iConverter GX/T2

10/100/1000BASE-T to 100/1000X Fiber Media Converter

The iConverter GX/T2 is a 10/100/1000BASE-T copper to 100BASE-X or 1000BASE-X fiber media converter, and is available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter GX/T2 supports jumbo frames up to 10,240 bytes.

The GX/T2 is used for conversion from a 10/100/1000 copper to Fast Ethernet or Gigabit Ethernet fiber, and supports both 100BASE-X and 1000BASE-X Small Form Pluggable (SFP) transceivers. This simplifies inventory management in large campus networks with multiple data rates, and demarcation extension for different Ethernet telecom services. SFP transceivers also enable adaptability to different fiber types and distances, and support Coarse Wave Division Multiplexing (CWDM) technology to increase the bandwidth capacity of fiber infrastructure.

The GX/T2 fixed fiber models support 1000BASE-X over multimode and single-mode dual fiber with ST, SC and LC connectors; and single-mode single-fiber with SC connectors.

The RJ-45 port supports 10/100/1000 and Half/Full-Duplex auto-negotiation with both hardware and software manual override controls.

The GX/T2 features user-selectable Link Propagate and Link Segment modes to facilitate quick fault detection, isolation and reporting.

Advanced features on the chassis plug-in module include IEEE 802.1Q VLAN and 802.1p Quality of Service prioritization standards, and Port Access Control, which provides the ability to enable or disable individual ports to control delivery of services. The GX/T2 also supports port-level MIB statistics reporting real-time packet statistics to provide performance and operational monitoring.

The GX/T2 chassis plug-in module also features two Gigabit Ethernet backplane ports for connectivity to adjacent iConverter modules in a chassis for multi-port and multi-service configurations.

The hot-swappable plug-in module can be mounted in a 19 or 5-Module chassis with any combination of redundant AC and DC power supplies. It can also be mounted in a 2-Module AC or DC powered chassis, or in a 1-Module chassis with AC or DC power input.

The standalone GX/T2 can be wall-mounted and is DC powered. It can be ordered with an external AC to DC power adapter, or it can be DC powered using a 2-pin terminal connector.

SFPs not included

KEY FEATURES

- Multirate 10/100/1000 copper to 100/1000X Ethernet Media Converter
- Conforms to 10BASE-T, 100BASE-TX, 1000BASE-T, 100BASE-X[1] and 1000BASE-X specifications
- Fixed fiber port supports multimode and single-mode dual fiber with ST, SC and LC connectors; and single-mode single-fiber with SC connectors
- Supports dual fiber and single-fiber 100BASE-FX or 1000BASE-X SFP transceivers for standard or CWDM wavelengths
- RJ-45 port supports 10/100/1000 and Half/Full-Duplex auto-negotiation and MDI/MDIX auto-crossover
- 10,240 byte jumbo frames
- Supports QoS, Port Access Control and MIB statistics
- VLAN with 802.1ad Q-in-Q for Carrier and Enterprise Ethernet Deployments
- Bandwidth control (rate limiting) in 64Kb increments
- 1000Mbps Ethernet backplane ports for port expansion and connectivity to adjacent iConverter modules
- User-selectable link fault detection modes facilitate quick fault detection, isolation and reporting
- Management of the plug-in module 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
- Commercial (0 to 50°C) and wide (-40 to 60°C) temperature ranges
- Lifetime Warranty and free 24/7 Technical Support

[1] 100BASE-X is supported on SFP models only

SPECIFICATIONS

Description	***iConverter* GX/T2** 10/100/1000BASE-T Copper to 100/1000BASE-X Fiber Media Converter	
Standard Compliances	IEEE 802.3, 802.1Q, 802.1p, 802.1ad RFC 2819 (RMON)	
Regulatory Compliances	UL, CE, FCC Class A, RoHS2, WEEE, REACH	
Frame Size	Up to 10,240 bytes	
Port Types	Copper: Fiber:	10/100/1000BASE-T (RJ-45) 100BASE-X (SFP) 1000BASE-SX (ST, SC, SFP) 1000BASE-LX (ST, SC, SFP) 1000BASE-ZX (SC, SFP) 1000BASE-BX (SC, SFP)
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: (US)	100 - 120VAC/60Hz 0.06A @ 120VAC (max)
	AC Adapter: (Universal)	100 - 240VAC/50 - 60Hz 0.06A @ 120VAC (max)
DC Power Requirements	DC Input: (Backplane)	3.3VDC, 1.4A @ 3.3VDC
	DC Input: (Terminal Block)	7 - 60VDC, 0.7A max 2-Pin Terminal (non-isolated)
	DC Input: (AC Adapter)	7 - 60VDC, 0.7A max 2.5mm Barrel Connector
Dimensions	Plug-in: Standalone:	W: 0.85" x D: 4.5" x H: 2.8" L: 21.6 mm x B: 114.3 mm x H: 71.1 mm W: 3.8" x D: 4.8" x H: 1.0" L: 96.5 mm x B: 121.9 mm x H: 25.4 mm
Weight	Plug-in: Standalone w/o Adapter: Standalone w Adapter:	8 oz.; 226.8 grams 1.0 lb.; 453.6 grams 1.5 lbs.; 680.4 grams
Temperature	Commercial: Wide: Storage:	0 to 50°C -40 to 60°C -40 to 80°C
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m	
MTBF (hrs)	Plug-in: Standalone w/o Adapter: Standalone w/ US Adapter: Standalone w/ Uni Adapter:	520,000 722,000 250,000 100,000
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

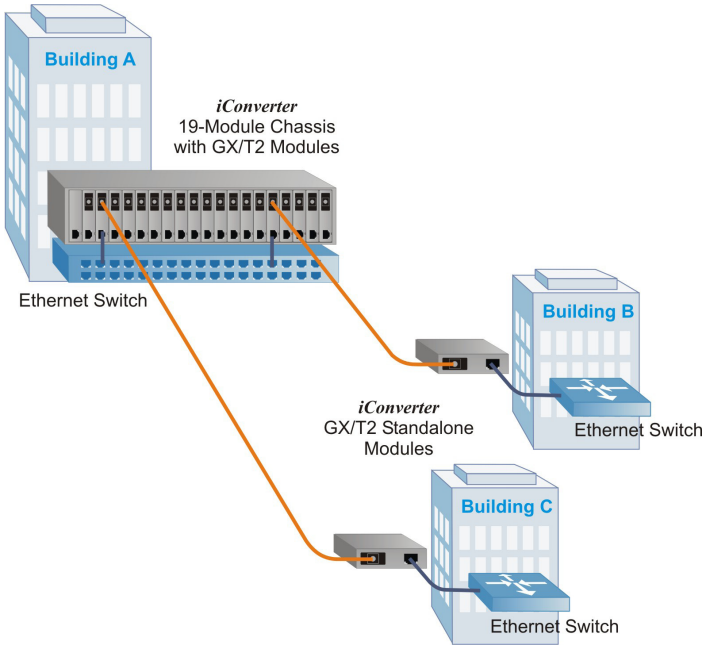
APPLICATION

In this application example, GX/T2 media converters are deployed in a star topology network with fiber links distributed from a central location.

At Building A, iConverter GX/T2 media converters are installed in an iConverter 19-Module providing a high density copper-to-fiber deployment. RJ-45 ports from an Ethernet switch are converted to fiber, extending the network to different locations throughout the campus.

At Buildings B and C, iConverter GX/T2 standalone media converters provide copper-to-fiber connectivity to Ethernet switches in each building.

The iConverter GX/T2 supports Link Modes used to provide network notification of fiber and copper faults. Link failures on any port are propagated to managed network switches, notifying network administrators of link failure.



MANAGEMENT

The iConverter GX/T2 plug-in module can be used in managed or unmanaged applications. Management provides remote configuration, monitoring and trap notification. Management of the plug-in module is accomplished by installing an iConverter Management Module (NMM2) or Network Interface Device (NID) in the same chassis.

The Management Module can be accessed via SNMP, Telnet, and serial port. The GX/T2 can be managed with Omnitron's intuitive, graphic-oriented NetOutlook SNMP Management Software or third party SNMP management software. Management via the Telnet and the serial interfaces have an easy-to-use, menu-driven interface.

The management software can override the physical DIP-switch settings such as auto-negotiation, Half or Full-Duplex, Backplane Selection, remote configuration parameters including rate-limiting, VLAN and Port Access Control. Some of the real-time GX/T2 parameters that can be monitored include duplex mode, link and data activity status. Other parameters include module type and model, hardware and software revisions, serial numbers and a user-defined identifier. The port MIB statistics include transmit and receive packet counts and error counts.

The iConverter GX/T2 supports SNMP trap notification for the monitoring and notification of different network events. Specific events that generate traps include module insertion and removal, and port link-up and link-down. Trap monitoring of specific events can be selectively enabled or disabled by the network management software.

ORDERING INFORMATION

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<Blank>	Commercial Operating Temperature Range Model
W	Wide Operating Temperature Range Model

<Blank>	Plug-in Module
D	Standalone with w/mounting brackets and External US AC Power Adapter
E	Standalone with w/mounting brackets and External Universal AC Power Adapter
F	Standalone with w/mounting brackets and DC Terminal Power

Fiber Type	Distance	Connector Type			Tx Lambda (nm)	Rx Lambda (nm)	Min. Tx Power (dBm)	Max. Tx Power (dBm)	Min. Rx Power (dBm)	Max. Rx Power (dBm)	Min. Attenuation (dB)	Link Budget (dB)
		ST	SC	SFP								
-	-	-	-	8539N-0	-	-	-	-	-	-	-	-
MM/DF	220 / 550m[2]	8520N-0	8522N-0	-	850	850	-10	-4	-17	-3	-	7
MM/DF	2km	-	8522N-6	-	1310	1310	-9.5	-3	-19.5	-3	-	10
SM/DF	12km	8521N-1	8523N-1	-	1310	1310	-9.5	-3	-19.5	-3	-	10
SM/DF	34km	-	8523N-2	-	1310	1310	-5	0	-23	-3	3	18
SM/DF	80km	-	8523N-3	-	1550	1550	-5	0	-23	-3	3	18
SM/DF	110km	-	8523N-4	-	1550	1550	0	5	-24	-3	8	24
SM/DF	140km	-	8523N-5	-	1550	1550	2	5	-28	-8	13	30
SM/SF[3]	20km	-	8530N-1	-	1310	1550	-9.5	-3	-20	-3	-	10.5
SM/SF[3]	20km	-	8531N-1	-	1550	1310	-9.5	-3	-20	-3	-	10.5
SM/SF[3]	40km	-	8530N-2	-	1310	1550	-3	0	-20	-3	3	17
SM/SF[3]	40km	-	8531N-2	-	1550	1310	-3	0	-20	-3	3	17

[2] 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.
[3] When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other.

For wide temperature (-40 to 60°C), add a "W" to the end of the model number. Contact Omnitron for extended temperature (-40 to 75°C) models.

Order the appropriate SFPs separately. Visit www.omnitron-systems.com/optical-transceivers.php

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