

iConverter® X21

X.21 Serial to Fiber Media Converter

The iConverter X21 is a X.21 or RS-530 serial-to-fiber media converter, and is available as a compact, unmanaged standalone unit or a managed chassis plug-in module. The iConverter X21 supports several configuration modes to enable connections with a wide variety of X.21 and RS-530 devices.

The X21 supports demanding applications where security, and performance are critical. The X21 provides the reliability and connectivity features necessary for enterprise and military applications, including controlling radar installations from remote distances.

The X21 supports fixed-fiber multimode and single-mode dual fiber with ST, SC and LC connectors; and single-mode single-fiber with SC connectors.

The X21 also supports both standard, CWDM and DWDM Small Form Pluggable (SFP) transceivers, enabling adaptability to different fiber types, distances and wavelengths, providing maximum flexibility across a variety of network architectures and topologies.

The X21 can auto-detect and configure itself to match the baud rate of the connected device up to 8.192Mbps. The X21 supports standard DCE-sourced timing and terminal timing. The X21 also supports RS-530 DCE and DTE co-directional timing, Tx and Rx data, and two control lines. An adapter cable is included to accommodate different gender connectors.

The X21 features local loop-back configuration to facilitate quick link testing and installations.

iConverter X21 media converters are available as compact, unmanaged standalone units, or chassis plug-in modules that can be managed with a Management Module (NMM2) or Network Interface Device (NID) installed in the chassis. The management module provides access to all the advanced features on the module.

The X21 standalone models are available with an external AC to DC power adapter or with a 2-pin terminal connector for direct connection to DC power. The standalone module can be DIN-Rail mounted using the optional DIN-Rail mounting bracket (8250-0) or mounting clips (8251-0).

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



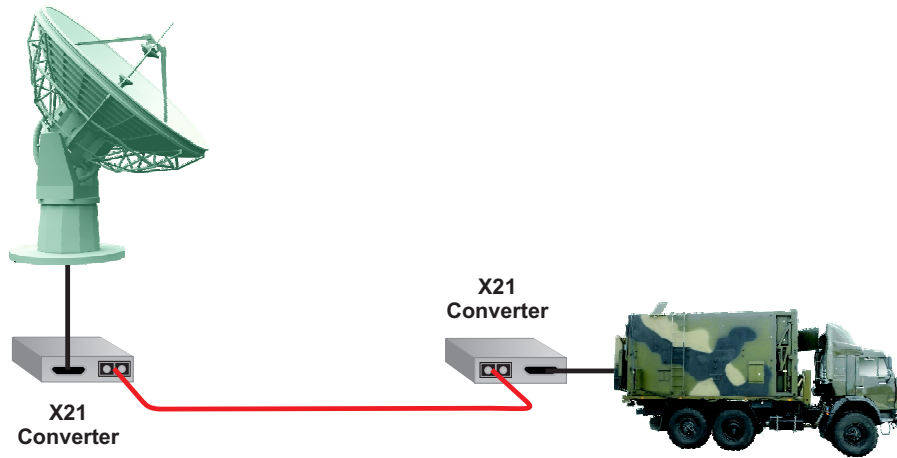
KEY FEATURES

- X.21 and RS-530 Serial to Fiber media converter
- Auto-configuration of baud rates
- DCE-sourced or terminal clock modes
- Supports serial data rates up to 8.192Mbps
- Included adapter cable used to provide desired serial interface gender
- Small Form Pluggable (SFP) transceivers with Optical Statistics for standard, CWDM or DWDM wavelengths
- Fixed-fiber connectors support multimode, single-mode dual fiber with ST, SC and LC connectors, and single-mode single-fiber with SC connectors
- Extends network distances up to 120km
- Features local loop-back for easy testing of fiber and serial interfaces
- Plug-in modules are hot-swappable in 19-Module, 5-Module, 2-Module or 1-Module chassis
- Management is available with the addition of a management module to the chassis
- SNMP management via NetOutlook® provides real-time port and module status information, remote parameter configuration and trap notification
- Commercial (0 to 50°C) and wide (-40 to 60°C) temperature ranges
- TAA, BAA and NDAA compliant, and Made in the USA
- Lifetime Warranty and free 24/7 Technical Support

APPLICATION

The iConverter X21 serial-to-fiber converter provides a secure and safe environment for controlling high security or

hazardous environments by extending the distance between locations up to 120km over single-mode fiber.



SPECIFICATIONS

Description	<i>iConverter X21</i> X.21 Serial to Fiber Media Converter	
Standard Compliances	ITU-T X.21	
Regulatory Compliances	Safety:	UL, cUL, CE, UKCA
	EMI:	FCC Class A
	ACT:	TAA, BAA, NDAA
Environmental	RoHS, WEEE, REACH	
Port Types	Serial:	High-Density 15 Pin Female DB-15 male and female adapters included
	Fiber:	ST, SC, LC, Single-fiber SC, SFP
Cable Types	Serial:	24 gauge (typical)
	Fiber:	Multimode: 50/125µm, 62.5/125µm Single-mode: 9/125µm
AC Power Requirements	AC Adapter: (US)	100 - 240VAC/50 - 60Hz 0.05A @ 120VAC
	AC Adapter: (Universal)	100 - 240VAC/50 - 60Hz 0.05A @ 120VAC
DC Power Requirements	DC Input: (Backplane)	3.3VDC, 0.5A @ 3.3VDC
	DC Input: (Terminal Block)	5 - 32VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
	DC Input: (AC Adapter)	5 - 32VDC, 0.3A @ 9VDC 2.5mm Barrel Connector

Dimensions W x D x H	Plug-in:	0.85" x 4.5" x 2.8" (21.6 mm x 114.3 mm x 71.1 mm)
	Standalone:	3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
	Standalone: (Wall-mount)	3.8" x 4.8" x 1.0" (96.52 mm x 121.92 mm x 25.4 mm)
Weight	Plug-in:	8 oz. (226.8 grams)
	Standalone w/o Adapter:	1.0 lb. (453.6 grams)
	Standalone w Adapter:	1.5 lbs. (680.4 grams)
Temperature	Commercial:	0 to 50°C
	Wide:	-40 to 60°C
	Storage:	-40 to 80°C
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m	
MTBF (hrs)	Plug-in:	500,000
	Standalone w/o Adapter:	510,000
	Standalone w/ US Adapter:	250,000
	Standalone w/ Uni Adapter:	100,000
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

ORDERING INFORMATION

Step 1: Choose a Base Part Number (xxxx-x-pt)

Fiber Type	Distance	Connector Types				Tx / 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	LC	SFP							
-	-	-	-	-	8859-0-pt	-	-	-	-	-	-	
MM/DF	5km	8840-0-pt	8842-0-pt	8846-0-pt	-	1310 / 1310	-23	-12	-31	-12	8	
SM/DF	30km	8841-1-pt	8843-1-pt	8847-1-pt	-	1310 / 1310	-15	-8	-31	-8	16	
SM/DF	60km	8841-2-pt	8843-2-pt	8847-2-pt	-	1310 / 1310	-5	0	-31	-3	26	
SM/DF	120km	-	8843-3-pt	8847-3-pt	-	1550 / 1550	-5	0	-31	-3	26	
SM/SF ¹	20km	-	8850-1-pt	-	-	1310 / 1550	-15	-5	-30	-3	15	
SM/SF ¹	20km	-	8851-1-pt	-	-	1550 / 1310	-15	-5	-30	-3	15	
SM/SF ¹	40km	-	8850-2-pt	-	-	1310 / 1550	-8	0	-30	-3	22	
SM/SF ¹	40km	-	8851-2-pt	-	-	1550 / 1310	-8	0	-30	-3	22	

¹ When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other.

MM = Multimode, SM = Single-mode, DF = Dual Fiber, SF = Single-fiber

Contact Omnitron for other configurations and extended temperature (-40 to 75°C) models.

Order the appropriate Fast Ethernet SFPs separately. [Visit the Omnitron Optical Transceivers web page.](#)

Step 2: Choose a Power Option (xxxx-x-pt)

<leave blank> = Plug-in module
A = Barrel Connector and AC/DC Power Adapter, 100-240VAC, 50-60Hz, with US power cord without integrated mounting brackets
B = Barrel Connector and Universal AC/DC Adapter, 100-240 VAC, 50-60Hz, No Power Cord, without integrated mounting brackets
C = Direct DC input, 2 pin terminal connector, no AC/DC power adapter, without integrated mounting brackets
D = Barrel Connector and AC/DC Power Adapter, 100-240VAC, 50-60Hz, with US power cord with integrated mounting brackets
E = Barrel Connector and Universal AC/DC Adapter, 100-240 VAC, 50-60Hz, No Power Cord, with integrated mounting brackets
F = Direct DC input, 2 pin terminal connector, no AC/DC power adapter, with integrated mounting brackets

Step 3: Choose an Operating Temperature Range (xxxx-x-pt)

<leave blank> = Commercial temperature (0 to 50°C)
W = Wide temperature (-40 to 60°C)

ACCESSORIES

Model Number	Description
8250-0	DIN Rail Mounting Bracket for standalone modules without integrated mounting brackets (power option -A, -B, -C)
8251-0	DIN Rail Mounting Clip for standalone models with integrated mounting brackets (power options -D, -E, -F)
8260-0	1U Rack Mount Shelf for standalone models (up to 4 modules)

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