

Copper-to-Fiber Media Converters



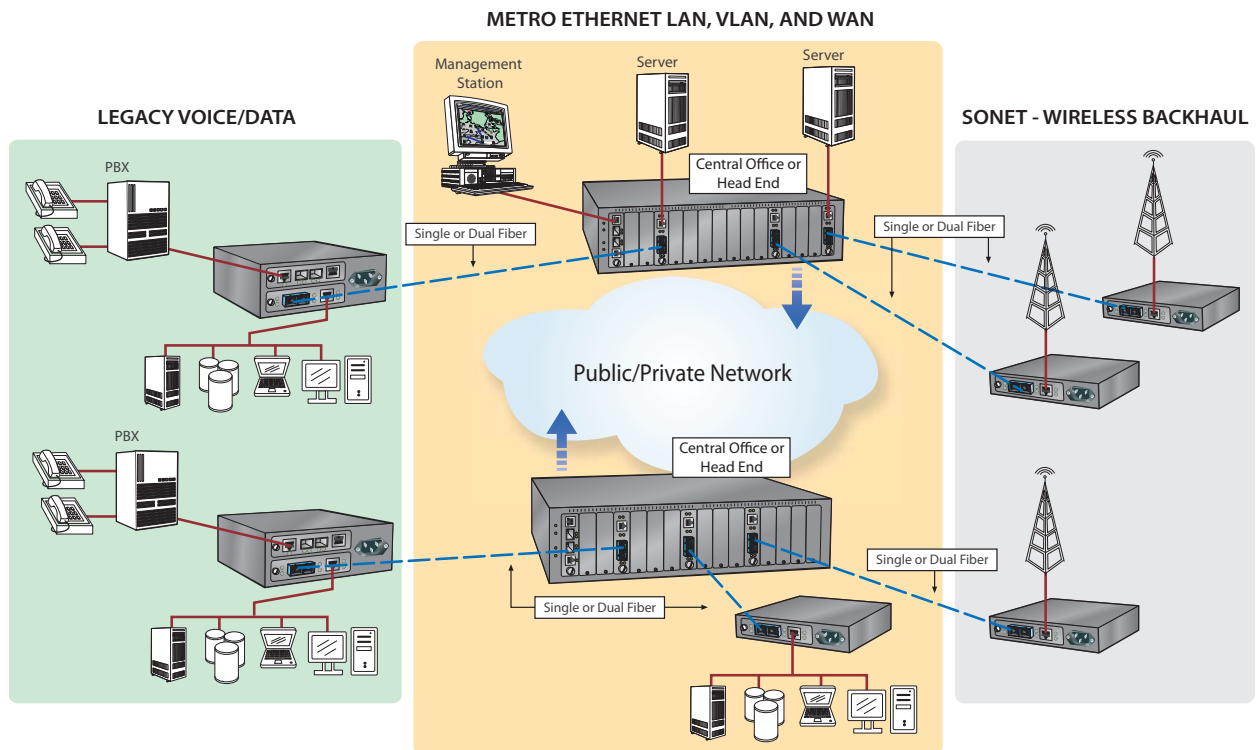
Overview

Fiber Driver® copper to fiber media conversion modules from MRV make it easy to merge legacy copper network elements with new or existing fiber optic infrastructure. LAN communications may be extended to distances of up to 90 km. In addition, the Multimode Extender (MX) technology found in select Fiber Driver products breaks the transmission barrier of multi-mode fiber with link distances of up to 8 km.

Copper-to-fiber solutions are available for Ethernet, Fast Ethernet, Gigabit Ethernet, OC-3/STM-1, DS3, and E3. Additional Ethernet copper-to-fiber solutions are provided by the MRV signal repeater and switch modules.

Features

- Copper-to-fiber media conversion
- Long link range
 - 90 km on single-mode (SM)
 - 8 km on multi-mode (MM)
- Wide protocol support
 - Fast and Gigabit Ethernet
 - OC-3/STM-1
 - DS3 and E3
- Network transparency
- Single fiber solutions for double network capacity
- Fiber Driver remote management and tools
 - Command line interface (CLI)
 - SNMP support
 - MegaVision Pro® and GUI support
 - Link Integrity Notification (LIN) status propagation (on select models)
- Fiber Driver platform compatibility
 - Single-slot design
 - Hot-swap and plug-n-play support



Datasheet

Specifications*

Operating Temperature Range	0°C to 50°C (32°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Relative Humidity	85% maximum, non-condensing
Physical Dimensions	25 mm x 75 mm x 175 mm deep (1" x 3" x 7" deep)
Weight	120-240 g (4.2 - 8.5 oz) depending on configuration
Regulatory Compliance	FCC Part 15 (Class A); IC (Class A); EMC Directive: Emission (Class A) and Immunity; RoHS Directive; China RoHS; WEEE Directive

* Environmental specifications for all components in the system must conform to installation location conditions.

Ordering Information

Model	Function	Protocol	Connectors ¹ Port/Link	Wavelength (nm)	Min. Budget Loss (dB)	Approx. Range ² (km)
Gigabit Ethernet Dual Fiber						
EM316GCL/M	1000Base-T Ethernet to 1000Base-SX Dual Wavelength MM	Gigabit Ethernet	RJ-45/DSC	850	DL ³	0 - 0.5
EM316GCL/MX	1000Base-T Ethernet to 1000Base-LX Dual Wavelength Extended MM	Gigabit Ethernet	RJ-45/DSC	1310	DL ³	0 - 2
EM316GCL/S1	1000Base-T Ethernet to 1000Base-LX Dual Wavelength SM	Gigabit Ethernet	RJ-45/DSC	1310	6	0 - 10
EM316GCL/S2	1000Base-T Ethernet to 1000Base-LX Dual Wavelength SM	Gigabit Ethernet	RJ-45/DSC	1550	8	0 - 30
EM316GCL/S3	1000Base-T Ethernet to 1000Base-LX Dual Wavelength SM	Gigabit Ethernet	RJ-45/DSC	1550	15	30 - 60
Gigabit Ethernet Dual Wavelength Single Fiber						
EM316WGCLC/S2 EM316WGCLT/S2	1000Base-T to 1000Base-LX Dual Wavelength SM	Gigabit Ethernet	RJ-45/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	12 (@1310 nm)	0 - 25
EM316WGCLC/S3 EM316WGCLT/S3	1000Base-T to 1000Base-LX Dual Wavelength SM	Gigabit Ethernet	RJ-45/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	20 (@1310 nm)	0 - 40

Ordering Information

Model	Function	Protocol	Connectors ¹ Port/Link	Wavelength (nm)	Min. Budget Loss (dB)	Approx. Range ² (km)
Fast Ethernet Dual Wavelength Single Fiber						
EM316WFC/S2 EM316WFT/S2	100Base-TX to 100Base-FX Dual-Wavelength SM	Fast Ethernet	RJ-45/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	17 (@1310 nm)	0 - 30
EM316WFC/S3 EM316WFT/S3	100Base-TX to 100Base-FX Dual Wavelength SM	Fast Ethernet	RJ-45/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	22 (@1310 nm)	0 - 45
EM316WFC/S2JR EM316WFT/S2JR	100Base-TX to 100Base-FX Dual Wavelength SM	Fast Ethernet	RJ-45/SC	1550 (Tx)/1310 (Rx) 1310 (Tx) 1550 (Rx)	17 (@1310 nm)	0 - 30
EM316WFC/S3JR EM316WFT/S3JR	100Base-TX to 100Base-FX Dual Wavelength SM	Fast Ethernet	RJ-45/SC	1550 (Tx)/1310 (Rx) 1310 (Tx) 1550 (Rx)	22 (@1310 nm)	0 - 45
DS3 Dual Wavelength Single Fiber						
EM316WDS3C/S2 EM316WDS3T/S2	DS3 Coax to Optical Fiber Dual Wavelength SM	DS3	BNC/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	17 (@1310 nm)	0 - 30
EM316WDS3C/S3 EM316WDS3T/S3	DS3 Coax to Optical Fiber Dual Wavelength SM	DS3	BNC/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	22 (@1310 nm)	0 - 45

¹ Default connectors listed, other connectors are optional

² All specifications, distance claims and operational parameters are based on industry average fiber cable performance; 9μ Singlemode performance of 0.25 dB/km for 1550 nm and 0.5 dB/km for 1310 nm, and 62.5μ Multimode performance of 3 dB/km for 850 nm and 1.5 dB/km for 1300 nm. For non-standard fiber applications or additional information contact MRV Communications

³ Dispersion Limited



Datasheet

Ordering Information

Model	Function	Protocol	Connectors ¹ Port/Link	Wavelength (nm)	Min. Budget Loss (dB)	Approx. Range ² (km)
Fast Ethernet Dual Fiber						
EM316F/M	100Base-TX to 100Base-FX MM	Fast Ethernet	RJ-45/DSC	1310	DL ³	0 - 2
EM316F/MX	100Base-TX to 100Base-FX Extended MM	Fast Ethernet	RJ-45/DSC	1310	DL ³	2 - 8
EM316F/S1	100Base-TX to 100Base-FX SM	Fast Ethernet	RJ-45/DSC	1310	17	0 - 35
EM316F/S2	100Base-TX to 100Base-FX SM	Fast Ethernet	RJ-45/DSC	1310	24	25 - 45
EM316F/S3	100Base-TX to 100Base-FX SM	Fast Ethernet	RJ-45/DSC	1550	24	35 - 90
OC-3/STM-1 Dual Fiber						
EM316O3C/M	OC-3/STM-1 Coax to Optical Fiber MM	OC-3/STM-1	BNC/DSC	1310	DL ³	0 - 2
EM316O3C/S1	OC-3/STM-1 Coax to Optical Fiber SM	OC-3/STM-1	BNC/DSC	1310	17	0 - 35
EM316O3C/S2	OC-3/STM-1 Coax to Optical Fiber SM	OC-3/STM-1	BNC/DSC	1310	24	25 - 45
EM316O3C/S3	OC-3/STM-1 Coax to Optical Fiber SM	OC-3/STM-1	BNC/DSC	1550	24	35 - 90
DS3 Dual Fiber						
EM316DS3/M	DS3 Coax to Optical Fiber MM	DS3	BNC/DSC	1310	DL ³	0 - 2
EM316DS3/S1	DS3 Coax to Optical Fiber SM	DS3	BNC/DSC	1310	17	0 - 35
EM316DS3/S2	DS3 Coax to Optical Fiber SM	DS3	BNC/DSC	1310	24	25 - 45
EM316DS3/S3	DS3 Coax to Optical Fiber SM	DS3	BNC/DSC	1550	24	35 - 90
E3 Dual Fiber						
EM316E3/M	E3 Coax to Optical Fiber MM	E3	BNC/DSC	1310	DL ³	0 - 2
EM316E3/S1	E3 Coax to Optical Fiber SM	E3	BNC/DSC	1310	17	0 - 35
EM316E3/S2	E3 Coax to Optical Fiber SM	E3	BNC/DSC	1310	24	25 - 45
EM316E3/S3	E3 Coax to Optical Fiber SM	E3	BNC/DSC	1550	24	35 - 90

¹ Default connectors listed, other connectors are optional

² All specifications, distance claims and operational parameters are based on industry average fiber cable performance; 9μ Singlemode performance of 0.25 dB/km for 1550 nm and 0.5 dB/km for 1310 nm, and 62.5μ Multimode performance of 3 dB/km for 850 nm and 1.5 dB/km for 1300 nm. For non-standard fiber applications or additional information contact MRV Communications

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The Fiber Driver product family provides many conversion solutions with greater distances and better manageability than other product lines on the market. For additional information including pricing and availability, contact your nearest authorized MRV representative.

MRV has more than 50 offices throughout the world. Addresses, phone numbers and fax numbers are listed at www.mrv.com. Please e-mail us at sales@mrv.com or call us for assistance.

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