

Zhone PON Splitters & WDM Combiners

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



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, featuring an initial 400 Gbps pure packet switching capacity and 2x10 Gbps redundant links to every slot. 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.

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 MXK-OLT, optical Splitters/WDM 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 1xN/2xN 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 1x32/2x32 (1RU) and 1x64/2x64 (2RU)

The PON splitters 1x32/2x32 and 1x64/2x64 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:
 - 3.9" x 6.3" x 1.1"
 - (100 mm x 159 mm x 29 mm)
 - LGX Double Width:
 - 3.9" x 6.3" x 2.2"
 - (100 mm x 159 mm x 58 mm)
 - LGX Triple Width:
 - 3.9" x 6.3" x 3.3"
 - (100 mm x 159 mm x 87 mm)
- PON 1RU 1x32/2x32 Splitters:
 - 1.8" x 17.3" x 10.9"
 - (44.4 mm x 439 mm x 276 mm)
- PON 2RU 1x64/2x64 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

- GPON G.984.1-4 compliant
- PON Splitters
- Port number:
 - 1x2, 1x4, 1x8, 1x16, 1x32 and 1x64
 - 2x2, 2x4, 2x8, 2x16, 2x32 and 2x64
- Operation wavelength:
 - 1310+/-50 nm, 1480~1625 nm
- Insertion Loss:
 - Max. 3.6dB (1x2), Max. 4.1dB (2x2)
 - Max. 7.5dB (1x4), Max 7.9dB (2x4)
 - Max. 11dB (1x8), Max 11.5dB (2x8)
 - Max. 14.3dB (1x16), Max 14.6dB (2x16)
 - Max. 18dB (1x32), Max 18.1dB (2x32)
 - Max. 21.5dB (1x64), Max 21.5dB (2x64)
- Uniformity:
 - Max. 1.0dB (1x2, 2x2, 1x4, 2x4, 1x8)
 - Max. 1.2dB (2x8)
 - Max. 1.5dB (1x16, 2x16, 1x32, 1x64)
 - Max. 1.7dB (2x32)
 - Max. 2.0dB (2x64)
- Return loss:
 - Min. 55dB
- Directivity:
 - Min. 55dB
- Polarization Dependent Loss:
 - Max. 0.2dB (1x2)
 - Max. 0.3dB (2x2, 1x4, 2x4, 1x8, 2x8, 1x16, 2x16)
 - Max. 0.45dB (2x32)
 - Max. 0.5dB (1x32, 1x64, 2x64)
- Dimension:
 - Single wide LGX (1x2, 2x2, 1x4, 2x4, 1x8)
 - Double wide LGX (2x8, 1x16)
 - Triple wide LGX (2x16)
 - 1RU (1x32, 2x32)
 - 2RU (1x64, 2x64)

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-2X2-SC/APC-1LGX	PON SPLITTERS 2X2 SC/APC CONNECTORS LGX SINGLE WIDTH CARD (FRONT INPUT & OUTPUTS)
ZPON-SPLT-2X4-SC/APC-2LGX	PON SPLITTERS 2X4 SC/APC CONNECTORS LGX DOUBLE WIDTH CARD (FRONT INPUT & OUTPUTS)
ZPON-SPLT-2X8-SC/APC-2LGX	PON SPLITTERS 2X8 SC/APC CONNECTORS LGX DOUBLE WIDTH CARD (FRONT INPUT & OUTPUTS)
ZPON-SPLT-2X16-SC/APC-3LGX	PON SPLITTERS 2X16 SC/APC CONNECTORS LGX TRIPLE WIDTH CARD (FRONT INPUT & OUTPUTS)
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-2X32-SC/APC-1RU	PON SPLITTERS 2X32 SC/APC CONNECTORS RACK MOUNT 1RU (FRONT INPUTS & OUTPUTS)
ZPON-SPLT-2X64-SC/APC-2RU	PON SPLITTERS 2X64 SC/APC CONNECTORS RACK MOUNT 2RU (FRONT INPUTS & 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/UPC-SM-12M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/UPC CONNECTORS, SINGLE MODE, 12M/36FT
ZPON-JMPR-SC/APC-SC/UPC-SM-15M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/UPC CONNECTORS, SINGLE MODE, 15M/45FT
ZPON-JMPR-SC/APC-SC/UPC-SM-20M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/UPC CONNECTORS, SINGLE MODE, 20M/66FT
ZPON-JMPR-SC/APC-SC/UPC-SM-30M	PON FIBER JUMPER CABLE W/ SC/APC TO SC/UPC CONNECTORS, SINGLE MODE, 30M/100FT
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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