Data Sheet

ADTRAN

1116VXP

16-Port Sealed FTTN with Built-in POTS

VDSL2 | Vectoring | POTS | Sealed | Low TCO

Benefits

- **Environmentally sealed, temperature hardened standalone Vectored VDSL2 FTTN solution enables rapid deployment of ultra- broadband and CAF services**
- **Built-in POTS, supporting up to 16 subscribers; voice signalling via TDM voice (GR-303/TR-08) and VoIP (MGCP/SIP)**
- **Delivers 100 Mbps up to 3000 feet from the node using bonded VDSL2 with vectoring**
- **Extends 25/3 DSL services up to 18K feet for CAF applications**
- **Provides silent operation and low profile construction abiding by 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)**
- **Supports two GigE or 10GigE uplinks**
- **Reduces installation cost via flexible powering options (span, AC and DC powering)**

Overview

Accelerating Gigabit Services

The growing demand for broadband services is 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. Broadband technologies such as bonded and vectored VDSL2 allow service providers to utilise existing copper infrastructure in combination with sealed Fibre-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® 1116VXP is a compact, sealed, FTTN solutions that allows service providers to realise ultra-broadband speeds with their existing copper infrastructure, economically delivering 100 Mbps+ 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. This allows for ultra-broadband services deployment within days, instead of months, dramatically lowering deployment costs.

Support Existing Lifeline POTS

The 1116VXP also supports delivery of lifeline POTS services with ultra-broadband (100+ Mbps) services, and provides 16 POTS interfaces to support 16 subscribers. The subscriber interface is traditional analogue POTS, but the 1116VXP converts each signal to an RFC 3550 IP-packet, allowing voice traffic to be carried across the same Ethernet transport architecture. The 1116VXP also supports SIP and MGCP for native Voice-over-IP (VoIP).

Cost-Effectively Expand Footprint

Integrated 10G switching in the 1116VXP Host units enables daisy-chaining multiple 1116VXPs to support a growing number of subcsribers. This accommodates long-term growth and lowers initial circuit costs. Ethernet Ring Protection Switching (ERPS) support enables resilient connection of multiple nodes while minimising aggregation port cost. Integrated splitters and primary protection eliminate the need for extra equipment and provide the absolute smallest footprint for the 1116VXP Vectored VDSL2 system.

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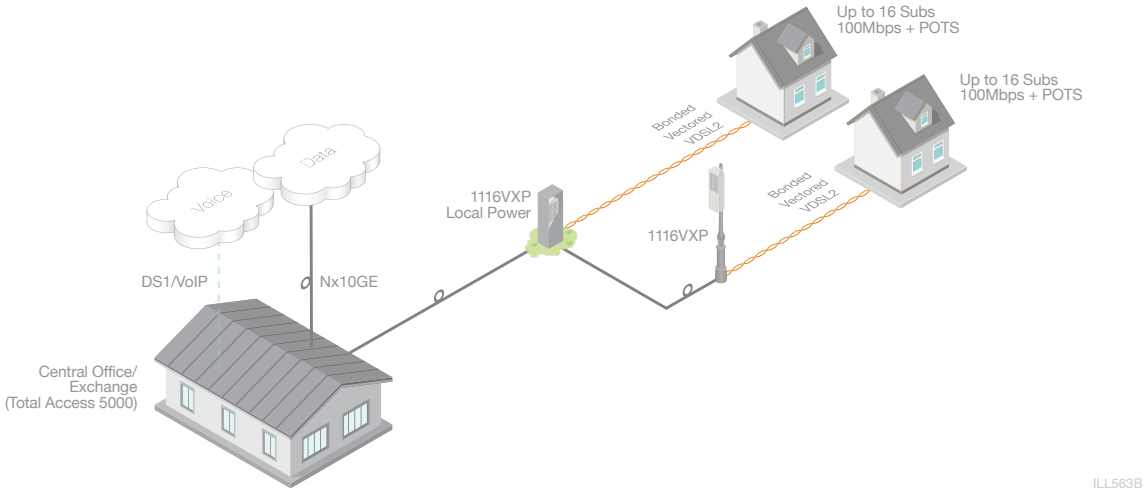
Lower Operation and Maintenance Costs

The 1116VXP 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 1116VXP 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 and -48 VDC local powering options are offered. Span powering from the central office allows for the centralization of battery backup and greatly reduces deployment costs. The 1116VXP 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:** 21.9 x 16.8 x 4.54 in. (569 x 428 x 116 mm) (H x W x D)
- **Weight:** 48 lbs. (22 kg.)
- **Outdoor Mounting:** Pole, Pedestal, Cross-box, Remote Terminal, other challengning locations

Mechanical

Access

- 16 subscriber ports of Vectored VDSL2 for high speed internet.
- Integrated Splitters and built-in support voice service delivery
- Well-suited for 100Mbps services delivery

Network

- Two 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):** 16 (one per loop)
- **Downstream Data Rate:**
  - **ADSL2:** Up to 12 Mbps
  - **ADSL2+:** Up to 25 Mbps
  - **VDSL:** Up to 110 Mbps
- **Upstream Data Rate:**
  - **ADSL:** Annex A mode - Up to 1.2 Mbps
  - **ADSL2+:** Annex M mode - Up to 2.5 Mbps
  - **VDSL:** Up to 50 Mbps
- **DSL Service Range:** 18,000 ft. (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

POTS Performance

Signalling 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:** 1560 Ω Including Handset

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, USB Type B)
- **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

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Product Specifications

Power

- **Local DC Power:** –48 VDC
- **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.
1116VXP HOST	1179922F1
1116VXP Host with Holdover	1179922F1H
Cables*	
Power	
DC Power (20 ft cable)	1179810G2
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
1148VXP Customer Access Cable	1179818Fx*

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

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