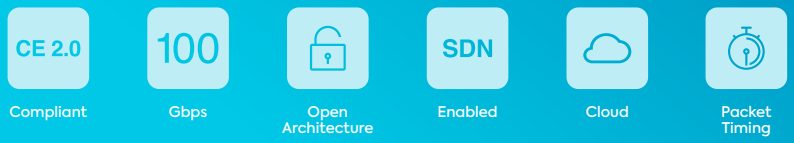
Adtran

Data Sheet

SDX 6000 Series

SD-Access PON OLTs



Benefits

- **Built for Open, Vendor-Neutral Aligned Networks**
- **Pay-As-You Grow Disaggregated Architecture**
- **Supported By Targeted, Domain-Specific Integration Services**
- **Integrated Into Leading Access Domain Control and Orchestration Solutions**
- **Supports Control Plane Portability For Simplifying Transition to Virtualized Networks**
- **Best-In-Class Scalability to Support Dense Urban and Rural Applications**
- **Inclusive of 10G Combo PON, XGS-PON, and GPON Variants**

Overview

The Adtran® SDX 6000 Series of software-defined access (SD-Access) OLTs consist of open and disaggregated access devices that support a broad range of PON standards, including 10G Combo PON, XGS-PON, and GPON. These devices are built using modern design principles and apply lessons learned from data center networks. This approach is an architectural shift from previous networks that have historically relied on closed, monolithic systems being managed by vendor-specific management systems. This evolution enables operators to vastly lower their costs to build, operate, innovate, and grow their networks

Open, Programmable, Scalable

Built around an open architecture, the SDX 6000 Series of OLTs can be aggregated by any high-density aggregation system, including the SDX 8000 Series of Nx100G next-generation aggregation switches. From a programmability perspective, these OLTs have open APIs that utilize standard NETCONF/ YANG interfaces for all management functions, easing the integration into an SDN-controlled environment. For scalability, they are built around a "pay-as-you-grow" architecture where service providers simply add GPON/10G PON OLTs as needed without the upfront investment or the system constraints of a big, iron chassis system. In addition to being open, programmable, and scalable, all embedded software functions in the OLT, including ONU management and PON provisioning, are virtualized and can be hosted on an external server to enable massive scalability and avoid the system constraints of embedded processing systems.

SDX 6000 Series OLTs offer all the carrier-class features (i.e., ONU management, clocking, VLAN tag manipulation, resiliency, etc.) of traditional chassis-based OLT systems, but with much more flexibility, scalability, and an open architecture that cannot be matched by a closed, vendor-specific chassis system.

Open, SDN-programmable Architecture

The SDX 6000 Series is complemented by the Mosaic Software Suite that offers a modern management system with full FCAPS functionality with an intuitive GUI for device configuration and service activation. Open, standards-based northbound APIs simplify integration into existing IT/OSS systems enabling automation of network and service management and ease migration to SDN-based orchestration and management system.

SDX 6000 SERIES

Portfolio Summary

SDX 6010-16
16-Port GPON OLT

- 16 GPON Ports
- 2x40GE and 4x10GE Uplinks
- Side-to-side or Front-to-back Airflow Variants
- Side-to-side Variant Hardened For Remote Cabinet Deployment

SDX 6020-48
48-Port GPON OLT

- 48 GPON Ports
- 4x100GE and 4x10GE Uplinks
- Side-to-side Airflow
- Lower Power and Cost Per Port For High-density Sites

SDX 6320-16
16-Port Hardened 10G Combo PON OLT

- 16 (32)* 10G Combo PON Ports
- 4x100GE and 4x10GE Uplinks
- Side-to-side or Front-to-back Airflow Options
- Hardened For Remote Cabinet Deployment

SDX 6330-48
48-Port Hardened 10G Combo PON OLT

- 48 (96)* 10G Combo PON Ports
- 2x200GE, 2x100GE, and 2x10/25GE Uplinks
- Side-to-side or Front-to-back Airflow Options
- Hardened For Remote Cabinet Deployment

SDX 6312-4
4-Port Sealed 10G Combo PON OLT

- 4 (8)* 10G Combo PON Ports
- 4x10GE Uplinks
- Environmentally Sealed Unit (IP68)
- Fan-less Conductive Cooling
- Stand, Pole, Wall, or Pedestal Mount Options

**Supports separate or simultaneous XGS-PON and GPON delivery per interface*

Product Specifications

Feature	6010-16	6020-48	6320-16	6330-48	6312-4
10G Combo PON Supported			●	●	●
XGS-PON Interfaces			16	48	4
GPON Interfaces	16	48	16	48	4
Uplink Interfaces	2x40GE QSFP+ 4x10GE SFP+	4x100GE QSFP28 4x10GE SFP+	4x100GE QSFP28 4x10GE SFP+	2x200GE QSFP-DD 2x100GE QSFP28 2x10/25GE SFP+	4x10GE SFP+
Jumbo Frames MTU	9216 Bytes	9216 Bytes	9216 Bytes	9216 Bytes	9216 Bytes
MAC Addresses	256K	256K	256K	256K	256K
Multicast Groups	50	50	50	50	50
Multicast Streams	32K	32K	32K	32K	32K
Rack Units	1RU	2RU	1.5RU	2.5RU	Environmentally Sealed
Mounting Brackets	19, 21, 23-in	19, 21, 23-in	19, 21, 23-in	19, 21, 23-in	
Airflow Options	S2S, F2B	S2S	S2S	S2S	Fan-less Conductive Cooling
Baffle Kits Available			F2B, F2T, B2T	F2B, F2T, B2T	
Dimensions (DxWxH)	S2S: 236 x 437 x 44 mm F2B: 336 x 437 x 44 mm	235 x 437 x 87 mm	225 x 387 x 66 mm	232 x 390 x 110 mm	243 x 515 x 280 mm
Weight	8.8 lbs/4 kg	13 lbs/5.9 kg	10.14 lbs/4.6 kg	14.2 lbs/6.4 kg	35 lbs/16 kg
Powering Options	-48VDC Redundant Feed	-48VDC Redundant Feed	-48VDC Redundant Feed	-48VDC Redundant Feed	AC/DC or SPAN
Typ Power Consumption w/o Optics	134 W	270 W	TBD	450 W	TBD
Max Power Consumption w/o Optics	180 W	375 W	330 W	600 W	125 W
Temperature Range	S2S: -40 to 65°C F2B: 0 to 50°C	-40 to 65°C	-40 to 70°C	-40 to 65°C	-40 to 65°C
Relative Humidity	up to 95% non-condensing	up to 95% non-condensing	up to 95% non-condensing	up to 95% non-condensing	up to 95% non-condensing

SDX 6000 SERIES

Product Specifications

Interfaces

- ITU-T Compliant for GPON and XGS-PON
- Class B+, C+, C++, and D SFP Support
  - 60 km Extended Range Support
- Class N1, N2, D1, and D2 SFP+ Support
  - 40 km Extended Range Support
- Forward Error Correction (FEC)
- Type B PON Redundancy (Future)
- Rogue ONU Detection (Future)

Uplink Connectivity

- Daisy Chaining For E-Line Services
- Ethernet Ring Protection Switching (ERPS)
- Ethernet Linear Protection Switching (ELPS)
- Multiprotocol Label Switching (MPLS)
- Ethernet OAM
- LAG with LACP Support, LLDP-Enabled
- Zero Touch Provisioning (ZTP)

Subscriber Service Delivery

- G.988 VEIP Support For Residential Gateways
- Triple-Play – Voice, Video, and Data
- IGMP Snooping and Proxy
- DHCP Relay For IPv4 and IPv6
- DHCP Option 82 Support
- PPPoE Intermediate Agent
- Proxy ARP

Security

- TACACS+ and RADIUS (Authentication, Authorization)
- Subscriber Access Lists (ACL)
- AES Encryption
- DoS Protection
- Anti-Spoofing Prevention

Traffic Management

- HQoS Architecture
  - Flexible Multi-tier Scheduling
  - Dual Rate Shapers Per Scheduled Node
- Dynamic Bandwidth Allocation
- E-Line and E-LAN Forwarding Schemes

Network Management and Timing

- NETCONF/YANG
- CLI
- Telnet/SSH
- IPv4/IPv6 In-band/Out-of-band Management
- Syslog
- Synchronous Ethernet
- 1588v2 Precision Time Protocol

Regulatory Standards

- Applicable UL/CUL Standards
- Applicable EN/IEC/AS/NZS Standards
- FCC Part 15 Class B
- CE Mark (meets applicable safety, EMC, energy efficiency directives)
- NEBS Level 3

Ordering Information

Equipment		Part No.
SDX 6010-16	16-Port GPON OLT, Side-to-side Airflow	11971305F1
	16-Port GPON OLT, Front-to-back Airflow	11971305F2
SDX 6020-48	48-Port GPON OLT	11971301F1
SDX 6320-16	16-Port 10G Combo PON OLT	11971330F1
SDX 6330-48	48-Port 10G Combo PON OLT	11971340F1
SDX 6312-4	4-Port Sealed 10G Combo PON OLT, AC/DC Power Supply	41971310F1
	4-Port Sealed 10G Combo PON OLT, SPAN Power Supply	41971310F2

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