

SDX 600 Series

Multigigabit GPON optical network terminals (ONTs)



Gigabit



Zero-touch



Analytics



VoIP



SDN

Enabled



Benefits

- Large portfolio consisting of 2.5GbE and 1GbE LAN interfaces, integrated voice ports, SFP ONT
- Capable of 1Gbit/s throughput speed test with 2.5GbE variants
- Low-power device that discretely blends into any environment with a compact, modern design
- Features recyclable enclosures, cloud-hosted documentation and optimized packaging
- Zero-touch service provisioning eliminates truck rolls for service upgrades
- Advanced Ethernet OAM provides better insights and diagnostics through remote testing, end-to-end visibility and fiber monitoring capabilities
- Uniquely supports SFU, SBU, and MDU deployments streamlining installation
- Key part of wireless residential gateway deployment strategy

Overview

The Adtran SDX 600 Series of GPON optical network terminals (ONTs) are designed to address the demands of residential and business customers in the multigigabit era.

The flexible, open technology provides a cost-effective path to high-bandwidth services while enabling service providers to support existing FTTP subscribers. Variants supporting 2.5GbE interfaces have the unique capability of fully supporting 1Gbit/s throughput speed testing.

SDN-ready solution

The SDX 600 Series of ONTs addresses today's key challenges around delivering cost-efficient, converged residential and business services. Part of the Adtran ecosystem of open-API access products, they enable easy integration into existing network infrastructure and SDN-based management systems. Simple zero-touch provisioning allows for end user installations without the need for truck rolls, reducing complexity and opex. What's more, they feature advanced operational monitoring features, such as Y.1731 continuity check and 1Gbit/s speed test support. With 2.5GbE and 1GbE LAN interfaces, as well as integrated voice ports, service providers can offer any flavor of multigigabit or Gigabit service. Also available is an GPON SFP ONT that offers a complete ONT in a small form factor pluggable package.

Coupled with Adtran service delivery gateways (SDGs), the SDX 600 Series of ONTs meet the demand of current and future Wi-Fi standards and enable seamless integration with Adtran's intelligent Mosaic One management system for enhanced control and monitoring. Our ONTs are specifically designed to remain at the premises for the long term, meeting the requirements of ever-advancing Wi-Fi residential gateways for years to come. Maintenance-free and with a compact, modern design, they discretely blend into a range of environments.

Committed to building environmentally responsible solutions

Meeting today's soaring bandwidth demands takes more than just great technology. It takes a company that's committed to building environmentally responsible solutions. Our SDX 600 Series is a distillation of everything we've learned over the past decade. It features recyclable enclosures, cloud-hosted documentation and optimized packaging, all designed to put sustainability first. We've worked closely with service providers to address some of their key concerns when it comes to building networks in a cost-effective and sustainable way. Just take a look at the low-power capabilities of our SDX 600 Series. It's compliant with Energy Efficient Ethernet (EEE) and European Union Code of Conduct v8. We're confident that it's going to help service providers in a big way.

SDX 600 SERIES

Product specifications

Network interfaces

- GPON uplink interface
- Single-fiber SC/APC connector
- 1490nm downstream and 1310nm upstream
- Compliant with ITU-T G.984.x GPON PMD
- Forward Error Correction (FEC) support
- Advanced Encryption Standard (AES) support
- Supports up to 1:128 split
- Rogue ONU mitigation

Ethernet interfaces

- Ethernet port auto-negotiation or manual configuration
- MDI/MDIX automatically sense
- Hardware priority queues on downstream
- Enhanced buffer management
- Ethernet loopback (RFC2544 testing)

Ethernet service support

- 802.1q (2018) bridges and bridge networks
- 802.1x port-based network access control/port authentication
- 802.1ad VLAN stacking (Q-in-Q) and VLAN translation
- 802.1p bit marking/remarking
- Class of service based on VLAN-ID
- Eight queues, strict priority and/or weighted fair queue schedulers
- Configurable to EtherType and TPID
- VLAN IDs 0 – 4095; EVC configurable in the range of 2 – 4,094
- 9k jumbo frame support
- BBF.247 Issue 1 [in force] support
- Synchronous Ethernet (SyncE) support

Operations, administration and management

- ITU-T G.988 OMCI embedded operations channel interface support
- Hardware-based Y.1731 PM
 - Continuity Check (CC)
 - Link Trace (LTM/LTR)
 - Loopback (LBM/LBR)
- TR-471 NPT speedtest support
- 15 min rolling counters
- Dying gasp alarm

LEDs

- Power
- LAN
- Optical
- Alarm
- Voice/POTS

Video service support

- Mediaroom/Minerva video models
- IGMP v2/v3 snooping

Voice service support

- ANSI/ETSI FXS interfaces
- SIP and MGCP softswitch support
- Configurable dial plan
- Configurable country specific ring-back tones (frequency, tones, and cadences)
- GR-909 metallic loop testing
- T.38 fax
- Echo cancellation
- REN 3 support up to 500ft/152m

Regulatory standards

- Supported regions: US, Canada, EU, UK, Australia, New Zealand
- Electromagnetic compatibility
 - FCC Part 15 Class B
 - EN 300 386
 - EN 55022
 - AS/NZS CISPR 22 Class B
- Safety
 - UL/CUL 62368-1
 - IEC 62368-1
 - EN 62368-1
 - AS 62368.1
- Environmental
 - ETS 300 019-2-3 Class 3.1 – environmental conditions and test for telecommunications equipment
 - EN 300 019-1-2 Class 2.3 – transportation
 - EN 300 019-1-1 Class 1.2 – storage
- Laser approvals
 - IEC 60825-1:2014
 - Safety of laser products – Part 1: equipment classification and requirements
- CE marked 93/68 EU
- European Union CE Mark declaration of conformity
- Energy efficiency ErP directive
- European Union Code of Conduct

Product specifications

Feature	600	601q	601qv	604iw
Access technology	GPON	GPON	GPON	GPON
Application	MDU/SMB	SFU	SFU	SFU
Environment	-25°C to +40°C	0°C to +40°C		
Relative humidity	up to 95% non-condensing			
FXS interfaces			1	2
1G Ethernet interfaces (10M/100M/1G)				4
2.5G Ethernet interfaces (10M/100M/1G/2.5G)	SFP (1G/2.5G)	1	1	
Dimensions (DxWxH)	80.0 x 18.1 x 15.2 mm	90.0 x 80.0 x 35.0 mm	102.0 x 91.0 x 33.0 mm	
Weight	0.12 lbs / 0.055 kg	0.28 lbs / 0.129 kg	0.33 lbs / 0.15 kg	
Additional features	SFP+ ONT	UPS/BBU with telemetry capabilities		
Mounting options	SFP+ cage	Desk/wall, fiber tray, wall mount, or DIN rail		



Wall mount box

- Securely mount to any wall
- Installs over wall electrical outlet
- Multiple cable entry and exit options
- Fiber tray included with slack storage
- 12VDC wall wart of UPS/BBU powering



Fiber tray

- Low profile design adds protection of fiber
- Securely mount to any wall
- Hides cabling and fiber
- Fiber tray included with slack storage
- Compatible with DIN rail mounts

SDX 600 SERIES

Ordering information

Equipment		Part No.
SDX 600	2.5GbE GPON SFP ONT	1287940F2
SDX 601q	2.5GbE GPON ONT	1287986Fx*
SDX 601qv	2.5GbE GPON ONT with VoIP	1287987Fx*
SDX 604iw	4-port 1GbE GPON ONT with VoIP	1287935Fx*

*Regional support for NA, UK, EU, AUS, and NZ

Accessories		
SDX 601q/601qv fiber tray		1287487F1
SDX 604iw fiber tray		1287445F1
SDX 600 Series UPS/BBU ONT wall mount (UPS/BBU sold separately)		1287475F1
12 VDC ONT UPS/BBU with 8-pin telemetry cable		1287480Fx*
7-pin Phoenix to barrel adapter cable		1287406F4

*Regional support for NA, UK, EU, AUS, and NZ

Updated January 30, 2025

