

Tellabs® 8813-311v Ethernet Access Node

Overview

The Tellabs® 8813-311v Ethernet Access Node enables transparent LAN services delivered over Ethernet or multiprotocol label switching (MPLS). As a Layer 2 Virtual Private Network (VPN) technology, the Tellabs 8813-311v node can be deployed in point-to-point line services, or multipoint-to-multipoint LAN services. L2 VPN technologies are transparent to higher level protocols, minimizing the operational expense required to provision the services.

The Tellabs 8813-311v node enables service providers to maximize the revenue potential of a next generation broadband access infrastructure, without having to worry about complicated deployment strategies or stranded capital assets when they are ready to move to an MPLS core network. Service providers can deploy carrier-grade broadband services using transparent LAN service now and easily migrate to VPN LAN service on a customer-by-customer basis when the MPLS core network becomes available, achieving a true converged broadband service network extending from subscriber to subscriber.

The Tellabs 8813-311v node can be deployed with any other Ethernet service element to enable integrated, flexible and cost-effective service delivery to residential or business subscribers.



Figure 1. Tellabs® 8813-311v Ethernet Access Node

Tellabs® 8813-311v Ethernet Access Node Features at a Glance

Features	Benefits
Simultaneous support of Ethernet (Q-in-Q) and MPLS (VPLS)	<ul style="list-style-type: none"> ■ Supports any mix of Ethernet and MPLS Layer 2 VPNs on a common infrastructure ■ Simple migration between Ethernet and MPLS access ■ Extends services and capabilities of MPLS core network directly to subscribers
Programmable and explicit Quality of Service for every service and application	<ul style="list-style-type: none"> ■ Parameters include Committed Information Rate (CIR), Peak Information Rate (PIR), latency and jitter tolerance ■ Ensures full monetization of all network resources
Carrier-class resiliency	<ul style="list-style-type: none"> ■ Supports critical, time-sensitive applications such as voice and video ■ Provides same Service Level Agreements and guarantees as SONET/SDH infrastructure
Complete end-to-end subscriber service management and visibility	<ul style="list-style-type: none"> ■ Improves customer service ■ Reduces time and cost to establish new services or make changes to existing services
Flexible topology and deployment scenarios	<ul style="list-style-type: none"> ■ Supports any combination of point-to-point, ring, redundant and non-redundant star off ring, and dual-horned topologies ■ Small Form Factor Pluggable (SFP) optics match cost-to-revenue potential and enable media flexibility

Specifications

Protocols and Standards

Ethernet

- VLAN tunneling (Q-in-Q) for Transparent LAN Services (TLS)
- Layer 2 control frame tunneling
- IEEE 802.3u (Fast Ethernet)
- IEEE 802.3x (full duplex with flow control)
- IEEE 802.3z (Gigabit Ethernet)
- IEEE 802.1D MAC bridges — Including .1p priority
- IEEE 802.1Q VLAN - full VLAN range
- IEEE 802.1ab link layer Discovery — IEEE 802.3ah EFM OAM
- Jumbo frames up to 9,216 bytes
- Certified compliant to Metro Ethernet Forum specifications for Ethernet Private Line and Ethernet LAN
- 0x9100 Ethertype support
- Per VLAN learning

Virtual Private Services (VPS)

- Ethernet Transparent LAN Services (Q-in-Q)
- H-VPLS (MTU-s application)
- Pseudo-wire emulation (PWE3)
- 254 VC labels, 64 Tunnel labels
- Label Distribution Protocol (RFC 3036 — LDP) for VC labels
- ReSerVation Protocol (RFC 2205 and 3209) for tunnel labels
- Targeted LDP — Extended discovery
- Back-to-back MTU-s
- Backup LSPs
- Draft Martini-L2 circuit-trans-MPLS-08
- Draft Martini-L2 circuit-encap-MPLS-04
- MPLS label encoding (RFC 3032)
- MPLS EXP bits (RFC 3270)
- MPLS OAM ping and traceroute (future)

Multicast Management

- IGMPv2 snooping (RFC 2236)
- IGMP domains
- IGMP message filtering
- Unknown Multicast filtering
- Well-known protocol forwarding

Network Management

- SNMP, SNMP MIB II (RFC 1213)
- Bridge MIB (RFC 1493)
- MIB II interfaces (RFC 1573)
- RMON MIB (RFC 1757), including persistent configuration
- RMON II (RFC 2021)
- Ethernet-like interface MIB (RFC 1643)
- Enhanced CLI
- DHCP (RFC 2131), DHCP relay
- CLI-based configuration files
- NTP (RFC 1305)
- CPU load query
- DNS (RFC 1035)
- Device archive
- RADIUS
- Syslog
- Local port mirroring

Link and Path Protection

- Manual Link Aggregation
- IEEE 802.3ad LACP
- IEEE 802.1w RSTP (now in .1D)
- Spanning tree domains
- Hub topology protection
- LACP dynamic RSTP path cost

Security

- Egress port restriction
- Service access control
- Layer 2, 3, 4+ protocol filtering
- Broadcast containment
- RADIUS
- User access rights

MAC Address Table Capacity

- 20,000 addresses

Quality of Service

- 128 service levels
- Committed and Peak Information Rate
- Layer 2, 3, 4 Quality of Service
- DiffServ with marking/remarking, traffic profiling

Physical and Environmental

Dimensions

- 1.74" H x 17.5" W x 15.5" D (44.4 mm x 444.5 mm x 393.7 mm)

Operating Temperature and Humidity

- 0° C to +40° C (+32° F to +104° F); 0 to 90% relative humidity, non-condensing

Storage Temperature

- -40° C to +70° C (-40° F to +158° F)

Weight

- 14 lb (6.35 kg)

Input Power

- -72 to 38 V DC 1.4/2.3 Amps; 100-240 V AC, 47/63 Hz, 0.9/1.4 Amps
- Redundant hot swappable AC/DC power supplies

Regulatory

Safety Certifications

- UL, CE

Safety Standards

- UL 60950
- IEC 60950

Emissions

- FCC 47CFR Part 15, Class B
- EN 55022 Class B

Immunity

- EN 55024

Ordering Information

Tellabs® 8813-311v NOT KITTED — Must Order Individual Line Items, 1 or 2 PS; MPLS SW is an Optional Line Item.

<i>Product Number</i>	<i>Description</i>
81.8813-0311-V011D	(4)GIG SFP (24)10/100M RJ45 EXT (2)SLOTS AC OR DC
81.8813-MPLSPSL001	MPLS SW, PERPETUAL SW LICENSE 8813-311v
81.8813-PWER000600	DC PLUGGABLE PS FOR 311, 311v, 327, 427
81.8813-PWER000500	AC PLUGGABLE PS FOR 311, 311v, 327, 427
81.8813-CABL-PW01A	CABLE USE WITH 81.8813-PWER000500, AU
81.8813-CABL-PW01E	CABLE USE WITH 81.8813-PWER000500, EU
81.8813-CABL-PW01N	CABLE USE WITH 81.8813-PWER000500, NA
81.8813-CABL-PW01U	CABLE USE WITH 81.8813-PWER000500, UK

North America

Tellabs
One Tellabs Center
1415 West Diehl Road
Naperville, IL 60563
U.S.A.
+1 630 798 8800
Fax: +1 630 798 2000

Asia Pacific

Tellabs
3 Anson Road
#14-01 Springleaf Tower
Singapore 079909
Republic of Singapore
+65 6215 6411
Fax: +65 6215 6422

Europe, Middle East & Africa

Tellabs
Abbey Place
24-28 Easton Street
High Wycombe, Bucks
United Kingdom
HP11 1NT
+44 870 238 4700
Fax: +44 870 238 4851

Latin America & Caribbean

Tellabs
1401 N.W. 136th Avenue
Suite 202
Sunrise, FL 33323
U.S.A.
+1 954 839 2800
Fax: +1 954 839 2828

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