

Tellabs® 1000 Multiservice Access Platform: VDSL2 6+6 Plug-in Card

Deliver converged high-bandwidth services for increased revenue opportunities.

Overview

Providing high-speed, integrated broadband applications over yesterday's copper is challenging. But with the Tellabs VDSL2 6+6 high-performance line card, you can deliver integrated voice, data and video applications from the Tellabs® 1000 Multiservice Access Platform (MSAP). The card supports broadband service over a single copper pair or via two adjacent bonded copper pairs. This enables operators to provide higher speed broadband services across existing copper Customer Service Areas (CSAs).

Operating in both IP/Ethernet packet-based and ATM environments, the VDSL2 supports Packet Transfer Mode (PTM) traffic as well as ATM mode over copper. At the same time, the VDSL2 6+6 card is backward-compatible with legacy ADSL protocols such as G.992.1 (G.DMT), T1.413 (Full Rate), G.992.3 (ADSL2) and G.992.5 (ADSL2+). It also supports fallback to ADSL2+ for optimal services.

The Tellabs® Panorama™ Integrated Network Manager (INM) can easily manage all broadband services over the VDSL2 6+6 card. The INM supports the full range of Fault, Configuration, Accounting, Performance and Security (FCAPS) functions.

Features and Benefits

The VDSL2 6+6 provides six integrated ports of VDSL2 (with bonding capability) and POTS. The Tellabs 1000 MSAP supports up to 20 VDSL2 6+6 cards per large line size, 22 multi-service slot chassis or 8 VDSL2 6+6 cards in the smaller, 10 multi-service slot chassis. The cards themselves are equipped with dual memory for minimal service-affecting upgrades. Additional significant features and benefits:

- Both VDSL2 and ADSL2+ bonding for twice the bandwidth across two pairs
- Supports PTM and ATM traffic options per port for packet or ATM transmission
- ADSL2+ fallback from VDSL2 and from PTM to ATM for best reach and rate
- 17a profile for 5-band (17 Mhz) support, maximizing bandwidth within short CSAs
- Single Ended Line Test (SELT) proactively qualifies line distance, gauge and noise
- Low-power mode transition, at port level, saves power during port inactivity
- Power shut-off feature, at port level, saves power during battery backup conditions
- Future support for vectoring to optimize transmission across multiple pairs



VDSL2 6+6 plug-in card with ADSL2+ and bonding.

Applications

Start marketing IPTV services and premium High Speed Internet (HSI) in service areas that already have existing embedded Tellabs 1000 MSAP systems. The VDSL2 6+6 also is ideal for revenue growth strategies:

- Voice supporting GR-303, GR-08 and GR-57 switch interfaces
- Premium HSI with data rate service plans pushing 25 Mbps, 50 Mbps and beyond
- IPTV deployed in conjunction with IGMP-enabled GbE222
- Small business and home office services
- CSA loop shortening to maximize broadband services delivered
- Grow subscribers into new cabinet and retrofit existing cabinet

Specifications

Optimal Rate and Reach

VDSL2 theoretical data rate and reach under ideal conditions:

- Downstream: rate adaptive up to 100 Mbps in 32 kbps increments
- Downstream (2 bonded pairs): rate adaptive up to 200 Mbps in 32 kbps increments
- Upstream: rate adaptive up to 50 Mbps in 32 kbps increments
- Upstream (two bonded pairs): rate adaptive up to 100 Mbps in 32 kbps increments
- 1830 Ω total loop length including station



Line Testing

- DSL loop diagnostics
- Single Ended Line Test (SELT)
- Supports metallic test access

Input Impedance

- 900 Ω at 200 Hz to 3.2 kHz

Power

- Average power consumption: 21.56W (100% DSL lines trained and 6 CCS voice)
- Low-power mode, during port inactivity, can be provisioned in seconds
- Configurable power shut-off feature, during battery backup conditions

Environmental

- Operating temperature: -40°C to +65°C (-40°F to +149°F)
- Relative humidity: 5%–95% non-condensing

Dimensions

- Height: 13.018 cm (5.125 in)
- Width: 1.429 cm (0.563 in)
- Depth: 26.67 cm (10.5 in)
- Weight: 0.23 kg (0.5 lbs)

Compliance

A sample, non-exhaustive list of industry standards followed.

- G.993.2 (VDSL2)
- G.992.1 (G.DMT)
- T1.413 (Full Rate)
- G.992.3 (ADSL2)
- G.992.5 (ADSL2+)

LED Indicators

- Red, non-blinking FAIL: plug-in card failure or card is unable to communicate with the CPU.
- Red, blinking FAIL: one or more ADSL circuits are receiving illegal signaling.
- Green, non-blinking BUSY: one or more ADSL circuits are active.
- Green, non-blinking SYNC: one or more ADSL circuits are enabled and trained up with the CPE.

Software

- Supported in Tellabs 1000 MSAP Feature Package (FP) FP16 and greater

Information

VDSL2 6+6 (0110-0265)

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.

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
HP11 1NT
United Kingdom
+44 871 574 7000
Fax: +44 871 574 7151

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