



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.

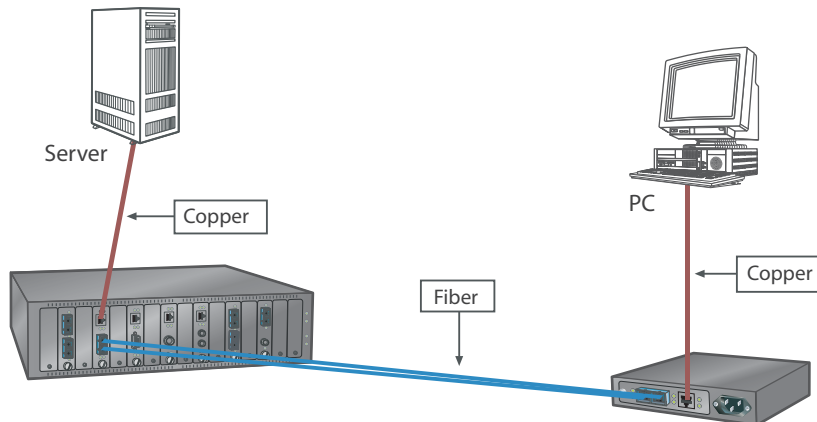
Copper-to-multi-mode and copper-to-single-mode solutions are available for Ethernet, Fast Ethernet, Gigabit Ethernet, copper Gigabit Ethernet, OC-3/STM-1, DS3, and E3. Additional Ethernet copper-to-fiber solutions are provided by the MRV signal repeater and switch modules.

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.

Features

- Copper-to-fiber media conversion
- Link distances up to 130 km over single-mode fiber
- Link distances up to 8 km over multi-mode fiber
- Wide protocol support
 - Ethernet
 - Fast Ethernet
 - Gigabit Ethernet
 - Copper Gigabit Ethernet
 - OC-3/STM-1
 - DS3
 - E3
- Network transparency
- Hot-swap support
- Plug-n-play functionality
- Single slot design
- SNMP management
- MegaVision Pro® support for graphical management
- Link Integrity Notification* (LIN) for end-to-end link-state propagation
- Fiber Driver chassis compatibility with single slot design

*Available on select models





Physical Specifications

Operating Temperature Range	0°C to 50°C (32°F to 122°F)
Operating Temperature Range (LT)	-40°C to 60°C (-40°F to 140°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Storage Temperature (LT)	-45°C to 85°C (-49°F to 185°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

Ordering Information

Model	Function	Protocol	Connectors ¹ Port/Link	Wavelength (nm)	Min. Budget Loss (dB)	Approx. Range ² (km)
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
EM316O3C/M	OC-3/STM-1 Coax to OC-3/STM-1 MM	OC-3/STM-1	BNC/DSC	1310	DL ³	0 - 2
EM316O3C/S1	OC-3/STM-1 Coax to OC-3/STM-1 SM	OC-3/STM-1	BNC/DSC	1310	17	0 - 35
EM316O3C/S2	OC-3/STM-1 Coax to OC-3/STM-1 SM	OC-3/STM-1	BNC/DSC	1310	24	25 - 45
EM316O3C/S3	OC-3/STM-1 Coax to OC-3/STM-1 SM	OC-3/STM-1	BNC/DSC	1550	24	35 - 90
EM316DS3/M	DS3 Coax to DS3 MM	DS3	BNC/DSC	1310	DL ³	0 - 2
EM316DS3/S1	DS3 Coax to DS3 SM	DS3	BNC/DSC	1310	17	0 - 35
EM316DS3/S2	DS3 Coax to DS3 SM	DS3	BNC/DSC	1310	24	25 - 45
EM316DS3/S3	DS3 Coax to DS3 SM	DS3	BNC/DSC	1550	24	35 - 90
EM316E3/M	E3 Coax to E3 MM	E3	BNC/DSC	1310	DL ³	0 - 2
EM316E3/S1	E3 Coax to E3 SM	E3	BNC/DSC	1310	17	0 - 35
EM316E3/S2	E3 Coax to E3 SM	E3	BNC/DSC	1310	24	25 - 45
EM316E3/S3	E3 Coax to E3 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

³ Dispersion Limited



Ordering Information						
Model	Function	Protocol	Connectors ¹ Port/Link	Wavelength (nm)	Min. Budget Loss (dB)	Approx. Range ² (km)
DUAL WAVELENGTH SINGLE FIBER						
EM316WFC/S2 EM316WFT/S2	100Base-TX to 100Base-FX Dual-Wavelength Single Fiber 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 Single Fiber 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 Single Fiber 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 Single Fiber SM	Fast Ethernet	RJ-45/SC	1550 (Tx)/1310 (Rx) 1310 (Tx) 1550 (Rx)	22 (@1310 nm)	0 - 45

Ordering Information						
Model	Function	Protocol	Connectors ¹ Port/Link	Wavelength (nm)	Min. Budget Loss (dB)	Approx. Range ² (km)
DUAL WAVELENGTH SINGLE FIBER						
EM316WO3C/S2 EM316WO3T/S2	OC3 MM to SM Single Fiber	OC3/STM-1	BNC/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	17 (@1310 nm)	0 - 30
EM316WO3C/S3 EM316WO3T/S3	OC3 MM to SM Single Fiber	OC3/STM-1	BNC/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	22 (@1310 nm)	0 - 45

Ordering Information						
Model	Function	Protocol	Connectors ¹ Port/Link	Wavelength (nm)	Min. Budget Loss (dB)	Approx. Range ² (km)
DUAL WAVELENGTH SINGLE FIBER						
EM316WDS3C/S2 EM316WDS3T/S2	DS3 Coax (BNC) to Single Fiber	DS3	BNC/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	17 (@1310 nm)	0 - 30
EM316WDS3C/S3 EM316WDS3T/S3	DS3 Coax (BNC) to Single Fiber	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



Ordering Information

Model	Function	Protocol	Connectors ¹ Port/Link	Wavelength (nm)	Min. Budget Loss (dB)	Approx. Range ² (km)
DUAL FIBER						
EM316GCL/M	1000Base-TX to 1000Base-SX MM	Gigabit Ethernet	RJ-45/DSC	850	DL ³	0 - 0.5
EM316GCL/MX	1000Base-TX to 1000Base-LX Extended MM	Gigabit Ethernet	RJ-45/DSC	1310	DL ³	0 - 2
EM316GCL/S1	1000Base-TX to 1000Base-LX SM	Gigabit Ethernet	RJ-45/DSC	1310	6	0 - 10
EM316GCL/S2	1000Base-TX to 1000Base-LX SM	Gigabit Ethernet	RJ-45/DSC	1550	8	0 - 30
EM316GCL/S3	1000Base-TX to 1000Base-LX SM	Gigabit Ethernet	RJ-45/DSC	1550	15	30 - 60

Ordering Information

Model	Function	Protocol	Connectors ¹ Port/Link	Wavelength (nm)	Min. Budget Loss (dB)	Approx. Range ² (km)
DUAL WAVELENGTH SINGLE FIBER						
EM316WGCLC/S2 EM316WGCLT/S2	1000Base-TX to 1000Base-LX Dual- Wavelength Single Fiber SM	Gigabit Ethernet	RJ-45/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	12 (@1310 nm)	0 - 25
EM316WGCLC/S3 EM316WGCLT/S3	1000Base-TX to 1000Base-FX Dual- Wavelength Single Fiber SM	Gigabit Ethernet	RJ-45/SC	1310 (Tx) 1550 (Rx) 1550 (Tx)/1310 (Rx)	20 (@1310 nm)	0 - 40

¹ Default connectors listed, other connectors are optional

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³ Dispersion Limited

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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