

Tellabs® 1600 Series 625 Multiple Dwelling Unit Optical Network Terminal

- **Overview:** The Tellabs 1600 Series 625 Multiple Dwelling Unit (MDU) Optical Network Terminal (ONT) supports voice, VDSL-based data, IPTV and Cable Television (CATV) services all over a single optical fiber in one cost-effective, easy-to-install unit.
- **Features:**
 - Provides 16 POTS ports, eight VDSL data ports, and one video port
 - ITU-G.983 compliant
 - Supports 622/155 Mbps asymmetrically on the PON
 - Utilizes the 1490 nm wavelength for downstream PON traffic from the OLT and 1310 nm wavelength for upstream traffic to the OLT
 - NEBS-3 compliant
 - Environmentally hardened enclosure
 - Install either indoors or outdoors
 - Locally powered by a 48 V DC input to enable flexibility in the placement of the power supply and battery backup system



Tellabs 1600 Series 625 MDU ONT

- **Support:** **Voice Support**

The Tellabs 625 ONT includes 16 POTS ports for carrier-grade voice services. The POTS ports:

- Provide all SLIC, codec, DTMF and dial-pulse detection/decoding functions needed for a complete analog telephone service
- Support FSK Caller ID generation
- Provide MWI functions for visual and audible alerts
- Provide 30 REN per ONT
- Support DTMF generation and decoding, tone generation, and modem/fax tone detection

The POTS ports perform all battery, over-voltage, ringing, supervision, CODEC, hybrid and test (BORSCHT) functions. The internal line-feed circuitry provides:

- Reverse battery operation
- Loop-start operation
- On-hook transmission

- **Data Support**

Eight lines of POTS plus VDSL with integrated splitters are provided. The VDSL service is ATM-based G.998 DSL and operates in three- or four-band mode offering high data throughput. The VDSL port supports streaming IP video and IPTV content delivery.

- **CATV Support**

The Tellabs 625 ONT provides a 55-870 MHz Cable Television (CATV) AM-VSB service over the 1550 nm optical wavelength on the PON in compliance with the G.983.3 standard. The CATV service can handle a variety of digital and analog channels. The video output is 33 dBmV, allowing for multiple splitter applications.

- **Management**

The Tellabs 625 ONT supports management via the ITU G.983.2 OMCI interface to the OLT. When deployed with the Tellabs® Multi-service Access Series OLT, the Tellabs 1600 Series 625 ONT can be managed by the Tellabs® 1090 Network Management System.

Specifications:

- **ITU-T G.983.1** Broadband optical access systems based on PON
- **ITU-T G.983.2** ONT management and control interface specifications for B-PON
- **ITU-T G.983.3** Broadband optical system with increased service capability by wavelength allocation
- **ATM Forum** af-vtoa-0078.00 circuit emulation service
- **ATM Forum** UNI 3.1
- **RFC 3261** Session Initiation Protocol (SIP)*
- **RFC 3665** Session Initiation Protocol (SIP)*

Network Interface

- **Downstream** 622 Mbps @ 1490 nm received optical power levels; -8 dBm to -28 dBm
- **Upstream** 155 Mbps @ 1310 nm transmitted optical power levels; 0 dBm to +4 dBm
- **Video** AM-VSB cable video distribution @ 1550 nm received optical power levels +1 dBm to -5 dBm

Subscriber Interfaces

- 16 IDC ports for voice connections with RJ-11T test jacks
- Eight splitters to provide VDSL services
- One Type F Coax connector for video is 33 dBmV

POTS Voice Specifications

- 16 POTS ports
- Performs all BORSCHT functions
- Up to five REN per line (maximum of 30 REN for the system)
- Supports loop lengths up to 1,000 ft
- Loop start operation with Modem/fax tone detection
- DTMF and dial pulse generation/decoding
- Dual tone generators
- A-Law* μ -Law, linear PCM companding
- GR-909 loop diagnostics
- Draw and Break Dial Tone (DBDT)
- FSK caller ID generation
- Audible/visual MWI indicator support
- AAL1 CES
- SIP*

Data Specifications

Eight combined POTS/ VDSL lines supporting:

- ITU G.998, three and four band
- Three Band up to:
 - 60 Mbps downstream
 - 12 Mbps upstream
- Four Band up to:
 - 60 Mbps downstream
 - 40 Mbps upstream
- 1,000 ft loop lengths
- Switched Digital Video (SDV)

*Future Release

Video Port Specifications

- 75 Ohm Type F
- Coaxial connector
- RF output level: 33 dBmV channel 55–870 Mhz forward path

Power Specifications

- 48 V DC input, 3A max.

Physical Dimensions

- Outer enclosure: 23 in x 19 in x 4 in
- Total weight: 17 lbs

Environmental Specification

- Temperature: -40° C to +46° C with solar loading

Certifications

- FCC Part 15 subpart B, GR-63, GR-487, GR-1089



One Tellabs Center
1415 West Diehl Road
Naperville, IL 60563 U.S.A.
Tel: +1.630.798.8800
Fax: +1.630.798.2000

The following trademarks and service marks are owned by Tellabs Operations, Inc., or its affiliates in the United States and/or in other countries: TELLABS®, TELLABS and T symbol®, and T symbol®. All other company names and products mentioned herein may be the property of their respective companies.