Tellabs® 140W Optical Network Terminal (ONT)

In-wall ONT offers a paintable and changeable faceplate for the modern enterprise LAN

Overview

The Tellabs 140W Optical Network Terminal (ONT) offers 4-port Gigabit Ethernet connectivity that is a scalable and smart choice for the new enterprise LAN. This evolutionary ONT can be integrated inside office furniture or mounted securely inside a wall. Its paintable and changeable faceplate sets a high standard for matching a wide range of interior office decors. All modern enterprise services and applications can be delivered, including voice, video, high-speed data, wireless, security, access controls, environmental and building automation in a small in-wall form factor.

Like all Tellabs® Optical LAN Solution ONTs, the Tellabs 140W ONT provides simple, smart and scalable Gigabit-speed services in all enterprise LAN installations, including government, financial, education, healthcare and hospitality. Additionally, the Tellabs 140W ONT creates a neat, clean and efficient workspace, and ensures the highest-level of security for all office environments.

This 4-port ONT offers powerful enterprise LAN features for a high-performance IT infrastructure:

- Four (4) 10/100/1000 Ethernet interfaces with Power over Ethernet Plus (PoE+) on all four (4) ports
- Fast and efficient IP endpoint provisioning, including power management, monitoring and configurations with Link Layer Discovery Protocol (LLDP) Media Endpoint Discovery (MED)
- Data, VoIP, unified communications and IP video in many forms (e.g., entertainment, surveillance, conferencing), wireless access points, security, automation, access control, environmentals and other corporate services
- Uses Tellabs' industry-leading software-defined traffic management, security, provisioning and traffic management mechanisms

Tellabs® 140W ONT with changeable faceplate

- 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 seamlessly with Tellabs' complete line of OLTs and ONTs
- Modular design with a separate back box (with remote DC power termination and fiber cable slack storage), ONT electronics (with fiber termination) and a paintable/changeable faceplate
- Building architects, engineers and consultants will enjoy the 140W ONT's paintable and changeable faceplate for matching a range of interior office decors

All features and functionality can be defined in software and dynamically allocated, based on real-time needs. Being controlled by the Tellabs® Panorama™ PON Manager helps speed installations and daily operations. Centrally controlled by the Tellabs Panorama PON Manager, the Tellabs 140W ONT supports autodiscovery mechanisms, can be quickly provisioned using global templates and wizards, and offers smart troubleshooting tools, all of which allow for speedy moves, adds and changes for everyday operations.

Multiple Powering and Mounting Options

The Tellabs 140W ONT is modular in design so that its ONT back box with power connectors and fiber cable slack storage can be installed separately. The ONT back box, with remote DC power termination, can be installed into a single- or dual-gang form factor. This modular design allows for separate installation of DC power and fiber cable during the rough construction phase, while ONT electronics, fiber connectivity and the ONT faceplate can be installed during the finish construction phase. Another benefit of the ONT back box (with DC power termination and fiber cable slack storage) is that it can be installed in preparation for future growth considerations (cover with standard blank faceplate) without incurring the expense of purchasing ONT electronics and an ONT faceplate.

Remote powering is supported using a centrally located bulk power plant, emergency power and bulk battery back-up over composite single-mode fiber (greenfield), which provides two copper wires or repurposes existing CATx cabling (brownfield).

Both IEEE 802.3af PoE and high-power PoE+ IEEE 802.3at, including Class 4 negotiations can be selected on a per port basis. The maximum PoE power when remotely powered is 60 watts spread across all four Ethernet ports.

Tellabs 140W ONT is designed and tested for a wide variety of mounting scenarios, including inside walls. Typical installation will be inside a wall using a low-voltage mounting bracket or a dual-gang utility box depending on local building practices and customer preference.

Specifications

Dimensions

- Base: 1.85x1.28x2.56 in (4.79x3.25x6.50 cm)
- Paintable and changeable faceplate: 2.79x0.87x4.76 in (7.08x2.21x12.09 cm)

Power Supply

- Input at ONT (volts): 48–56 VDC
- Power connector: Phoenix
- Consumption Idle (watts): 5 W
- Consumption w/o PoE Max (watts): 8 W
- Consumption w/PoE Max (watts): 72 W
- Max PoE Power via remote power: 60 W
- Max Draw (amps): 1.5 A @ 48 VDC
- Dying Gasp support

Operating Environment

- Temperature: 0° C to 40° C
- Relative humidity: 5% to 85%, noncondensing

Safety & EMI

- CE, FCC and UL certified

Installation

- Inside a wall using a low-voltage mounting bracket or a dual-gang utility box depending on local building practices and customer preference
- Built-in location indicator for easy installation and labeling identification

Network Interface

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

Gigabit Passive Optical Network

- ITU-T G.984-compliant framing
- Flexible mapping of GEM ports and T-CONT with priority queue-based scheduling
- Activation with automatically discovered serial number (SN) and password
- AES-128 decryption with churning keys
- Forward Error Correction (FEC)
- IP DSCP to 802.1p mapping
- Support for multicast GEM port

Ethernet Interfaces

- Four 10/100/1000Base-T Gigabit Ethernet RJ-45 connectors
- Autosensing MDI/MDIX or manual configuration
- Virtual switch based on 802.1Q VLAN
- 1,024 MAC addresses
- 512 VLAN groups
- 25 VLANs per Ethernet port
- VLAN tagging/detagging, marking/remarking per Ethernet port
- VLAN translation and trunking
- QoS and security policies based on VLAN-ID, 802.1p, DSCP
- MAC address limiting to prevent flooding attacks and limiting the number of devices attached to a port
- IPv6 capable for enterprise services
- L2–L4 Access Control Lists (ACLs)
- Upstream ACL rate limiting
- IEEE 802.3az Energy-Efficient Ethernet
- Both IEEE 802.3af PoE and high-power PoE+ IEEE 802.3at, including Class 4 negotiations
- Power over Ethernet, both PoE and PoE+ enabled on all four (4) ports
- IEEE 802.1x Port-Based Authentication
- Link Layer Data Protocol (LLDP) for autoprovisioning, inventory and PoE power management.
- Network Access Control (NAC)
- IGMP v2/v3 snooping

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.988
- Management Information Base (MIB) manipulation over OMCI by Create, Delete, Set, Get & Get Next commands
- Complete service provisioning, such as Ethernet and VoIP
- Alarming, events and performance monitoring
- Remote image download over OMCI as well as activation and rebooting
- Holds two versions of software with image integrity checking and automatic rollback

Ordering Information

Tellabs 140W ONT

- 81.11G-ONT140WN-R6 - ONT electronics with wall faceplate
- 81.11K-ONT140WP-R6 - DC power termination with back box (10-pack)
- Colored faceplates can be ordered in bulk. Please contact for Tellabs sales representative for more ordering details.
- SR29.0 is the minimum base software

For more information, please contact your local Tellabs sales representative or local Tellabs sales office at the phone numbers listed below, or visit www.tellabs.com.

The development, release and timing of features or functionality described for Tellabs' products remains at Tellabs' sole discretion. The information that is provided within this data sheet is not a commitment nor legal obligation to deliver any material, code or functionality.

Take the next step. Contact Tellabs today.

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