

Tellabs® 8607 Access Switch

Flexible access switch enabling multiple backhaul solutions from ADSL/SHDSL to E1 and Ethernet

The Tellabs® 8600 Managed Edge System is a scalable and versatile backhaul solution for evolving access networks. It is designed to meet the ever-growing requirements of data hungry mobile users. This LTE-ready platform provides an extensive Ethernet and IP feature set. Simultaneous support of MPLS, TDM, ATM and FR protects previous network investments. The Tellabs 8600 product family is fully supported by the Tellabs® 8000 Intelligent Network Manager, which is an easy to use end-to-end network management solution. The Tellabs 8000 intelligent manager minimizes operational and maintenance costs and scales up to tens of thousands of network elements.

Main Application

The Tellabs® 8607 Access Switch is a flexible solution for access networks at small traffic aggregation points or cell sites. It enables various site configurations and optimizes inventory management. The integrated ADSL and SHDSL functionality is built-in into the Tellabs 8607 switch as one of the transport options. Therefore, no additional external Network Terminating Units (NTU) are required.

A diverse set of access and uplink interfaces offer efficient alternatives for backhaul and provides flexibility for mobile evolution. The Tellabs 8607 access switch is LTE-ready, providing bi-directional switching capacity up to 2 Gbps with the latest synchronization features. The versatile service capabilities, including support for TDM, ATM, HDLC and Ethernet connections as well as IP routing, enable the migration of 2G TDM and 3G ATM, Ethernet or IP-based networks into a single network infrastructure.

Features and Benefits

The Tellabs 8607 switch is environmentally hardened, modular 1RU switch. It offers two fixed Ethernet Combo interfaces, two slots for DC Power modules and three slots for user-changeable Line Modules. The supported Line Modules are:

- 8 x 10/100BASE-TX Ethernet Line Module
- 8 x chE1/chT1 Line Module
- 2-Port ADSL Line Module
- 4-Port SHDSL Line Module

The 8 x 10/100BASE-TX Ethernet Line Module and the 8 x chE1/chT1 Line Module are compatible with the Tellabs® 8609 and the Tellabs® 8611 Access Switches. The 2-Port ADSL Line Modules and 4-Port SHDSL Line Modules are a robust addition to the Tellabs 8607 switch Line Modules selection providing new alternatives to implementations in the last mile. Both the 2-Port ADSL Line Module



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and 4-Port SHDSL Line Module support the bonding feature, enabling cost-efficient and adequate data throughput for small sites.

Energy-Efficient Network Element with Enhanced Resiliency Features

The Tellabs 8607 switch is energy-efficient providing many resiliency features like DC power redundancy, RSVP-TE LSP protection, Fast Reroute and IP load balancing.

Robust Synchronization

The Tellabs 8607 switch supports external synchronization input and output. For TDM networks the Tellabs 8607 switch supports traditional line signal based synchronization and for packet based networks it supports IEEE1588v2, adaptive timing and Synchronous Ethernet. The Tellabs 8607 access switch supports a high quality OCXO, which provides accurate temperature stability for IEEE 1588v2, adaptive timing recovery as well as providing for a highly stable node clock holdover.

Switching Capacity Up To 2 Gbps

The bi-directional switching capacity of the Tellabs 8607 switch is up to 2 Gbps (packet size dependent) and is designed for the cost-efficient delivery of LTE, 3G and 2G voice and data services over a common network infrastructure.

Quality of Service Testing in Packet Networks

With a unique Packet Loop Test feature that enables the testing of service parameters including delay, jitter, throughput and connectivity, the Tellabs 8607 switch helps to verify that the packet network meets the latest QoS requirements of voice, video and data services.

Specifications

Physical Dimensions

- 446 x 44.35 x 250 mm / 17.56 x 1.75 x 9.84 in (W x H x D)
- Installation into standard 19-inch rack. The 23-inch and ETSI 600 mm racks supported with side adapters.
- Wall-mountable
- 1RU high

Power and Cooling

- User-changeable single feed wide range (-48 VDC to +24 VDC) power module (up to 2 per element)
- Power redundancy with two power modules
- Maximum Power consumption 65W
- Hot swappable air filter and fan module

Functionality

- IP VPN (RFC4364)
- Ethernet/VLAN, SAToP, CESoPSN, ATM and HDLC pseudowires
- Single and multi-segment pseudowires
- TDM cross connection
- ATM VP/VC switching
- ATM cell concatenation
- ATM IMA
- MC / MLPPP, PPPmux
- Y.1731 frame delay and frame delay variation support
- IEEE802.1ag Ethernet OAM loopback, continuity check, ping and link trace
- BFD (Static, OSPF, ISIS, RSVP-TE)

Forwarding Capacity

- Up to 2 Gbps (packet size dependent)

Chassis Configuration

- Two module slots for power modules
- Three slots for user-changeable Line Modules (LM)
- Two 10/100BASE-TX/1000BASE-T or 1000BASE-X (SFP)
- Local management port (RS-232 type)
- External alarm interface
- Station Clock Input (SCI)
- Station Clock Output (SCO)

Line Modules (LM)

- 8 x chE1/chT1 LM
- 8 x 10/100BASE-TX LM
- 2-Port ADSL LM
 - G.992.1 (ADSL)
 - G.992.3 (ADSL2)
 - G.992.5 (ADSL2+)
 - G.998.1 (ATM based multi-pair bonding)
- 4-Port SHDSL LM
 - G.991.2 (G.SHDSL)
 - Extended rate support (5.6 Mbps/pair)
 - IEEE 802.3ah (EFM over copper support)
 - G998.2 (Ethernet based multi-pair bonding)
 - ATM transport mode
 - ATM IMA
 - Network timing reference transport

Resiliency

- 1:1 RSVP-TE LSP protection
- Fast Reroute (FRR)

Synchronization

- ITU-T [G.813] option 1
- ITU-T [G.8262]
- Telcordia [GR-1244] Stratum-3
- Synchronous Ethernet
- SSM over Ethernet [G.8264]
- Adaptive synchronization from SAToP and CESoPSN pseudowires
- IEEE 1588v2 Precision Time Protocol

IPv4 Routing and MPLS Label Distribution Protocols

- OSPF-TE, ISIS-TE, BGP and MP-BGP
- LDP, RSVP-TE

Traffic Management

- DiffServ support for up to 7 traffic classes
 - 7 queues in E1/T1 interfaces
 - 4 queues in Ethernet interfaces
- DiffServ aware MPLS Traffic Engineering (DS-TE)
- IEEE802.1P/Q mapping for IP or MPLS
- Policing and shaping
- VLAN shaping
- Access Control Lists (ACL)
- ATM service categories: CBR, rt-VBR, nrt-VBR, UBR+, UBR
- ATM VC queuing/shaping



Management

- CLI with SSH2, FTP with SSH2
- SNMPv1 and SNMPv2 monitoring
- Tellabs® 8000 Intelligent Network Manager

Standards

- Safety: EN 60950-1:2006 and IEC60950-1:2005
- EMC: EN 300 386:2008
- RTTE Directive 1999/5/EC
- FCC 47 CFR Part 15, Subpart B, Class A

Environmental Conditions

- Storage: ETSI EN 300 019-1-1, Class 1.1, Temperature: -5°C to 45°C / 23°F to 113°F
- Transportation: ETSI EN 300 019-1-2, Class 2.3, Temperature: -40°C to 70°C / -40°F to + 158°F
- Operating conditions: ETSI EN 300 019-1-3, Class 3.2 (non-condensing), Temperature: -40°C to 65°C / -40°F to 149°F. ADSL module operating temperature -5°C to 45°C / 23°F to 113°F. Relative humidity: 5% to 95%
- ADSL module operating temperature -5°C to 45°C / 23°F to + 113°F
- Minimum cold boot-up temperature: -20°C / -4°F

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