24-port VDSL2 Combo

Total Access 5000 24-port VDSL2 Combo Access Module

Product Features

- RPOTS
  - Provides 24 Remote POTS interfaces
  - Voice signaling via "Tunneled GR-303 over Ethernet"
  - Voice signaling via SIP
  - Automatic detection algorithm locates new Total Access 5000 Combo cards installed into the node
- DSL
  - Provides 24 ports of VDSL2, ADSL2+,ADSL2, ADSL, or READSL
  - Full 5-band VDSL2 profile support 8a-d, 12a-b, 17a
  - Full backward compatibility with existing ADSL modems
  - Supports separately configurable interface rates for upstream and downstream
  - Supports VDSL2 and ADSL2+ PTM Bonding
  - Supports ADSL2+ ATM Bonding
- General
  - Up to 504 ports per Total Access 5000
  - Supported by Total Access EMS
  - Industry-leading Ten-year warranty

Carriers are moving to simplify and advance the deployment of their next-generation networks. The Total Access® 5000 Combo VDSL2 Access Module provides carriers with a single slot module that offers both analog POTS and broadband VDSL2 services on each subscriber interface. This allows carriers to optimize their network infrastructure, providing simplified deployment and provisioning options and lowering overall operational cost. The Combo VDSL2 Access Module provides 24 POTS interfaces from a single access line slot. The subscriber interface is traditional analog POTS, but the Total Access 5000 Combo VDSL2 Access Module card converts each analog signal directly to an RFC 3550 IP packet, allowing voice traffic to be carried across the same Ethernet transport architecture alongside next-generation services like IPTV.

TDM Network interface is provided via the DS1 Voice Gateway Line Module, providing up to 32 DS1 interfaces using standard GR-303 protocol to interface to the switch. However, the Combo VDSL2 access module retains the flexibility to seamlessly upgrade via software to support next-generation voice architectures, such as SIP and MGCP. Fully configurable to support up to 24 ports of VDSL2, the Total Access 5000 Combo VDSL2 access module supports a 5-band profile of 8a through 8d, 12a, 12b, and 17a for flexible VDSL2 deployments. In addition, the Combo VDSL2 module also supports standard fallback modes including ADSL2+, ADSL2, ADSL, READSL2+, and G.Lite. Flexible and configurable, the VDSL2 Access Module allows operators to configure both upstream and downstream transmission rates or allows the interfaces to adapt to the best possible rates on the subscriber loop.

The Combo VDSL2 access module also incorporates flexible 2-port bonding schemes allowing operators to deploy legacy ADSL2+ 2-port ATM bonded services as well as advanced VDSL2 and ADSL2+ 2-port PTM bonded services to the customer premises.

Front panel LEDs include power, card status and loop status for each subscriber loop. The Combo Access Module supports craft interface management via the Total Access 5000 System Controller Module (SCM). More comprehensive management is available using the Total Access Element Management System (EMS). All provisioning data is supported through the SCM communications link. All provisioning data is stored in nonvolatile memory for recovery after a power loss and auto-provisioning is supported via the SCM.

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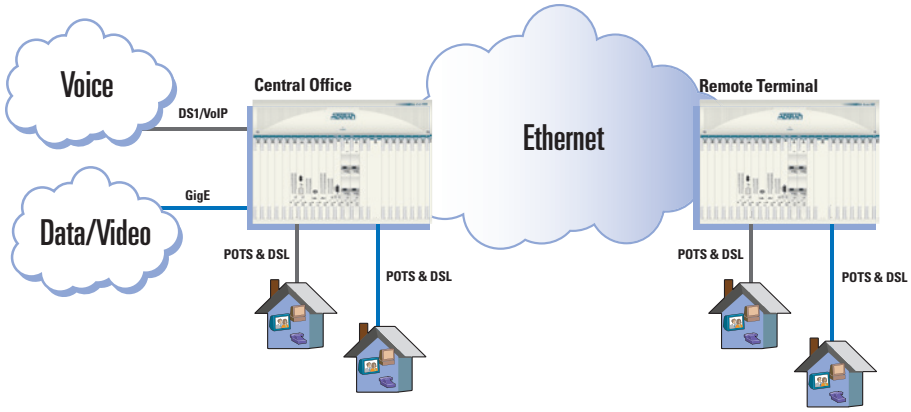

Product Specifications

Mechanical

- **Dimensions:** 9.25 in. H x 0.8 in. W x 9.25 in. D

Interfaces

Network Interfaces

- Intra-node via Ethernet transport (GE or EFM)
- Voice Switch Interface via DS1 Voice Gateway Line Module
- Voice Soft-switch Interface with SIP or MGCP

Physical

- Requires AMIO2 CH50 Push Through (P/N 1187410G1) or AMIO3 CH50 Push Through (P/N 1187411G1)
- Female CH50 connection for subscriber termination

DSL Performance

- VDSL2 5-Band Profile 8a-d, 12a-b, 17a
- ADSL2+ ITU G.992.5
- ADSL2 ITU G.992.3/4
- ADSL ITU G.992.1; ANSI T1.413-1998 Issue 2
- ADSL G.Lite ITU G.992.2
- READSL ITU G.992.5 Annex L

POTS Performance

Signaling Modes

- Loop Start
- Ground Start

Impedance

- 600 Ω
- 900 Ω + 2.16 µF
- 220 Ω + (820 Ω // 115 nF)
- 270 Ω + (750 Ω // 150 nF)
- 270 Ω + (750 Ω // 150 nF), Zin = 600 Ω
- 320 Ω + (1050 Ω // 230 nF)
- 350 Ω + (1000 Ω // 210 nF), Zin = 600 Ω
- 370 Ω + (620 Ω // 310 nF)
- 800 Ω // (100 Ω + 50 nF)
- 1650 Ω // (100 Ω + 5 nF), Zin = 900 + 2.16 µF

Loop Reach: 1560Ω including handset

Regulatory Standards

- NEBS Level 3
- GR-1089 CORE
- GR-63 CORE
- NRTL Listed
- FCC Part 15

Management

- Remote management through SNMP and TL1
- Ethernet interface for SNMP through System Controller
- Local CLI management through System Controller
- Supported by Total Access EMS

Environmental

- **Operating Temperature**: -40°C to +65°C
- **Storage Temperature:** -40°C to +85°C
- **Relative Humidity:** Up to 95%, at 50°C, noncondensing

Ordering Information

Equipment	Part #
Total Access 5000 Combo VDSL2 24-Port	1187120L1
Input/Output Modules	
AMIO2 CH50 Push-Through	1187410G1
AMIO3 CH50 Push-Through	1187411G1

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ADTRAN is an ISO 9001, ISO 14001, and a TL 9000 certified supplier.

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