



Enabling the
hyper-connected world

MXK-AEX20-FE/GE-CSFP

100M/1G 20 port fiber

Features & Benefits

- + 100Mbps/1Gbps fiber services selectable port by port
- + 100/1000BT Copper Services selectable port by port
- + Industry-leading SLMS traffic management provides QoS, traffic shaping, and security to support video, triple play, and other applications
- + Full range of management options including SNMP, CLI, WebUI, and integration into Zhone's ZMS Element Management System and OSS Gateway

Zhone's MXK intelligent terabit access concentrator reflects a clean-sheet approach to truly scalable multi-service architecture, designed to meet the rapidly evolving demands on access networks. MXK platforms offer unmatched bandwidth – with non-blocking capacity of up to 3,600 100Mbps GPON subscribers or 360 1G Active Ethernet subscribers per chassis – while leveraging Zhone's wellproven SLMS access operating system for sophisticated service intelligence and ease of management.

The MXK line includes several options for FTTx network design. Its 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 Active Ethernet single-slot card supports up to 360 subscribers in an 8U chassis, and 1,800 subscribers in a 7 ft. rack. Designed for use with two-channel MSA compliant Compact SFP's, the 10 ports on the card can be used to support fiber services to 20 customers per card. The card also supports single channel SFP's for a total of 10 subscribers per card. GPON splitters and dedicated fiber connections.

Zhone's SLMS (Single Line Multi-Service) access operating system provides intelligent functionality across all the company's hardware products. Driven by 8 years of experience in commercial operation and collaboration with 700+ service providers worldwide, Zhone's SLMS software delivers functionality critical to today's access networks in advanced networking, quality of experience, security, and management.

MXK-AEX20-FE/GE-CSFP

Product Specifications

Power

- 25W nominal; 54W maximum when equipped with 10 SFP transceivers at 1.45W each

Interfaces

- Single-Slot Card: 10 Ports (20 subscribers) – 100/1000 Fiber
- Ethernet Interfaces – MSA Compliant dual channel SFP
- Single-Slot Card: 10 Ports (10 subscribers) – 100/1000 Copper
- Ethernet Interfaces – SFP Based

Standards Support

- IEEE 802.3 Ethernet
- Bridging 802.1D
- VLAN 802.1Q with 802.1p
- Multicast IGMP v2 (Snooping, proxy)
- IEEE 802.3ah Ethernet in the First Mile
- IEEE 802.3ad LACP
- DHCP Relay
- RSTP
- EAPS

Management

- ZMS (Zhone Management System) and OSS Gateway
- Terminal for Command Line Interface (CLI)
- Built-in Web UI

Bandwidth/Distance

- 100/1000Mbps
- Supports distances up to 80km using either single or dual fiber SFPs

Regulatory Compliance

- Safety: UL 60950-1; CSA 60950-1; EN 60950-1
- Emissions: EN 55022A; PART 15A (FCC)
- Immunity: GR-1089-CORE, Issue 3; SR-3580, Issue 1; ATT-TP-76200, Issue 14; VZ.TPR.9205, Issue 3
- Environmental: GR-63-CORE, Issue 3

Operating Requirements

- Operating temperature: -40° C to +65° C
- Non operating temperature: -40°F to 158°F (-40°C to 70°C)
- Humidity: Up to 85%, non-condensing
- Altitude: -200ft to 16,500ft (-60m to 5,000m)
- Heat generated: 85 BTU nominal; 184 BTU max

Ordering Information

Model	Description
MXK-AEX20-FE/GE-CSFP	20-PORT ACTIVE ETHERNET LINE CARD (REQUIRES SFP)
Single Channel Fiber SFP's (1 subscriber per SFP)	
Model	Description
SFP-GE-SX-850-DLC	SFP GE SX (1000MBPS) TX 850 NM RX 850 NM UP TO 500M W/ DUPLEX LC CONNECTOR IND TEMP
SFP-GE-LX-1310-DLC	SFP GE LX (1000MBPS) TX 1310 NM RX 1310 NM UP TO 10KM W/ DUPLEX LC CONNECTOR IND TEMP
SFP-GE-EX-1310-DLC	SFP GE EX (1000MBPS) TX 1310 NM RX 1310 NM UP TO 40KM W/ DUPLEX LC CONNECTOR IND TEMP
SFP-GE-ZX-1550-DLC	SFP GE ZX (1000MBPS) TX 1550 NM RX 1550 NM UP TO 80KM W/ DUPLEX LC CONNECTOR IND TEMP
SFP-GE-BX-1310-SLC	SFP GE BX (1000MBPS) TX 1310 NM RX 1490 NM UP TO 10KM W/ SIMPLEX LC CONNECTOR IND TEMP
SFP-GE-BX-1490-SLC	SFP GE BX (1000MBPS) TX 1490 NM RX 1310 NM UP TO 10KM W/ SIMPLEX LC CONNECTOR IND TEMP
SFP-GE-BX10-1310-SLC	SFP GE BX (1000MBPS) TX 1310 NM RX 1550 NM UP TO 10KM W/ SIMPLEX LC CONNECTOR IND TEMP
SFP-GE-BX10-1550-SLC	SFP GE BX (1000MBPS) TX 1550 NM RX 1310 NM UP TO 10KM W/ SIMPLEX LC CONNECTOR IND TEMP

Ordering Information Continued

Single Channel Fiber SFP's (1 subscriber per SFP)	
Model	Description
SFP-GE-BX20-1310-SLC SFP	SFP GE BX20 (1000MBPS) TX 1310 NM RX 1550 NM UP TO 20KM W/ SIMPLEX LC CONNECTOR IND TEMP
SFP-GE-BX20-1550-SLC	SFP GE BX20 (1000MBPS) TX 1550 NM RX 1310 NM UP TO 20KM W/SIMPLEX LC CONNECTOR IND TEMP
SFP-GE-BEX-1310-SLC	SFP GE BEX (1000MBPS) TX 1310 NM RX 1550 NM UP TO 40KM W/ SIMPLEX LC CONNECTOR IND TEMP
SFP-GE-BEX-1550-SLC	SFP GE BEX (1000MBPS) TX 1550 NM RX 1310 NM UP TO 40KM W/ SIMPLEX LC CONNECTOR IND TEMP
Copper SFP (1 subscriber per SFP)	
SFP-FE/GE-TP-RJ45 SFP	SFP COPPER INTERFACE (1000MBPS) USING RJ-45 CONNECTOR
Dual Channel Fiber SFP's (2 subscribers per SFP)	
CSFP-GE-1490-1310-DL-BIDI-10KM	COMPACT-SFP, DUAL BIDIRECTIONAL, LC CONNECTORS, 1000MBPS, TX 1490 RX 1310, 10KM, MSA COMPLIANT
CSFP-GE-1490-1310-DL-BIDI-20KM	COMPACT-SFP, DUAL BIDIRECTIONAL, LC CONNECTORS, 1000MBPS, TX 1490 RX 1310, 20KM, MSA COMPLIANT
CSFP-GE-1550-1310-DL-BIDI-20KM	COMPACT-SFP, DUAL BIDIRECTIONAL, LC CONNECTORS, 1000MBPS, TX 1550 RX 1310, 20KM, MSA COMPLIANT



Zhone Technologies, Inc