iConverter GX/F
1000X to 100FX Managed Ethernet Media Converter / Repeater

The *iConverter* GX/F managed media converter is a member of the modular *iConverter* product family. The GX/F provides single-mode to multimode fiber conversion and rate conversion between 1000BASE-X and 100BASE-FX.

The *iConverter* GX/F extends network distances by connecting multimode fiber network devices over single-mode fiber cabling. It regenerates and retimes the fiber optic signal, and multiple GX/F repeaters can be cascaded to extend total network distances. The GX/F converts between Gigabit Ethernet fiber and Fast Ethernet fiber enabling seamless integration between Gigabit Ethernet and legacy Fast Ethernet networks.

iConverter GX/F models are available with multimode, single-mode, and single-fiber options with SC, MT-RJ, and LC connectors. The *iConverter* GX/F features two 10/100 Ethernet backplane ports to provide connectivity to adjacent modules for network expansion and for in-band connectivity to an iConverter Network Management Module.

The *iConverter* GX/F supports the IEEE 802.1Q and 802.1p standards, and the 802.1Q Tag VLAN packet tagging and untagging protocol.

Whether the GX/F is deployed at the customer premises (CP) or at the Central Office (CO), the VLAN technology enables Service Providers to offer their customers secure Ethernet Virtual Connections which are isolated from other customer's data as well as from the Service Provider's management traffic. It also enables the Service Provider to deploy edge equipment at the customer premises while maintaining secure separation of Service Provider network management and customer data traffic flows, providing intrusion protection to the Service Provider.

The GX/F features Port VLAN, which allows complete control of traffic flow between both fiber ports and chassis backplane ports on a module, and Port Access Control, which facilitates enabling and disabling of individual ports. The GX/F also supports reporting of MIB statistics. Statistics are available for 32 variables per port, reporting a wide range of real-time packet statistics to provide performance and operational monitoring.

The GX/F features user-selectable Link Propagate, Link Segment, Remote Fault Detection and Symmetrical Fault Detection modes to facilitate quick fault detection, isolation and reporting.
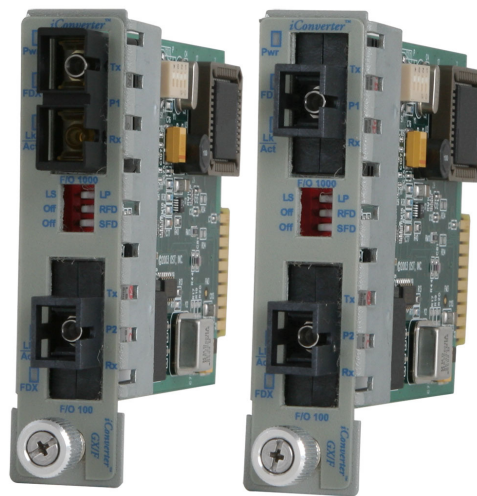
KEY FEATURES

■ 1000BASE-SX multimode or 1000BASE-LX single-mode to 100Base-FX single-mode or multimode

■ Supports multimode to single-mode and single-fiber to dual fiber with SC, LC and MT-RJ connectors

■ Features Port VLAN, Tag VLAN, Port Access Control and MIB statistics

■ Full-Duplex auto-negotiation or manual negotiation

■ Ethernet backplane ports for connectivity to adjacent *iConverter* modules

■ Supports 1000BASE-X (IEEE 802.3z) and 100BASE-FX (IEEE 802.3u)

■ User-selectable link fault detection modes facilitate quick fault detection, isolation and reporting

■ Management is available with the addition of a management module to the chassis

■ SNMP management via *NetOutlook*® provides real-time port and module information, remote parameter configuration and trap notification

■ Modules are hot-swappable in 19-Module, 5-Module, 2-Module or 1-Module chassis

■ Lifetime Warranty and free 24/7 Technical Support

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iConverter GX/F modules are hot-swappable and can be mounted in a 19-Module (2U high) or 5-Module (1U high) rack-mountable chassis (19-inch or 23-inch) with any combination of redundant AC, 24VDC or 48VDC power supplies. It can also be mounted in a 2-Module AC or 18 to 60VDC powered chassis, or in a 1-Module AC/DC powered chassis.
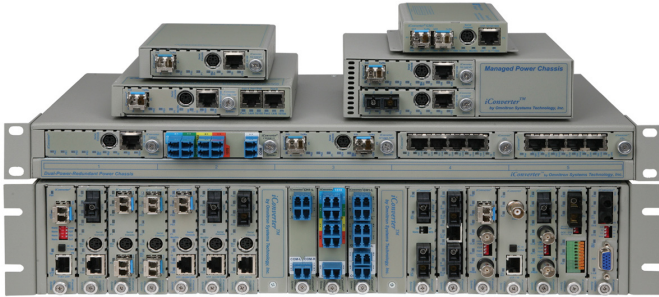
The *iConverter* Multi-Service Platform consists of Network Interface Devices, T1/E1 multiplexers, CWDM multiplexers and managed media converters that combine to deliver Carrier Ethernet and TDM services over fiber or CWDM wavelengths. This flexible architecture supports a wide variety of configurations for scalable and reliable fiber connectivity in Service Provider and Enterprise networks.

Management is accomplished by using a Network Management Module (NMM2) or a media converter with integrated management (such as an *iConverter* 10/100M2) that provides monitoring, remote configuration and trap notification. The management module can be accessed via SNMP, Telnet and via a serial port. The SNMP-based management is accomplished via Omnitron's intuitive, graphic-oriented *NetOutlook* management software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

Some of the real-time GX/F parameters that can be monitored include duplex mode (Half or Full), link and data receive status. Other parameters include module type and model, hardware and software revisions and serial numbers and a user-defined identifier.

Remote configuration of the GX/F module enables setting of VLAN and other software-only configured parameters as well as overriding of physical DIP-switch settings. Overriding of physical DIP-switch settings enables setting of parameters such as auto-negotiation, Half/Full-Duplex, Link modes and enabling backplane ports. It should be noted that the most recent configuration change, either DIP-switch or software will remain in effect until changed. In case of power removal, the configuration is reloaded from the NMM2 provided that the NMM2 "Soft Reload" option is selected.

The GX/F supports the launching of SNMP trap notifications for events such as module insertion and removal, port link-up and link-down, and hardware or software configuration changes. Trap monitoring of specific events can be selectively enabled or disabled by the network administrator.

SPECIFICATIONS

Model Type	GX/F
Protocols	1000BASE-SX/LX, 100BASE-FX
Fiber Connectors	SC, MT-RJ, LC, Single-Fiber SC
Controls	BP Enable, LS/LP, RFD, F/O Auto/Man, F/O FDX/HDX
LED Displays	Power, F/O link, FDX/HDX
Dimensions	W:0.85"" x D:4.5"" x H:2.8""
Weight	8 oz
Compliance	UL, CE, FCC Class A
Power Requirement	1.5A @ 3.3VDC (typical)
Temperature	Standard: 0 to 50° C
	Wide: - 40 to 60° C
	Storage: - 40 to 80° C
Humidity	5 to 95% (non-condensing)
Altitude	- 100m to 4000m
MTBF (hrs)	730,000

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Model Type	Fiber Type (Port 1 / Port2)	Distance Port 1	Distance Port 2	Connector Types			Fiber Type Port 1 Port2	Tx Wavelength (nm)	Rx Wavelength (nm)	Min. Tx Power (dBm)	Max. Tx Power (dBm)	Min. Rx Sensitivity (dBm)	Max. Rx Sensitivity (dBm)	Link Budget (dBm)
				LC/LC	MT-RJ / MT-RJ	SC/SC								
GX/F Dual Fiber	MM / SM	220 / 550m [1]	30km	-	8564-01	8562-01	MM	850	850	-10	-4	-17	-3	7
							SM	1310	1310	-15	-8	-31	-8	16
	MM / SM	220 / 550m [1]	60km	-	-	8562-02	MM	850	850	-10	-4	-17	-3	7
							SM	1310	1310	-5	0	-31	-3*	26
	MM / SM	220 / 550m [1]	120km	-	-	8562-03	MM	850	850	-10	-4	-17	-3	7
							SM	1550	1550	-5	0	-31	-3*	26
	SM / MM	12km	5km	-	8565-10	8563-10	SM	1310	1310	-9.5	-3	-19.5	-3	10
							MM	1310	1310	-24	-14	-31	-14	7
	SM / SM	12km	30km	8567-11	8565-11	8563-11	SM	1310	1310	-9.5	-3	-19.5	-3	10
							SM	1310	1310	-15	-8	-31	-8	16
	SM / SM	12km	60km	8567-12	-	8563-12	SM	1310	1310	-9.5	-3	-19.5	-3	10
							SM	1310	1310	-5	0	-31	-3*	26
	SM / SM	12km	120km	8567-13	-	8563-13	SM	1310	1310	-9.5	-3	-19.5	-3	10
							SM	1550	1550	-5	0	-31	-3*	26
	MM / MM	220 / 550m [1]	5km	-	8564-00	8562-00	MM	850	850	-10	-4	-17	-3	7
							MM	1310	1310	-24	-14	-31	-14	7
GX/F Port 1 Dual Fiber Port 2 Single-Fiber	MM / SM	220 / 550m [1]	20km	-	-	8562-05	MM	850	850	-10	-4	-17	-3	7
							SM	1310	1550	-15	-5	-30	-3	15
	MM / SM	220 / 550m [1]	40km	-	-	8562-06	MM	850	850	-10	-4	-17	-3	7
							SM	1310	1550	-8	0	-30	-3*	22
	MM / SM	220 / 550m [1]	20km	-	-	8562-07	MM	850	850	-10	-4	-17	-3	7
							SM	1550	1310	-15	-5	-30	-3	15
	MM / SM	220 / 550m [1]	40km	-	-	8562-08	MM	850	850	-10	-4	-17	-3	7
							SM	1550	1310	-8	0	-30	-3*	22
	SM / SM	12km	20km	-	-	8563-15	SM	1310	1310	-9.5	-3	-19.5	-3	10
							SM	1310	1550	-15	-5	-30	-3	15
	SM / SM	12km	40km	-	-	8563-16	SM	1310	1310	-9.5	-3	-19.5	-3	10
							SM	1310	1550	-8	0	-30	-3*	22
	SM / SM	12km	20km	-	-	8563-17	SM	1310	1310	-9.5	-3	-19.5	-3	10
							SM	1550	1310	-15	-5	-30	-3	15
	SM / SM	12km	40km	-	-	8563-18	SM	1310	1310	-9.5	-3	-19.5	-3	10
							SM	1550	1310	-8	0	-30	-3*	22

For wide temperature (-40 to 60ºC), add a "W" to the end of the model number. Consult factory for extended temperature (-40 to +75ºC) models.
When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other.
*A minimum of 3dB of attenuation is required for these models.
[1] 62.5/125µm, 100/140µm multimode fiber up to 220m. 50/125µm multimode fiber up to 550m. Refer to the fiber cable manufacturer for multimode distance specifications.

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