

iConverter

iConverter® 2Fx

100BASE-FX to 100BASE-FX Managed Fast Ethernet Media Converter & Switch

The *iConverter* 2Fx managed media converter is a member of the modular *iConverter* product family. The 2Fx provides a cost-effective solution for extending network distances by connecting multimode fiber network devices over single-mode fiber cabling. The *iConverter* 2Fx both regenerates and re-times the fiber optic signal, and multiple 2Fxs can be used to extend total network distances.

iConverter 2Fx models are available with multimode, single-mode, or single-fiber options, and support ST, SC, MT-RJ and LC connectors.

The *iConverter* 2Fx features two 10/100 Ethernet backplane ports to provide connectivity to adjacent modules for network expansion and provides additional fiber ports for *iConverter* modular NIDs.

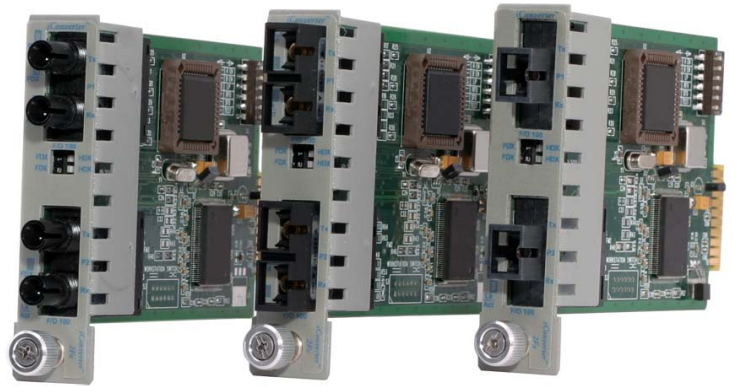
The *iConverter* 2Fx supports the IEEE 802.1Q and 802.1p standards. It supports the 802.1Q VLAN packet tagging and untagging for segregating data in Enterprise networks, and enables secure separation of Service Provider network management and customer data.

The 802.1Q Q-in-Q stacked tags enable Service Providers to offer their customers secure Ethernet Virtual Private Line services which isolates each customer's data traffic, as well as the Service Provider's management traffic.

The *iConverter* 2Fx features Port VLAN, which can be configured to restrict traffic flow between the module's fiber, UTP and backplane ports to improve security and intrusion protection. The 802.1p prioritization enables delivery of Quality of Service (QoS) to high-priority, real-time applications such as voice and video over Ethernet.

The *iConverter* 2Fx supports Bandwidth and Port Access Controls. Bandwidth Control enables the network administrator to selectively deliver eight different levels of traffic bandwidth to different ports, thereby limiting the bandwidth allocated to individual users. The Port Access Control enables the network administrator to easily control and deny individual port access while maintaining port configuration for easy port re-enabling.

The 2Fx features user-selectable Link Propagate, Link Segment, Remote Fault Detection, and Symmetrical Fault Detection modes to facilitate quick fault detection, isolation and reporting.



- 100BASE-FX to 100BASE-FX Fast Ethernet fiber media converter and switch
- Supports multimode, single-mode, and single-fiber with ST, SC, MT-RJ and LC connectors
- Ethernet backplane ports for in-band management and expansion to adjacent modules
- Supports IEEE 802.1Q Tag VLAN, Q in Q and Port VLAN
- Supports IEEE 802.1p Prioritization QoS
- Individual Port Bandwidth and Port Access Controls
- Per port MIB statistics
- Flash-upgradable memory option
- 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 status, 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 2Fxm 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.

SPECIFICATIONS

Model Type	2Fxm
Protocols	100BASE-FX
Fiber Connectors	SC, MT-RJ, LC, Single-Fiber SC
Controls	LS/LP, RFD, SFD, FDX/HDX, BP Enable
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	0.9A @ 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)	880,000

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.

Some of the real-time 2Fxm parameters that can be monitored include link and data receive status. Other parameters include module type and model, hardware and software revisions, serial numbers and a user-defined identifier.

The 2Fxm 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 2Fxm 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 backplane port enables. In case of power removal, the configuration can be reloaded from the NMM when the NMM "Soft Reload" option is selected.

In addition to all standard *iConverter* SNMP traps such as module insertion and removal, the 2Fxm modules can generate traps on port state changes including link-up and link-down. Trap monitoring of specific events can be selectively enabled or disabled by the network administrator.

To facilitate future features and upgrades, the 2Fxm supports field upgrades using the flash memory feature. Software can be upgraded by the management module via FTP.

ORDERING INFORMATION

Model Type	Fiber / Media Type	Distance	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)
			ST	SC	MT-RJ	LC							
2Fxm Dual Fiber	MM	5km	8440-0	8442-0	8444-0	-	1310	1310	-24	-14	-31	-14	7
	SM	30km	8441-1	8443-1	8445-1	8447-1	1310	1310	-15	-8	-31	-8	16
	SM	60km	8441-2	8443-2	-	8447-2	1310	1310	-5	0	-31	-3*	26
	SM	120km	-	8443-3	-	8447-3	1550	1550	-5	0	-31	-3*	26
2Fxm Single-Fiber	SM	20km	-	8450-1	-	-	1310	1550	-15	-5	-30	-3	15
	SM	40km	-	8450-2	-	-	1310	1550	-8	0	-30	-3*	22
	SM	20km	-	8451-1	-	-	1550	1310	-15	-5	-30	-3	15
	SM	40km	-	8451-2	-	-	1550	1310	-8	0	-30	-3*	22

For wide temperature (-40 to 60° C), add a "W" to the end of the model number. Consult factory for 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.

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