Data Sheet

ADTRAN

1148VX-DMT

48-Port Sealed FTTN with EoDMT Backhaul

VDSL2 | Vectoring | Weather-Resistant | Low TCO

Benefits

- **Environmentally sealed, temperature hardened standalone Vectored VDSL2 FTTN solution enables rapid deployment of ultra-broadband services**
- **Built-in EoDMT link supports bonded copper uplinks to deliver ultra-broadband services in remote or rural locations**
- **Delivers 100 Mbps up to 3000 feet from the node using bonded VDSL2 with vectoring**
- **Provides silent operation and low profile construction abiding to strict residential zoning rules**
- **Supports IPTV video service**
- **Can be mounted on pole, pedestal, cross-box or remote terminal delivering ultra-low Total Cost of Ownership (TCO)**
- **Allows system scalability from 48 to 192 subscribers, with field upgradeable 192-port system level vectoring**
- **Reduces installation cost via flexible powering options (span, AC, and DC powering)**

Overview

Accelerating Gigabit Services

Premium broadband services are fueling the need for pushing fiber deeper into the network and closer to the end user. However, the cost of delivering Fiber-to-the-Home (FTTH) can be both cost-prohibitive as well as time consuming, particularly in remote and rural locations. Next-generation broadband technologies such as Bonded and Vectored VDSL2 allow service providers to utilize existing copper infrastructure in combination with sealed Fiber-to-the-Node (FTTN) solutions to cost-effectively deliver ultra-broadband (100+ Mbps) and IPTV services to subscribers in all areas.

Faster Time-to-Market

The ADTRAN 1148VX-DMT (Discrete Multi-Tone) compact sealed FTTN solution allows service providers to realize ultra-broadband speeds with their existing copper infrastructure, economically delivering 100 Mbps+ premium broadband services to the home using Vectored VDSL2.

ADTRAN® designed the standalone, weather-proof 1100 Series FTTN systems to be mounted on a pole, pedestal, cross-box, remote terminal or other challenging locations, eliminating the need for expensive cabinet enclosures, heat exchangers and site construction, which account for a large portion of the total cost of deployment. This allows for ultra broadband services deployment within days, instead of months, dramatically lowering deployment costs.

Monetize Existing Copper Assets

Equipped with 8-pair bonded for copper backhaul, a non-blocking architecture, and a rich, carrier-based feature set targeted for the delivery of multimedia services, the 1148VX-DMT is ideally suited for ultra-broadband service delivery in difficult to serve locations. The 1148VX-DMT FTTN solution extends the delivery of 100 Mbps data and IPTV services up to 3000 feet by using bonded VDSL2 with vectoring. The ability to use either fiber or copper (bonded VDSL2) for uplinks allows carriers to deploy the 1148VX-DMT to expand service in remote or rural areas using 8-pair bonded copper as backhaul. The EoDMT uplink also supports vectoring for increased upstream backhaul bandwidth to the aggregator.

The 1148VX-DMT is a future-proof solution with 4 10Gig (GPON/NGPON2) uplink ports. As demand grows and fiber build-out makes economic sense, the copper uplinks can be upgraded to faster 10 GigE fiber backhaul to deliver higher broadband speeds and enhance customer satisfaction.

1148VX-DMT

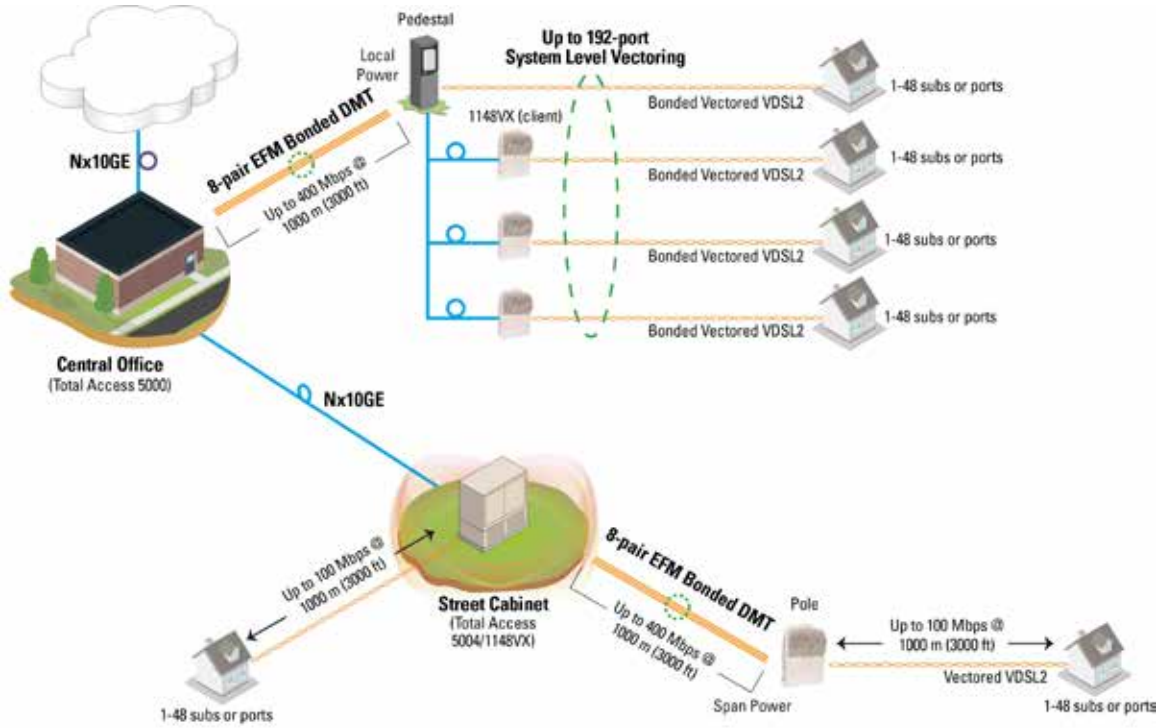
Cost-Effectively Expand Footprint

Integrated 10-Gigabit Ethernet switching in the 1148VX-DMT Host units allow connecting up to four 1148VX nodes to create an FTTN system that scales to 192 ports in a single managed node, accommodating long-term growth and lowering initial circuit costs. Support for system-level vectoring allows connecting up to four 1148VX systems (192 ports) in a single vectoring group, eliminating the complex binder management required by the less capable 48-port only board-level vectoring solutions. Ethernet Ring Protection Switching (ERPS) support enables resilient connection of multiple nodes while minimizing aggregation port cost. Integrated splitters and primary protection eliminate the need for extra equipment and provide the absolute smallest footprint for the 1148VX-DMT Vectored VDSL2 system.

Lower Operation and Maitenance Costs

Developed with concern for carrier field needs, the 1148VX-DMT comes with customer-accessible cables that allow for the quick replacement of units in the field. Several cable lengths with MS2 or 710 type connectors or unterminated stub are available to accommodate the needs of all service providers. The 1148VX-DMT can be remotely provisioned and managed using TL1, Telnet, SNMP, or the Advanced Operational Environment (AOE) management suite, enabling service providers to operate the unit without a truck dispatch.

RFT-V span, 100-240 VAC , and -48 VDC local powering options are offered within the unit, eliminating the need to order and spare different part numbers for different applications. Span powering from the central office allows for the centralization of battery backup and greatly reduces deployment costs. The 1148VX-DMT uses 1 to 8 powering pairs from the central office with the actual pair count dependent on the desired deployment range.



PRODUCT SPECIFICATIONS

Mechanical

- **Dimensions:** 22.40in. x 6.57 in. x 6.14in. (569mm x 421 mm x 156mm) (H x W x D)
- **Weight:** 42lbs (19kg)
- **Outdoor Mounting:** Pole, Pedestal, Cross-box, Remote Terminal, other challengning locations

Mechanical

Access

- 48 subscriber ports of Vectored VDSL2 for high speed internet.
- Integrated Splitters and overlay POTS support voice service delivery
- Well-suited for 100Mbps services delivery

Network

- 4x1/2.5/10GE SFP Interfaces
- Resilient Ethernet Ring per ITU-T G.8032 (ERPS)
- Up to 8-pair bonded EoDMT backhaul

DMT Specifications

- **Modulation Type:** Discrete Multi-Tone (DMT)
- **Mode:** Full Duplex, Non-overlapped
- **Standards:** T1.413;G.992.1 Annex A; G.992.2 Annex A; G.992.3; G.992.4; G.992.5
- **Number of Pairs (DSL plus POTS):** 48 (one per loop)
- **Downstream Data Rate:**
  - ADSL2: Up to 96 Mbps
  - ADSL2+: Up to 192 Mbps
  - VDSL: Up to 600 Mbps
- **Upstream Data Rate:**
  - ADSL: Annex A mode – up to 9 Mbps
  - ADSL2+: Annex M mode – up to 18 Mbps
  - VDSL: Up to 300 Mbps
- **DSL Service Range:** 18,000 feet (5.5 km)

DSL Standards

- ITU G.993.2 (VDSL2)
- ITU G.992.3 (ADSL2)
- ITU G.992.5 (ADSL2+)
- ITU G.993.5 (G.vector)
- G.998.1 (ATM Bonding)
- G.998.2 (EFM Bonding)

VDSL2 Profiles and PSDs

- Profiles 8a-d, 12a-b, 17a
- Annex A and Annex B PSDs

Ethernet Services Support

- Single Stack VLAN and Double Stack VLANs
- (Q-in-Q) Manipulation
- Flexible Traffic Classification
- Ingress Policing and Egress Shaping
- IGMP Snooping and Proxying

IPTV Services Support

- Internet Group Management Protocol v2 and v3
- Dynamic Host Configuration Protocol Support with Option 82

Security

- Management AAA via RADIUS and TACACS+
- SSHv1/v2, SFTP, and HTTPS

Management

- **Local:** Local Craft Interface (DB9, RS-232)
- **Remote:** TL1, Telnet, SNMP, Advanced Operational Environment (AOE) Management Suite

Environmental

- **Operating Temperature:** –40° F to 149° F (–40° C to +65° C)
- **Storage Temperature:** –40° F to 285° F (–40° C to +85° C)
- **Relative Humidity:** 95%, Non-Condensing
- **Environmentally Hardened**—Fully Sealed, Watertight

Power

- **Local DC Power:** –48 VDC
- **Local AC Power:** 100-240 VAC, 50/60 Hz, Auto-ranging AC Power Supply
- **Line Power:** 1 to 8 Line-Powering Pairs (+/- 190 VDC per pair)

Regulatory Standards

- GR-487-CORE, Issue 4
- NEBS Level 3
- GR-1089-CORE, Issue 6
- GR-63-CORE, Issue 4
- UL 60950-1/22
- RoHS Compliant
- FCC Part 15

ORDERING INFORMATION

Equipment			Part No.
1148VX-DMT HOST, 8xVDSL2, ANSI ONU			1179934F1
1148VX Client, ANSI			1179930F1
OSP System Level Vectoring (SLV) Resource Module			1179937F1
OSP SLV Adapter Module			1179939F1
OSP SLV Cable			1179851G1
1148VX Host to Client Expansion Cable			1179830G3
Accessories			
1148VX Pole Mount Bracket			1179779G1
1148VX Wall Mount Bracket			1179779G2
1148VX Pedestal Mount Bracket			1179779G4
24PR Sealed Power Node			1179880G1
Cables*			
Power			
DC Power (20 ft cable)			1179810G2
AC Power (20 ft cable)			1179810G7
Span Power (MS2 Connectors) (20 ft cable)			1179814G2
Span Power (710 Connectors) (20 ft cable)			1179814G4
Span Power (MS2, CAT5 Power/DMT) (5 ft cable)			1179817F2
Span Power (710, CAT5 Power/DMT) (5 ft cable)			1179817F1
Alarm Input (10 ft cable)			11798101G5
POTS/DSL, Fiber	5 ft	15 ft	20 ft
Cable Kit, 1148V, CAT5 AMP (MS2)	1179815F2		1179815F4
Cable Kit, 1148V, CAT5 AMP (710)	1179815G1		1179815F3
Cable Kit, 1148V CAT5 STUB		117815F7	1179815F8
100-Pair 24 AWG (MS2)	1179816F1		1179816F2
100-Pair 24 AWG (710)	1179816F4		1179816F5
Cable Kit, 1148V, 24AWG STUB		1179816F7	1179816F8

*Additional cable lengths available for quote. Please call 800-888-4ADTRAN for pre-sales support.

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