Tellabs® 1100 Series Optical Line Terminals (OLT)

Variety of OLT sizes for right-sized density, least energy and rack space usage

Overview

The goal of the Tellabs® 1100 Series is to optimize capital expenditures, energy consumption and space requirements wherever possible. To accomplish that end goal, Tellabs provides three different distribution shelves that best match total number of IP/ Ethernet end-points desired, power utilization and minimizes the physical space required within the data communications closet. This is accomplished with the following three IP/Ethernet centric Optical Line Terminals (OLT) distributions shelves:

- Tellabs 1150 OLT – high density 23” wide shelf
- Tellabs 1150E OLT – mid to high density 19” wide shelf
- Tellabs 1134 OLT – low density 19” wide shelf

All three of these OLT distribution shelves support common software and common hardware. They provide options for multiple 10GbE and 1GbE uplinks. Each can be equipped with GPON, Ethernet, ADSL2+ and VDSL2 service card, supporting both Fiber-to-the-Desktop, Fiber-to-the-Multi-Desk (also known as Fiber to the Communications Closet) and Multiservice Access architectures. Ultimately, these shelves are built to serve voice, video, data, wireless access, building security, building surveillance and building automation end-points.

Physical Attributes

Whether serving 200 IP/Ethernet end-points or serving 8,000 end-points, Tellabs can provide the right sized distribution shelf for the lowest first cost CapEx, on-going OpEx, energy use and space required (Table 1).

	Tellabs 1150 OLT	Tellabs 1150E OLT	Tellabs 1134 OLT
Height	15.75”/9RU	15.75”/9RU	6”/4RU
Width	23”	19”	19”
Depth	12”	12”	12”
Fan (2 per 1150 and 1150E)	3.50”/2 RU	3.50”/2 RU	Integrated
Ethernet Switch Unit slots	2	2	2
Multi-Service slots	16	14	4
Shelf backplane capacity	720Gbps	616Gbps	176Gbps
Bandwidth slot capacity	44Gbps	44Gbps	44Gbps
Total GPON ports	64	56	16
Total ONTs served	Up to 2,048	Up to 1,792	Up to 512
Total Ethernet ports served	Up to 8,192	Up to 7,168	Up to 2,048
10GbE interfaces	4	4	Future
1GbE interfaces	8	8	12

Table 1: 1150, 1150E and 1134 quick reference

These Tellabs OLTs equipped with network uplinks, service modules and Optical Network Terminals (ONTs) supports flexible service delivery models (e.g. bridged or force-forward), strict quality of service (e.g. rate shaping, VLAN trunking and priority, DBA, Type B PON protection), advanced security (e.g. ACLs, ingress broadcast rate limiting, AES) and strong authentication mechanisms (e.g. NAC, 802.1x, RADIUS, DHCP).

Features and Benefits

Tellabs 1150 OLT (23") distribution shelf

The Tellabs 1150 distribution shelf is designed for high-density deployments (Figure 1). The Tellabs 1150 is well suited to support Optical LAN, Fiber to the Premises and Multi-Service access. Voice, video and data services can be delivered from this distribution shelf. It also supports voice delivering both IP PBX, application servers and unified communications systems, and it can support TDM analog voice when bundled with Tellabs 1000® Voice Gateway. For video delivery, the Tellabs 1150 can be deployed in IP video and RF video configurations within telecom service provider, commercial enterprise or entertainment (e.g. hospitality) markets.

The Tellabs 1150 can be equipped with Ethernet Switch Unit (ESU11) or Ethernet Switch Unit Two (ESU2). ESU11 is implemented with non-blocking 24 Gbps switch fabric and four 1GbE Small Form-factor Pluggable (SFP) optics based IP/Ethernet interfaces. ESU2 provides a non-blocking 200 Gbps switch fabric, two 10GbE XFP based and four 1GbE SFP based IP/Ethernet interfaces. This ESU can be deployed redundantly for highest resiliency and reliability. System timing is controlled by redundant Timing Distribution Unit (TDU) cards in the Tellabs 1150 shelf. Alarm Maintenance Unit (AMU) provides alarm collection, alarm reporting, visual alarms and alarm audible functions.

Tellabs 1150E OLT (19") distribution shelf

The Tellabs 1150E supports common software and common hardware with the Tellabs 1150. The Tellabs 1150E distribution shelf is built for high-density enterprise and international needs (Figure 2). In both enterprise and international deployments, 19" racks are expected within the data communication center. With voice service being delivered directly from IP PBX, application servers and unified communications systems, the Tellabs 1150E is targeted for pure VoIP, IP video and IP/Ethernet data service delivery. The Tellabs 1150E supports both ESU11 and ESU2 equipped in simplex or duplex for high availability.

Tellabs 1134 OLT distribution shelf

The Tellabs 1134 supports common software and common service cards with the Tellabs 1150 and Tellabs 1150E. The Tellabs 1134 distribution shelf is designed for lower-density enterprise and international deployments (Figure 3). Furthermore with its' smaller form-factor, the Tellabs 1134 shelf is ideal for space challenged installation in data center, communications closets and outdoor remote cabinets. The Tellabs 1134 can be equipped with the ESU30.

Figure 1: Tellabs 1150 OLT

Figure 2: Tellabs 1150E OLT

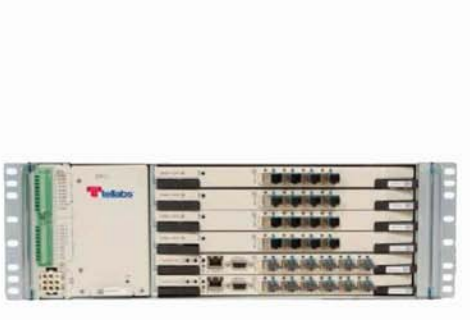

Figure 3: Tellabs 1134 OLT

Tellabs 1150 (23”) Specifications

Dimensions
- Height: 15.75 in / 40.00 cm
- Width: 23 in / 58.42 cm
- Depth: 12 in / 30.48 cm

Weight
- 41.55 lbs / 18.84 kg

Capacity
- 720Gbps backplane
- 44Gbps per multi-service slot

Power
- Dual -48V power feeds
- Total input power 1600W
- Max draw 26.5A @ -48VDC

Timing
- Composite clock input
- Timing over Packet (ToP)
- Network Time Protocol (NTP)
- Equip with redundant TDU

Alarming
- Equip with AMU

Environmental
- Temperature: -40F/-40C to +158°F/+70°C
- Humidity: 5% to 95% relative humidity
- Altitude: -200ft/-61m to +10,000ft/+3 km

Fan
- 1RU 23” Fan Tray Assembly
- 1600 CFM
- Vertical discharge

Mounting
- 23” rack

Cable management
- Horizontal fiber tray & guides

Tellabs 1150E (19”) Specifications

Dimensions
- Height: 15.75 in / 40.00 cm
- Width: 19 in / 43.18 cm
- Depth: 12 in / 30.48 cm

Weight
- 32.35 lbs / 14.67 kg

Capacity
- 616Gbps backplane
- 44Gbps per multi-service slot

Power
- Dual -48V power feeds
- Total input power 1450W
- Max draw 23A @ -48VDC

Timing
- No timing support for fax or modem traffic

Alarming
- No dry relay contact inputs

Environmental
- Temperature: -40F/-40C to +158°F/+70°C
- Humidity: 5% to 95% relative humidity
- Altitude: -200ft/-61m to +10,000ft/+3 km

Fan
- 1RU 19” Fan Tray Assembly
- 1100 CFM
- Vertical discharge

Mounting
- 19” or 23” rack

Cable management
- Horizontal fiber tray & guides

Tellabs 1134 Specifications

Dimensions
- Height: 6 in / 15.24 cm
- Width: 19 in / 43.18 cm
- Depth: 12 in / 30.48 cm

Weight
- 21 lbs / 9.52 kg

Capacity
- 176Gbps backplane
- 44Gbps per multi-service slot

Power
- Dual -48V power feeds
- Total input power 400W
- Max draw 10A @ -48VDC

Timing
- No timing support for fax or modem traffic Alarming
- Eight (8) dry relay contact inputs

Environmental
- Temperature: -40F/-40C to +158°F/+70°C
- Humidity: 5% to 95% relative humidity
- Altitude: -200ft/-61m to +10,000ft/+3 km

Fan
- Integrated
- 950 CFM
- Horizontal discharge

Mounting
- 19” or 23” rack

Cable management
- Cable guides on right side

Compliance and Safety

All distribution shelves meet the following compliance and safety requirements:

- NEBS Level 3 compliant
- Joint Interoperability Test Command (JITC)
- FCC Part 15 Class A
- UL 60950
- NEC 2002
- ANSI 319
- SR-3580 Issue 1
- GR-63 Issue 2
- GR-78-CORE Issue 1
- GR-295-CORE Issue 1
- GR-418-CORE Issue 2
- GR-487 Issue 2
- GR-909-CORE Issue 2
- GR-1089-Issue 3

Ordering Information

Tellabs 1150 OLT

- Tellabs 1150 distribution shelf, order part number - 4125053
- Tellabs 1150 1RU fan tray and power cable, order part number - 4195091

Tellabs 1150E OLT

- Tellabs 1150E distribution shelf, order part number - 4125061
- Tellabs 1150E 1RU fan tray and power cable, order part number - 4125073

Tellabs 1134 OLT

- Tellabs 1134 distribution shelf, order part number - 4115093
- Tellabs 1134 fan assembly (OFA1), order part number - 4115094

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

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Next Step:

Visit www.tellabs.com/solutions/opticallan to learn more about how Tellabs Optical LAN Solutions are solving enterprise network challenges while sgnificantly reducing CapEx and OpEx, power consumption, and space requirements. If you have a question about Tellabs Optical LAN Solutions, please email ask@tellabs.com.

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