



Tellabs® 142R Optical Network Terminal (ONT)

Flexible zone, wall- or desk-mounted PoE enabled ONT provides data, voice (IP & POTS) and video (IP & RF)

Overview

Designed to deliver powerful business services to end-users in free-standing, wall- or desk-mounted applications, the Tellabs 142R Optical Network Terminal (ONT) incorporates four (4) Gigabit Ethernet (with PoE), two (2) analog voice and one (1) RF Video ports into one cost-efficient package.

Like all Tellabs® Optical LAN Solution 100 Series ONTs, the Tellabs 142R ONT provides simple, smart and scalable gigabit-speed services in all enterprise LAN installations, including government, financial, education, healthcare and hospitality.

All features and functionality can be defined in software and dynamically allocated, based on real-time needs. Centralized Management provided by the Tellabs® Panorama™ PON Manager helps speed installations and daily operations. Controlled by the Tellabs Panorama PON Manager, the Tellabs 142R ONT supports auto-discovery mechanisms, can be quickly provisioned with network policies, and offers smart troubleshooting tools, all of which allow for speedy moves, adds and changes for everyday operations.

Services

Data

The Tellabs 142R ONT provides four (4) 10/100/1000 Gigabit Ethernet interfaces with Power over Ethernet Plus (PoE+) on each port. This ONT offers fast and efficient Ethernet/IP endpoint provisioning. This includes power management, monitoring and configurations with Link Layer Discovery Protocol (LLDP) Media Endpoint Discovery (MED). 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. This is inclusive of IEEE 802.1x authentication including multiple subtended hosts.

Voice – Analog (POTS) and VoIP

The Tellabs 142R ONT provides two (2) RJ-11 analog POTS ports equipped with a SIP agent for VoIP support. That means customers have a choice of supporting traditional analog Class 5 voice switch and softswitch deployments. Thus, enterprise VoIP connectivity supporting the latest unified communications systems such as Avaya and Cisco Unified Communications Call Manager can be delivered over fiber.

Whether analog voice or IP voice, the system will maintain a strict quality of service guarantee for the voice traffic transmission across the network.

Video – RF and IP Video

The Tellabs 142R ONT is an excellent choice for all forms of enterprise video such as entertainment, security, video conferencing, high-end telepresence conferencing, telepresence robotics and surveillance. Depending on the necessary video content, whether RF or IP format, the ONT supports both.

When deploying RF video services, the Tellabs 142R ONT provides a standard coaxial (F-connector) interface supporting 54–870 MHz CATV AM-VSB service over the 1550 nm optical wavelength on the PON. This standard is in compliance with ITU-T G.984.4.



Tellabs® 142R ONT serving all voice, video and data options

Multiple Powering and Mounting Options

Powering

The Tellabs ONT142R is designed with local power, local Battery Backup Unit (BBU) and remote powering options. Remote powering is supported using a centrally located bulk power plant, emergency power and bulk battery back-up over composite single mode fiber (greenfield).

Power over Ethernet (PoE)

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

Mounting

Tellabs 142R ONT is designed and tested for a wide variety of mounting scenarios modern office and extended campus environments. It can be mounted in zone box, in-wall NEMA enclosure, secured to a wall, mounted underneath a desk or be free-standing on a desktop.

Visit www.tellabs.com for more information

Specifications

Dimensions

- 8.66"/220mm x 6.11"/168mm x 1.33"/34mm

Power Supply

- Input at ONT (volts): 48–56 Vdc
- Consumption Idle (watts): 5 W
- Consumption w/o PoE Max (watts): 13 W
- Consumption w/PoE Max (watts): 75 W
- Max PoE Power via remote power: 63 W
- Max Draw (amps): 1.38 A @ 48 VDC
- Dying Gasp support

Operating Environment

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

Compliance Testing

- UL, FCC and ETL

Installation

- Mounting options: zone, wall, desktop, in-wall enclosure (sold separately)
- Built-in audible 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, Downstream 1550 nm (RF Video)
- 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

RF Video Interface

- One (1) 75 Ohm with F-type connector
- Compliant to ITU-T G.984 standards
- AM-VSB Cable Video Distribution @ 1550 nm
- Received power levels, +1 dBm to -5 dBm
- Frequency Range 54-870 MHz CATV

Analog Voice Interface

- Two (2) RJ 11
- Three (3) REN load
- Balanced ring at 55 V RMS
- DTMF dialing
- Supports 500-ft. loop length
- Multiple voice codec G.711 and G.729
- Echo cancelling, VAD and CNG
- Various CLASS services (FSK) — caller ID, waiting, call forwarding and call transfer call
- SIP (RFC3261)

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
- 1024 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
- POTS (per port)
- Ethernet (per port)
- Battery

Operations, Administration & 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 & Get Next commands
- Complete service provisioning, such as Ethernet and VoIP
- Alarming, events & 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 142R ONT

- 81.11G-ONT142R- R6
- Minimum base software SR29.1
- Fiber Management Bracket 81.11G-ONT142R-R6 (10 pack)
- Battery Backup Bracket 81.11K-BKONTBBU-R6 (10 pack)

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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