Tellabs® 100 Series Mini Optical Network Terminals (ONTs)

A new generation of in-wall and cubicle ONTs enable complete office environment integration

Overview

The Tellabs® 120W (In-Wall) and 120C (Cubicle) Mini Optical Network Terminals (ONTs) provide a revolutionary new level of deployment efficiency and simplicity, further reducing the total cost of deployment of Optical LAN solutions. This next generation of ONTs are deployed fully integrated into the office environment; either in-wall, integrated into office furniture, or in a stand-alone mini package. A full suite of voice, video, and high-speed data services in a compact and efficient package.

Like all Tellabs ONTs, the new Tellabs 100 Series Mini ONTs provide high-speed, low cost performance in all enterprise and government environments. Additionally, the Tellabs 120 Series Mini ONT creates a neat, clean and efficient workspace and provides a new level of security for all office environments. And, with a full suite of expansion modules, users can enjoy WiFi wireless, CATV, secure VoIP, HPNA, Zigbee, additional Gigabit Ethernet ports, and POTS services.

These small ONTs offer powerful Enterprise business features:

- Integrated deployment eliminates the need for desktop ONTs
- Two (2) 10/100/1000 Gigabit Ethernet interfaces
- Power-over-Ethernet (PoE) on each port
- Link Layer Data Protocol (LLDP) for fast and efficient IP endpoint provisioning
- Remote powering allows for re-purposing of existing CATx cable or leverage advances in hybrid fiber/copper infrastructure
- Existing battery back-up systems can be re-purposed in the communication closet
- Modular design allows ONT to be field upgradable with expansion modules
- Uses Tellabs' industry leading Government and Enterprise security, provisioning, and quality of service mechanisms
- Alarmed faceplate – Removing faceplate sends alarm to management system (120W only)
- Network Access Control (NAC) enables individual user service profiles to automatically follow a user to any port on the Tellabs Optical LAN system, including service profile and security settings
- Operates with Tellabs' complete line of Optical LAN OLT and ONT solutions

Equipped with an ITU-T G.984-compliant 2.5 Gbps downstream and 1.25 Gbps upstream GPON interface, the Tellabs Series 100 Mini ONT supports the full range of advanced services including voice, video and high-speed Internet (HSI).

Tellabs® 120W Mini Optical Network Terminal (ONT)

Tellabs® 120C Mini Optical Network Terminal (ONT)

Compliant with ITU standard ONT Management Control Interface (OMCI) definitions and managed by the Tellabs® Panorama™ Manager, the Tellabs 100 Series Mini ONTs support the full range of FCAPS functions including supervision, monitoring and maintenance for easy adds, moves, and changes.

Services

Data

The Tellabs 100 Series Mini ONTs deliver enterprise-class data services in a compact and innovative package. With 2.5Gbps of delivered bandwidth to the ONT, end users gain access to gigabit speeds for today's demanding business applications. Complete with a comprehensive enterprise-class security architecture, organizations can rely on key features such as Denial of Service (DOS) protection and Network Access Control (NAC) with dynamic policy assignment.

Deployment efficiency can be gained by delivering both data and Power-over-Ethernet on a single-cable solution supporting edge devices such as VoIP phones, surveillance cameras, and wireless access points (APs). With support for eight (8) VLANs per Ethernet port, connecting multiple IP endpoints to a single ONT Ethernet port further enhances scalability.

Ease of connectivity is provided with RJ-45 data interfaces located directly on the In-Wall faceplate, or in the case of the Cubicle unit directly in the raceway. Flexible location placement supports WiFi APs, video surveillance, building automation systems.

VoIP

Voice-over-IP services are supported using external VoIP phones and other Integrated Access Devices (IAD). Link Layer Data Protocol (LLDP) provides plug-and-play configuration for VLAN assignments, Quality of Service (QoS), security policies, and PoE power levels, enabling rapid deployment of unified communication services.

Video

The Tellabs 100 Series Mini ONTs support flexible video content delivery in the form of Ethernet/IP data, either as unicast and multicast streams. Advanced IGMP, VLAN, and 802.1p/DSCP processing ensures secure and efficient service delivery for video conferencing, video surveillance, and other video applications user.

Specifications

Dimensions

- In-Wall Model
  Faceplate: 4.51" (H) x 3.075" (W) x 0.525" (D)
  Base: 2.79" (H) x 1.625" (W) x 2.93" (D)
  Total depth is 3.45"
- Cubicle Model
  2.79" (H) x 1.62" (W) x 2.93" (D)

Power Supply

- Remote powering or local powering
- +48Vdc input
- Optional (local) battery back-up
- Dying gasp support

Operating Environment

- Temperature: -5ºC to 50ºC
- Humidity: 5% to 85% relative humidity

Safety & EMI

- ETSI, FCC and UL certified

Installation

- In-Wall unit mounts directly in wall with standard gang box, mud ring, or extension ring
- Cubicle unit mounts directly within standard raceways

Network Interface

- Compliant to ITU-T G.984 GPON standards
- SFF type laser, SC/APC connector
- Wavelengths: Downstream 1490nm, Upstream 1310nm
- 1.244 Gbps burst mode upstream transmitter
- 2.488 Gbps downstream receiver
- Compliant with ITU-T G.984.2 Amd1, Class B+
- APD receiver and DFB transmitter
- 0.5~+5dBm launch power, -27 dBm sensitivity, and -8dBm overload
- Laser compliant to FCC 47 CFR Part 15
- Class B and FDA 21 CFR 1040.10 and 1040.11, Class I

GPON Quality of Service (QoS)

- Fully ITU-T G.984-compliant framing
- Multiple T-CONTs and GEM ports per device
- Supports single T-CONT and multiple T-CONTs modes
- Flexible mapping between GEM ports and T-CONT with priority queue-based scheduling
- Activation with automatic discovered Serial Number (SN) and password
- AES-128 Decryption with key generation and switching
- Forward Error Correction (FEC)
- IP DSCP/ToS to 802.1p mapping
- Support for multicast GEM port

Ethernet Interfaces

- Two (2) 10/100/1000Base-T Gigabit Ethernet with RJ-45 connectors
- 802.3az Energy-Efficient Ethernet
- Power-over-Ethernet (PoE) leveraging the latest 802.3at chipset
- Class 3 – 15.4 Watts total, shared
- Auto sensing MDI/MDIX or manual configuration
- IEEE 802.1D bridging
- Virtual switch based on 802.1Q VLAN
- 1024 MAC address, 512 VLAN groups
- Eight (8) VLANs per Ethernet port
- VLAN tagging/detagging, marking/re-marking per Ethernet port
- VLAN translation, trunking, stacking (Q-in-Q)
- CoS, QoS, and Security policies based on each VLAN-ID, 802.1p, DSCP
- MAC address limiting to prevent flooding overflow
- IPv6 capable for enterprise services
- L2-L4 Access Control Lists (ACL)
- Upstream ACL rate limiting
- 802.1x Port Based Authentication
- Link Layer Data Protocol (LLDP) for auto provisioning and power control
- Network Access Control (NAC)
- IGMP v2/v3 snooping

Expansion Modules*

- Two (2) 10/100/1000Base-T Gigabit Ethernet with PoE
- Two (2) POTS with RJ-11 connectors, optional AS-SIP support
- One (1) CATV via F-connector (broadcast video)
- 802.11 b/g WiFi
- HPNA
- Zigbee wireless
- Dual GPON optical port (redundancy)

*Future availability

LED Indicators

- PON – Link status
- Ethernet link (per port)
- Ethernet Tx/Rx (per port)

Operations, Administration and Maintenance (OAM)

- Standards--compliant OMCI as defined in ITU-T G.984.4 and G.983.2
- Management Information Base (MIB) manipulation over OMCI by Create, Delete, Set, Get and Get Next commands
- Complete service provisioning including Ethernet, VoIP, etc.
- Alarming and AVC report, performance monitoring
- Remote image download over OMCI, as well as activation and rebooting
- Holds two versions with image integrity checking and automatic rollback
- Built in location indicator for easy installation and labeling identification

Next Step:

Visit **www.tellabs.com/solutions/opticallan** to learn more about how Tellabs Optical LAN Solutions are solving enterprise network challenges while significantly reducing CapEx and OpEx, power consumption,and space requirements. If you have a question about Tellabs Optical LAN Solutions, please email **ask@tellabs.com**.

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