

# GigE Line Card



## Velocity VX/MXK-F OLT 32xGigE Line Card MXK-LC-AEG32

Ultra high-capacity fiber-optimized Active Ethernet Line Card

### Features & Benefits

- + 100Mbps/1Gbps fiber services selectable port by port
- + 100/1000BT Copper Services selectable port by port
- + Supports 802.3ad Link Aggregation Control Protocol
- + Supports up to 512 1G AE ports in a V16 or MXK-F1421 chassis
- + Plug compatible with any VX/MXK-F OLT Chassis

The MXK-LC-AEG32 Active Ethernet line card offers one of the most cost-effective ways for operators to deploy point-to-point fiber-based services to the home, business, MDU, and cell site. The line card supports Ethernet optical interfaces providing 1.0Gbps downstream and 1.0Gbps upstream bandwidth over a point-to-point dedicated fiber network. With pay-as-you grow per port expansion service provider can choose the network architecture that offers the right balance between capital cost optimization and ease of upgradeability.

The MXK-LC-AEG32 is supported on the Velocity VX and MXK-F OLT broadband access platform. The solution is industrial temperature and can be deployed in some of the harshest and most demanding environments. The VX/MXK-F OLTs offer ultra-high capacity, fiber-optimized aggregation of 1GigE AE, GPON, XGS-PON, 10GigE AE and 100GigE services.

Industry-leading traffic management provides QoS, rate limiting, and dynamic bandwidth allocation to support triple-play residential, business services and mobile backhaul applications. Full range of management options including SNMP, CLI, and integration into ZMS Element Management System and OSS Gateway

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## The Ultimate in Density and Flexibility

Active Ethernet line cards support point-to-point copper and fiber-based Ethernet services at symmetric 100 Mbps or 1 Gbps data rates. These can be used to aggregate (or subtend) other Ethernet based devices or to provide high-bandwidth services to individual customer premises.

Selection of an Active Ethernet point-to-point architecture equips services providers with a comfortably future-proof infrastructure as demand for individual subscriber data rates continue to rise. The MXK-LC-AEG32 Active Ethernet single-slot card can connect up to 512 subscribers on a fully configured V16 or MXK-F1421 Chassis. Designed for use with two-channel MSA compliant Compact SFP's, the 16 sockets on the card can be used to support fiber services to 32 customers per card. The card also supports single channel SFP's for a total of 16 subscribers per card. The AE OLT line card allows maximum flexibility for operators as they scale and deploy higher densities of fiber networks.

The MXK-LC-AEG32 leverages dedicated fiber to deliver residential and MEF compliant business services, or high-capacity mobile xHaul. With pluggable cSFP/SFP interfaces the service providers can offer fixed or variable bandwidth for select customers in a cost-effective manner.

## Key Service Attributes

- + 1.0 Gbps Active Ethernet connecting DZS G-Series and X-Series AE ONTs
- + Support of two-channel Ethernet MSA compliant compact SFP's
- + Sixteen SFP interfaces, maximum capacity of 32 subscribers with cSFPs
- + Support of 10km, 20km and 60km point-to-point AE optical modules
- + Traffic management provides QoS, Rate limiting and Policing
- + Transparent LAN services
- + IPTV multicast, IGMPv2 and IGMPv3 services
- + Temperature Hardened - designed for outside plant deployment

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## Features, Protocols, Interfaces

### Interfaces

- + 32 cSFP Subscriber Line Interfaces, 1G BaseT Ethernet
- + 16 SFP Subscriber Line Interfaces, 1G BaseT Ethernet

### Protocol Support

- + Port VLAN (802.1D)
- + Tagged VLAN (802.1q)
- + Spanning Tree (802.1D)
- + Rapid Spanning Tree (802.1w)
- + MSTP (802.1s)
- + LACP (802.3ad)
- + IGMP Snooping + IGMP v2/v3 with Proxy reporting
- + Broadcast Storm Protection
- + Bridge Loop Protection
- + Transparent L2/L3 VPN for business services
- + L2 ACL (Allow/Deny)
- + Radius
- + RFC 3619 (EAPS)
- + Traffic Rate Limiting
- + Traffic Queuing (8 Priority levels)
- + COS to DSCP Marking
- + Strict Priority (Scheduling)
- + Traffic Policing
- + Traffic Class Mapping (802.1p)

### Regulatory Compliance

- + Safety
  - + EN 62368-1
  - + UL 62368-1
- + EMC Emissions / Immunity
  - + FCC Part 15 Class A
  - + EN 55022 Class A
  - + CES-003 Class A
  - + EN 300 386

## Physical & Environmental Specifications

Dimensions (W x H x D)	378mm x 22mm x 212mm
Operating temperature	-40~149°F (-40~+65°C)
Storage temperature	-40~158°F (-40~+70°C)
Operating humidity	5 to 85 % (non-condensing)

Altitude:	-200ft to 16,500ft (-60m to 5,000m)
Power Requirements	Average 50W typical
Maximum Power	66W (16 SFP transceivers at 1.45W each)

# Ordering Information

## Bases

<b>MXK-LC-AEG32</b>	ROHS, MXK-F 2U/14U ACTIVE ETHERNET LINE CARD W/32X1GE ETHERNET, ANGLED SFP/CSFP BASED
<b>SFP-GE-1310TX-1490RX-20KM-SLC</b>	SFP GE (1000 MBPS) TX 1310 NM RX 1490 NM UP TO 20KM W/SIMPLEX LC CONNECTOR IND TEMP
<b>SFP-GE-LX-1310-DLC-E</b>	SFP GE LX (1000MBPS) TX 1310 RX 1310 NM TO 10KM W/ DUPLEX LC CONN, ITEMP, CSFP LINE CARD COMPATIBLE
<b>SFP-FE/GE-TP-RJ45E</b>	SFP FE/GE TP (100/1000MBPS) UP TO 100M W/ RJ45 CONNECTOR IND TEMP; SUITABLE FOR CSFP USE

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