

# Tellabs® 1000 Multi-Service Access Series Passive Optical Network (PON) Plug-in Card

## Overview

The Tellabs Passive Optical Network (PON) plug-in card is part of the Tellabs® 1000 Multi-Service Access Series, an end-to-end, standards-based solution, which enables accelerated migration to Fiber-to-the-Premises (FTTP) deployment. The Tellabs 1000 series builds on its industry-leading integrated multi-service access platform. The PON plug-in card is the key enabler of the Tellabs 1000 MSA shelf as a modular, highly integrated Optical Line Terminal (OLT) and voice gateway combination.

The PON card provides an interface to the Optical Distribution Network (ODN) and supports up to 32 Optical Network Terminals (ONTs) for residential and business applications.

The PON card has an upstream maximum bandwidth capacity of 155 Mbps and downstream capacity of 622 Mbps. Optical wavelengths utilized for these services are:

- 1310 nm for upstream traffic from the ONTs
- 1490 nm for downstream traffic toward the ONTs

The PON card has access to the narrowband and broadband resources of the Tellabs 1000 MSA Series.

The PON card is “BPON” compliant with the FSAN, ITU-T G.983 standard. This approach enables volume-based cost reductions, use of best-in-class product sets, and common performance and operation among vendors to provide optimal economic solutions to service providers.

Since the PON card is NEBS approved and environmentally hardened, PONs may be extended from both the central office or remote cabinet environment. The high-density PON card can be deployed from any Tellabs 1000 MSA shelf and from any of the shelf's 22 card slots. A hardened OLT helps resolve reach and fiber-count issues. Plan the network with your existing resources in mind to accelerate implementation of FTTP.

## Features and Benefits:

- Modular, high-density, pay-as-you-grow implementation
- 700 homes per shelf, <5,000 homes per seven foot bay
- Hot-swappable modules for in-service upgrades
- Advanced thermal design for -40° to +65° C operation
- Hardened OLT for deployment in central office or in cabinet
- Standard homologated interfaces
- Selection of ATM and GigE network interfaces
- Optical budget: 28 dB class B+
- Brings hundreds of digital video channels to the home
- Field proven advanced management and diagnostics for ease of deployment



## LED Indicators

- FAIL — card failure
- ACTV — card active
- BUSY — voice call on the card
- SYNC — at least one ONT ranged

## Specifications:

### *Voice Services Support*

- Circuit switched GR-303, TR-008 and TR-57
- VoIP via SIP
- Circuit Emulation Services (CES) for Business T-1

### *Video Services Support*

- RF Video Overlay at 1550 nm, 50 to 850 MHz, Analog and Digital service
- IP Switched Digital Video

### *Optical Interface*

- 622 Mbps downstream, 155 Mbps upstream
- Compatible with class B ODN, 28 dB class B+, 20 km reach (12.4 miles)

### *Signaling*

- TX
- RCV

### *Environmental*

- Operating temperature: -40° to +75° C (-40° to 167° F)
- Humidity (relative): 5–95% non-condensing
- Typical power consumption: 12 W

### *Dimensions*

- Height: 5.125 in (13.018 cm)
- Width: 5.63 in (1.429 cm)
- Depth: 10.5 in (26.67 cm)
- Weight: 10 oz; 0.63 lb (0.28 kg)

### *Compliance*

- ITU-T G.983 standard

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