

miConverter GX

1000BASE-T to 1000BASE-X Gigabit Ethernet Media Converter

The *miConverter* Gx is a miniature 1000BASE-T UTP copper to 1000BASE-X fiber Gigabit Ethernet media converter. The *miConverter* Gx provides cost-effective fiber connectivity from Gigabit switches to diagnostic equipment, desktop and laptop computers.

The *miConverter* Gx is the first Gigabit media converter powered by a USB port (1.0, 1.1, and 2.0). An optional USB Power Adaptor Cable is available, which reduces the module's weight and eliminates the need to tether the *miConverter* Gx to an electrical outlet.

The Plug-and-Play capability of the *miConverter* Gx simplifies fiber-to-the-laptop and fiber-to-the-desktop deployments. The *miConverter* Gx features auto-negotiation, which allows connected network devices to auto-negotiate their Duplex and Pause modes. The *miConverter* Gx also provides manual configuration with built-in DIP-switches for compatibility with legacy Gigabit fiber products. These features ensure the *miConverter* Gx is compatible with the widest range of Gigabit fiber equipment.

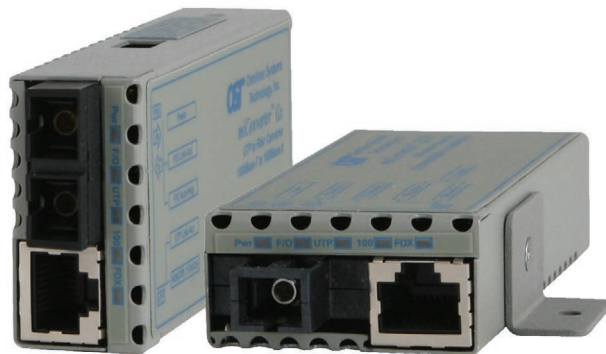
The *miConverter* Gx is available in multimode dual fiber, single-mode dual fiber and single-mode single-fiber options. It supports SC and ST connectors with fiber link distances up to 550m over MM fiber, 80km over SM fiber and 40km over single-fiber.

The *miConverter* Gx supports industry standard wavelengths depending on the fiber type. For multimode dual fiber, the *miConverter* Gx uses 850nm (Sx). When using single-mode dual fiber models with distances of up to 34km, the *miConverter* Gx uses 1310nm (Lx). For distances of up to 80km, the *miConverter* Gx uses 1550nm (Zx).

Single-mode single-fiber *miConverter* Gx models use 1310nmTx/1550nmRx and 1550nmTx/1310nmRx wave division multiplexing. The SF converters must be used in pairs where the transmit (Tx) wavelength of one converter matches the receive (Rx) wavelength of the other.

The LED indicators provide diagnostic data such as availability of power, port activity, link status, and Duplex modes to assist in network installation and maintenance.

The *miConverter* Gx combines Gigabit Ethernet connectivity with the lightweight design and low-power consumption required for both permanent deployment and mobile service networks.



Shown with optional wall mount bracket

KEY FEATURES

- Miniature Gigabit Ethernet media converter
- Supports 1000BASE-T, 1000BASE-X and the IEEE 802.3 specification
- Plug-and-Play capability
- USB power via optional Power Adapter Cable
- Supports Full/Half-Duplex fiber optic auto-negotiation
- Multimode and single-mode fiber options
- LED indicators for UTP and fiber status
- Domestic, Universal and Country/Region specific power supply options
- Wall-mount with optional mounting brackets or an 18-Module Powered Chassis
- Small and lightweight (5 ounces)
- Cost-effective
- Lifetime Warranty and free 24/7 Technical Support

SPECIFICATIONS

Model Type	<i>miConverter GX</i>	
Description	1000BASE-TUTP to 1000BASE-X Fiber Converter with Auto-negotiation	
Protocols	802.3ab, 1000BASE-T, 1000BASE-X	
Compliance	UL, CE, FCC Class A	
Cable Types	UTP: EIA/TIA 568A/B, Cat 5 and higher Fiber: Multimode: 50/125, 62.5/125, 100/140µm Single-mode: 9/125µm	
Connector Types	UTP: RJ45 Fiber: Dual fiber: SC, ST Single-fiber: SC	
LED Display	Pwr, FO-Lk/Act, UTP-Lk/Act, FO-AN/MAN, HDX/FDX	
Dimensions	W:1.71" x L:4.10" x H:0.84"	
Weight	without power adapter	5 oz.
	with USB power adapter	6 oz.
	with AC power adapter [US]	12 oz.
Power Requirements	DC Power	0.5A @ 5VDC
	DC Power Connector	2.5mm DC Jack
	AC Power Adapter [US]	100-120VAC/60Hz 0.03A @ 120VAC
	AC Power Adapter [Universal]	100-240VAC/50-60Hz 0.03A @ 120VAC
Temperature	Standard	0 to +50°C
	Storage	-50 to +80°C
Humidity (non-condensing)	5 to 95%	
Altitude	-100m to 4000m	
MTBF (hrs)	without power adapter	810,000
	with US and Country/Region Specific power adapter	250,000
	with Universal power adapter	100,000

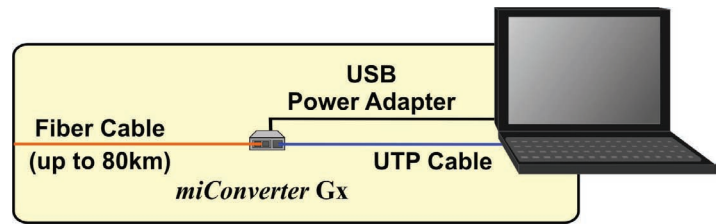
The external AC power supply is available in US, Universal and Country/Region specific models. Country/Region specific models feature optional interchangeable connectors, allowing for compatibility with electrical outlet types found around the world.

The *miConverter Gx* can be mounted in the *miConverter* 18-Module Power Chassis to consolidate individual modules into a rack-mount form factor that can be deployed where multiple fiber optic links are distributed from UTP switch equipment. The chassis powers converter modules with barrel-style DC connectors, and is available with a single universal AC, 24VDC or 48VDC internal power supply. This compact, high-density chassis is 1.5 rack units high, and can be mounted in a standard 19" or 23" equipment rack.

Weighing less than 5 oz. with the USB Power Adapter Cable, the *miConverter Gx* can easily fit into any pocket or laptop carrying case. It can also be attached to portable equipment using the included Velcro® strips or wall-mounted using the optional wall-mounting bracket kit.

APPLICATION EXAMPLE

The application diagram depicts a laptop computer connected to a fiber network.



The *miConverter Gx* connects to the laptop via two cables. The USB Power Adapter Cable powers the *miConverter Gx* by drawing electrical current from the USB port (1.0 or 2.0) of the laptop. The UTP cable links the laptop network port and the *miConverter Gx* copper port. The *miConverter Gx* converts the 1000BASE-T UTP signal to a 1000BASE-X fiber signal, which can extend the fiber link up to 80km. Power from the USB port of the computer is automatically shut off when the computer is powered down, turning off the *miConverter Gx* when fiber conversion is no longer needed.

The cost-effective *miConverter Gx* is ideal for connecting large numbers of workstations in unmanaged fiber-to-the-desktop Gigabit Enterprise network applications. These applications can include remote edge locations where power outlets are at a premium, such as portable, temporary facilities. The *miConverter Gx* is also an excellent solution for construction and military fiber-to-the-laptop applications where Gigabit fiber connectivity is required and local power is not available.

ORDERING INFORMATION

Multimode [MM] or Single-Mode [SM] / Dual Fiber [DF] or Single-Fiber [SF]	Distances	ST Connector	SC Connector	Tx λ (nm)	Rx λ (nm)	Min. Tx Power (dBm)	Max. Tx Power (dBm)	Min. Rx Sense (dBm)	Max. Rx Sense (dBm)	Link Budget (dBm)
MM/DF	220/550m	1200-0-x	1202-0-x	850	850	-10	-4	-17	-3	7
SM/DF	12km	1201-1-x	1203-1-x	1310	1310	-9.5	-3	-19.5	-3	10
SM/DF	34km	-	1203-2-x	1310	1310	-5	0	-23	-3*	18
SM/DF	80km	-	1203-3-x	1550	1550	-5	0	-23	-3*	18
SM/SF	20km	-	1210-1-x	1310	1550	-9.5	-3	-20	-3	10.5
SM/SF	20km	-	1211-1-x	1550	1310	-9.5	-3	-20	-3	10.5
SM/SF	40km	-	1210-2-x	1310	1550	-3	0	-20	-3*	17
SM/SF	40km	-	1211-2-x	1550	1310	-3	0	-20	-3*	17

When choosing power options, replace (-x) in the model number with the suffix number that corresponds to the selected power supply.

-1 US Power Supply - 120Volt / 60Hz

-2 Universal Power Supply (requires AC power cord) - 100-240Volt / 50-60Hz

-3 European Power Supply - 100-240Volt / 50-60Hz

-4 UK Power Supply - 100-240Volt / 50-60Hz

-5 Australian Power Supply - 100-240Volt / 50-60Hz

-6 USB Power Adapter -8 US/JPN Power Supply - 100-240Volt / 50-60Hz

-8 US/JPN Power Supply - 100-240Volt / 50-60Hz

Example: 1203-3-6 = SM/DF/80KM with a USB Power Adapter Cable

For power supplies -3, -4 -5 and -8, country/region specific clips are used to provide the necessary power connection.

When using single-fiber media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other. Contact Omnitron for other fiber options and operational temperature ranges.

* A minimum attenuation of 3db is required for these models.

18-Module AC Powered Chassis	1020-1
18-Module 48DVC Powered Chassis	1025-1
18-Module 24VDC Powered Chassis	1026-1
Wall Mounting Hardware Kit	1091-0
USB Power Adapter	9130-2
US Domestic AC Power Adapter	9113-PS
Universal AC Power Adapter (requires AC power cord)	9115-PS
AC Country/Region Specific Power Adapter w/ European Connector Clip	9116-PS-3
AC Country/Region Specific Power Adapter w/ UK Connector Clip	9116-PS-4
AC Country/Region Specific Power Adapter w/ Australian Connector Clip	9116-PS-5
AC Country/Region Specific Power Adapter w/ Japanese Connector Clip	9116-PS-8
Country/Region Specific European Connector Clip**	9116-3
Country/Region Specific UK Connector Clip**	9116-4
Country/Region Specific Australian Connector Clip**	9116-5
Country/Region Specific Japanese Connector Clip**	9116-8

**All spare Connector Clips can be used with AC Power Adapters 9116-PS-3, 9116-PS-4, 9116-PS-5 and 9116-PS-8

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