

Enabling the hyper-connected world



# V1-16XC



## V1-16XC New generation OLT for optical broadband service

The DZS V1-16XC introduces a point-to-multipoint concept with the XGS-PON technology, which enables a cost-effective FTTx service.

### Features & Benefits

- + 900Gbps switching capacity
- + 16-port XGS-PON/GPON combo interfaces
- + Fixed 4-port 25GBase-R and 2-port 100GBase-R optical interfaces
- + XGS-PON ODN class N1 compliant with ITU-T G.9807.1

The XGS-PON technology adds new features and functionality targeted at improving performance and interoperability, and adds support for new applications, services, and deployment scenarios. Among these changes are improvements in data rate and reach performance, diagnostics, and stand-by mode, to name a few.

The V1-16XC introduces a point-to-multipoint concept with the XGS-PON technology, which enables a cost-effective FTTx service. The reason why XGS-PON is considered as a cost effective solution is its usage of a passive splitter rather than an active switching system.

## New generation OLT for optical broadband service

# V1-16XC



### Extraordinary Capacity and Flexibility

The V1-16XC is comprised of combo 16-port XGS-PON interface for service interface and fixed 4-port 25GE interface and 2-port 100GE for uplink on the front panel. It offers usable interface to make up diversity network services. Therefore, depending on customer requirements, it can be configured with several Ethernet configurations.

### Made for Rigid Performance and Reliability Requirements

The V1-16XC offers timing services, allowing for system clocking synchronization from the core of the network. It also provides 2 mounting slots for the dual power modules and 2 mounting slots for the fan on the rear panel. PSU modules support 1:1 redundancy and load sharing, so it is possible to operate as non-stoppable. Security features include storm control for broadcast, multicast and unknown unicast packets, out-band management and Secure Shell (SSH) support.

### Next generation of ultra-fast XGS-PON

The V1-16XC offers next generation of ultra-fast XGS-PON technology that can be used for a variety of new revenue generating applications. Due to the coexistence of GPON equipment installed on the same network, the network can be improved efficiently. It is expected to help build business continuity systems such as telework and video conference that require triple play services of video, data and voice.

# New generation OLT for optical broadband service

## V1-16XC



## Features, Protocols, Interfaces

### Capacity

- + Max. 900Gbps switching capacity base on I/O full duplex
- + Main switching block in Base board with fixed I/O Interface

### Interfaces

- + 16-port XGS-PON combo interface
- + 4-port 25G optical interface
- + 2-port 100G optical interface
- + 1-port of RS-232 Interface for Console Debug mode
- + 1-port of 10/100/1000Base-T electrical Interface for Management
- + 1-port of Alarm Interface
- + Clock Interface

### Resiliency

- + Redundant dual power supply unit (PSU)
- + Hot Swappable for all plug-in units (PSU and FAN)
- + LED indicator

### Layer 2 Capabilities

- + Standard Ethernet Bridging
- + 32K MAC entries
- + 4K active VLANs for 802.1q tagged frame
- + Port VLAN
- + VLAN stacking/translation
- + Link aggregation (static, LACP)
- + Jumbo frame 9K

### GPON Capabilities

- + Support ITU-T G.984.4 ONT Management & Control Interface (OMCI)
- + Remote ONT/ONU management
- + Automatic ONT ranging
- + GPON OLT Class B+ compliant with ITU-T G.984.2
- + GPON OLT Class C+ compliant with ITU-T G.984.2
- + Full-duplex operation
- + 2.488Gbps downstream and 1.244Gbps upstream applications
- + 2.488Gbps continuous-mode transmitter(1.49um-DFB) with automatic output power control
- + BER: under  $10^{-10}$
- + Receiving Wavelength: 1260 ~ 1360nm (Typ: 1310nm)
- + Input sensitivity: Max -28dBm (Measured with a PRBS 2<sup>23</sup>-1 pattern)
- + Input Saturation Power(Overload): -8dBm (min)
- + Transmitter wavelength: 1480 ~ 1500nm (Typ: 1490nm)
- + Mean launched power: +1.5 ~ +4.5dBm (End of life)
- + Spectral width (-20dB): 1nm (max)
- + Receiving Wavelength: 1260 ~ 1360nm (Typ: 1310nm)

### XGS-PON Capabilities

- + Support ITU-T G.9807.1 Compliant
- + Full-duplex operation
- + XGS-PON ODN Class N1 compliant with ITU-T G.9807.1
- + 9.953Gbps downstream and 9.953/2.488Gbps upstream applications
- + Support DDM (Digital Diagnostics Monitoring)
- + Transmission distance: 20km with single-mode fiber
- + Laser type: laser diode class 1 (defined in IEC 60825-1)

### Traffic Management

- + Conditional rate limiting
- + Diff Serv
- + Traffic Scheduling (SP, DRR)
- + 8 queues per port
- + Clock Synchronization
- + IEEE1588v2 (TC/BC)
- + Synchronous Ethernet

### Management

- + Serial/SSH/Telnet(CLI)
- + SNMPv1/v2/v3
- + DHCP server, client, relay agent
- + RMON
- + Software Download/Upgrade

## Physical & Environmental Specifications

|                           |                            |                                   |  |
|---------------------------|----------------------------|-----------------------------------|--|
| Dimensions (W x H x D)    | 440 mm x 44 mm x 280 mm    | Service i/f                       | 16 x XGS-PON combo (SFP+)                        |
| Operating temperature     | -40~149°F (-40~65°C)       | Uplink i/f                        | 4 x 25GBase-R (SFP28)<br>2 x 100GBase-R (QSFP28) |
| Storage temperature       | -40~158°F (-40~70°C)       | Serial i/f, CLI                   | RS232 (RJ45)                                     |
| Operating humidity        | 5 to 95 % (non-condensing) | Ethernet i/f for local management | 10/100/1000Base-T (RJ45)                         |
| AC power                  | 100-240VAC, 5A             | Clock i/f for ToD                 | RS-485   |
| DC power                  | 48VDC, 6.3A                | Alarm i/f                         | RJ45   |
| Maximum power consumption | AC: 245W, DC: 230W         | Heat Transfer Direction           | Front to Rear                                    |

## Ordering Information

### Bases

#### V1-16XC

##### Front

- 16-port XGS-PON combo (SFP+)
- 4-port 25Gbase-R (SFP28)
- 2-port 100Gbase-R (QSFP28)
- 2-slot for Power Supply Unit
- Clock Interface: ToD, 10MHz, 1PPS
- Alarm Interface
- 1-port RS232 for Console
- 1-port GTX for MGMT

##### Rear

- 2-slot for FAN Unit

#### PSU/FAN

V1-16XC\_PSU\_DC  
V1-16XC\_PSU\_AC  
V1-16XC\_FAN  
V1-16XC\_PSU\_Blank Panel  
V1-16XC\_FAN\_Blank Panel

#### SFP+ Options

SFP+ 10GE-SR  
SFP+ 1GE10GE-SR  
SFP+ 10GE-LR  
SFP+ 10GE-ER  
SFP+ 10GE-ZR

#### SFP28 Options

SFP28-25G-SR  
SFP28-25G-LR  
SFP28-25G-ER

#### QSFP28 Options

QSFP28-100GE-SR4  
QSFP28-100GE-LR4



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