Omnitron Systems

miConverter® 10/100 Media Converter

User Manual

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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.

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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.omnitron-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.

Technical Support:

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General

This User Manual covers the following model numbers:

Fiber Type and Distance	Connector Types		Tx Lambda (nm)	Rx Lambda (nm)
	ST	SC		
MM/DF/5km	1100-0-p	1102-0-p	1310	1310
SM/DF/30km	1101-1-p	1103-1-p	1310	1310
SM/DF/60km	1101-2-p	1103-2-p	1310	1310
SM/DF/120km	-	1103-3-p	1550	1550
MM/SF/5km	-	1110-0-p	1310	1550
MM/SF/5km	-	1111-0-p	1550	1310
SM/SF/20km	-	1110-1-p	1310	1550
SM/SF/20km	-	1111-1-p	1550	1310
SM/SF/40km	-	1110-2-p	1310	1550
SM/SF/40km	-	1111-2-p	1550	1310
SM/SF/60km	-	1110-3-p	1310	1550
SM/SF/60km	-	1111-3-p	1550	1310

Model numbers are followed by **-pt**, where **p** indicates the specific type of power option and **t** indicates the temperature range. See the data sheet for more information.

Powering Options (-p)

-1	Barrel Connector and US Power Adapter, 100 - 120VAC, 60Hz
-2	Barrel Connector and Universal Power Adapter, 100-240VAC, 50-60Hz (requires AC power cord)
-3	Barrel Connector and European Power Adapter, 100-240VAC, 50-60Hz
-4	Barrel Connector and UK Power Adapter, 100-240VAC, 50-60Hz
-5	Barrel Connector and Australian Power Adapter, 100-240VAC, 50-60Hz
-6	USB Power Adapter Cable
-8	Barrel Connector and US/Japan Power Adapter, 100-240VAC, 50-60Hz

Description

The miniature miConverter 10/100 is a rate-switching 10/100 RJ-45 copper to 100BASE-X fiber media converter that provides cost-effective fiber extension and connectivity.

The 100BASE-X fiber port operates in Full-Duplex mode and supports single-mode or multimode fiber with ST or SC fiber connectors. Single-fiber models feature

Bi-Directional fiber and support distances of up to 60km. The various fiber model options are described in the table on the first page.

The RJ-45 port can auto-negotiate by detecting the speed and duplex-mode of the connected device. Upon connection to the UTP device, the RJ-45 port speed adjusts to either 10Mbps or 100Mbps, and the duplex-mode adjusts to either Full-Duplex or Half-Duplex.

WARNING!
Before inserting the Power Adapter, verify that the power on the unit is appropriate for your AC line voltage source.

Powering Modes

AC power adapter is available in US, Universal and Country/Region specific models. Country/Region specific models feature optional interchangeable connectors, allowing for compatibility with electrical outlet types found around the world.

This product should only be used with Omnitron Supplied Power Unit.

To power the module using the USB cable, connect the USB Standard Type A connector to a USB port on the computer. Then connect the connector at the other end of the cable (barrel connector) to the connector on the back of the miConverter. Confirm that the module has powered up properly by checking the power status LED located on the top of the module.

To power the module using the AC/DC adapter, connect the AC/DC adapter to the AC outlet. Then connect the barrel connector at the end of the cable to the back of the miConverter. Confirm that the module has powered up properly by checking the power status LED located on the top of the module.

Installation Procedure

The miConverter 10/100 can be quick-mounted using the included Velcro® strips, or permanently mounted using the optional wall-mounting kit (P/N 4381).

Attach the RJ-45 port of the miConverter 10/100 to a 10BASE-T or 100BASE-TX PoE capable Ethernet device, via a category 5 or better cable.

Attach the fiber port of the miConverter 10/100 to a 100BASE-X Fast Ethernet device, via a fiber cable of appropriate mode and type.

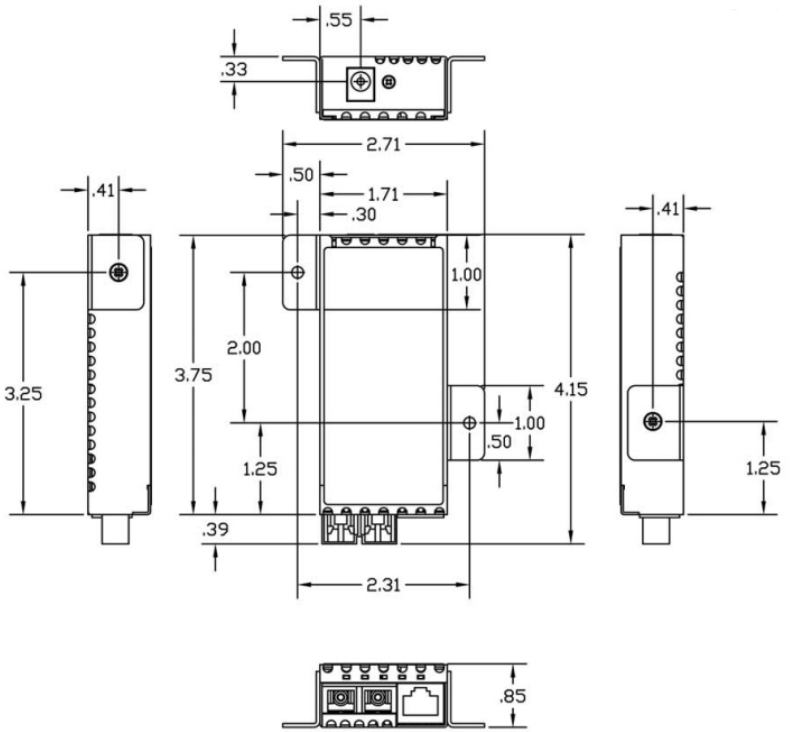
When connecting the dual-fiber models, the miConverter transmitter (Tx) must attach to the receiver side of its link partner; the receiver (Rx) must attach to the transmitter.

When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other. Based on this guideline, the SF media converter models must be used in pairs, such as the 1110-1 matched with the 1111-1.

LED Indicators

LED	Color	Description
Power “Pwr”	Amber	Off: No Power On: Power applied
Fiber Link “F/O”	Green	Off: No fiber link On: Fiber link Blinking: Data activity
RJ-45 Link “UTP”	Green	Off: No RJ-45 link On: RJ-45 link Blinking: Data activity
RJ-45 Speed “100”	Green	Off: Linked at 10M when UTP LED is ON On: Linked at 100M when UTP LED is ON
RJ-45 Duplex “FDX”	Green	Off: Half-Duplex On: Full-Duplex

Mechanical



Specifications

Standard Compliances	IEEE 802.3	
Regulatory Compliances	Safety: EMI: ACT:	UL, cUL, CE, UKCA FCC Class A TAA, BAA, NDAA
Environmental	RoHS, REACH, WEEE	
Frame Size	Up to 1,536 bytes	
Port Types	Copper: Fiber:	10/100BASE-T (RJ-45) 100BASE-X (ST, SC)
Cable Types	Copper: Fiber:	EIA/TIA 568A/B, Cat 5 UTP and higher Multimode: 50/125µm, 62.5/125µm Single-mode: 9/125µm
AC Power Requirements	AC Adapter:	100 - 240VAC/50 - 60Hz 0.03A @ 120VAC (max)
DC Power Requirements	DC Input: (AC Adapter)	5.0 to 12.0VDC 0.5A @ 5VDC, 0.28A @ 9VDC 2.5mm Barrel Connector
Dimensions W x D X H	Standalone	1.71” x 4.10” x 0.84” (43.4 mm x 104.1 mm x 21.3 mm)
Weight	Module: With AC adapter:	4 oz. (113.4 grams) 12 oz. (340.2 grams)
Temperature	Commercial: Wide:	0 to 50°C -40 to 60°C
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m	
MTBF (hrs)	Module: With US AC Adapter:	1,160,000 206,000
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

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