

Datasheet

EM316FC400



Overview

The EM316FC400 module extends the power of the Fiber Driver® Optical Multi-Service Platform to high capacity Storage Array Networks using up to 4 Gbps Fibre Channel traffic. The EM316FC400 covers all three Fibre Channel formats as defined by FCIA, including 1, 2, and 4 Gbps, for transport of native Fibre Channel and FICON traffic.

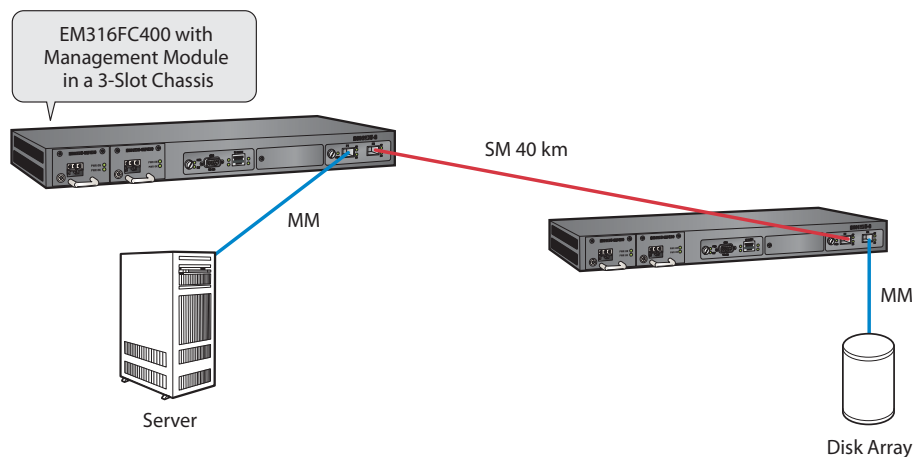
The EM316FC400 is a compact one-slot module with two SFP interface ports. Installation and setup is simple plug-n-play, and the module is hot-swappable in any powered Fiber Driver chassis. Simply insert the SFP transceivers required for the wavelength and distance of the application, and then connect to the network.

EM316FC400 connection types change by hot-swapping SFP transceivers from the wide MRV selection supporting any application. Visit <http://www.mrv.com> for the current offerings. The portable transceivers may be interchanged with other modular Fiber Driver equipment. Sharing inventory reduces storage needs and maximizes the return on investment (ROI).

Highlights

- Multiple application modular design
 - Media converter (MM to SM)
 - CWDM /DWDM transponder
 - Repeater
- Two SFP ports
 - Multi-mode
 - Single-mode (short or long haul)
 - CWDM & DWDM
- 1, 2, and 4 Gbps Fibre Channel and FICON support
- Maximum data rate settable to 1, 2, or 4 Gbps (network management module required)
- Transmission distances limited only by SFPs
- Easy installation
 - Hot-swapping and plug-n-play support
 - Flexible and scalable network design
 - Fiber Driver chassis integration
- EM316LNxNM-OT network management
 - SNMP support
 - MegaVision Pro® support (through SNMP)
 - Command line interface (CLI) administration
- Powerful management support
 - Automatic rate detection and clock recovery circuitry
 - Link Integrity Notification (LIN) support
 - Module loopback
 - Optical Performance Monitoring - Digital Diagnostics (SFF-8472) support
 - Pseudo Random Bit Sequence (PRBS) sender/ checker for connection testing

Typical Application: SAN Extension over Fiber



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The choice of SFPs defines the module functionality, allowing it to operate in several modes.

- Media converter for extended range (multi-mode to single-mode)
- WDM transponder (MM/SM access to CWDM/ DWDM network line)
- Repeater (long haul single-mode gray or xWDM on each interface)

The EM316FC400 is transparent to edge device speed negotiation processes, and it automatically adjusts its clock recovery (CDR) circuits to the appropriate rate of 1, 2, or 4 Gbps.

The module is designed with administration and installation in mind. It requires no provisioning, so it is truly an out-of-box plug-and-play solution.

The EM316FC400 also offers advanced module loopback and PRBS capabilities on each interface. Loopback eases the challenge of validating the installation, debugging the optical link, and finding potential faults on either the client or line interface. PRBS provides additional circuit testing.

Link Integrity Notification (LIN) is a status propagation mechanism for Fiber Driver. LIN enables link-dependent devices to route network traffic intelligently and transparently in a SAN or other sensitive network by shutting down dependant transmit ports when a link fault is detected upstream.

The module fully supports the SFP MSA standard including full optical performance monitoring (OPM) based on Digital Diagnostics according to SFF-8472. The advanced OPM detects optical link degradation that may be caused by bad connectors or splices, old fiber, or other issues. Discovering link weakness before imminent failure can save significant operational expenses.

The EM316FC400 supports SNMP and command line interface (CLI) through the EM316LNxNM-OT Fiber Driver Network Management module. Although manageable through any SNMP network management system, MegaVision Pro® adds a unique graphical user interface (GUI) for all MRV Fiber Driver devices including the EM316FC400. Administrators have a powerful alternative to the CLI through windows that mirror the actual Fiber Driver modules being managed. Information available for the EM316FC400 includes SFP status, wavelength usage, hardware configuration, and other module information.

Visit <http://www.mrv.com> or contact an MRV representative for additional information, pricing, and availability of the EM316FC400 and the full line of MRV Communications products.

Physical 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
Approximate Dimensions	25 mm x 75 mm x 175 mm deep (1" x 3" x 7" deep)
Approximate Weight	120g (4.2oz)
Regulatory Compliances	FCC Part 15 (Class A); IC (Class A); EMC Directive: Emission (Class A) and Immunity; RoHS Directive; China RoHS; REACH Directive; WEEE Directive; The Quality Management System is certified to ISO 9001 by QMI-SAI Global The Environmental Management System is in compliance with ISO 14001

**Datasheet****Ordering Information**

Model	Function	Protocol	Connectors Port/Link	Wavelength (nm) Port / Link	Budget (dB) Port / Link	Range Port / Link
EM316FC400	Dual SFP 1/2/4Gbps Fibre Channel Converter/Transponder	1/2/4 Gbps Fiber Channel	SFP (x2)	N/A or SFP / SFP Dependent	N/A or SFP / SFP Dependent	N/A or SFP / SFP Dependent

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