IE-iMcV-ModeConverter

USER MANUAL

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ABOUT THE IE-IMCV-MEDIALINX & -IMCV-MEDIALINX

OVERVIEW

The IE-iMcV-ModeConverter is SNMP-manageable and installs in the modular, SNMP-manageable iMediaChassis series and in the unmanaged MediaChassis series.

The IE-iMcV-ModeConverter is a protocol-independent module with SFP ports that can provide a single conversion between single-mode and multi-mode fiber, single-mode to single-mode, or multi-mode fiber to single strand single-mode fiber. The supported transmission speeds are: 10-155 Mbps and 622-1250 Mbps. Each module includes two SFP ports that can support SFPs with LC connectors. Single-strand fiber versions are also available with SC connectors.

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

CONFIGURATION INSTRUCTIONS

The IE-iMcV-ModeConverter module has user-configurable features (e.g., LinkLoss, High Speed SFP, and Low Speed SFP). Refer to the chart for information on features. Instructions for configuring both managed (via an SNMP-compatible management application such as iView²) and unmanaged modules follow.

MANAGED MODULES

To manage one or more iMcV modules, an SNMP agent must be present in the chassis. The iMediaChassis series, available in 3, 6 or 20 slots in both AC and DC, requires a separate SNMP Management Module. To configure managed modules, install the module first, and then configure it by using the management software. The SNMP management includes an SFP table for both ports if SFPs with DDMI are installed; the SFP table provides information such as temperature, voltage, output power, receive power, vendor serial number, vendor part number and vendor name. The SFP table can be viewed through Module Details within iView².

NOTE: *Management software overrides any hardware settings (e.g., jumper, switch, etc.), so the module must be configured through the software before beginning normal operation. Until a module installed in a managed chassis is configured via the software, it will operate using the hardware configuration.*

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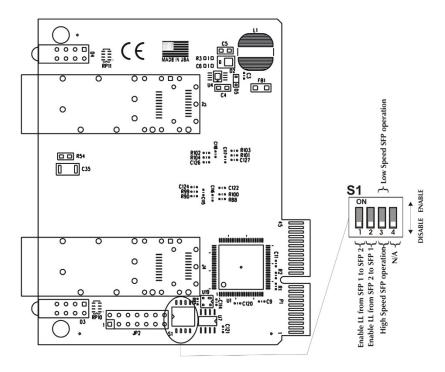
UNMANAGED MODULES

Before beginning installation of the IE-iMcV-ModeConverter, configure it for the desired features. The chart states features and settings.

After configuring the DIP Switches for the desired settings, install the module and connect the appropriate cables (refer to the *Installation* section for more information).

Switch #	Function	Default
1	ON to Enable LL from SFP1 to SFP2.	OFF
2	ON to Enable LL from SFP2 to SFP1.	OFF
3	OFF selects High Speed SFP operation. ON selects Low speed operation.	OFF
4	n/a	OFF

INSTALLATION

The IE-iMcV-ModeConverter module installs in any B+B SmartWorx SNMP-manageable iMediaChassis series or in any MediaChassis. To install an IE-iMcV-ModeConverter module, remove the blank bracket covering the slot where the module is to be installed by removing the screws on the outside edges of the bracket. Slide the IE-iMcV-ModeConverter module into the chassis, via the card guides, until the module is seated securely in the connector. Secure the module to the chassis by tightening the captive screw. Save any blanks removed during installation for future use should configuration requirements change. Install the SFPs necessary for the type of application.

ABOUT LINKLOSS (FXLL) AND SFP SPEED

The IE-iMcV-ModeConverter module includes LinkLoss (FXLL) and SFP speed control.

The FXLL feature is user-selectable through management with the default condition OFF. When a loss of signal is detected on an incoming port, the optical transmitter on the other port is turned OFF. This provides an FXLL carry forward function to alert the IE-iMcV-ModeConverter downstream of the problem. The FXLL feature is bi-directional and can be enabled from SFP1-to-SFP2, from SFP2-to-SFP1, or both at the same time. If FXLL is not enabled, a loss of optical signal on one SFP will force a 25 MHz "keep alive" signal to be transmitted on the other SFP.

The SFP speed DIP Switch allows the end user to select OFF to support high-speed SFP operation for 1.25Gbps. Select ON if installing SFPs that support 155Mbps. The Dual Speed function is only supported by Dual Speed SFPs.

NOTE: *Both SFP ports must be populated with the same speed capability. Combining a 1.25Gbps SFP with a 155Mbps SFP will not function properly.*

LED OPERATION

Each IE-iMcV-ModeConverter module features diagnostic LEDs that provide information on features and ports.

PWR	**Power**—indicates power is provided to the module. _Glows green when unit powered on and running. _Off when unit is not powered (not operating).
FLT	**Fault**—indicates a FAULT condition. Glows red when SFP is missing. _Off when there are no alarms/alerts. _Blinks red if there is an SFP alarm.
SD	**Signal Detect**—indicates detection of fiber transmission. _Glows green when fiber signal detected. _Glows red when fiber loss of signal detected.
MSA	**Multi-Source Agreement**—indicates that an MSA-compliant SFP has been installed. _Glows green when SFP detected. _Off if SFP is not detected.
MIS	**Mismatch**—indicates that two different speeds of SFPs have been installed. IE-iMcV-ModeConverter only supports SFPs of the *same* speed. _Glows red when there is a speed mismatch. _Off when speed is OK.
FLT	**Fault**—indicates a FAULT condition. _Glows red when SFP is missing. _Off when there are no alarms/ alerts. _Blinks red if there is an SFP alarm.
SD	**Signal Detect** —indicates detection of fiber transmission. _Glows green when fiber signal is detected. _Glows red when fiber loss of signal is detected
MSA	**Multi-Source Agreement** —indicates that an MSA-compliant SFP has been installed. _Glows green when SFP is detected. _Off if SFP is not detected.

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INSTALLATION TROUBLESHOOTING

If the MSA LEDs do not light, check that the same speed has been installed. The MIS LED should indicate this condition.

SPECIFICATIONS

Power Consumption (Typical)

662 mA @ 5V

Operating Temperature

-40 to +85 °C (-40 to +185 °F)

Storage Temperature

-40 to +85 °C (-40 to +185 °F)

Humidity

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

Dimensions

Single slot iMcV module

B+B SMARTWORX TECHNICAL SUPPORT

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STATEMENTS, GUIDELINES, PRECAUTIONS

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.

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.

STANDARDS/COMPLIANCES

CE

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

The products described herein comply with the Council Directive on Electromagnetic Compatibility (2004/108/EC).

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

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