

iConverter® FF User Manual



Description

This user manual covers the iConverter 100FF, OC3FF, OC12FF, 1000FF and xFF modules.

The iConverter fiber-to-fiber chassis plug-in media converters provide single-mode (SM) to multimode (MM), dual fiber to single-fiber, wavelength conversion and fiber extension. Fixed-fiber models are available for Ethernet, Fast Ethernet, Gigabit Ethernet and SONET/SDH applications. The Small Form Pluggable (SFP) model is protocol transparent and also supports Fibre Channel.

The FF modules can be used in an unmanaged or managed applications. To be managed, an Network Management Module (NMM2) or a module with integrated management must be installed in the same chassis.

See data sheet for available models

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Specifications

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Description	iConverter FF Fiber-to-Fiber Converter			
Standard	Protocol Transparent up to 8.50Gbps Ethernet (100BASE-X, 1000BASE-X) SONET (OC-3, OC-12, OC-48), SDH (STM-1, STM-4, STM-16) Fibre Channel (1x, 2x, 4x, 8x), CPRI line rates (up to 6.144Gbps)			
Regulatory	UL, CE, FCC Class A, NEBS Level 3, UKCA			
Environmental	RoHS, WEEE, REACH			
Frame Size	Unlimited			
Data Rate	xFF: 1Mbps to 8.50Gbps (depending on SFP) 100FF: 1Mbps to 155Mbps 100FF: 500Mbps to 1250Mbps OC3FF: 1Mbps to 155Mbps OC12FF: 622Mbps to 1250Mbps			
Port Types	Fiber: ST, SC or SFP (depending on model)			
Cable Types	Fiber: Multimode: 50/125μm, 62.5/125μm Single-mode: 9/125μm			
DC Power Requirements	DC Input: (Backplane)	3.3VDC, 0.5A @ 3.3VDC		
Dimensions W x D x H	0.85" x 4.5" x 2.8	" (21.6 mm x 114.3 mm x 71.1 mm)		
Weight	8.0 oz. (226.8 grams)			
Temperature	Commercial: Wide: Extended: Storage:	0 to 50°C -40 to 60°C -40 to 75°C (xFF only) -40 to 80°C		
Humidity	5 to 95% (non-condensing)			
Altitude	-100m to 4,000m			
MTBF (hrs)	1,300,00 (xFF), 1,100,000 (all others)			
Warranty	Lifetime warranty with 24/7/365 free Technical Support			

LINK MODES:

The iConverter fiber-to-fiber media converters support two different link modes. Figure 2 illustrates the different link modes. Figure 2(a) illustrates normal operation (no fault conditions).

Normal Operation

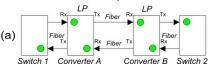


Figure 2a Link Mode

The Link Propagate (LP) mode transmits a link signal only when a link signal is detected. Utilizing this configuration, a loss of a receive link signal will continue to propagate through to the next port in the network. See Figure 2b.

Fiber Fault with Link Propagate

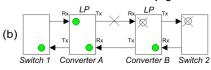


Figure 2b Link Mode

The Remote Fault Detection + Link Propagate (RFD+LP) mode transmits a link signal only when a link signal is detected. When a loss of link is detected, this mode will loop back and propagate forward the fault condition. See Figure 2c.

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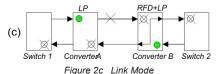
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Warranty

This product is warranted to the original purchaser (Buyer) against defects in material and workmanship for a period of two (2) years from the date of shipment. A lifetime warranty may be obtained by the original purchaser by registering this product at www.omnitron-systems.com/ support within ninety (90) days from the date of shipment. During the warranty period, Omnitron will, at its option, repair or replace a product which is proven to be defective with the same product or with a product with at least the same functionality.

NOTE: Connecting two modules set to RFD is an illegal setting and will cause unpredictable conditions.

Fiber Fault with RFD+LP Link Mode



Front Panel DIP-switches

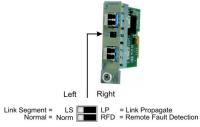


Figure 3: Front Panel DIP-switches

Link Segment/Link Propagation "LS/LP"

This DIP-Switch has no effect. The LS function has been disabled to enhance compatibility with third-party fiber optic devices. iConverter fiber-to-fiber media converters operate in LP mode.

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For warranty service, the product must be sent to an Omnitron designated facility, at Buyer's expense. Omnitron will pay the shipping charge to return the product to Buyer's designated US address using Omnitron's standard shipping method.

Limitation of Warranty

The foregoing warranty shall not apply to product malfunctions resulting from improper or inadequate use and/or maintenance of the equipment by Buyer, Buyer-supplied equipment, Buyer-supplied interfacing, unauthorized modifications or tampering with equipment (including removal of equipment cover by personnel not specifically authorized and certified by Omnitron), or misuse, or operating outside the environmental specification of the product (including but not limited to voltage, ambient temperature, radiation, unusual dust, etc.), or improper site preparation or maintenance.

No other warranty is expressed or implied. Omnitron specifically disclaims the implied warranties of merchantability and fitness for any particular purpose.

The remedies provided herein are the Buyer's sole and exclusive remedies. Omnitron shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any legal theory.

Environmental Notices

The equipment covered by this manual must be disposed of or recycled in accordance with the Waste Electrical and Electronic Equipment Directive (WEEE Directive)

Remote Fault Detection Switch "RFD"

When in the Remote Fault Detection "RFD" position, the Remote Fault Detection mode is enabled and LP mode is disabled. When in the Normal "Norm" position (factory setting), Remote Fault Detection is disabled and LP mode is enabled.

Mounting and Cable Attachment

iConverter modules are hot-swappable and can be installed into any chassis in the iConverter family.

Caution: Use proper ESD protection to reduce the risk of damage to your equipment.

a. Carefully slide the module into an open slot in the chassis. Align the module with the installation guides and ensure that the module is firmly seated against the backplane. Secure the module by fastening the front panel thumbscrew (push in and turn clockwise to tighten) to the chassis front. Verify the "Pwr" LED is ON (indicating the chassis is powered).

b. When using a model with a SFP port, insert the SFP fiber transceivers into the SFP receptacles on the module.

NOTE: The release latch of the SFP transceiver must be in the closed (up) position before insertion.

c. Connect an appropriate multimode or single-mode fiber cables to the fiber ports of the installed module. It is important to ensure that the transmit (TX) is attached to the receive side of the device at the other end and the receive (RX) is attached to the transmit side. Single-fiber (SF) media converter models operate in pairs. The

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of the European Community directive 2012/19/EU on

waste electrical and electronic equipment (WEEE)

which, together with the RoHS Directive 2015/863/

EU, for electrical and electronic equipment sold in the

EU after July 2019. Such disposal must follow national

legislation for IT and Telecommunication equipment in

accordance with the WEEE directive: (a) Do not dispose

waste equipment with unsorted municipal and household

waste. (b) Collect equipment waste separately. (c) Return

equipment using collection method agreed with Omnitron.

The equipment is marked with the WEEE symbol shown

to indicate that it must be collected separately from other

types of waste. In case of small items the symbol may

be printed only on the packaging or in the user manual.

If you have guestions regarding the correct disposal of

equipment go to www.omniton-systems.com/support or

The equipment is marked with the WEEE

e-mail to Omnitron at intlinfo@omnitron-systems.com.

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omnitron-systems.com.

TX wavelength must match the RX wavelength at the other end and the RX wavelength must match the TX wavelength at the other end.

Software Controlled Switch Settings

DIP-Switch settings are available via software control when a FF module is installed in an iConverter chassis with a Management Module.

The settings can be controlled via Serial Console/Telnet Console, NetOutlook Management Software or other third-party SNMP-based clients:

For more information on using and configuring the Advanced Features, register for access to the NetOutlook Management Software user manual.

LED Indicators

The FF modules do not generate data, it only passes the data it receives from the connected equipment. Both transceivers must be installed and connected in order for the module to pass data traffic. P1/P2 Lk/Rx LED indicates an optical connection has been established. It does not indicate the presence of data traffic. Check the attached equipment for confirmation of data traffic.

	LED	Color	Description
	Pwr	Amber	OFF: Module is not powered ON: Module has power
	P1 "Lk/Rx"	Green	OFF: No fiber link ON: Port is detecting link
	P2 "Lk/Rx"	Green	OFF: No fiber link ON: Port is detecting link

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Safety Warnings and Cautions

ATTENTION: Observe precautions for handling electrostatic discharge sensitive devices.

WARNING: Potential damage to equipment and personal injury.



WARNING: Risk of electrical shock.

Customer Support Information

Phone: (949) 250-6510 Fax: (949) 250-6514

Address: Omnitron Systems Technology, Inc.

38 Tesla

Irvine, CA 92618, USA

Email: support@omnitron-systems.com
URL: www.omnitron-systems.com

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