Omnitron Systems

iConverter® FF User Manual

DESCRIPTION

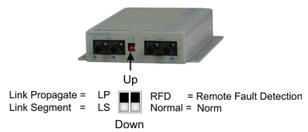
This user manual covers the iConverter 100FF, OC3FF, OC12FF, 1000FF and xFF modules.

The iConverter standalone fiber-to-fiber media converters provide single-mode (SM) to multimode (MM), dual fiber to single-fiber, wavelength conversion and fiber extension. The Small Form Pluggable (SFP) model is protocol transparent and also supports Fibre Channel.

See data sheet for available models.

DIP-SWITCH SETTINGS

Front Panel DIP-switches



Link Segment/Link Propagation "LS/LP"

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

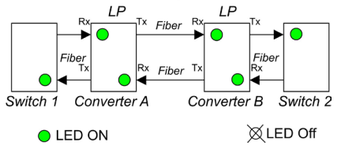
Remote Fault Detection Switch "RFD"

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.

Link Modes

The iConverter fiber-to-fiber media converters support two different link modes.

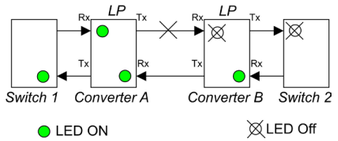
Normal Operation



Link Propagate

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.

Fiber Fault with Link Propagate

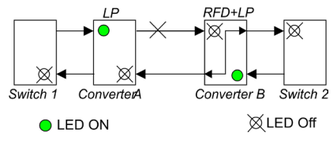


Remote Fault Detection

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.

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

Fiber Fault with RFD+LP Link Mode



MOUNTING AND CABLE ATTACHMENT

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

1. Use the four mounting holes on the module to secure the module to the wall. The module can accommodate #6 screws (not included).

Installation of the module should be such that the air flow in the front, back, side and top vents of the switch are not compromised or restricted.

For AC models:

To power the unit using the AC/DC adapter, connect the AC/DC adapter to an AC outlet. Then connect the barrel plug at the end of the wire on the AC/DC adapter to the 2.5mm DC barrel connector (center-positive) on the unit. Confirm that the unit has powered up properly by checking the power status LED located on the front of the unit.

For DC Models:

To power the unit using a DC power source, prepare a power cable using a two conductor insulated wire (not supplied) with 12AWG to 20AWG thickness. Cut the power cable to the length required. Strip approximately 3/8 of an inch of insulation from the power cable wires. Connect the power cables to the unit by fastening the stripped ends to the DC power connector.

Connect the power wires to the DC power source. The Power LED should indicate the presence of power.

WARNING: Note the wire colors used in making the positive and negative connections. Use the same color assignment for the connection at the DC power source.

2. 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.

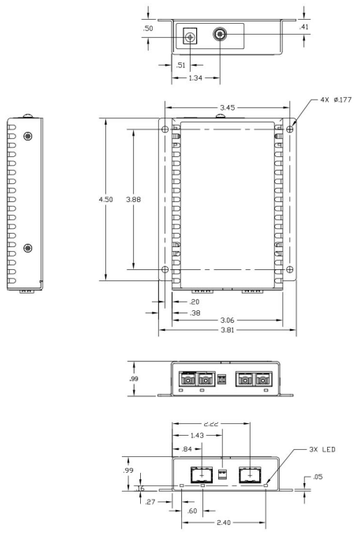
3. Connect an appropriate multimode or single-mode fiber cables to the fiber ports of the installed module. It is important to ensure that the transmit (TX) is attached to the receive side of the device at the other end and the receive (RX) is attached to the transmit side. Single-fiber (SF) media converter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

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.

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

MECHANICAL



SPECIFICATIONS

Standard	Protocol Transparent
Regulatory	Safety: UL, CE, NEBS Level 3, UKCA EMI: FCC Class A ACT: TAA, BAA, NDAA
Environmental	RoHS, WEEE, REACH
Frame Size	Unlimited
Data Rate	xFF: 1Mbps to 8.50Gbps (depending on SFP) 100FF: 1Mbps to 155Mbps 1000FF: 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
AC Power Requirements	AC Adapter (2.5mm barrel): 100 - 240VAC/50 - 60Hz, 0.05A @ 120VAC
DC Power Requirements	DC Input (2.5mm barrel or 2-pin Terminal): 5 - 32VDC, 0.3A @ 9VDC (1.0A max)
Dimensions W x D x H	3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
Weight	1.0 lb. (453.6 grams) - without AC Adapter 1.5 lbs. (680.4 grams) - with AC Adapter
Temperature	Commercial: 0 to 50°C Wide: -40 to 60°C Extended: -40 to 75°C (xFF only) Storage: -40 to 80°C
Humidity	5 to 95% (non-condensing)
Altitude	-100m to 4,000m
MTBF (hrs)	1,100,000 - Module 250,000 - Module with US AC Adapter 100,000 - Module with Universal AC Adapter
Warranty	Lifetime warranty with 24/7/365 free Technical Support

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.omniton-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.

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) 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 questions regarding the correct disposal of equipment go to www.omniton-systems.com/support or e-mail to Omnitron at intlinfo@omnitron-systems.com.

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

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