



SDX 6000 Series

Disaggregated OLTs



Quick
installation



Flexible
deployments



Efficient
operation



Low power



Multi-
gigabit

Benefits

- Pay-as-you-grow disaggregated architecture
- Built for open, vendor-neutral aligned networks
- Easy-to-install, compact form factor for single person installation
- Fits all deployment scenarios from large-scale to niche applications
- Scale down to as few as 100 subscribers all the way up to 100,000
- Unmatched flexibility - standalone, chain, ring, leaf/spine architectures
- United under a single control and orchestration platform
- Inclusive of 10G Combo PON, XGS-PON, and GPON variants
- Advanced Combo PON technology delivers simultaneous GPON and XGS-PON connections through a single port

Overview

The Adtran SDX 6000 Series of software-defined access (SD-Access) OLTs consists 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 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 classic OLT chassis systems. 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 classic chassis-based OLT systems but with more flexibility and 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, which offers a modern management system with full FCAPS functionality and 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 easing the migration to SDN-based orchestration and management systems.

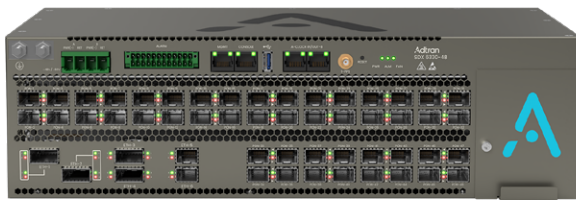
SDX 6000 Series

Portfolio summary

SDX 6330

High-density 10G Combo PON OLT

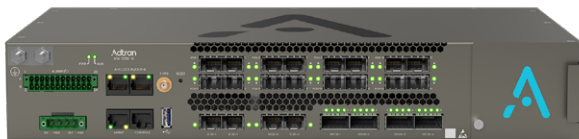
- 48 PON ports deliver simultaneous XGS-PON and GPON connections through a single port
- 2x 200GbE, 2x 100GbE, and 2x 10/25GbE uplinks
- Side-to-side airflow; optional baffle kits available
- Hardened for remote cabinet deployment



SDX 6320

Medium-density 10G Combo PON OLT

- 16 PON ports deliver simultaneous XGS-PON and GPON connections through a single port
- 4x 100GbE and 4x 10GbE uplinks
- Side-to-side airflow; optional baffle kits available
- Hardened for remote cabinet deployment



SDX 6324

Low-density 10G Combo PON OLT

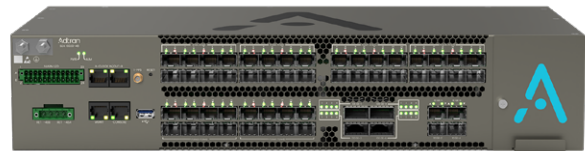
- 4 PON ports deliver simultaneous XGS-PON and GPON connections through a single port
- 4x 10GbE uplinks
- Side-to-side airflow; optional baffle kits available
- Hardened for remote cabinet deployment



SDX 6020

High-density GPON OLT

- 48 GPON ports
- 4x 100GbE and 4x 10GbE Uplinks
- Side-to-side airflow
- Hardened for remote cabinet deployment



SDX 6010

Medium-density GPON OLT

- 16 GPON ports
- 2x 40GbE and 4x 10GbE uplinks
- Side-to-side or front-to-back airflow variants
- Side-to-side variant hardened for remote cabinet deployment



SDX 6312

Low-density sealed 10G Combo PON OLT

- 4 PON ports deliver simultaneous XGS-PON and GPON connections through a single port
- 4x 10GbE uplinks
- Environmentally sealed unit (IP68)
- Fanless conductive cooling
- Strand, pole, wall or pedestal mount options



SDX 6000 Series

Product specifications

Feature	SDX 6330	SDX 6320	SDX 6324	SDX 6020	SDX 6010	SDX 6312
Subscriber count	over 6,000	over 2,000	over 500	over 6,000	over 2,000	over 500
10G Combo PON supported	•	•	•			•
XGS-PON interfaces	48	16	4			4
GPON interfaces	48	16	4	48	16	4
Uplink interfaces	2x 200GbE QSFP-DD 2x 100GbE QSFP28 2x 10/25GbE SFP28	4x 100GbE QSFP28 4x 10GbE SFP+	4x 10GbE SFP+	4x 100GbE QSFP28 4x 10GbE SFP+	2x 40GbE QSFP+ 4x 10GbE SFP+	4x 10GbE SFP+
Jumbo frames MTU	9216 bytes	9216 bytes	9216 bytes	9216 bytes	9216 bytes	9216 bytes
MAC addresses	256K	256K	256K	256K	256K	64K
Multicast bundles	50	50	50	50	50	50
Multicast streams	32K	32K	32K	32K	32K	32K
Rack units	2.5RU	1.5RU	1RU	2RU	1RU	Environmentally sealed
Mounting options	19, 21, 23-in brackets	19, 21, 23-in brackets	19, 21, 23-in brackets	19, 21, 23-in brackets	19, 21, 23-in brackets	Strand, pole, wall, pedestal
Airflow options	Side-to-side, left-to-right	Side-to-side, left-to-right	Side-to-side, left-to-right	Side-to-side, left-to-right	Side-to-side & front-to-back variants	Fanless conductive cooling
Baffle kits available	F2B, F2T, F2S	F2B, F2T, F2S, B2T	F2B, F2T, B2F, B2T			
Dimensions (D x W x H)	225 x 387 x 110mm	225 x 387 x 66mm	235 x 386 x 44mm	235 x 437 x 87mm	S2S: 236 x 437 x 44mm F2B: 336 x 437 x 44mm	243 x 515 x 280mm
Weight	14.2 lbs. (6.4kg)	10.14 lbs. (4.6kg)	8.8 lbs. (4kg)	13 lbs. (5.9kg)	8.8 lbs. (4kg)	35 lbs. (16kg)
Powering options	-48VDC redundant feed	-48VDC redundant feed	-48VDC redundant feed	-48VDC redundant feed	-48VDC redundant feed	AC/DC, span or CATV
Typ. power consumption without optics at 25°C	205W	186W	80W	165W	95W	70W
Max. power consumption without optics	300W	280W	140W	280W	141W	80W
Operational temperature range	-40 to 70°C	-40 to 70°C	-40 to 70°C	-40 to 65°C	S2S: -40 to 65°C F2B: 0 to 50°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	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
 - 60km extended range support
- Class N1, N2, D1, and D2 SFP+ support
 - 40km 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)
 - Label add/remove support
- 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 (DBA)
- 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 (SyncE) (future)
- 1588v2 precision time protocol (future)

Regulatory standards

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

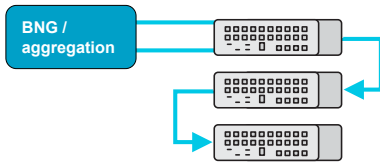
SDX 6000 Series

SDX network architectures

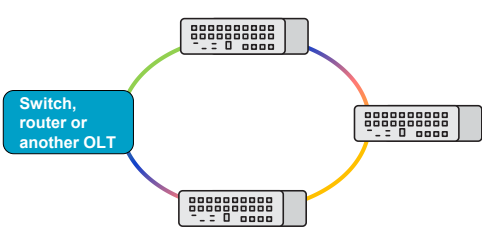
1 Standalone OLT



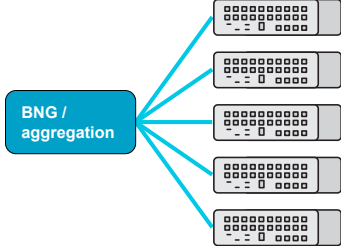
2 OLT chain



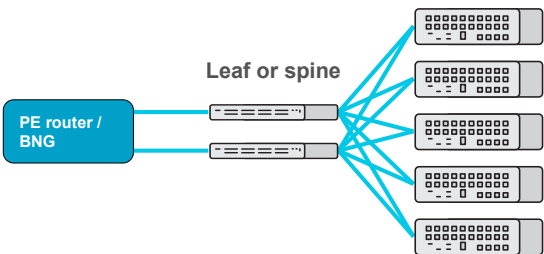
3 OLT ring



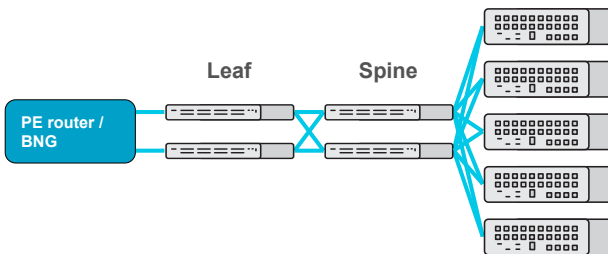
4 OLT star



5 Simple aggregation



6 Leaf spine aggregation



SDX 6000 Series

Ordering information

Equipment		Part No.
SDX 6330	48-port 10G Combo PON OLT	11971340F1
SDX 6320	16-port 10G Combo PON OLT	11971330F1
SDX 6324	4-port 10G Combo PON OLT	11971325F1
SDX 6020	48-port GPON OLT	11971301F1
SDX 6010	16-port GPON OLT, side-to-side airflow	11971305F1
	16-port GPON OLT, front-to-back airflow	11971305F2
SDX 6312	4-port sealed 10G Combo PON OLT, AC/DC power supply	41971310F1
	4-port sealed 10G Combo PON OLT, span power supply	41971310F2
	4-port sealed 10G Combo PON OLT, CATV power supply	41971310F3

