



Z H O N E

# Zhone PON Splitters & WDM Combiners

zPON

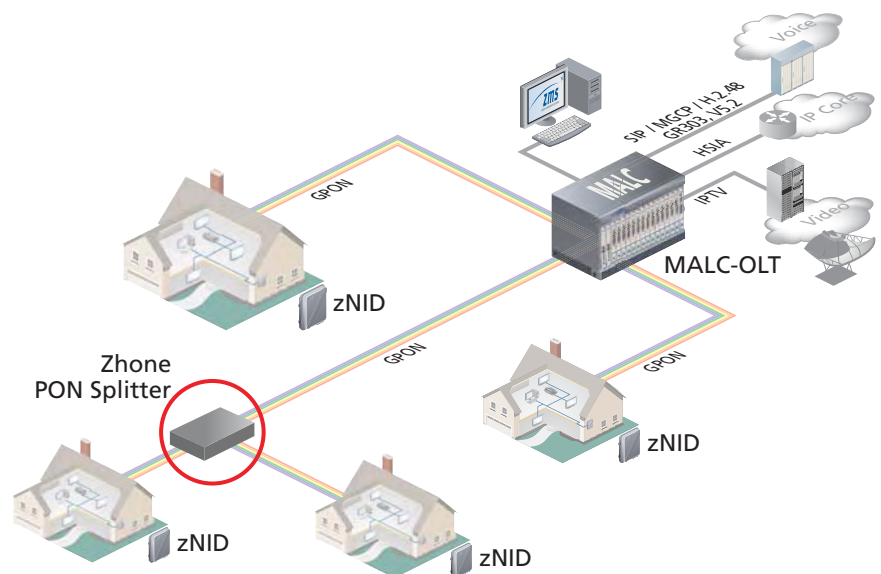
## Zhone PON Splitters & WDM Combiners

- ✓ *Flexible 4RU chassis provides front and rear access for PON splitter and WDM combiner modules*
- ✓ *Compact 1RU and 2RU options for 1x32 and 1x64 PON splitters*
- ✓ *Part of the complete Zhone GPON solution with the MALC-OLT and the zNID ONT*
- ✓ *Optional wall mounting brackets for retrofitting existing remote terminals with space limitations*



In a PON (Passive Optical Network), each end user has an ONT (Optical Network Terminal) while the fiber terminates at a central office or remote cabinet in an OLT (Optical Line Terminal). Between the OLT and the ONT may be one or two stages of passive splitters, which split the connection to multiple end points (up to 64), and WDM combiners, when RF overlay services are also being offered.

Zhone's complete end-to-end GPON solutions with MALC-OLT, optical splitter packages and zNID-ONT is the most complete FTTH platform delivering converged broadband services in the industry.



### **PON 4RU Chassis**

The PON shelf is a 4RU chassis that can accommodate up to 12 single PON splitters or WDM Combiners LGX modules. The chassis is flexible enough to allow for the installation of the modules in the front or in the rear part of the chassis. The chassis also includes two fiber management brackets that can be installed both in the front and in the rear part of the chassis.

### **PON Splitter 1x2, 1x4, 1x8, and 1x16 modules**

The PON shelf can accommodate several types of PON splitters LGX modules. The PON splitter modules feature low insertion loss, low polarization dependant loss and high port-to-port uniformity. All the modules include SC/APC connectors.

### **PON Splitter 1x32 (1RU) and 1x64 (2RU)**

The PON splitters 1x32 and 1x64 are available in 1RU and 2RU rack mounting format, respectively. The PON splitters feature low insertion loss, low polarization dependant loss and high port-to-port uniformity. Both models include SC/APC connectors.

### **WDM Combiner modules**

The PON shelf can also accommodate different types of WDM Combiner LGX modules. The WDM Combiner modules are to be used when RF video overlay (RF @ 1550 nm) service is provided. The WDM Combiner modules feature low insertion loss, low polarization dependant loss and low ripple. All the modules include SC/APC connectors for the combined port (1310/1490/1550 nm) and the RF @ 1550 nm port.

### **Wall Mounting Brackets**

When limited space is an issue for the PON splitter or WDM combiner module installation, Zhone also offers wall mounting brackets for these modules.

## Technical Specifications

### Dimensions

- PON 4RU Chassis:
  - 7" x 16.9" x 10.6"
  - (177mm x 430mm x 270mm)
- PON Modules:
  - LGX Single Width:
    - 5.1" x 1.1" x 6.5"
    - (130 mm x 28.3 mm x 165 mm)
  - LGX Double Width:
    - 5.1" x 2.2" x 6.5"
    - (130 mm x 28.3 mm x 165 mm)
- PON 1RU 1x32 Splitters:
  - 1.8" x 17.3" x 10.9"
  - (44.4 mm x 439 mm x 276 mm)
- PON 2RU 1x64 Splitters:
  - 3.5" x 17.3" x 10.9"
  - (88.8 mm x 439 mm x 276 mm)

### Power

- Total input power: 300mW

### Interfaces

- SC/APC

### Standards Support

- BPON G.983.1-3 compliant
- GPON G.984.1-4 compliant
- PON Splitters
- Port number:
  - 1x2, 1x4, 1x8, 1x16, 1x32 and 1x64
- Operation wavelength:
  - 1310+/-50 nm, 1460~1600 nm
- Insertion Loss:
  - Max. 3.6dB (1x2)
  - Max. 7.5dB (1x4)
  - Max. 11dB (1x8)
  - Max. 14.3dB (1x16)
  - Max. 18dB (1x32)
  - Max. 21.5dB (1x64)
- Uniformity:
  - Max. 1.0dB (1x2, 1x4, 1x8)
  - Max. 1.5dB (1x16, 1x32, 1x64)
- Return loss:
  - Min. 55dB
- Directivity:
  - Min. 55dB
- Polarization Dependent Loss:
  - Max. 0.2dB (1x2)
  - Max. 0.3dB (1x4, 1x8, 1x16)
  - Max. 0.5dB (1x32, 1x64)
- Dimension:
  - Single wide LGX (1x2, 1x4, 1x8)
  - Double wide LGX (1x16)
  - 1RU (1x32)
  - 2RU (1x64)

### Protocol Support

- WDM Combiners
- Channel Pass Band:
  - Transmission: 1540~1560 nm
  - Reflection: 1260~1360 nm, 1480~1500 nm
- Insertion Loss:
  - Com To Transmission: 1.2 dB
  - Com To Reflection: 1.0 dB
- Isolation:
  - Transmission: Min 40dB
  - Reflection: 15 dB
- Ripple:
  - Max. 0.3dB
- Return loss:
  - Min. 50dB
- Directivity:
  - Min. 50dB
- Polarization Dependent Loss:
  - Max. 0.1dB
- Dimension:
  - Single wide LGX (Single and Double WDM Combiner Modules)

### Operating Requirements

- Operating temperature: -40° C to +85° C

## Ordering Information

## zPON Splitter and WDM Combiners

ZPON-SPLT-CHASSIS-4U-12LGX	PON SPLITTERS/WDM COMBINERS 4RU CHASSIS 12 LGX SLOTS
ZPON-SPLT-1X2-SC/APC-1LGX	PON SPLITTERS 1x2 SC/APC CONNECTORS LGX SINGLE WIDTH CARD (FRONT INPUT & OUTPUTS)
ZPON-SPLT-1X4-SC/APC-1LGX	PON SPLITTERS 1x4 SC/APC CONNECTORS LGX SINGLE WIDTH CARD (FRONT INPUT & OUTPUTS)
ZPON-SPLT-1X8-SC/APC-1LGX	PON SPLITTERS 1x8 SC/APC CONNECTORS LGX SINGLE WIDTH CARD (FRONT OUTPUTS & REAR INPUT)
ZPON-SPLT-1X16-SC/APC-2LGX	PON SPLITTERS 1x16 SC/APC CONNECTORS LGX DOUBLE WIDTH CARD (FRONT OUTPUTS & REAR INPUT)
ZPON-SPLT-1X32-SC/APC-1RU	PON SPLITTERS 1x32 SC/APC CONNECTORS RACK MOUNT 1RU (FRONT INPUT & OUTPUTS)
ZPON-SPLT-1X64-SC/APC-2RU	PON SPLITTERS 1x64 SC/APC CONNECTORS RACK MOUNT 2RU (FRONT INPUT & OUTPUTS)
ZPON-SPLT-WALL-MOUNT-1LGX	WALL MOUNTING BRACKETS FOR LGX SINGLE WIDTH CARD
ZPON-SPLT-WALL-MOUNT-2LGX	WALL MOUNTING BRACKETS FOR LGX DOUBLE WIDTH CARD
ZPON-WDM-1XSC/APC-1LGX	TRI-WAVE SINGLE WDM COMBINER SC/APC LGX SINGLE WIDTH CARD (FRONT INPUT & OUTPUTS)
ZPON-WDM-2XSC/APC-1LGX	TRI-WAVE DOUBLE WDM COMBINER SC/APC LGX SINGLE WIDTH CARD (FRONT INPUT & OUTPUTS)

## zPON Jumper cables

ZPON-JMPR-SC/APC-SC/UPC-SM-1M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/UPC CONNECTORS, SINGLE MODE, 1M/3.5FT
ZPON-JMPR-SC/APC-SC/UPC-SM-3M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/UPC CONNECTORS, SINGLE MODE, 3M/10FT
ZPON-JMPR-SC/APC-SC/UPC-SM-5M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/UPC CONNECTORS, SINGLE MODE, 5M/16.5FT
ZPON-JMPR-SC/APC-SC/UPC-SM-10M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/UPC CONNECTORS, SINGLE MODE, 10M/33FT
ZPON-JMPR-SC/APC-SC/APC-SM-1M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/APC CONNECTORS, SINGLE MODE, 1M/3.5FT
ZPON-JMPR-SC/APC-SC/APC-SM-3M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/APC CONNECTORS, SINGLE MODE, 3M/10FT
ZPON-JMPR-SC/APC-SC/APC-SM-5M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/APC CONNECTORS, SINGLE MODE, 5M/16.5FT
ZPON-JMPR-SC/APC-SC/APC-SM-10M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/APC CONNECTORS, SINGLE MODE, 10M/33FT



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