU – Waste Electrical and Electronic Equipment (WEEE)
2014/35/EU – Low Voltage Directive

CE Standards:
EMC:
EN 55032: Class B – Electromagnetic Compatibility of Multimedia Equiment – Emission Requirements
EN 55024 – Information Technology Equipment - Immunity Characteristics - Limits and Methods of Measurement
EN 61000-3-2 –Emissions: Harmonic Currents Injected into the AC Mains
EN 61000-3-3 – Emissions: Voltage Fluctuations/Flicker Impressed on AC Mains
Safety:
EN 60950-1 +A11 +A1 +A12 +A2

LISTED 5M80 ITE E156766

Class 1 Laser product, Luokan 1 Laserlaite, Laser Klasse 1, Appareil A'Laser de Classe 1

European Directive 2002/96/EC (WEEE) requires that any equipment that bears this symbol on product or packaging must not be disposed of with unsorted municipal waste. This symbol indicates that the equipment should be disposed of separately from regular household waste. It is the consumer's responsibility to dispose of this and all equipment so marked through designated collection facilities appointed by government or local authorities. Following these steps through proper disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about proper disposal, please contact local authorities, waste disposal services, or the point of purchase for this equipment.

RoHS