

# IE-iMcV-MuxDemux/4 CWDM System

## Operation Manual



### Limited Lifetime Warranty

---

Effective for products of B&B Electronics shipped on or after May 1, 2013, B&B Electronics warrants that each such product shall be free from defects in material and workmanship for its lifetime. This limited lifetime warranty is applicable solely to the original user and is not transferable.

This warranty is expressly conditioned upon proper storage, installation, connection, operation and maintenance of products in accordance with their written specifications.

Pursuant to the warranty, within the warranty period, B&B Electronics, at its option will:

1. Replace the product with a functional equivalent;
2. Repair the product; or
3. Provide a partial refund of purchase price based on a depreciated value.

Products of other manufacturers sold by B&B Electronics are not subject to any warranty or indemnity offered by B&B Electronics, but may be subject to the warranties of the other manufacturers.

Notwithstanding the foregoing, under no circumstances shall B&B Electronics have any warranty obligations or any other liability for: (i) any defects resulting from wear and tear, accident, improper use by the buyer or use by any third party except in accordance with the written instructions or advice of the B&B Electronics or the manufacturer of the products, including without limitation surge and overvoltage conditions that exceed specified ratings, (ii) any products which have been adjusted, modified or repaired by any party other than B&B Electronics or (iii) any descriptions, illustrations, figures as to performance, drawings and particulars of weights and dimensions contained in the B&B Electronics' catalogs, price lists, marketing materials or elsewhere since they are merely intended to represent a general idea of the products and do not form part of this price quote and do not constitute a warranty of any kind, whether express or implied, as to any of the B&B Electronics' products.

THE REPAIR OR REPLACEMENT OF THE DEFECTIVE ITEMS IN ACCORDANCE WITH THE EXPRESS WARRANTY SET FORTH ABOVE IS B&B ELECTRONIC'S SOLE OBLIGATION UNDER THIS WARRANTY. THE WARRANTY CONTAINED IN THIS SECTION SHALL EXTEND TO THE ORIGINAL USER ONLY, IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL SUCH WARRANTIES AND INDEMNITIES ARE EXPRESSLY DISCLAIMED, INCLUDING WITHOUT LIMITATION (I) THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND OF MERCHANTABILITY AND (II) ANY WARRANTY THAT THE PRODUCTS ARE DO NOT INFRINGE OR VIOLATE THE INTELLECTUAL PROPERTY RIGHTS OF ANY THIRD PARTY. IN NO EVENT SHALL B&B ELECTRONICS BE LIABLE FOR LOSS OF BUSINESS, LOSS OF USE OR OF DATA INTERRUPTION OF BUSINESS, LOST PROFITS OR GOODWILL OR OTHER SPECIAL, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES. B&B ELECTRONIC SHALL DISREGARD AND NOT BE BOUND BY ANY REPRESENTATIONS, WARRANTIES OR INDEMNITIES MADE BY ANY OTHER PERSON, INCLUDING WITHOUT LIMITATION EMPLOYEES, DISTRIBUTORS, RESELLERS OR DEALERS OF B&B ELECTRONIC WHICH ARE INCONSISTENT WITH THE WARRANTY, SET FORTH ABOVE.

## Table of Contents

Limited Lifetime Warranty.....	ii
About the IE-iMcV-MuxDemux/4 CWDM System .....	1
Installing an iMcV-Module .....	2
Connecting the IE-iMcV-MuxDemux/4.....	3
Specifications.....	4
B&B Electronics Technical Support.....	5
Fiber Optic Cleaning Guidelines.....	6
Electrostatic Discharge Precautions.....	7
Certifications.....	8

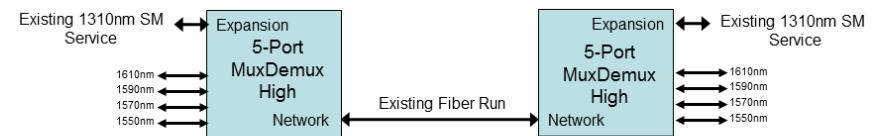
## About the IE-iMcV-MuxDemux/4 CWDM System

The IE-iMcV-MuxDemux/4 has six ports:

Ports	1470-1530nm-LC	1500-1610nm-LC
1	1470nm Fiber Port	1550nm Fiber Port
2	1490nm Fiber Port	1570nm Fiber Port
3	1510nm Fiber Port	1590nm Fiber Port
4	1530nm Fiber Port	1610nm Fiber Port
5	Expansion Port to Daisy Chain Multiple Mux	Expansion Port to Daisy Chain Multiple Mux
6	Network Port	Network Port

The IE-iMcV-MuxDemux/4 is a dual wide module that provides 4 channels of CWDM (Coarse Wavelength Division Multiplexing), an expansion port to allow existing 1310nm fiber, in order to cascade additional units, and a network port. For customers deploying high-end gigabit switches, the IE-iMcV-MuxDemux/4 can provide the growing need for greater bandwidth on fiber. This Industrial Ethernet module has an extended temperature of -40C to +85C.

### Common Application



Add four additional services to an existing 1310nm SM line

## Installing an iMcV-Module

The IE-iMcV-MuxDemux/4 installs in B&B Electronics' iMediaChassis series or in any MediaChassis/2. It occupies 2 slots as it is dual wide.

The IE-iMcV-MuxDemux/4 can be installed in a 2 slot unmanaged chassis:

- IE-MediaChassis/2-AC
- IE-MediaChassis2-DC
- MediaChassis/2-AC
- MediaChassis/2-DC
- MuxDemuxChassis/2

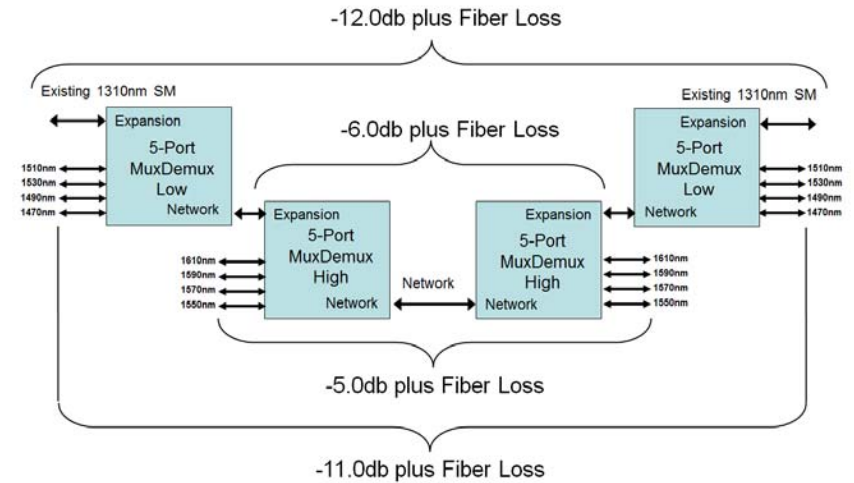
### NOTE

All modules are hot-swappable.

To install an IE-iMcV-MuxDemux/4

1. 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.
2. Slide the IE-iMcV-MuxDemux/4 into the chassis, via the cardguides, until the module is seated securely in the connector.
3. Secure the module to the chassis by tightening the captive screw.
4. Save any "blanks" removed during installation for future use if the configuration requirements change.
5. The MuxDemuxChassis/2 is a 2 slot chassis without a power supply, as the IE-iMcV-MuxDemux/4 does not require power to function.

## Connecting the IE-iMcV-MuxDemux/4



<b>Ports 1-4</b>	The IE-iMcV-MuxDemux/4 allows 4 devices of differing wavelengths, transmits the wavelengths along a single fiber, then separates the wavelengths, enabling the fiber optic receivers to receive a signal of the correct wavelength.
<b>Port 5</b>	Port 5 is an expansion port to allow multiple IE-iMcV-MuxDemux/4 to be daisy chained, or to carry a legacy 1310nm SM fiber link.
<b>Port 5 Network Port</b>	This port allows two IE-iMcV-MuxDemux/4 to be connected back to back there are no diagnostic LEDs for the IE-iMcV-MuxDemux/4.

## Specifications

---

### Fiber Optic (Insert Loss)

3.0dB for CWDM systems using an optical band between 1450nm and 1610nm

NOTE
Unit does not require power to operate!

### Operating Temperature

-40°F to +185°F (-40°C to +85°C)

### Storage Temperature

-40°F to +185°F (-40°C to +85°C)

### Humidity

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

### Dimensions

Dual-wide, two slot chassis module

## B&B Electronics Technical Support

---

**Tel:** (800) 346-3119 (in the U.S. and Canada)

Monday-Friday, 7:00am-7:00pm CST

+353 91 792444 (Europe)

Monday through Friday 8:00am - 5:00pm GMT

**Fax:** (815) 433-5109 U.S. and Canada

+353 91-792445 Europe

**E-Mail:** [support@bb-elec.com](mailto:support@bb-elec.com) U.S. and Canada

[techsupport@bb-elec.com](mailto:techsupport@bb-elec.com) Europe

**Web:** [www.bb-elec.com](http://www.bb-elec.com)

## 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 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.

---

## Certifications

---

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.



## International Headquarters

B&B Electronics  
707 Dayton Road  
Ottawa, IL 61350 USA

**Phone** (815) 433-5100 — **General Fax** (815) 433-5105

Email: [support@bb-elec.com](mailto:support@bb-elec.com)

Website: [www.bb-elec.com](http://www.bb-elec.com)

## European Headquarters

B&B Electronics  
Westlink Commercial Park  
Oranmore, Co. Galway, Ireland

**Phone** +353 91-792444 — **Fax** +353 91-79244S5

Email: [techSupport@bb-elec.com](mailto:techSupport@bb-elec.com)

Website: [www.bb-elec.com](http://www.bb-elec.com)

**ISO 9001:2008  
REGISTERED**



© 2013 B&B Electronics. All rights reserved.

The information in this document is subject to change without notice. B&B Electronics assumes no responsibility for any errors that may appear in this document. IE-iMcV-MuxDemux/4 is a trademark of B&B Electronics. Other brands or product names may be trademarks and are the property of their respective companies.

**Document Number 44-80131-00 A1**

**November 2013**