Tellabs® 1100-714G Single Family Unit GPON ONT

Multiple 10/100/1000 Ethernet interface ONT delivers next-generation services for home, small business, remote building and smart grid applications.

Overview
The Tellabs® 1100-714G Single Family Unit GPON Optical Network Terminal (ONT) is hardened for single family home and small business applications. The ONT features 2 provisionable voice ports and 4 high-speed 10/100/1000 data ports. These support Voice over IP (VoIP), High-Speed Internet (HSI) and Internet Protocol Television (IPTV) services. The Tellabs 1100-714G ONT provides ITU-T G.984-compliant 2.5 Gbps downstream and 1.25 Gbps upstream. GPON interfaces with extended PON reach out to 30 km/18.6 mi.

The Tellabs 1100-714G is the latest GPON SFU ONT in the long lineage of Tellabs ONTs and follows the same form, fit and function. Thus, the ONT can be installed in previously released GPON SFU ONT 13” x 13” enclosures.

The Tellabs 1100-714G ONT is compliant with ITU standard Management Control Interface (OMCI) definitions. It is manageable from the Tellabs® Panorama™ PON Manager and supports the full range of fault, configuration, automation, performance and security (FCAPS) functions.

Services

Data
The Tellabs 1100-714G ONT features four 10/100/1000 Base-T Ethernet ports to enable Premium HSI delivery. With a multiport Ethernet ONT, service providers can eliminate the need for a hub or switch at the premises to reduce expenses. It is also ideal for smart grid deployments where additional Ethernet ports are needed for interface to a smart meter.

Voice
The Tellabs 1100-714G ONT provides 2 analog POTS ports equipped with a SIP agent for VoIP support. That means service providers have a choice of supporting traditional analog Class 5 voice switch or next-generation softswitch deployments. Quality of service is maintained across the system to protect the voice traffic in both scenarios.

Video
The Tellabs 1100-714G ONT supports video content delivered in the form of Ethernet/IP data (by multicast or unicast). When multicast technology is used for delivering video content through the data channel, the Tellabs 1100-714G ONT supports the dedicated multicast GEM port on the downstream. Thus, video content is received and processed by all 32 ONTS on a single PON channel, significantly improving bandwidth efficiency.

In addition, the Tellabs 1100-714G ONT supports an IGMP snooping function for further optimization. When IGMP snooping is enabled, the Tellabs 1100-714G ONT monitors the member joining and leaving activities at the Ethernet service port, then selectively delivers up to 48 multicast streams. Multicast QoS is supported via the 802.1p bits.

Specifications

Physical
- 11.2 in/28.5 cm (H) x 10.8 in/27.5 cm (W) x 2.0 in/5 cm (D)
- 0.88 lb/0.4 kg weight
- One SC/APC angled optical connector GPON interface
- Four RJ-45 Ethernet interfaces
- Two “punch down” IDCs for POTS interface

Enclosure
- Same enclosure used for previous GPON SFU ONTs
- Optional outdoor enclosure 13 in/33 cm x 13 in/33 cm x 3.5 in/8.9 cm
- Fiber management and proper bend radius guides
- Integral 60-ft fiber slack storage in outdoor enclosure

Power
- Input at ONT (volts): 12–14 VDC
- Consumption Idle (watts): 4.7 W
- Consumption Max (watts): 15.7 W
- Max Draw at ONT (amps): .61 A
- Optional battery back-up
- Dying Gasp support
Operating Environment
- Temperature: -40° F/-40° C to +158° F/+70° C
- Relative humidity: 5% to 95%, noncondensing
- Altitude: -200 ft/-61 m to +10,000 ft/+3 km

Safety & EMI
- ETSI, FCC and UL certified installation

GPON Network Interface
- Compliant with ITU-T G.984 series standards
- 2.488 Gbps downstream receiver
- 1.244 Gbps burst mode upstream transmitter
- Multiple GPON Traffic-Containers (T-CONT) per device
- Multiple GPON Encapsulation Mode (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 serial number and password
- AES-128 bit encryption with key churning
- Forward Error Correction (FEC)
- IEEE 802.1p mapper service profile on upstream
- Support for multicast GEM port
- SFF-type laser, SC/APC connector
- Compliant with ITU-T G.984.2 Amd1, Class B+
- 0.5~+5 dBm launch power, -27 dBm sensitivity and -8 dBm overload

Ethernet Service Interface
- 10/100 Base-T interface with RJ-45 connectors
- Ethernet port auto-negotiation or manual configuration
- MDI/MDIX automatic sensing
- Hardware priority queues on the downstream
- IEEE 802.1D bridging
- Virtual switch based on IEEE 802.1q VLAN
- Up to 256 MAC addresses and 4 VLAN groups
- VLAN tagging/detagging per Ethernet port
- VLAN stacking (Q-in-Q) and VLAN translation
- IP ToS/DSCP to IEEE 802.1p mapping
- CoS based on VLAN-ID, IEEE 802.1p bit, ToS/DSCP
- Marking/remarking of IEEE 802.1p
- IGMP v2/v3 snooping
- MAC address limiting to prevent flooding overflow
- Upstream broadcast filter for Denial of Service (DoS) attacks

Voice Service Interface
- IDC connector
- 5 REN load
- Balanced ringing, 55 V RMS
- DTMF dialing
- Multiple codecs G.711 (μ-law) and G.729 (A and B)
- Echo cancellation
- Voice Activity Detection (VAD)
- Comfort noise insertion
- SIP (RFC 3261), SDP (RFC 2327), RTP (RFC 3550/3551)
- DTMF encoding by RELAY or IN-BAND method
- Support various CLASS services — caller ID, call waiting, call forwarding, call transfer, call toggle, three-way calling and distinctive ringing
- G.711 for fax, modem connection and TTY devices
- T.38/T.30 fax
- DHCP client or static IP configurations

LED Indicators
- Power
- Optical
- OMCI
- POTS
- Ethernet 1
- Ethernet 2
- Ethernet 3
- Ethernet 4

Ordering Information
- ONT714G (81.16G-714G00PX-R6)

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

Take the next step. Contact Tellabs today.