



## GPON Uplink Cards

### High-Bandwidth Uplinks

#### Featuring 2 x 10 G + 8 x 1 G or 8 x 1 G Ethernet Ports

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 3,600 100 Mbps GPON subscribers or 360 1 G Active Ethernet subscribers per chassis — while leveraging Zhone's well-proven SLMS access operating system for sophisticated service intelligence and ease of management.

The MXK uplink cards enable operators to offer superior high-bandwidth services in a variety of network designs. The cards currently support two GPON compatible configurations: (1) 2 x 10 Gig + 8 x 1 Gig Ethernet ports and (2) 8 x 1 Gig Ethernet ports. Both fibre and copper SFPs are supported on all the cards.

In addition, the 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, without dropping any voice calls. The cards also support link aggregation and the EAPS ring protocol, for additional network resiliency options.

Comprehensive, intuitive management of the MXK uplinks is provided through CLI, WebUI or ZMS options.

### Features and Benefits

- Aggregate 400 Gbps of non-blocking capacity, with 20 Gbps to each line card
- Support for carrier-class active/standby redundancy, link aggregation, point-to-point, and ring configuration on all ports
- Copper and fibre based SFP
- Full range of management options including SNMP, CLI, WebUI, and integration into Zhone's ZMS Element Management System

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### Technical Specifications

<b>POWER</b>		Provided by the MXK Chassis
<b>INTERFACES</b>		2 SFP+ Based 10 GigE Ports 4 or 8 SFP Based GigE Ports Supporting Copper or Fibre SFPs
<b>STANDARDS SUPPORT</b>		Bridging 802.1D 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
<b>MANAGEMENT</b>		ZMS (Zhone Management System) via SNMP v2c for GUI and CORBA IDL machine interface Terminal for Command Line Interface (CLI) Built-in GUI-based Management
<b>REGULATORY COMPLIANCE</b>	<b>Safety</b>	UL 60950-1; CSA 60950-1; EN 60950-1
	<b>Emissions</b>	EN 55022A*; PART 15A (FCC)
	<b>Immunity</b>	GR-1089-CORE, Issue 3*; SR-3580, Issue 1*; ATT-TP-76200, Issue 14*; VZ.TPR.9205, Issue 3*
	<b>Environmental</b>	GR-63-CORE, Issue 3*
<b>OPERATING REQUIREMENTS</b>	<b>Ambient Operating Temperature</b>	-40°C to +65°C
	<b>Relative Operating Humidity</b>	Up to 85% (non-condensing)
		GR-487 compliant Designed for outside plant deployment

\*In process

### Ordering Information

PART NUMBER	DESCRIPTION
<b>Uplink Cards</b>	
ZHN-MXK-UPL-2X10G-8X1G-C	MXK uplink with 2 x 10 G SFP+ Based + 8 x 1 G Ethernet Ports, SFP Based
ZHN-MXK-UPL-8X1G	MXK uplink with 8 x 1 G Ethernet Ports, SFP Based
ZHN-MXK-UPL-6X1G-C	MXK uplink with 6 x 1 G Ethernet Ports, SFP Based, with clock
<b>SFPs &amp; XFPs</b>	
ZHN-MXK-10GE-SFP+-SR	SFP+, Short Reach Optics 300 m, 10G Ethernet, 850 nm
ZHN-MXK-10GE-SFP+-20KM-1310	SFP+, Long Reach Optics 20 km, 10G Ethernet, 1310 nm
ZHN-MXK-10GE-SFP+-40KM-1550	SFP+, Long Reach Optics 40 km, 10G Ethernet, 1550 nm
ZHN-MXK-10GE-XFP-40KM-1550	XFP Long Reach (40 km), Singlemode, 1550 nm, DUPLEX LC/UPC, Supporting 10 GBPS ETHERNET; I-TEMP
ZHN-MXK-10GE-XFP-80KM-1550	XFP Long Reach (80 km), Singlemode, 1550 nm, DUPLEX LC/UPC, Supporting 10 GBPS ETHERNET; I-TEMP
ZHN-SFP-GE-SX-850-DLC	SFP GE SX (1000 MBPS) TX 850 nm RX 850 nm up to 500 m w/ DUPLEX LC Connector IND Temp
ZHN-SFP-GE-LX-1310-DLC	SFP GE LX (1000 MBPS) TX 1310 nm RX 1310 nm up to 10 km w/ DUPLEX LC Connector IND Temp
ZHN-SFP-GE-EX-1310-DLC	SFP GE EX (1000 MBPS) TX 1310 nm RX 1310 nm up to 40 km w/ DUPLEX LC Connector IND Temp
ZHN-SFP-GE-ZX-1550-DLC	SFP GE ZX (1000 MBPS) TX 1550 nm RX 1550 nm up to 80 km w/ DUPLEX LC Connector IND Temp
ZHN-SFP-GE-BX-1310-SLC	SFP GE BX (1000 MBPS) TX 1310 nm RX 1490 nm up to 10 km w/ SIMPLEX LC Connector IND Temp
ZHN-SFP-GE-BX-1490-SLC	SFP GE BX (1000 MBPS) TX 1490 nm RX 1310 nm up to 10 km w/ SIMPLEX LC Connector IND Temp
ZHN-SFP-GE-BEX-1310-SLC	SFP GE BEX (1000 MBPS) TX 1310 nm RX 1550 nm up to 40 km w/ SIMPLEX LC Connector IND Temp
ZHN-SFP-GE-BEX-1550-SLC	SFP GE BEX (1000 MBPS) TX 1550 nm RX 1310 nm up to 40 km w/ SIMPLEX LC Connector IND Temp 2012