

Giga-McBasic-II Media Converter

USER MANUAL



B+B SMARTWORX

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FCC RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class A 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 A 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 A prescrites dans le Règlement sur le brouillage radioélectrique publié par le ministère des Communications du Canada.

ABOUT THE GIGA-MCBASIC-II

The Giga-McBasic-II provides two conversions between 10/100/1000 Base-T twisted pair and 100/1000 Base-SX/FX fiber. This device auto-negotiates speed and duplex on the copper port and the fiber 100/1000 Mbps, FDX.

The Giga-McBasic-II SFP, SFP port-based model, includes two 10/100/1000 Mbps RJ-45 connectors and one SFP port designed to support MSA-compliant 1000 or 100 Mbps SFPs. A DIP switch enables LFPT (Link Fault Pass-Through), a diagnostic feature for troubleshooting faulty fiber; both support jumbo frames up to 10240 MTU.

The Giga-McBasic-II, TX/FX is a fixed fiber transceiver model, includes two 10/100/100 Mbps RJ-45 connectors and one 1000Mbps SC fiber connector that can support single-mode fiber or multi-mode fiber in dual-strand or single-strand fiber. A DIP switch enables 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 SmartWorx to accommodate Single-Mode or MultiMode fiber in Dual-Strand, and Single-Strand fiber for Single Mode.

NOTE: CWDM fiber options are available for all models.

INSTALLING THE GIGA-MCBASIC-II

The Giga-McBasic-II installs virtually anywhere: as a standalone, table-top device, or using a wallmount bracket.

HARDWARE MOUNTING

The IE-Giga-McBasic-II 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 SmartWorx distributor.

POWERING THE GIGA-MCBASIC-II

The Giga-McBasic-II is powered via an industry standard IEC connector and will support 100 to 240 VAC, 50/60Hz.



LED OPERATION

Each Giga-McBasic-II includes a front LED stack. Functions are as follows:



| | |
|------------------|---|
| FLT | Glows red when a fault has been detected on the unit. |
| LNK | Glows green with a valid link. |
| 1000 Mbps | Glows green when is running at 1000Mbps. |
| PWR | Glows green when unit is powered. |

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



| | |
|----------------|---|
| LNK/ACT | Glows green with a valid link. Blinks green when activity is detected. |
| FDX | Glows amber when port is running full duplex |

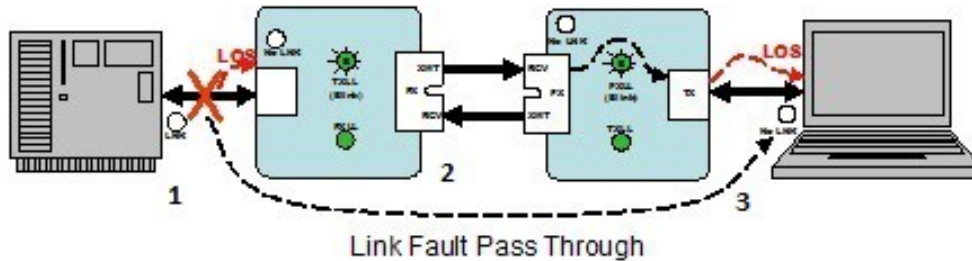
LFPT

The Giga-McBasic-II includes an LFPT DIP s Switch, located on the front 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 Giga-McBasic-II, 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. On the GigaMcBasic- II, LFPT is supported on the connector closest to the DIP switch.



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. Note that dropping link on the supported copper port will disable the fiber port. This will in turn break the connection from the other copper port to the fiber port.

LOW SPD SWITCH ON THE SFP VERSION

The SFP version of the Giga-McBasic-II supports a LOW SPD DIP switch. If a Gigabit SFP is installed in the SFP port, by setting the switch to the On position, it will force the SFP to operate at 100Mbps. This DSW setting is only for the model offering a Fiber SFP port; it is not available on models with fixed fiber ports.

| | |
|------------|-----------------------|
| Switch ON | SFP forced to 100Mbps |
| Switch OFF | SFP not forced |

SPECIFICATIONS**Ethernet Connections**

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

AC Power

Standard IEC connector 100 to 240 VAC

Operating Temperature

-10 to +50 °C (+14 to +122 °F)

Storage Temperature

-35 to +75 °C (-31 to +167 °F)

Humidity

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

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

100-240 VAC, 500mA, 50/60Hz

Dimensions

2.03 x 10.16 x 10.16 cm (0.8H x 4.0W x 4.0D in)

B+B SMARTWORX TECHNICAL SUPPORT

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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 the factory 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 a 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 SmartWorx.



**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.



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