



Tellabs® 729GP Optical Network Terminal (ONT)

Flexible, stackable communications closet, multidesk or multidwelling unit 24-port ONT for Gigabit Ethernet, PoE+ and POTS services delivery

Overview

Designed to deliver powerful enterprise business data, VoIP, and POTS services to 24 end-points, the stackable, scalable Tellabs® 729GP Optical Network Terminal (ONT) packs a lot of functionality into a compact one-rack unit (1 RU) chassis. It can be located in a telecommunications room, data center or telephone closet, driving fiber optics closer to the users and end devices.

Tellabs 729GP ONT features 24 ports of Gigabit Ethernet with Power over Ethernet (PoE) for powerful enterprise business data service delivery. IEEE 802.3af PoE and 802.3at PoE+ compliance provides up to 30 watts on each Ethernet port. PoE provides remote power to VoIP desktop phones, Wi-Fi access points, IP security cameras and other environmental and access control systems. The Tellabs 729GP also features 24 ports for analog voice business service delivery.

Equipped with standard RJ-45 CAT-rated cabling for Ethernet data and voice service delivery, the Tellabs 729GP ONTs feature an ITU-T G.984-compliant 2.5 Gbps downstream and 1.25 Gbps upstream G-PON interface supporting the full range of advanced services, including voice, video, data, Wi-Fi, smart buildings apps, security, surveillance, environmental and automation.

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 729GP 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 in everyday operations.



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Services

Data

- Twenty-four 10/100/1000 Base-T Gigabit Ethernet data interface ports
- Power over Ethernet compliant with IEEE 802.3af and 802.3at
- Autonegotiation and MDI/MDIX autosensing
- Advanced data features, including Virtual Local Area Network (VLAN) trunking, VLAN termination, VLAN translation, traffic classification and access control lists (ACLs)
- IEEE 802.1P and IEEE 802.1Q
- IEEE 802.1x port-based authentication
- Link Layer Data Protocol (LLDP) for autoprovisioning, inventory and PoE power management
- Network access control (NAC)

Tellabs 729GP ONT is ideal for supporting modern high-performance LAN data services and applications, including wireless access points, security, automation, access control, environmental and other corporate services.

Voice

- 24 ports of POTS interface for carrier-grade voice services
- Five REN per line, balanced ring at 55 V RMS, DTMF dialing
- Support for multiple voice codecs
- Echo canceling, VAD, CNG
- Full class service support — caller ID, call waiting, call forwarding, call transfer, etc.
- SIP (RFC-3261)
- Drop-in replacement to serve existing analog telephone sets

To enable VoIP access, the Tellabs 729GP ONT also supports interfacing an external IAD box or home router with voice capability through the Ethernet interface.

Video

Tellabs 729GP ONT supports flexible video content delivery in the form of Ethernet/IP data, either as unicast or multicast streams controlled by the Internet Group Management Protocol (IGMP). Multicast Quality of Service (QoS) is supported with a combination of 802.1p bits and advanced bandwidth management mechanisms. Using VLANs and advanced IGMP processing ensures security, service delivery and efficiency for each user.

The Tellabs 729GP ONTs are an excellent choice for all forms of enterprise video, such as entertainment, security, video-conferencing, high-end telepresence conferencing, telepresence robotics and surveillance.

Specifications

Dimensions

- 1.7 in/43 mm (H) x 17.3 in/439 mm (W) x 17.5 in/444 mm (D)

Power Supply

- Input power — 120/240 VAC 50/60 Hz
- 3-pin AC power connector with switch and fuse (rear accessible)
- Power cord included (IEC C15)
- Dying Gasp support

Powering

- Input at ONT (volts): 100–240 VAC
- Consumption Idle (watts): 63 W
- Consumption w/o PoE Max (watts): 140 W
- Consumption w/PoE Max (watts): 589 W
- Max Draw at ONT (amps): 8.0 A
- IEEE 802.3af PoE and IEEE 802.3at PoE+ compliant
- 450 watts of total PoE+ power per 729GP ONT
- Back-up power through existing building emergency power generation plant

Operating Environment

- Temperature: -5° C to +55° C
- Relative humidity: 5% to 85%, noncondensing

Safety & EMI

- ETSI, FCC and UL/ETL certified

Installation

- Rack or wall mounting
- 19" rack mounting, 1 RU height
- Brackets available for 23" mount option

Network Interface

- Compliant to ITU-T G.984 G-PON standards
- SFF-type laser, SC/APC connector
- Wavelengths: Upstream 1310 nm, Downstream 1490 nm
- 2.488 Gbps downstream receiver
- 1.244 Gbps burst mode upstream transmitter
- Compliant with 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

- Fully ITU-T G.984-compliant framing
- Multiple T-CONTs per device
- Multiple GEM ports per device
- Supports single T-CONT and multiple T-CONTs modes
- Flexible mapping between GEM ports and T-CONT
- Activation with automatic discovered SN and password
- AES-128 decryption with key generation and switching
- Forward error correction (FEC)
- 802.1p mapper service profile on U/S
- Mapping of GEM ports into a T-CONT with priority queues-based scheduling
- Support for multicast GEM port

Ethernet Interfaces

- 10/100/1000 Base-T Gigabit Ethernet with RJ-45 connectors
- Power over Ethernet compliant with IEEE 802.3af and 802.3at
- Maximum PoE power: 30 W/port; 450 W per unit
- Ethernet port autonegotiation or manual configuration
- MDI/MDIX automatic sensing
- Virtual switch based on 802.1Q VLAN
- Up to 384 MAC addresses and 92 VLAN groups
- VLAN tagging/detagging per Ethernet port
- VLAN stacking, VLAN translation, VLAN trunking
- Marking/remarking of 802.1p
- IGMP v2/v3 snooping
- MAC address limiting to prevent flooding overflow
- Upstream broadcast rate limiting and filtering for security control
- L2, L3, L4 access control lists (ACLs)
- 802.1x port-based authentication
- Link Layer Data Protocol (LLDP) for autoprovisioning, inventory and PoE power management
- Network access control (NAC)

POTS Interfaces

- Standard 50-pin connector (RJ-21)
- 5-REN load
- Balanced ring, 55 V RMS
- DTMF dialing
- Multiple codecs:
 - G.711 (-law and A-law)
 - G.729 (A and B)
 - G.723.1
- Echo cancellation

- Voice activity detection (VAD) and comfort noise insertion
- SIP (RFC-3261)
- SDP (RFC-2327)
- RTP (RFC3550/3551)
- DTMF encoding by relay or in-band method
- Full class service support — caller ID, call waiting, call forwarding, call transfer, call toggle, three-way calling, distinctive ringing and more
- G.711 for fax, modem connection and TTY devices
- T.38/T.30 fax
- Configurable dial plan
- Country-specific ring tone generation
- DHCP client or static IP configurations

LED Indicators

- Power
- Optical signal
- Alarm
- POTS
- PoE
- Individual LAN port speed indication

Operations, Administration and Maintenance (OAM)

- Standards-compliant OMCI as defined in ITU-T G.988 and G.984.4
- Management information base (MIB) manipulation over OMCI by Create, Delete, Set, Get and 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 729GP ONT

- Part Number 81.16G-729GPOPB-R6
- Minimum base software SR.27

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 or legal obligation to deliver any material, code or functionality.

Take the next step. Contact Tellabs today.



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