DZS

V1-16XC-E

Reimagine Your Edge

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

A new generation Velocity series OLT with the flexibility to choose between GPON, XGS-PON or XGS-PON/GPON Combo for cost-effective 10G services.

Features & Benefits

+ Compact 1RU OLT with 240mm depth, fitting to ETSI rack installations

+ 360Gbps switching capacity

+ 16-port XGS-PON/GPON combo SFP+ interfaces

+ XGS-PON ODN class B+ and class C+ compliant with ITU-T G.9807.1

+ Fixed 4-port 25G SFP28 and 2-port 100G QSFP28 optical interfaces

+ Management via CLI or Netconf / YANG, enabled for SDN network deployments

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-E utilizes a point-to-multipoint Optical Distribution Network (ODN) and the XGS-PON technology with 10G Symmetric bandwidth to enable cost-effective, higher bandwidth, higher value FTTx services. Service providers can add new 10Gig PON services alongside GPON to offer choice and keep pace with growing bandwidth demands. Cost effective 10Gig offers an opportunity for revenue growth in business and mobile xHaul applications beyond traditional residential applications with a common fiber network.

V1-16XC-E

Extraordinary Capacity and Flexibility

The V1-16XC-E is comprised of 16-port combo XGS-PON interfaces for service interfaces and fixed 4-port 25GE interfaces and 2-port 100GE interfaces for uplink on the front panel. It offers useable interfaces to make up diverse 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-E is temperature hardened, so it can be used in indoor and outdoor cabinets. Due to the low depth of only 224mm it fits very well in ETSI cabinets or in locations where space is a constraint. It has an integrated DC power supply with redundant DC inputs. The fan module is pluggable and includes four single fans. Security features include storm control for broadcast, multicast and unknown unicast packets, outband management and Secure Shell (SSH) support.

Next generation of ultra-fast XGS-PON

The V1-16XC-E 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, existing networks 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.

Key Service Attributes

+ Compact 1RU OLT with hardened temperature for indoor or outdoor cabinets, depth below 300mm

+ Sixteen XGS-PON/GPON combo interfaces

+ Four 25G/10G SFP28/SFP+ interfaces and two 100G QSFP28 optical interfaces for Uplinks

+ Clocking interfaces for ToD, 10MHz and 1PPS

+ OLT features according to BBF TR-156

+ Management via CLI or Netconf/YANG

V1-16XC-E

Features, Protocols, Interfaces

Capacity
+ 360Gbps switching capacity
+ Main switching block on 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 inputs
+ Hot Swappable fan unit (front access)
+ LED indicator

Layer 2 Capabilities
+ Standard Ethernet Bridging
+ 32K MAC entries
+ 4K active VLANs for 802.1q tagged frames
+ Port VLAN
+ VLAN stacking/translation
+ Spanning Tree (STP, RSTP, MSTP)
+ Link aggregation (static, LACP)
+ Jumbo frame 9K

Layer 3 Capabilities
+ Static Routing
+ IPv6 with ICMPv6, DHCPv6
+ IPv4/IPv6 Dual Stack

GPON Capabilities
+ Support ITU-T G.988 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 223-1 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)
+ Extinction Ratio: 8.2dB (min)
+ Support for DDM (Digital Diagnostics Monitoring)
+ Transmission distance: 20km with single mode fiber
+ Laser type: laser diode class1 (defined in IEC 60825-1)

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 for 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, WFQ)
+ 8 queues per port
+ Clock Synchronization
+ IEEE1588v2 (TC/BC)
+ Synchronous Ethernet

Management
+ Serial/SSH/Telnet (CLI)
+ SNMP v1/v2c/v3
+ DHCP server, client, relay agent with option 82
+ PPPoE Intermediate Agent with tag format
+ RMON
+ syslog
+ Netconf/YANG
+ NTP
+ Software Download/Upgrade
+ Configuration backup/Download/Upload
+ Device Monitoring (Fan/Power/Temperature/ Memory/CPU)
+ Traffic Monitoring with interface statistics

V1-16XC-E

Physical & Environmental Specifications

Dimensions (W x H x D)	440 mm x 44 mm x 224 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) 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)
DC power	48VDC, 4.4A, dual inputs (A and B power)	Clock i/f	ToD (RJ45), 1PPS (SMA), 10MHz (SMA)
Maximum power consumption	DC: 206W @65°C, 151W @25°C	Alarm i/f	D-sub connector, 26 pins, 8 in / 4 out
Heat Transfer Direction	Side to side (right to left)	Fans	Pluggable fan module (incl. 4 fans)

Ordering Information

Base	
V1-16XC-E	Front - 16-port XGS-PON combo (SFP+) - 4-port 25Gbase-R (SFP28) - 2-port 100Gbase-R (QSFP28) - Clock Interface: ToD, 10MHz, 1PPS - Alarm Interface - 1-port RS232 for Console - 1-port GTX for MGMT - 48V DC power supply with redundant inputs - 1-slot for FAN Unit
FAN	V1-16XC-E-FANASSY
SFP+ Options	SFP+ 10GE-SR SFP+ 1GE10GE-SR SFP+ 10GE-LR SFP+ 10GE-ER SFP+ 10GE-ZR SFP-GE-SX SFP-GE-LX10 SFP-GE-LX20 SFP-GE-LX40
SFP28 Options	SFP28-25G-SR SFP28-25G-LR
QSFP28 Options	QSFP28-100GE-SR4 QSFP28-100GE-LR4

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