



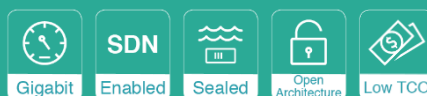
ADTRAN®

Data Sheet

ADTRAN

516G Series

16-port G.fast Sealed, Outdoor Coax ONU



Product Features

- Fully sealed enclosure for go-anywhere deployment flexibility
- Passive cooling for completely silent operation in residential areas
- Ultra-low Total Cost of Ownership (TCO) for triple-play service delivery
- Provides 16 ports of vectored G.fast over coax
- Span- and local-powered for increased flexibility and reliability
- Supports IPTV video service
- Dynamic Time Assignment (DTA)
- Advanced traffic management supports business services
- Single fibre Gigabit Ethernet backhaul
- GPON ONT SFP uplink option
- Supports EFM bonding for greater bandwidth and reach
- Supports both FTTdp and FTTB operational models
- Persistent Management Agent (PMA) supported by Access Integrator Ethernet (ACI) and AOE
- DPU management via Netconf/YANG as proposed by BBF
- Optimized power consumption

Premium broadband services are fueling the need for pushing fibre deeper into the network and closer to the end user. As this occurs, it provides an opportunity for network operators to leverage next-generation broadband technologies like VDSL2, G.fast and vectoring.

The ADTRAN 516G G.fast coax ONU allows service providers to realize ultra-fast broadband approaching Gigabit speeds over existing copper infrastructure. It rapidly enables advanced communications and entertainment services to previously hard-to-connect subscribers. Now, if a location has a phone line or coax cabling it can also be served with premium broadband.

Part of ADTRAN's comprehensive family of G.fast products, the 516G G.fast ONU is purpose-built for the emerging Fibre-to-the-distribution point (FTTdp) or Fibre-to-the-Building (FTTB) markets. Its fully sealed housing makes the 516G ONU a robust and reliable network element that can be deployed in pedestals, on poles, or in low-profile "doghouse" enclosures and even underground vaults and hand-holes.

The most cost-effective solutions for Distribution Points (DPs) support long-term operation without requiring direct touch installation or maintenance. They also must be able to support a positive operator business case for only a small number of served subscribers. Concepts for simplified installation like "zero-touch" customer turn-up processes allow a single truck roll/site visit for hardware installation and then a zero-touch turn-up for every subsequent customer. The ADTRAN G.fast family provides a remote-controlled bypass system for each subscriber, supporting a smooth migration from existing DSL services.

With the G.fast product family, ADTRAN introduces the Persistent Management Agent (PMA) concept for zero-touch installation and easy management of thousands of DPs in the field.

The DPUs are managed by a cloud-server-based PMA via NETCONF / YANG providing a path towards a true software defined network (SDN).

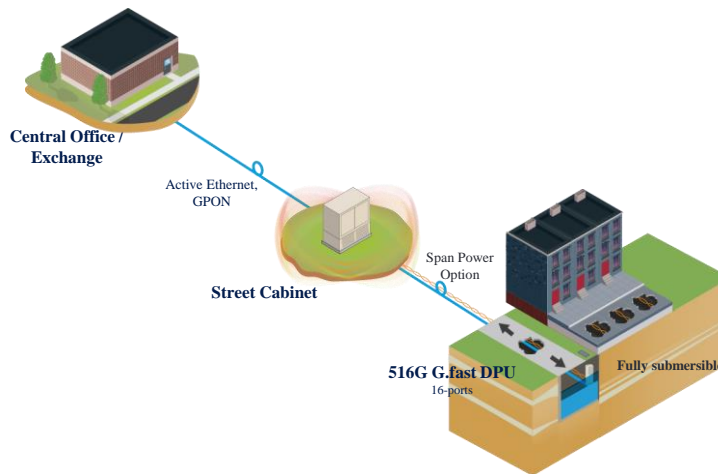
Fed with Active Ethernet or GPON, the 516G coax ONU supports up to 16 subscribers with high-speed vectored 106 Mhz G.fast data service, and is ideal for deep-fibre deployments to the curb, building, home, distribution point, MDU, or other applications where advanced services are required for a small number of subscribers. The GPON SFP approach ensures interoperability with third party GPON OLTs.

The 516G coax variant also features Dynamic Time Assignment (DTA) to optimize performance. DTA allows management of the up- and downstream split ratio on a per port basis to deliver optimal performance based on service and application needs.

The 516G is a potent FTTdp or FTTCab ONU which provides IPTV, ultra-high-speed (up to 1 Gbps) data, and voice services over the existing in-building copper infrastructure. Services can be deployed rapidly and with minimal installation and construction costs. Combining the ability to be deployed in any environment with dramatically lower deployment costs, the 516G allows carriers to cost effectively reduce loop lengths and maximise the performance of G.fast for every subscriber in its copper network. It also enables operators to invest in a full FTTH network over a longer period of time, making the cost more manageable.

ADTRAN FTTCab and FTTB architectures can be operationally aligned with FTTH architectures with common OMCI provisioning, etc., improving efficiency.

ADTRAN's 500G/600G series G.fast work seamlessly with ADTRAN's widely deployed hiX5600 and Total Access 5000 Series Multiservice Access Nodes (MSANs) bridging the gap between existing and next-generation network architectures.



Product Specifications

Mechanical

- Dimensions: 440 x 255 x 85 mm
- Weight: < 7.0 kg (15 lbs)
- Outdoor Mounting: Pedestal, Pole, Wall, Hand-hole, Dog House-style Cabinets

Interfaces

Network

- Two Optical P2P 1/2.5 Gbps SFP
- GPON Uplink

Subscriber

- 16 G.fast All Digital Loop
- Integrated COAX Interface

DSL Performance

- 106 MHz G.fast according to ITU-T G.9700 and G.9701
- G.vector ITU-T G.993.5
- Configurable G.fast Start Frequency ≥ 2.2 MHz
- Downstream to Upstream Ratio Ranges from 1:1 to 10:1
- SRA, SOS, Physical Layer Retransmission
- Dynamic Time Assignment (DTA)

Ethernet Services

- 802.1D Bridging
- Virtual Switch Based on 802.1q VLAN
- VLAN Tagging/Untagging per Ethernet Port
- VLAN Stacking (Q-in-Q) and VLAN Translation
- Class of Service (CoS) Based on VLAN-ID, 802.1p Bit
- Marking/Remarking of 802.1p

IPTV Support

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

Power Options

- **Forward Line Power:** 1 to 2 Line-powering Pairs (+/- 190VDC per pair)
- **Local DC Power:** -42 VDC to -56VDC

Regulatory Approvals

- ETSI EN 300 019
- ETSI EN 300 386
- ETSI EN 60950
- ETS 300 753
- ETS ES 201 468
- DTAG TS 0364/96
- DTAG 1TR9
- ITU-T K.27/31/35
- ITU-T K.45
- GR-487-CORE, Issue 2
- GR-1089-CORE, Issue 3
- GR-63-CORE, Issue 2
- UL 60950-1/21/22
- NEBS Level 3
- FCC Part 15
- ROHS 6 of 6 Compliant

Environmental

- **Operating Temperature:** -40° C to +70° C (-40° F to +158° F)
- **Storage Temperature:** -40° C to +85° C (-40° F to +185° F)
- **Relative Humidity:** 100%, Condensing, Fully Submersible

Ordering Information

Equipment	Part No.
ADTRAN 516G G.fast ONU	1131761F2x*

* Multiple powering options



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