

V1-16XC



V1-16XC New generation OLT for optical broadband service

A new generation XCelebrate™ OLT with the flexibility to choose GPON, XGS-PON or GPON+XGS-PON (Combo) for cost-effective 10Gig services.

Features & Benefits

- + Compact 1U low profile, high density
- + 900Gbps switching capacity
- + 16-port XGS-PON/GPON combo SFP+ interfaces
- + Fixed 4-port 25GE SFP28 and 2-port 100G QSFP28 optical interfaces
- + XGS-PON ODN class N1/N2 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 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 based 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

Extraordinary Capacity and Flexibility

The V1-16XC is comprised of combo 16-port XGS-PON+GPON 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 High 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.

Key Service Attributes

- + Compact 1U Chassis with Hardened Temperature for indoor or outdoor cabinets
- + Sixteen XGS-PON/GPON combo interfaces
- + Four 25GE/10GE SFP28/SFP+ interfaces and Two 100G QSFP28 for Uplink
- + ONU bundle rate-limit in OLT
- + Traffic management provides QoS, traffic shaping
- + Transparent LAN services
- + IPTV multicast, IGMPv2 and IGMPv3 services
- + PPPoE Intermediate Agent

V1-16XC

Features, Protocols, Interfaces

Capacity

- + Max. 900Gbps switching capacity based 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 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)
- + 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
Operating temperature	-40~149°F (-40~65°C)
Storage temperature	-40~158°F (-40~70°C)
Operating humidity	5 to 95 % (non-condensing)
Clock i/f for ToD	RS-485

Alarm i/f	RJ45
AC power	100-240VAC, 5A
DC power	48VDC, 6.3A
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
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PSU/FAN	V1-16XC_PSU_DC V1-16XC_PSU_AC V1-16XC_FAN V1-16XC_PSU_Blank Panel V1-16XC_FAN_Blank Panel
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SFP+ Options	SFP+ 10GE-SR SFP+ 1GE10GE-SR SFP+ 10GE-LR SFP+ 10GE-ER SFP+ 10GE-ZR
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SFP28 Options	SFP28-25G-SR SFP28-25G-LR SFP28-25G-ER
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QSFP28 Options	QSFP28-100GE-SR4 QSFP28-100GE-LR4
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