

Datasheet

# LambdaDriver® Multi-protocol OTN Muxponder Modules (EM2009-8AXFP/8AXFP2/TM-8A8T)



EM2009-8AXFP/8AXFP2/TM-8A8T

### Features

- OTU2 line interfaces (FEC or EFEC)
- Multi-service / multi-protocol transport
- Extensive performance management capability
- Diagnostics Loop-Back (DLEB)
- Digital Diagnostics monitoring
- Hot swappable
- Choice of XFP or tunable long haul line interface
- LIN Support

### Applications

- Advanced Multiprotocol Service aggregation
- Services ADD/DROP over single wavelength

### Overview

The OTN Muxponders are a revolutionary addition to the LambdaDriver system that enhance the versatility and flexibility of WDM-based network design and implementation to unprecedented levels.

These modules are Multi-Service line cards that incorporate 8 SFP-based access ports and one or two line ports (XFP or tunable DWDM) and are two shorts slot wide.

The uniqueness of this device consists in its capability to accept any protocol at its access ports in different mixing schemes and aggregate these services over an OTU2 line with FEC or EFEC support.

The access services can be any mix of the protocols STM1/4/16, OTU1, FC100/200/400, FE/GE, SDI /HD-SDI and 3G-SDI protocols.

Each access port can host any standard SFP (Copper, Coax or Fiber).

Modules with XFP line ports (e.g.,EM2009-8AXFP) are best suited for Access/Metro Networks, while the long-haul applications are addressed by modules with a tunable DWDM transceiver with superior optical transport performance (e.g.,

TM-8A8T).

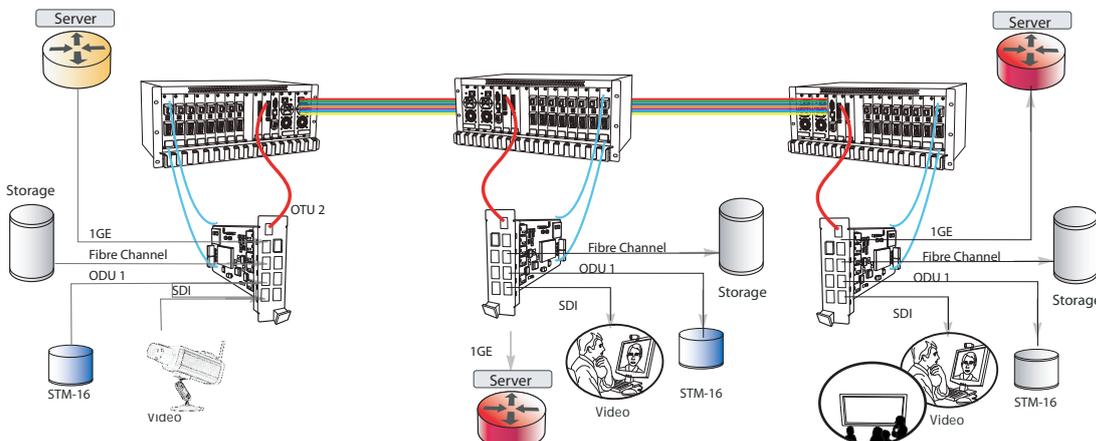
The EM2009-8AXFP2 incorporates two XFP based line interfaces thus having the capability of forwarding some the services received at one line port to local client ports while forwarding other services to a next hop via a second line port, there by functioning as a non-optical service add/drop multiplexer and thus eliminating the need to use a dedicated wavelength for each service.

Extensive performance monitoring is supported on all ports as required by most of the carrier-oriented management systems.

Diagnostics LoopBack per port can be remotely activated with the management module to facilitate troubleshooting and network maintenance.

A typical application is aggregation of multiple services over single fiber or single wavelength with high-level Performance Monitoring.

The modules are manageable with the LambdaDriver management module (EM800-MNGP or EM1600-MNGP) either locally over a serial RS-232 connection or remotely over a Telnet or SNMP connection using, for example with the MRV



**Environmental Specifications**

<b>Operating Temperature</b>	-5 to 45 °C (23 to 113 °F)
<b>Storage Temperature</b>	-10 to 70 °C (14 to 158 °F)
<b>Relative Humidity</b>	85% maximum, non-condensing
<b>Dimensions (W x H x D)</b>	54.18 mm x 130.7 x 227mm (2.13 x 8.956 x 5.145 In)
<b>Weight</b>	EM2009-8AXFP: 0.726 kg EM2009-8AXFP2: 0.750 kg TM-8A8T: 0.858 kg
<b>Connectors</b>	8 x SFP & 1x XFP receptacles ( EM2009-8AXFP) 8 x SFP & 2x XFP receptacles ( EM2009-8AXFP2) 8 x SFP & 2x MU receptacles ( TM-8A8T)
<b>Power Consumption (Fully loaded)</b>	EM2009-8AXFP: 16.50Watt EM2009-8AXFP2: 19.00 Watt TM-8A8T: 24.50 Watt

**Technical Specifications**

	<b>Tunable DWDM wavelength models</b>	<b>XFP models</b>
<b>Access Data Rate</b>	100Mbps to 4.25 Gbps	100Mbps to 4.25 Gbps
<b>Line Data Rate</b>	OTU2 (10.7Gbps)	OTU2 (10.7Gbps)
<b>TX power (dBm)</b>	4 - 7	per the XFP
<b>Maximum receiver sensitivity (dBm)</b>	-28	per the XFP
<b>Overload (dBm)</b>	-6	
<b>DWDM wavelengths range</b>	1529-1563 nm on ITU-T G694.1 50 GHz grid	
<b>Chromatic Dispersion tolerance</b>	1600 ps/nm	per the XFP
<b>Dispersion penalty at limit (dB)</b>	2	per the XFP

**Order Info**

EM2009-8AXFP	TDM Module with OTU2 XFP line port, 8 x SFP multiprotocol ports
EM2009-8AXFP2	TDM Module with 2 x OTU2 XFP line ports 8 x SFP multiprotocol ports
TM-8A8T	TDM Module with OTU2 tunable DWDM line ports, 8 x SFP multiprotocol ports 80km operating range

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