



Z H O N E

# Smart OMCI

## Smart OMCI: Comprehensive GPON ONT Management

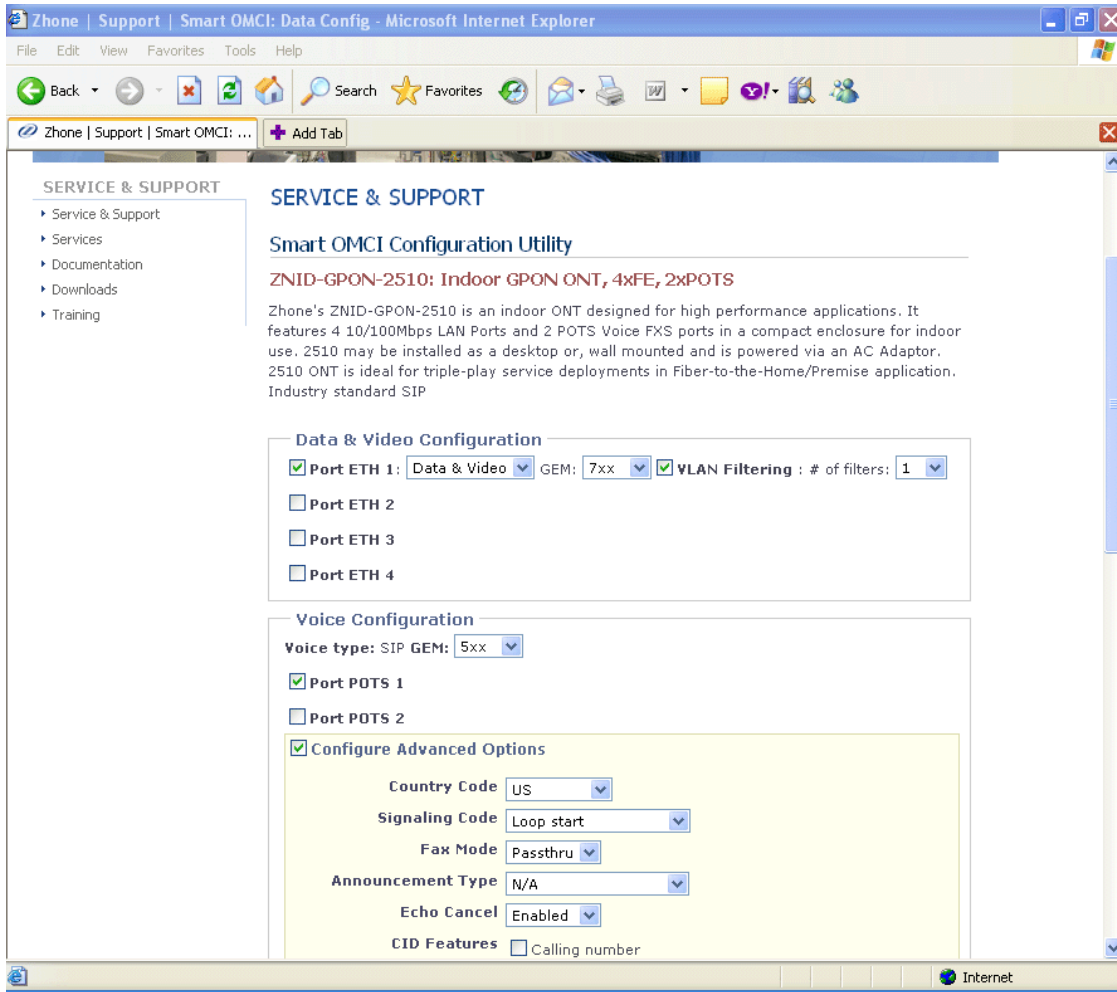
- ✓ *Comprehensive, intuitive management*
- ✓ *Reduces training, complexity, and opex*
- ✓ *No OLT software upgrade required for adding new ONT models or services*
- ✓ *Intelligent front end for 100% ITU standards-compliant implementation*
- ✓ *Confirmed multi-vendor interoperability, through participation in FSAN Interop plugfest*

Demands on access networks are increasing at an accelerating rate, requiring a clean-sheet approach to a truly scalable multi-service architecture. Zhone's MXK intelligent terabit access concentrator reflects this new approach, with non-blocking capacity of up to 3,600 100Mbps GPON subscribers or 360 1G Active Ethernet subscribers per chassis. Beyond sheer bandwidth, MXK platforms leverage Zhone's well-proven SLMS access operating system for sophisticated service intelligence, to guarantee high quality of experience for subscribers, along with ease of management to address rising costs of network operation.

Zhone's MXK includes Smart OMCI™, Zhone's unique approach to GPON ONT configuration and management. To improve ease of use for service providers, the Smart OMCI modules present a comprehensive, intuitive interface on top of a 100% standard-compliant and proven interoperable implementation of the ITU G984.4 OMCI protocol. This interface provides the behind-the-scenes intelligence required to simplify the process of adding new or changing ONT models, service definitions, and configurations, all without OLT software upgrades. Zhone has participated in the FSAN Interop plugfest conducted by ETSI, which confirms the interoperability of the Smart OMCI implementation.

Key functionality of Zhone's Smart OMCI includes:

- Easy upgrade of firmware on ONT, providing flexibility in upgrading the ONT in bulk at a specified time based on business logic or automatically upgrade ONT at activation.
- Monitoring of ONTs via statistical data gathered and made available every 15 minutes.



Zhone's Smart OMCI extension to ZMS provides an easy-to-use interface for adding new ONTs and service configurations to your GPON network

- Status information of every subscriber facing ports can be individually monitored and controlled.
- Retrieval of alarms and traps from every ONT via multiple configurations including: line status traps, battery related traps, or dying gasp.
- Quick and easy functionality to add new services to new and existing ONTs.

Zhone's Smart OMCI is fully integrated with ZMS, WebUI, and CLI.

Zhone's Smart OMCI reduces operational expenses for service providers via its seamless integration with existing and new hardware.

## Technical Specifications

### Dimensions

- MXK 819
  - 8U: 13.97 x 17.25 x 11.15 in. / 35.5 x 43.8 x 28.3 cm
  - Line Cards: 14; front card access
- MXK 823
  - 8U: 13.97 x 21.18 x 11.15 in. / 35.5 x 53.8 x 28.3 cm
  - Line Cards: 18; front card access
- MXK 319
  - 3U: 5.25 x 17.25 x 11.15 in. / 13.3 x 43.8 x 28.3 cm
  - Line Cars: 7; front card access

### Power

- DC: -43.75V to -62V
- Dual (A / B redundant) power feeds

### Interfaces

- GPON OLT G.984.1-4 compliant
- Active-Ethernet 802.3ah

### Protocol Support

- 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
- RSTP
- EAPS

### Management

- Terminals
  - ZMS (Zhone Management System) via SNMP v2c for GUI and CORBA IDL machine interface
  - Terminal for Command Line Interface (CLI)
  - Web GUI based Management

### Uplinks & Line Cards

- Uplinks:
  - 2 x 10G Ethernet + 8 x 1G Ethernet
  - 8 x 1G Ethernet
- Optical Based Line Cards:
  - 4 Port GPON OLT
  - 8 Port GPON OLT
  - 20 Port Active Ethernet (High Performance/ High Density options)

## Ordering Information

## MXK Chassis

MXK-CHASSIS-819	8U, 19" Rack, 16 Slots
MXK-CHASSIS-823	8U, 23" Rack, 20 Slots
MXK-CHASSIS-319	3U, 19" Rack, 7 Slots

## Uplink Controllers

MXK-UPLINK-2x10G-8x1GE	Uplink with 2 x 10G and 8 x 1G Ethernet Ports
MXK-UPLINK-8x1GE	Uplink with 8 x 1G Ethernet Ports

## Line Cards

MXK-GPONX4-IO	GPON Line Card with 4 OLT Ports, SFP based
MXK-GPONX8-IO	GPON Line Card with 8 OLT Ports, SFP based
MXK-AEX20-FE/GE-25	Active-Ethernet Line Card with 20 SFP based Ports
MXK-AEX20-FE/GE	Single Slot Active-Ethernet Line Card, SFP based, supporting 20 customers

## Software

MXK-SW-DEFAULT	Baseline for operation of residential triple-play or business services OLT
MXK-SW-ADV-QOS	Adds rate-limiting, 802.1P, IPSLA
MXK-SW-SECURITY-SERVICES	Adds secure bridging, MAC swap, SSH, SFTP, ACL, and other controls

## Accessories

MXK-10GE-XFP-LR	XFP, Long Reach Optics 10KM, 10G Ethernet
MXK-GE-SFP-LX	SFP, Long Reach Optics 10KM, 1G Ethernet
MXK-GE-SFP-SX	SFP, Short Reach Optics 500M, 1G Ethernet
MXK-GE-SFP-TP	SFP, Copper 100M, 1G Ethernet
MXK-UPLINK-BLANK	Blank End Panel to cover unused Uplink Slot
MXK-BLANK-ENDPANEL	Blank End Panel to cover unused Line Slot

## ZMS

ZMS-NMS-TR1	ZMS TIER 1 LIC. (1-5K); CLIENT/SERVER SW W/CONFIG, FAULT, REAL-TIME STATS & DIAG FUNCT & ORACLE DB
ZMS-NMS-TR1-STNDBY	ZMS COLD STANDBY TIER 1 LIC. (1-5K); ZMS AND ORACLE DATABASE, REQUIRES PURCHASE OF ZMS-NMS-TR1
ZMS-NMS-TR2	ZMS TIER 2 LIC. (1-50K); CLIENT/SERVER SW W/CONFIG, FAULT, REAL-TIME STATS & DIAG FUNCT & ORACLE DB
ZMS-NMS-TR2-STNDBY	ZMS COLD STANDBY TIER 2 LIC. (1-50K); ZMS AND ORACLE DATABASE, REQUIRES PURCHASE OF ZMS-NMS-TR2
ZMS-NMS-TR3	ZMS TIER 3 LIC. (50K+); CLIENT/SERVER SW W/CONFIG, FAULT, REAL-TIME STATS & DIAG FUNCT & ORACLE DB
ZMS-NMS-TR3-STNDBY	ZMS COLD STANDBY TIER 3 LIC. (50K+); ZMS AND ORACLE DATABASE, REQUIRES PURCHASE OF ZMS-NMS-TR3
ZMS-NMS-OSSGW	ZMS OSS GATEWAY CORBA IDL INTERFACE. REQUIRES CORRESPONDING VERSION OF ZMS NMS.
ZMS-NMS-TR1-TR2-UPGRADE	ZMS TIER 1 (1-5K) TO TIER 2 (1-50K) LICENSE UPGRADE
ZMS-NMS-TR1-TR2-STNDBY-UPGRADE	ZMS STANDBY TIER 1 (1-5K) TO TIER 2 (1-50K) LICENSE UPGRADE
ZMS-NMS-TR1-TR3-UPGRADE	ZMS TIER 1 (1-5K) TO TIER 3 (50K+) LICENSE UPGRADE
ZMS-NMS-TR1-TR3-STNDBY-UPGRADE	ZMS STANDBY TIER 1 (1-5K) TO TIER 3 (50K+) LICENSE UPGRADE
ZMS-NMS-TR2-TR3-UPGRADE	ZMS TIER 2 (1-50K) TO TIER 3 (50K+) LICENSE UPGRADE
ZMS-NMS-TR2-TR3-STNDBY-UPGRADE	ZMS STANDBY TIER 2 (1-50K) TO TIER 3 (50K+) LICENSE UPGRADE

## GPON-ONT

Refer to the Zhone website for the complete list of supported GPON ONTs



Zhone Technologies, Inc.  
@ Zhone Way  
7001 Oakport Street  
Oakland, CA 94621  
510.777.7000 phone  
[www.zhone.com](http://www.zhone.com)

For more information about Zhone and its products, please visit the Zhone Web site at [www.zhone.com](http://www.zhone.com) or e-mail [info@zhone.com](mailto:info@zhone.com)

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