Data Sheet

ADTRAN

601X

Single Family Unit ONT

SDX Series

SDN Enabled | IPTV | Zero-Touch

Benefits

- **Most cost-effective delivery of symmetric multi-gigabit services**
- **Pluggable WAN interface for fixed wavelength or TWDM optics**
- **Simple migration from fixed to tunable optics**
- **1G user interface**
- **IPTV video support including IGMP snooping feature set**
- **Traffic management through priority queuing, scheduling, policing and traffic shaping**
- **Native Ethernet transport over the XGS-PON (XGEM Based)**

Overview

Upgrading Fibre-to-the-Premises (FTTP) networks to Next-Gen PON provides network operators the performance to extend the life of their Optical Distribution Network (ODN) while providing an architecture that supports cost-effective business and backhaul services delivery at greater than Gigabit speeds.

Delivering Cost-Effective Converged Residential and Business Services

The biggest challenge facing Next-Gen 10G PON is designing a single system that meets the scale and flexibility needs for premium business and backhaul services while also delivering on the price point needed for mass market residential applications.

The ADTRAN 601X single family unit (SFU) optical network terminal (ONT), part of the ADTRAN family of next-generation 10G ONTs, uses a flexible optics approach that enables service providers to support existing fibre-to-the-home (FTTH) subscribers while also providing a path to higher-bandwidth business and backhaul services.

The 601X SFU ONT provides high-bandwidth, symmetric gigabit access for the home. The 601X SFU ONT leverages XGS-PON technology to deliver SLA-based symmetric gigabit services over copper or fibre networks. The 601X also supports IPTV, enabling premium residential services. Leveraging the ADTRAN Mosaic OS modular network element software, the 601X SFU ONT is software-defined networking (SDN) controlled, allowing for zero-touch service orchestration and flexible interoperability.

Advancing Next-Generation Networks

The ADTRAN Next-Gen PON system elegance offers the ability to benefit from mass-market price points without the wait for volume deployments of the Next-Gen PON market. This approach gives service providers confidence that they can move forward with a Next-Gen PON strategy today, without the risk of depending on a future worldwide volume ramp of 10G and tunable optics to make it cost-effective. Leveraging the additional capacity available through the disruptive ADTRAN Next-Gen PON solution set, service providers can extract an additional five to 10 years of revenue from this year's residential PON deployments, maximising future service flexibility and minimising risk of subscriber churn.

SDN-Ready Solution

Additionally, the operational cost and complexity to connect a FTTP subscriber can be further reduced to accelerate the expansion of Gigabit broadband services. ADTRAN 600 Series ONTs support provisioning through modern, open APIs, facilitating deployment in next-generation, SDN-based management systems. This, in concert with accelerated mass-market electronics and optics pricing ensures that cost-sensitive residential broadband will be viable via 10G PON technologies. The 600 Series ONTs also support OMCI provisioning, bridging the gap between current and next-gen software-defined access (SD-Access) networks.

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Product Specifications

Ethernet Interfaces

- **One User Interface:** 10/100/1000Base-T Interface with RJ-45 Connector
- 1 Gbps Symmetric Throughput
- Ethernet Port Auto Negotiation or Manual Configuration
- MDI/MDIX Automatically Sense
- Hardware Priority Queues on the DownstreamDirection in Support of CoS

Ethernet Services Support

- Service Scale and Flexibility
- 802.1D Bridging
- 802.1x Authentication
- Eight Queues, Strict Priority and/or Weighted Fair Queue Schedulers
- Configurable to EtherType and TPID for Service Flexibility
- VLAN IDs 0 – 4095; EVC Configurable in the Range of 2 – 4,094
- Virtual Switch Based on 802.1q VLAN
- VLAN Tagging/Detagging
- VLAN Stacking (Q-in-Q) and VLAN Translation
- Class of Service Based on VLAN-ID, 802.1p Bit
- Marking/Remarking of 802.1p
- Supports 9k Jumbo Frame
- **Dimensions:** 6.6” Length x 8.5” Width x 1.2” Height

Power Supply

- +10 – 22V DC (Feed via External AC/DC Adapter)
- Dying Gasp Support
- Multi-pin Connector for Power and Alarm Input from UPS
- **Power Consumption:** Less than 30W

Network Interface

- TWDM WAN SFP+ Port
- Compliant with ITU-T G.9807.1 XGS-PON standards
- Class N1 (NG-PON2) optics support
- Class G (XGS-PON) optics support
- Dynamic Bandwidth Allocation (DBA)
- Mapping of xGEM Ports into a T-CONT with Priority Queue Based Scheduling

FCC/EMC

- FCC Part 15 Class A
- EN 300 386, with compliance to the EMC directive 89/336/EEC
- EN 55022/CISPR22 Class A

Safety

- UL/CUL 60950
- EN 60950-1
- IEC 60950
- AS/NZS 60950

Regulatory

- ETS 300 019-2-3 for Class 3.1E– Environmental conditions and test for telecommunications equipment
- EN 300 019-1-2 for ETS Class 2.3 –Transportation
- EN 300 019-1-1 for ETS Class 1.2 – Storage
- ETSI 300 132-2 – Power Supply interface at the input to telecommunications equipment

LEDs

- Status
- Network
- Management
- Data

Ordering Information

Equipment	Part No.
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