



ADTRAN

1148SVX

48-port Sealed, Super-Vectoring FTTC

VDSL2
35b

Low TCO



Sealed



Vectoring

Benefits

- Environmentally sealed, temperature-hardened, Super-Vectoring (VDSL2 35b) FTTC solution enables rapid deployment of ultra-broadband services
- Delivers 300 Mbps over 500m from the cabinet 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 (TCO)
- Allows system scalability from 48 to 192 subscribers, with field-upgradeable system-level vectoring (SLV)
- 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 fibre deeper into the network and closer to the end user. However, the cost of delivering Fibre-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 utilise existing copper infrastructure in combination with sealed Fibre-to-the-Cabinet (FTTC) solutions to cost-effectively deliver ultra-broadband (300+ Mbps) and IPTV services to subscribers in all areas.

Super-Vectoring (VDSL2 35b)

The ADTRAN 1148SVX compact, sealed FTTC solution utilises 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 500m 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, weatherproof 1100 Series FTTC 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 units allow for the connection of up to four 1148SVX nodes to create an FTTC 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 (ERPS) support enables resilient connection of multiple nodes while minimising 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.

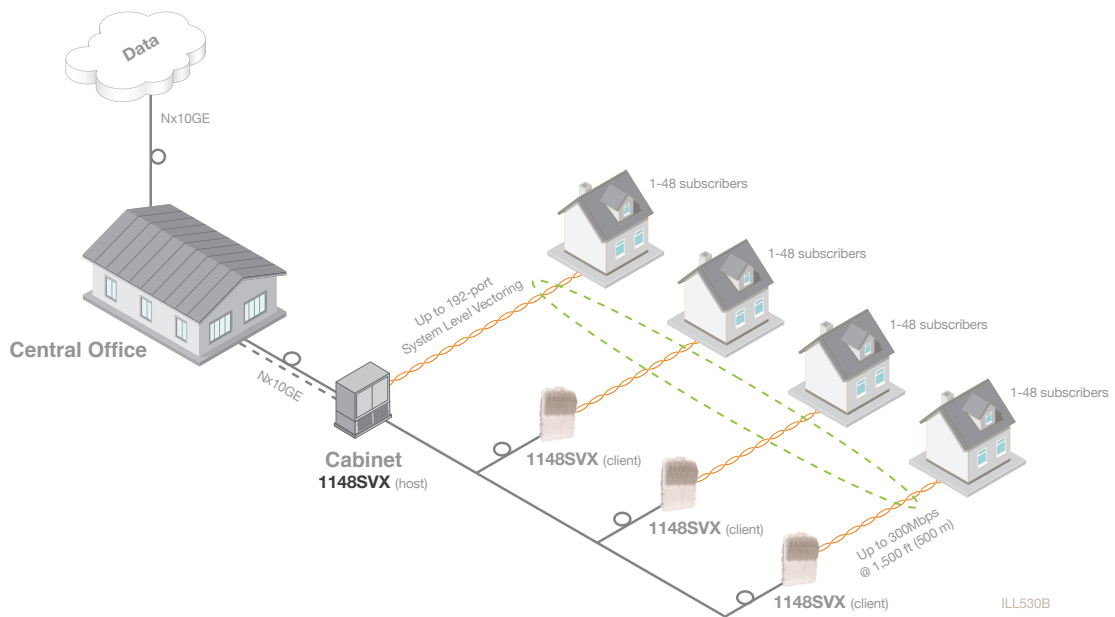
Integrated primary protection eliminates the need for extra equipment and provides the absolute smallest footprint for the 1148SVX Super-Vectoring FTTC system.

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 centralisation 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.



48-port Sealed, Super-Vectoring FTTC

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)

DSL Loop Interface

- 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): 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 100 Mbps
- DSL Service Range: 16,000 feet (4.9 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

Ordering Options

| Equipment Options | | 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 Cooled 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, Fibre | 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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