Data Sheet

ADTRAN

1148SVX

48-port Sealed, Super-Vectoring FTTN

VDSL2 | Low TCO | Sealed | Vectoring

Benefits

- **Environmentally sealed, temperature-hardened, Super-Vectoring (VDSL2 35b) FTTN solution enables rapid deployment of ultra-broadband services**
- **Delivers 300 Mbps over 1,500 ft. from the node using bonded, Super-Vectoring (VDSL2 35b)**
- **Provides silent operation and low-profile construction abiding to strict residential zoning rules**
- **Supports IPTV video service**
- **Can be mounted on a pole, pedestal, cross-box or remote terminal delivering ultra-low Total Cost of Ownership**
- **Allows system scalability from 48 to 192 subscribers, with field-upgradeable 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 and time-consuming, particularly in remote and rural locations. Next-generation broadband technologies such as Super-Vectoring (VDSL2 35b) allow service providers to utilize existing copper infrastructure in combination with sealed Fiber-to-the-Node (FTTN) solutions to cost-effectively deliver ultra-broadband (300+ Mbps) and IPTV services to subscribers in all areas.

Super-Vectoring (VDSL2 35b)

The ADTRAN 1148SVX is a compact, sealed FTTN solution. It utilizes Super-Vectoring, the next generation of vectored VDSL2, which doubles the frequency to 35MHz and more than doubles speeds. With the 1148SVX, service providers can deliver speeds in excess of 300 Mbps to subscribers within a 1,500 ft. service area. The 1148SVX also supports fallback to VDSL2 profile 17a, enabling service providers to deliver multiple tiers of ultra-broadband services (100-600 Mbps).

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 service deployment within days, instead of months, dramatically lowering deployment costs.

Cost-Effectively Expand Broadband Footprint

Integrated 10 Gigabit Ethernet switching in the 1148SVX host unit allows for the connection of up to four 1148SVX nodes to create an FTTN system that scales to 192 ports in a single managed node. This eliminates the need for complex binder management required by less capable, 48-port solutions that only support board-level vectoring. Ethernet Ring Protection Switching support enables resilient connection of multiple nodes while minimizing aggregation port cost.

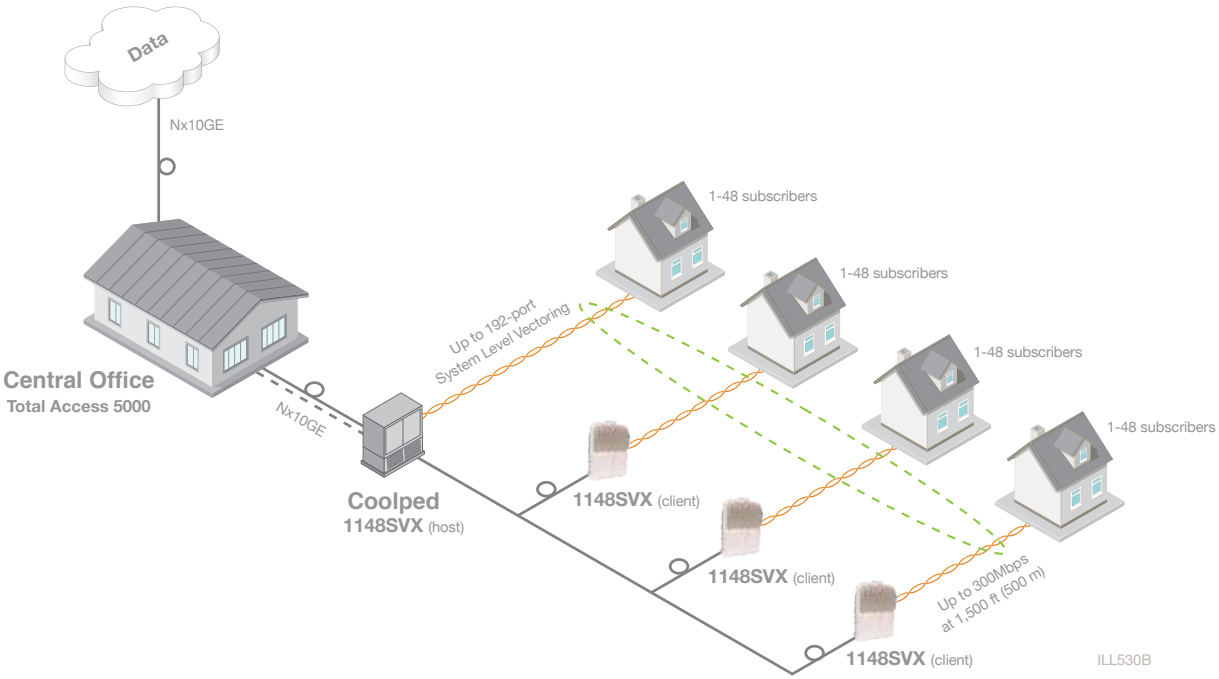
The 1148SVX is a future-proof solution with four 1/10GigE uplink ports. As demand grows, the system can be upgraded to 10G uplinks to deliver higher broadband speeds and enhance customer satisfaction. Integrated primary protection eliminates the need for extra equipment and provides the absolute smallest footprint for the 1148SVX Super-Vectoring FTTN system.

ADTRAN 1148SVX

Lower Operation and Maintenance Costs

Developed with concern for carrier field needs, the 1148SVX comes with customer-accessible cables that allow for quick replacement of units in the field. Several cable lengths with MS2 or 710-type connectors or unterminated stubs are available to accommodate the needs of all service providers. The 1148SVX can be remotely provisioned and managed using TL1, Telnet, SNMP, or AOE, as well as ADTRAN's next-generation open, SDN-ready Mosaic Cloud Platform, giving service providers a path to a Software Defined Access (SD-Access) Network.

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 1148SVX uses one to eight powering pairs from the central office with the actual pair count dependent on the desired deployment range.



Product Specifications

Mechanical

- **Dimensions:** 22.4 in. x 6.57 in. x 6.4 in. (56.9 cm x 42.1 cm x 15.6 cm) (H x W x D)
- **Weight:** 42 lbs. (19 kg)
- **Outdoor Mounting:** Pole, Pedestal, Cross-box, Remote Terminal, other challenging locations

Interfaces

Access

- 48 subscriber ports of Super-Vectoring (VDSL2 35b) for high speed Internet
- Well-suited for 100-600 Mbps service delivery

Network

- 4 x 1/2.5/10GE SFP Interfaces
- Resilient Ethernet Ring per ITU-T G.8032 (ERPS)

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: > 12 Mbps
  - ADSL2+: > 25 Mbps
  - VDSL: > 110 Mbps
- Upstream Data Rate:
  - ADSL: Annex A mode – > 1.2 Mbps
  - ADSL2+: Annex M mode – > 2.5 Mbps
  - VDSL: Up to 50 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, 35b
- Annex A and Annex B PSDs

IPTV Support

- Internet Group Management Protocol (IGMP) v2 and v3
- Dynamic Host Configuration Protocol (DHCP) support with option 82

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

Security

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

Management

- Local: Local Craft Interface (DB9, RS-232)
- Remote: TL1, Telnet, SNMP, Mosaic Cloud Platform, 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

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

ADTRAN 1148SVX

Ordering Information

Equipment			Part No.
1148SVX Host			1179912F2
1148SVX Client			1179910F2
System Level Vectoring (SLV) Resource Module			1179938F1
OSP SLV Cable			1179851G1
1148 Series Host to Client Expansion Cable			1179830G1
Accessories			
1148 Series Pole Mount Bracket			1179779G1
1148 Series Wall Mount Bracket			1179779G2
1148 Series Coolped Mount Bracket			1179779G4
24PR Sealed Power Node			1179880G1
Cable Options**			
Power			
11xx DC Power Cable (20 feet)			1179810G2
11xx AC Power Cable (20 feet)			1179810G7
Span Power (MS2 Connectors) (20 feet)			1179814G2
Span Power (710 Connectors) (20 feet)			1179814G4
Span Power (MS2, CAT5 Power/DMT) (5 feet)			1179817F2
Span Power (710, CAT5 Power/DMT) (5 feet)			1179817F1
Alarm Input Cable (10 feet)			1179810G5
POTS, 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

** Future release. **Additional cable lengths available for quote. Please email support@adtran.com or call 888-4ADTRAN for pre-sales support.*

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