

MiniMc TP-TX/FX, TX/FX-SFP with LFPT

Compact Media Converter





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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.

WARRANTY

B&B Electronics warrants to the original end-user purchaser that this product, EXCLUSIVE OF SOFTWARE, shall be free from defects in materials and workmanship under normal and proper use in accordance with B&B Electronics' instructions and directions for a period of six (6) years after the original date of purchase. This warranty is subject to the limitations set forth below.

At its option, B&B Electronics will repair or replace at no charge the product which proves to be defective within such warranty period. This limited warranty shall not apply if the B&B Electronics product has been damaged by unreasonable use, accident, negligence, service or modification by anyone other than an authorized B&B Electronics Service Technician or by any other causes unrelated to defective materials or workmanship. Any replaced or repaired products or parts carry a ninety (90) day warranty or the remainder of the initial warranty period, whichever is longer.

To receive in-warranty service, the defective product must be received at B&B Electronics no later than the end of the warranty period. The product must be accompanied by proof of purchase, satisfactory to B&B Electronics, denoting product serial number and purchase date, a written description of the defect and a Return Merchandise Authorization (RMA) number issued by B&B Electronics. No products will be accepted by B&B Electronics which do not have an RMA number. For an RMA number, contact B&B Electronics at PHONE: (800) 624-1070 (in the U.S and Canada) or (949) 465-3000 or FAX: (949) 465-3020. The end-user shall return the defective product to B&B Electronics, freight, customs and handling charges prepaid. End-user agrees to accept all liability for loss of or damages to the returned product during shipment. B&B Electronics shall repair or replace the returned product, at its option, and return the repaired or new product to the end-user, freight prepaid, via method to be determined by B&B Electronics. B&B Electronics shall not be liable for any costs of procurement of substitute goods, loss of profits, or any incidental, consequential, and/or special damages of any kind resulting from a breach of any applicable express or implied warranty, breach of any obligation arising from breach of warranty, or otherwise with respect to the manufacture and sale of any B&B Electronics product, whether or not B&B Electronics has been advised of the possibility of such loss or damage.

EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, B&B ELECTRONICS MAKES NO OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS B&B ELECTRONICS PRODUCT, INCLUDING WITHOUT LIMITATION ANY SOFTWARE ASSOCIATED OR INCLUDED. B&B ELECTRONICS SHALL DISREGARD AND NOT BE BOUND BY ANY REPRESENTATIONS OR WARRANTIES MADE BY ANY OTHER PERSON, INCLUDING EMPLOYEES, DISTRIBUTORS, RESELLERS OR DEALERS OF B&B ELECTRONICS, WHICH ARE

INCONSISTENT WITH THE WARRANTY SET FORTH ABOVE. ALL IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY LIMITED TO THE DURATION OF THE EXPRESS WARRANTY STATED ABOVE.

Every reasonable effort has been made to ensure that B&B Electronics product manuals and promotional materials accurately describe B&B Electronics product specifications and capabilities at the time of publication. However, because of ongoing improvements and updating of B&B Electronics products, B&B Electronics cannot guarantee the accuracy of printed materials after the date of publication and disclaims liability for changes, errors or omissions.

ABOUT THE MINIMC

The MiniMc provides a single conversion between 10/100 Base-T twisted pair and 100 Base-SX/FX fiber. This device Auto Negotiates speed and duplex on the copper port and the fiber 100Mbps, FDX. There is a fixed fiber and an SFP version available; both support jumbo frames up to 1916 MTU.

The MiniMc, TX/FX is a fixed fiber transceiver model, includes one 10/100Mbps RJ-45 connector and one 100Mbps SC fiber connector which can support Single Mode fiber or Multi Mode fiber in Dual Strand or Single Strand fiber.

The MiniMc, SFP* is an SFP port-based model, includes one 10/100 Mbps RJ-45 connector and one SFP port, which was designed to support MSA-compliant 100Mbps SFPs. One of the models offers a DIP Switch to set LFPT (Link Fault Pass-Through), a diagnostic feature for troubleshooting a fault condition on a segment. Each model will detect the SFP and run at the speed for which the SFP was designed. SFPs can be purchased from B&B Electronics to accommodate Single Mode or Multi Mode fiber in Dual Strand, and Single Strand fiber for Single Mode.

NOTE: CWDM fiber options are available for all models.

INSTALLING THE MINIMC

The MiniMc installs virtually anywhere as a standalone device in locations with extremely limited space. Installation options include:

Velcro strips

DIN rail mounting

A wall mount bracket

A PowerTray/18 for high density applications

Hardware Mounting

The IE-MiniMc 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 through a B&B Electronics Distributor.

DIN Rail Clips

The MiniMc can be mounted with two DIN Rail clips, a hardware option available through B&B Electronics. The DIN Rail clips include screws, to allow the installation onto a DIN Rail. Install the screws into DIN Rail clips, which should be mounted perpendicular to the DIN Rail. Snap the converter onto the clips. To remove the converter from the DIN Rail, use a flat-head screwdriver into the slot to gently pry the converter from the rail.



NOTE

The DIN clips are designed for use on a DIN-35 rail.

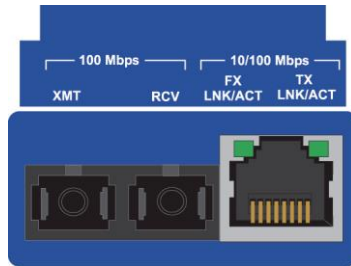
POWERING THE MINIMC

The MiniMc includes multiple powering options:

- A country-specific, high-reliability AC power adapter (included)
- IE-PowerTray/18 for Rack Mounting
- Single USB power cable

LED OPERATION

Each MiniMc includes two LEDs, located on the RJ-45 connector. LED functions are as follows:



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

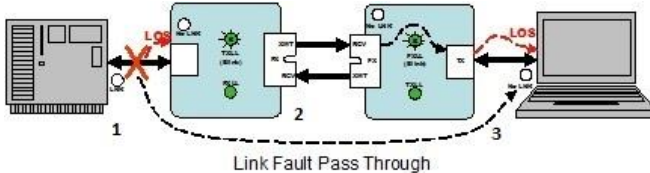
The MiniMc model with LFPT includes a DIP Switch, located on the back of the unit. DIP Switch functions are as follows:



Switch Up LFPT ON

Switch Down LFPT OFF

Link Fault Pass-Through (LFPT) is a troubleshooting feature that combines TX and FX LinkLoss from both the local and remote MiniMc, TX-FX/SFP modules. LFPT is enabled by turning on the DSW on both modules. This feature allows either end of the conversion to detect a link fault occurring at the other end of the media conversion chain.



LFPT requires both TXLL and FXLL to be enabled.

Regardless if there is a break in segment 1, 2 or 3, the link will drop on the switches at both ends. The link fault is passed through the media conversion and is observed at each end. It acts just like it would if the devices were directly connected.

SPECIFICATIONS

Ethernet Connections

- 10/100 BaseT
- Auto Negotiation
- AutoCross
- Flow Control
- 1916 MTU
- Full Line-Rate Forwarding

AC Wall Adapter

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

Operating Temperature

+14°F to +122°F (-10°C to +50°C)

Storage Temperature

-31°C to +167° F (-35°C to +75°C)

Humidity

5% to 95% (non-condensing), 0 – 10,000 ft. altitude

Input Power Consumption (Typical, varies with optical transceiver type)

500 mA @ 5 VDC

Dimensions

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

NOTE

Use only the supplied B&B Electronics wall adapter or USB cable with this product. Using a non-B&B Electronics power source will void the warranty.

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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 Electronics 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 standalone 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 standalone 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: The products described herein comply with the Council Directive on Electromagnetic Compatibility (2004/108/EC) and the Council Directive on Electrical Equipment Designed for use within Certain Voltage Limits (2006/95/EC). Certified to Safety of Information Technology Equipment, Including Electrical Business Equipment. For further details, contact B&B Electronics.



Class 1 Laser product, Luokan 1 Laserlaite,

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.



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