

iConverter

***iConverter*[®] GX/X**

1000X to 1000X Gigabit Ethernet Switch and Media Converter

The *iConverter* GX/X managed two-port Gigabit Ethernet switch and media converter is a member of the modular *iConverter* product family. The GX/X provides single-mode to multimode fiber conversion for extending network distances up to 80km by connecting multimode fiber network devices over single-mode fiber cabling. The GX/X also functions as a repeater, regenerating and re-timing the fiber optic signal. Multiple GX/X can be cascaded to extend total network distances.

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

Whether deployed at the Customer Premises (CP) or at the Central Office (CO), the VLAN-based technology enables Service Providers to offer to 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.

The GX/X 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/X 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.

iConverter GX/X models are available with multimode, single-mode, and single-fiber options. They support SC, MT-RJ, and LC connectors. The *iConverter* GX/X 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 GX/X features user-selectable Link Propagate, Link Segment, Remote Fault Detection and Symmetrical Fault Detection modes to facilitate quick fault detection, isolation and reporting.



- Two-port 1000BASE-X fiber switch and media converter
- Two Gigabit Ethernet fiber ports
- Supports multimode, single-mode, and single-fiber with SC, MT-RJ and LC connectors
- Features Port VLAN, Tag VLAN, Port Access Control and MIB statistics
- Full-Duplex auto-negotiation or manual negotiation
- Two 10/100 Ethernet backplane ports for connectivity to adjacent *iConverter* modules
- Supports 1000BASE-X (IEEE 802.3z)
- 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

MANAGEMENT

iConverter GX/X 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. They can also be mounted in a 2-Module AC or 18 to 60VDC powered chassis, or in a 1-Module AC/DC powered chassis.

Management is accomplished by using a Network Management Module (NMM) 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.

SPECIFICATIONS

Model Type	GX/X
Protocols	1000BASE-SX/LX
Fiber Connectors	SC, MT-RJ, LC, Single-Fiber SC
Controls	BP Enable, LS/LP, RFD, SFD, F/O Auto/Man
LED Displays	Power, FO 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	2.2A @ 3.3VDC (typical)
Temperature	Standard: 0 to 50° C Storage: -40 to 80° C
Humidity	5 to 95% (non-condensing)
Altitude	-100m to 4000m
MTBF (hrs)	640,000

Some of the real-time GX/X 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, serial numbers and a user-defined identifier.

The GX/X supports reporting of MIB statistics. Statistics are available for 32 variables per port, reporting real-time packet statistics to provide performance and operational monitoring.

Remote configuration of the GX/X 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, Link modes and enabling the backplane ports. In the case of power removal, the DIP-switch override configuration is reloaded from the NMM provided that the NMM "Soft Reload" option is selected.

The GX/X 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.

ORDERING INFORMATION

Model Type	Fiber / Media Type Port 1 / Port 2	Distance Port 1	Distance Port 2	Connector Types			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)
				SC	MT-RJ	LC							
GX/X Dual Fiber	MM / MM	220 / 550m ¹	220 / 550m ¹	8542-00	8544-00	-	850	850	-10	-4	-17	-3	7
	MM / SM	220 / 550m ¹	12km	8543-10	-	-	850 / 1310	850 / 1310	-10 / -9.5	-4 / -3	-17 / -19.5	-3 / -3	7 / 10
	SM		12km	8543-11	8545-11	8547-11	1310	1310	-9.5	-3	-19.5	-3	10
	SM		34km	8543-22	-	8547-22	1310	1310	-5	0	-23	-3*	18
	SM		80km	8543-33	-	8547-33	1550	1550	-5	0	-23	-3*	18
GX/X Single-Fiber	MM / SM	220 / 550m ¹	20km	8550-01	-	-	850 / 1310	850 / 1550	-10 / -9.5	-4 / -3	-17 / -20	-3 / -3	7 / 10.5
	MM / SM	220 / 550m ¹	20km	8551-01	-	-	850 / 1550	850 / 1310	-10 / -9.5	-4 / -3	-17 / -20	-3 / -3	7 / 10.5

Consult the factory for wide temperature (-40 to 60° C) and extended temperature (-40 to +75° C) 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.
 The GX/X cannot be installed in the 1-Slot chassis (Models 8240 and 8241) because of power and heat constraints.

Trademarks are owned by their respective companies. *iConverter* is a registered trademark of Omnitron Systems Technology, Inc. *NetOutlook* is a trademark of Omnitron Systems Technology, Inc. Specifications subject to change without notice. ©2003-2007 Omnitron Systems Technology, Inc. All rights reserved.