advanced media technologies®

V-LC-XGSP-16

Reimagine Your Edge

V-LC-XGSP-16 Combination GPON/XGS-PON Line Card

A new generation XCelerate™ line card for mass-scale XGS-PON deployment with the flexibility of on-board traffic management, aggregation, and uplinks.

Features & Benefits

- 16-port XGS PON/ line card
- Advanced Traffic Management and QoS support
- On-board 2 x 100G uplink ports
- ITU-T Standards compliant

The V-LC-XGSP-16 is the latest addition to our portfolio of line cards for use in the Vx series OLT chassis. This new generation XCelerate™ line card can support 16 interfaces for XGS-PON and x100G QSFP28 uplinks in a single-slot card design.

The high density V-LC-XGSP-16 line card with non-blocking architecture enables service providers to deploy mass scale 10Gig services to keep pace with growing bandwidth demands. Cost effective 10Gig services offer an opportunity for revenue growth in business and mobile xHaul applications beyond traditional residential applications with a common fiber network.

The V-LC-XGSP-16 can be deployed in V2, V6, V14, and V16 chassis. It provides up to 256 OLT ports in one V16 chassis.

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System-On-a-Card Design

The V-LC-XGSP-16 utilizes our System-On-a-Card XCelerate™ design where service cards include all the required hardware functions to operate as a stand-alone OLT. It comes with on-board high capacity local switching and aggregation as well as two 100GE uplinks. This capability allows maximum flexibility in OLT system configuration and ultimate scalability. It allows expansion by simply adding OLT cards regardless of the backplane capacity and central switch fabric capacity.

Disaggregation and SDN Support*

The XCelerate™ service cards allow any Velocity OLT to be deployed as a traditional chassis OLT or as Disaggregated OLTs. The unique XCelerate™ architecture allows the V-LC-XGSP-16 cards to operate as a "System-on-a-Card" for disaggregation and SDN Control. On-board switches in V-LC-XGSP-16 cards provide traffic aggregation, QoS, and uplink interfaces for non-blocking performance. With a fully distributed database, both boot and upgrade times are exceedingly low for better customer experience. System upgrades are much simpler ensuring maximum reliability and availability.

The Ultimate in Density and Flexibility

With 128 splits per PON, one V16 chassis fully equipped with V-LC-XGSP-16 line card can support up to 32K ONTs concurrently. The XCelerate™ line card allows maximum flexibility for operators as they transition through different generations of fiber access technologies. It allows them to leverage the existing ODN to offer higher bandwidth XGS-PON services to businesses and homes, or for mobile xHaul. Mass scale XGS-PON deployment with V-LC-XGSP-16 can significantly increase service provider revenue at unmatched cost-points. The V-LC-XGSP-16 supports co-existence of standard GPON and XGS-PON on the same PON with an external WDM Co-Existence element if needed.

The two 100G ports on the card offers additional uplink capacity and flexibility on how traffic is aggregated. The ports on the card can also be used for subtending other OLTs or devices. The ability to have 100G backplane interfaces as well as on-board 100G uplinks provide customers flexibility and scalability for non-blocking bandwidth.

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Key Service Attributes

- XGS-PON ITU-T G.9807.1-compliant interface, Class N1, N2, and E1
- Type-B redundancy support
- Sixteen SFP+ interfaces for XGS-PON
- Two 100G QSFP28 Ethernet interfaces for Uplink or Downlink
- Link Aggregation across the QSP28 ports intra-card or adjacent card
- Traffic management provides QoS, traffic shaping
- Layer 2 switching/forwarding features, video replication and security
- Support of Radius proxy, 802.1x, LLDP
- IPTV multicast, IGMPv2 and IGMPv3 services

Product Specifications

Interfaces

- Subscriber Line Interfaces: GPON
- Two 100G (QSFP28) or 40G (QSFP+)

Protocol Support

- ITU-T G.9807
- Bridging 802.1D
- VLAN 802.1Q with 802.1p
- IGMP
- IGMP Snooping with Proxy reporting
- DHCP Relay & DHCP Option 82
- PPPOE with Intermediate Agent
- Broadcast Storm Protection
- Bridge Loop Protection
- Transparent L2/L3 VPN for businesss services

Regulatory Compliance

- Safety
  - EN 62368-1
  - UL 62368-1
  - CAN/CSA C22.2 No. 62368-1
- EMC Emissions / Immunity
  - FCC Part 15 Class A
  - EN 55022 Class A
  - CES-003 Class A
  - EN 300 386

Physical & Environmental Specifications

Dimensions (H x W x D)	378mm x 22mm x 212mm
Operating temperature	-40~149°F (-40~65°C)
Storage temperature	-40~158°F (-40~70°C)
Operating humidity	5 to 85 % (non-condensing)

Altitude:	-200ft to 16,500ft (-60m to 5,000m)
Power Requirements	Typical 113W (without SFP)
Maximum Power	185W

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Ordering Information

V-LC-XGSP-16	ROHS, REQ MIN. XXX. (16) 10/10 XGS-PON+GPON COMBO (COEXISTENCE) PORT LC, SINGLE SLOT (REQ SFP+ XCVRS)
XCVR-XGS-ONLY-N2-RSSI-I	XGSPON OLT 10G SFP+, NO SUPPORT FOR 2.5G UP,1577NM CW MODE DOWN, 1270NM APD/TIA UP, I TEMP, RSSI
XCVR-XGS-ONLY-SFP+-N2-RSSI-C	XGSPON OLT 10G SFP+, NO SPT FOR 2.5G UP,1577NM CW MODE DOWN, 1270NM APD/TIA UP, CTEMP, RSSI
XCVR-AEHG-QSFP28-100M-CA	QSFP28 100G MMF 850 100M OM4 (70M OM3) OPTICAL XCVR, 0~70 DEG C C-TEMP
XCVR-AEHG-QSFP28-10KM-CA	QSFP28 100G SMF 1310 10KM OPTICAL XCVR, 0~70 DEG C-TEMP

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