

SKU: 81.11G-ONT142R-T-R6
Category:

142R Optical Network Terminal (ONT142R-TAA)

Designed to deliver business services to end-users in free-standing, wall- or desk-mounted applications, the TAA compliant Tellabs 142R Optical Network Terminal (ONT) incorporates four (4) Gigabit Ethernet (with PoE), two (2) analog voice and one (1) RF Video ports. The Tellabs 142R ONT provides simple, smart and scalable gigabit-speed services in all enterprise LAN installations, including multi-dwelling units (MDU), student housing, senior, assisted living, luxury apartments, condos, houses, hotels and resorts. The Tellabs 142R ONT delivers enterprise video such as entertainment, security, video conferencing, high-end telepresence conferencing, telepresence robotics and surveillance. Both RF or IP format are supported. When deploying RF video services, the Tellabs 142R ONT provides a standard coaxial (F-connector) interface supporting ITU-T G.984.4 compliant 54-870 MHz CATV AM-VSB service over the 1550 nm optical wavelength on the PON.

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Features

- TAA Compliant
- Uses Tellabs' industry-leading software-defined global profiles, traffic management, security, provisioning and traffic management mechanisms
- Two analog POTS ports equipped with a SIP agent for VoIP support.
- RF Video via standard coaxial interface supporting 54-870 MHz CATV AM-VSB service over the 1550 nm optical wavelength within PON
- Advanced IP and Ethernet Functions
- Supports IP-based voice, all forms of enterprise IP-based data traffic and all forms of enterprise IP-based video traffic
- Both IEEE 802.3af Power over Ethernet (PoE) and high-power PoE+ IEEE 802.3at
- Enterprise grade G-PON ITU-T G.984 implementation
- Built-in audible location indicator for easy installation and labeling identification
- Supports Dante and CobraNet digital audio systems over IP

Highlights

Advanced IP and Ethernet

Uses industry-leading software-defined traffic management, security, provisioning and quality of service mechanisms.

Voice

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

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.

Powering

The Tellabs ONT142R is designed with local power 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.

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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.

Specifications

Physical

- Height: 1.34 in / 34.03 mm
- Width: 8.66 in / 220 mm
- Depth: 6.30 in / 160 mm
- Weight: 1.0 lb/.45 kg

Interfaces

- SC-APC / G-PON (G.984) uplink: 1
- RJ-45 / Gigabit Ethernet w/PoE: 4
- RJ-11 / POTS Voice: 2
- F-Connector / RF Video: 1

Power

- Input at ONT (Volts): 50-57Vdc
- Consumption Idle (Watts): 5W
- Consumption w/o PoE Max (Watts): 13W
- Consumption w/PoE Max (Watts): 75W
- Max Draw at ONT (Amps): 1.38A

Local Power Options

- Power Supply Unit (PSU): not included
- PSU Part Number: 81.11P-PWIL81WM
- PSU Consumption: 100-240VAC @ 1.5A
- ONT Power Connector: B-Type

Remote Power Options

- ONT Power Connector: Molex

Power over Ethernet (PoE)

- IEEE 802.3af: Yes
- IEEE 802.3at: Yes
- Max Power Delivered (Watts): 60W

Alarm / Monitor / Test

- Dying Gasp
- OMCI

Environmental

- Temperature: 0C / +32F to +40C / +104F
- Relative humidity: 5% to 85%, non-condensing

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Compliance

- UL
- FCC
- ETL
- TAA

IP/Ethernet Network

- Total MACs 1,024
- Total VLANs: 32
- VLAN Groups: 32
- VLANs per Port: 25
- IP/Ethernet: Change of Authorization (Cisco ISE and ForeScout)
- Dynamic ARP Inspection (DAI)
- MAC Authentication Bypass (MAB)
- Private VLAN support, IGMP v2/v3 snooping
- Network Access Control (NAC)
- Link Layer Data Protocol (LLDP) for autoprovisioning, inventory and PoE power management
- IEEE 802.1x Port-Based Authentication
- Power over Ethernet
- PoE and PoE+ enabled on all four (4) ports
- IEEE 802.3af PoE and high-power PoE+ IEEE 802.3at, including Class-4 negotiations
- Dante audio over IP
- Upstream ACL rate limiting
- L2-L4 Access Control Lists (ACLs)
- IPv6 capable for enterprise services
- MAC address limiting to prevent flooding attacks and number of devices attached to a port
- QoS and security policies based on VLAN-ID, 802.1p, DSCP
- VLAN translation and trunking
- VLAN tagging/detagging, marking/ remarking per Ethernet port
- Virtual switch based on 802.1Q VLAN
- Autosensing MDI/MDIX or manual configuration
- Twenty-Four 10/100/1000Base-T Gigabit Ethernet
- RJ-45 connectors

Passive Optical Network

- Class B and FDA 21 CFR 1040.10 and 1040.11
- Class I, Laser compliant to FCC 47 CFR Part 16, 0.5~+5 dBm launch power
- APD receiver and DFB transmitter, ITU-T G.984.2 Amd1 Class B+
- 2.488 Gbps downstream receiver
- 1.244 Gbps burst mode upstream
- Wavelengths downstream 1490 nm
- Wavelength upstream 1310 nm
- Support for multicast GEM port
- P DSCP to 802.1p mapping

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- Forward Error Correction (FEC)
- AES-128 decryption with churning keys
- Activation with automatically discovered Serial Number (SN) and password
- Flexible mapping of GEM ports and T-CONT with priority queue-based scheduling
- Compliant to ITU-T G.984 standards

ONT Management Control Interface OMCI

- Remote image download over OMCI as well as activation and rebooting
- Alarming, events & performance monitoring
- Complete service provisioning, such as Ethernet and VoIP
- Management Information Base (MIB) manipulation over OMCI by Create, Delete, Set, Get & Get Next commands
- OMCI ITU-T G.988 standard

POTS (Analog Voice)

- SIP (RFC3261)
- Various CLASS services (FSK)
- Echo cancelling
- VAD and CNG
- Multiple voice codec G.711 and G.729
- DTMF dialing
- Balanced ring at 55 V RMS
- Three (3) REN load
- Two (2) RJ-11

RF Video

- One (1) 75 Ohm with F-type connector
- AM-VSB Cable Video Distribution @ 1550 nm
- Compliant to ITU-T G.984 standards

LED Indicators

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

Management

- Tellabs Panorama PON Manager
- ONT has no local management access

Software Support

- Minimum base software SR29.1 and higher
- Holds two versions of software with image integrity checking and automatic rollback
- Tellabs Panorama PON Manager

Installation

- OLTs supported: OLT1150, OLT1150E, OLT1134AC, OLT1131, OLT6, OLT1, OLT-mini
- Mounting options: zone, wall, desktop, in-wall, enclosure (sold separately)

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Ordering Information

- Tellabs 142R ONT TAA Compliant: 81.11G-ONT142R-T-R6
- PSU Part Number: 81.11P-PWIL81WM
- North American Power cable: 81.11W-C5TYPB-R6
- Orderable fiber mgmt. bracket: 81.11G-ONT142R-R6

General

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