

# Casa Systems

## 16x10G PON Card

Winning and keeping residential and enterprise video and Internet services customers has never been tougher. Service providers face a range of competition in a business that requires rapid response but is still capital intensive. They need partners who are fast enough to get them ahead of their competition and committed to keeping them there, which is why more and more, leading providers depend on Casa Systems.

Casa Systems' portfolio offers service providers the solutions they need for next generation networks, available now. These solutions help service providers transform their networks to address capacity, performance, cost and agility challenges caused by exponentially increasing traffic, growing numbers of attached devices, rising competition, and legacy network limitations. Casa's approach helps service providers extend the life of existing network assets while making a smooth transition to distributed, converged, cloud-based all-IP infrastructure at the pace the service provider desires.

Casa's Passive Optical Network (PON) solution is part of a suite of access products designed to deliver unified Gigabit services to residential and business subscribers over fiber networks or over networks comprised of Hybrid Fiber Coax (HFC) and PON and access technologies. Within this portfolio, Casa's latest 16x10G line card supports DPoEv2 compliant 10G EPON OLT services from Casa's award-winning high density C100G chassis or mid-density C40G chassis.

Deployed with the SMM300G Switch and Management Module, the PON 16x10G cards delivers the features of a standards-based "DPoEv2.0 System", enabling PON services managed by the same DOCSIS back office systems and tools that are used today. The PON16x10G card can be deployed in a PON only chassis, or the PON card can coexist with upstream and downstream RF cards as well as the CSC8x10G (CCAP Services Card for Casa's Distributed Access cable solutions). This allows a service provider to introduce PON with as little as a spare slot on an existing chassis. As the PON subscriber base increases, additional chassis can be introduced, or existing CCAP chassis can be converted.



### Highlights

#### High Density

The PON16x10G line card supports 16x10G EPON interfaces with pluggable SFP+'s. A C100G chassis with 12 PON16x10G line cards can support 192x10G EPON ports. A C40G chassis with 4 PON16x10G line cards can support 64x10G EPON ports. Each EPON port supports a PR(X)30 SFP+ transceiver for supporting 32 ONUs at 20 kilometers

#### Mixed Mode Support

The PON 16x10G card supports mixed mode EPON services in the upstream direction, allowing 10G/10G and 10G/1G EPON Optical Network Units (ONU) to coexist on the same PON hardware

#### DPoE v2.0 Support

Supports native EPON ONU and DPoEv2.0 compliant ONUs. With a standards-based DPoE Mediation Layer (and Virtual Cable Modem functionality), the PON16x10G can manage L2 ONUs from existing DOCSIS back office systems as well as support Metro Ethernet (business) services

#### XG-PON1 Support Option

Software upgradeable for XG-PON1  
10G Downlink / 2.5G Uplink

**Feature Benefit**

**Pluggable SFP+: Designed for compliance with PON 16x10G Card**

<b>EPON Services</b>	DS: 10G EPON US: 10G and 1G EPON
<b>Power Budget</b>	PR30 (10G/10G) PRX30 (10G/1G)
<b>Downstream Optical Transmit Wavelength Range</b>	1575-1580 nm
<b>Downstream Optical Transmit Power</b>	+2 to +5 dBm
<b>Upstream Optical Receive Wavelength Range</b>	10G US: 1260-1280 nm 1G US: 1260-1360nm
<b>Upstream Optical Receive Power Level</b>	10G US: -6 to -28 dBm 1G US: -8 to -30 dBm
<b>Compliance</b>	<ul style="list-style-type: none"> <li>• SFP+ MSA</li> <li>• SFF-8472</li> <li>• IEEE-802.3av</li> <li>• IEEE-802.3ah</li> <li>• FCC 47 CFR Part 15, Class B</li> <li>• FDA 21 CFR 1040.10 and 1040.11</li> </ul>

**PON 16X10G Card: Designed for compliance with above Pluggable SFP+**

<b>Ports</b>	16 x 10G EPON Ports
<b>Throughput</b>	Max DS throughput per PON Port: 9.9Gbps Max US throughput per PON port: 9.8Gbps (10G EPON) and .985 Gbps (1G EPON)
<b>No. of ONUs per Port</b>	Max number of ONUs per port: 32 at 20km; 64 on shorter PONs
<b>Max Power Consumption</b>	175W
<b>Front Panel LEDs</b>	Status, Active, Alarm and 16x PON port status LEDs
<b>Standards</b>	Designed to the following standards: <ul style="list-style-type: none"> <li>• IEEE-802.3av</li> <li>• IEEE-802.3ah</li> <li>• CableLabs' DPoEv2.0 specifications                             <ul style="list-style-type: none"> <li>• IP (HSD) Residential Services</li> <li>• L2VPN / MEF Services</li> </ul> </li> </ul>

**ONUs**

Casa Systems offers a family of DPoEv2.0-compliant ONUs for residential, MDU and enterprise deployments, including: Bridge, Bridge with Voice, and Wifi Gateway ONUs.

Casa's 10G EPON solution also supports interoperability with third party DPoEv2.0 ONUs.

