



Enabling the  
hyper-connected world

# MXK-UPLINK-2X10G-8X1GE-TOP

## Terabit access concentrator

### Features & Benefits

- + Aggregate 512 Gbps of non-blocking capacity, with 20 Gbps to each line card
- + Cross-card link aggregation capable
- + Supports 1588v2 and SyncE
- + Support for carrier-class active/standby redundancy, link aggregation, point-to-point, and ring configuration on all ports
- + Copper and fiber based SFP/SFP+
- + Full range of management options including SNMP, CLI, WebUI, and integration into ZMS Element Management System

Zhone's MXK intelligent terabit access concentrator reflects a clean-sheet approach to a 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 well proven SLMS access operating system for sophisticated service intelligence and ease of management.

MXK uplink cards enable operators to offer superior high-bandwidth services in a variety of network designs by offering a wide range of available service types and features. To support mobile back-haul applications the MXK-UPLINK-2X10G- 8X1GE-TOP supports 2X 10G and 8 X 1G Ethernet ports with Synchronous Ethernet and 1588v2 for clock recovery, as well as a E1/T1/BITS timing inputs.

Additionally, MXK uplink cards provide full card and network redundancy by supporting an active card and backup standby in the same chassis. If a card or network failover occurs, the standby card will take over instantly – even without dropping any calls. And for additional network resiliency, these cards support both cross-card and intra-link aggregation, as well as the EAPS ring protocol.

Of course as in all MXK portfolio, comprehensive, intuitive management is provided via CLI, WebUI, and ZMS user interface options.

The MXK-UPLINK-2X10G-8X1GE-TOP requires a minimum software release of MXK 2.4.1.4xx.

# MXK-UPLINK-2X10G-8X1GE-TOP

## Product Specifications

### Power

- 104W Nominal, 128W Maximum
- Nominal = card powered-up and idle; Maximum = card will all SFPs connected and passing traffic

### Interfaces

- 2 SFP+ 10G Ports
- 8 SFP-Based GigE Ports Supporting Copper or Fiber SFPs
- RJ-48 E1/T1/BITS
- DE-9 interface for PPS and TOD input / outputs (future)

### Standards Support

- Bridging 802.10
- VLAN 802.1Q with 802.1p
- Multicast IGMP v2 and v3 (Snooping, proxy)
- ITU G.984.1- 984.4 OMCI
- IEEE 802.3ah
- IEEE 802.3ad LACP
- DHCP Relay
- 802.1ag
- 1588v2
- SyncE

### Management

- ZMS management system via SNMP v2c for GUI and CORBA IDL machine interface
- Terminal for Command Line Interface (CLI)
- Built-in GUI-based Management

### 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

- Ambient operating temperature: -40° C to +65° C
- Relative operating humidity: up to 85% (non-condensing)
- GR-487 compliant
- Designed for outside plant deployment
- Heat generated: 355 BTU nominal; 437 BTU max

## Ordering Information

Uplink Card	
Model	Description
<b>MXK-UPLINK-2X10G-8X1GE-TOP</b>	MXK UPLINK WITH 2 X 10G AND 8 X 1G ETHERNET PORTS WITH SYNC E AND 1588V2, E1/T1/BITS SYNCHRONIZATION INPUTS AND SUPPORT FOR CROSS-CARD LINK AGGREGATION
Accessories	
<b>MXK-CBL-CLKSYNC-YCBL-1FT</b>	CLOCK SYNCH Y-CABLE FOR REDUNDANT UPLINKS
<b>MXK-10GE-SFP+-SR</b>	SFP+ SHORT REACH (300M) , MULTI MODE, 850NM, DUPLEX LC/UPC, SUPPORTING 10GBPS ETHERNET; ITEMP
<b>MXK-10GE-SFP+-20KM-1310</b>	SFP+ LONG REACH (20KM) , SINGLE MODE, 1310NM, DUPLEX LC/UPC, SUPPORTING 10GBPS ETHERNET; ITEMP
<b>MXK-10GE-SFP+-40KM-1550</b>	SFP+ LONG REACH (40KM) , SINGLE MODE, 1550NM, DUPLEX LC/UPC, SUPPORTING 10GBPS ETHERNET; ITEMP
<b>MXK-10GE-SFP+-80KM-1550</b>	SFP+ LONG REACH (80KM) , SINGLE MODE, 1550NM, DUPLEX LC/UPC, SUPPORTING 10GBPS ETHERNET; ITEMP
<b>SFP-GE-SX-850-DLC</b>	SFP GE SX (1000MBPS) TX 850 NM RX 850 NM UP TO 500M W/ DUPLEX LC CONNECTOR IND TEMP

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## Ordering Information Continued

Accessories	
Model	Description
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-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



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