

SDX 8200/8100 Series

SD-Access aggregation switches



Certified



Gbps



Open
architecture



Enabled



Cloud
software



Packet
timing

Benefits

- Accelerates differentiated service creation via open, multi-vendor, SDN programmability
- Avoids vendor-specific component lock-in via open interfaces and APIs
- Complete single-source product that can run independently from vendors for smooth migration into the whitebox world
- Supports broadband video deployment models compatible with leading IPTV middleware providers
- Supports data center, central office, cabinet racking, and customer premises options
- Supports stringent backhaul services with enhanced features, including low latency and network timing synchronization
- Mitigates the uncertain demand of emerging differentiated services through data center switching architectures
- Improves customer experience via strong traffic management and QoS
- Delivers SLA-based enterprise services via comprehensive Carrier Ethernet support

Overview

The Adtran SDX 8200 and SDX 8100 Series of access and aggregation switches applies open and programmable SDN architectures for scaling data centers. These differentiated attributes enable our software-defined access (SD-Access) architectures to achieve the massive scalability required to support the uncertain demand of emerging differentiated broadband services and supports the consolidation of SLA-based enterprise and backhaul services.

Horizontal scalability and mesh network resiliency

Access and aggregation switches support advanced switching architectures that are highly scalable and resilient. The SDX 8200/8100 Series supports horizontal scalability (scaling out versus up), which allows the operator to add capacity on the fly. Mesh switching provides multiple paths for each network element, creating a highly fault-tolerant network. These switches can be deployed as a spine, top-of-rack leaf switch, or middle-of-row leaf switch to interconnect computing and storage functions with aggregate fiber-to-the-premises, Carrier Ethernet access, and aggregation components.

Multi-market, multi-service consolidation

These switches are an integral part of a next-generation access solution, supporting the consolidation of 1, 10, 25 and up to 400Gbit/s services across multiple market segments.

Residential broadband, mobile backhaul/fronthaul, enterprise networking, and cloud connectivity services can be simultaneously deployed on a common architecture due to their comprehensive feature set and enormous scale. Operators can offer broadband video from multiple video content providers via unicast and multicast, IPTV, and over-the-top (OTT) deployment models. Deliver SLA-based enterprise and mobile backhaul and fronthaul services through Carrier Ethernet, Ethernet OAM, and performance monitoring, as well as support for stringent network timing distribution and synchronization.

The SDX Aggregation Suite

The SDX Aggregation Suite is a collection of optimized, flexible software that enables advanced carrier-grade features on bare-metal switches. The Adtran SDX Aggregation Suite is built upon Open Network Linux (ONL), which provides an industry-standard, open platform. We then harness the power of containerization to apply open, programmable SDN models and data center scaling principles.

Open, SDN-programmable architecture

These switches support open interfaces and open APIs from vendor-neutral SDN controllers helping operators avoid vendor-specific component and process lock-in that leads to long release schedules that stifle the agility of in-house DevOps teams. They support multiple Linux-based network operating systems and offer NETCONF/YANG APIs for SDN programmability.

SDX 8200/8100 Series

Portfolio summary

SDX 8230

- 400/100GbE aggregation switch
- 2x 400GbE, 8x 100GbE, 4x 1/10/25GbE interfaces
- Advanced Carrier Ethernet features with H-QoS
- Side-to-side airflow; optional baffle kits available
- Remote OLT and Carrier Ethernet services aggregation
- Less than 300mm in depth
- Temperature-hardened



SDX 8210

- 48-port 10GbE Carrier Ethernet switch
- 6x 100GbE, 48x 10GbE interfaces
- Advanced Carrier Ethernet features with H-QoS
- Front-to-back airflow
- Remote OLT and Carrier Ethernet services aggregation



SDX 8205-54/54M

- 48-port 10GbE Carrier Ethernet switch
- 6x 100GbE, 48x 10GbE interfaces
- Advanced Carrier Ethernet features with H-QoS
- Side-to-side airflow; optional baffle kits available
- Remote OLT and Carrier Ethernet services aggregation
- Less than 300mm in depth



SDX 8120

- 14-port 1GbE Carrier Ethernet switch
- 4x 10GbE, 10x 1GbE interfaces
- Advanced Carrier Ethernet features with H-QoS
- Side-to-side airflow
- Edge router and point-to-point Ethernet access
- Less than 300mm in depth



SDX 8200/8100 Series

Product specifications

Feature	SDX 8230	SDX 8210	SDX 8205-54	SDX 8205-54M	SDX 8120
Link interfaces	2x 400GbE (QSFP56-DD) 8x 100GbE (QSFP28) 4x 1/10/25GbE (SFP28)	6x 100GbE (QSFP28) 48x 10GbE (SFP+)	2x 100GbE (QSFP-DD/28) 4x 100GbE (QSFP28) 48x 10GbE (SFP+)	2x 100GbE (QSFP-DD/28) 4x 100GbE (QSFP28) 48x 10GbE (SFP+)	4x 10GbE (SFP+) 10x 1GbE (SFP)
Each port supports	QSFP56-DD: 1x 400GbE 4x 100GbE (breakout) 1x 100GbE QSFP28: 1x 100GbE 4x 25GbE (breakout) 4x 10GbE (breakout) SFP28: 1x 25GbE 1x 10GbE 1x 1GbE	QSFP28: 1x 100GbE 1x 40GbE 4x 25GbE (breakout) 4x 10GbE (breakout) SFP+: 1x 10GbE 1x 1GbE	QSFP-DD/28: 1x 100GbE 1x 40GbE 4x 25GbE (breakout) 4x 10GbE (breakout) SFP+: 1x 10GbE 1x 1GbE	QSFP-DD/28: 1x 100GbE 1x 40GbE 4x 25GbE (breakout) 4x 10GbE (breakout) SFP+: 1x 10GbE 1x 1GbE	SFP+: 1x 10GbE 1x 1GbE
Switch capacity	1.2Tbit/s	880Gbit/s	880Gbit/s	880Gbit/s	140Gbit/s
Jumbo frames MTU	9216 Bytes	9216 Bytes	9216 Bytes	9216 Bytes	9216 Bytes
MAC addresses	256K	750K	750K	750K	64K
Rack units	1RU	1RU	1.5RU	1.5RU	1RU
Mounting options	19, 21, 23-in	19, 21, 23-in	19, 21, 23-in	19, 21, 23-in	19, 21, 23-in
Airflow options	Side-to-side	Front-to-back	Side-to-side	Side-to-side	Side-to-side
Baffle kits available	F2B, F2F, B2T, T2B		F2B, F2F, B2T, T2B	F2B, F2F, B2T, T2B	
Dimensions (D x W x H)	230 x 387 x 44mm	548 x 440 x 44mm	230 x 437 x 66mm	230 x 437 x 66mm	236 x 437 x 44mm
Weight	8.8 lbs. (4kg)	21.4 lbs. (9.7kg)	10.14 lbs. (4.6kg)	10.14 lbs. (4.6kg)	9.05 lbs. (4.11kg)
Powering options	-48VDC redundant feed	Hot-swappable AC or DC	-48VDC redundant feed	-48VDC redundant feed	Hot-swappable AC or DC
Typ. power consumption without optics at 25°C	57W	270W	95W	135W	50W
Typ. power consumption with optics*	110W	330W	220W	270W	60W
Max. power consumption without optics	125W	420W	106W	144W	72W
Operational temperature range	-40 to 70°C	0 to 40°C	-40 to 65°C **	-40 to 65°C **	-25 to 70°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

* Please note, the typical power consumption with optics is dependent on the equipped optical modules.

** Revision notice: The SDX 8205-54 temperature specification was enhanced to -40 to +65°C effective Q4 2025. This change applies only to devices manufactured after this date. Units produced prior to Q4 2025 maintain their original 0 to +50°C rating and qualification.

SDX 8200/8100 Series

Ethernet services support

- Classification of traffic based on:
 - Per UNI port
 - CE VLAN ID (C-tag)
 - CE VLAN P-bit
 - DSCP fields
 - Single stack VLAN
 - Double stack VLANs (Q-in-Q)
- 802.1q single/double tag manipulation
- S-tag TPID provisioning supports 802.1ad and 802.1q standards
- Ingress and egress policing
- Strict priority with 8 queues per port
- Shaping per queue
- Scheduling support:
 - Tail drop
 - Weighted Random Early Detection (WRED)
 - Weighted Deficit Round Robin (WDRR) (future)

Network management and monitoring

- NETCONF/YANG
- CLI
- Telnet/SSH
- IPv4/v6 management
- DHCPv4/v6
- Traceroute
- Port Mirroring
- Traffic mirroring (future)
- Syslog
- NTP
- LLDP (future)

Network timing and synchronization

- Synchronous Ethernet (SyncE)
- Prepared 1588v2

Security

- Accounting and authorization support:
 - RADIUS
 - TACACS+ (future)
- ACL logging and mirroring (future)
- DHCP snooping (future)
- DOS protection

Layer 2 and Layer 3 features

- Carrier-grade Ethernet switching
- EVC (EPL, EVPL), MEF compliant
- Link Aggregation Group (LAG)
- Multi-chassis Link Aggregation Group (MC-LAG)
- Ethernet Linear Protection Switching (ELPS)
- 802.1ag Ethernet OAM Connectivity Fault Management (CFM)
- ITU-T Y.1731 Ethernet in the First Mile OAM
- Ethernet Local Management Interface (E-LMI)
- Link State Awareness (LSA)
- Static Routing (IPv6/VRF)
- Dynamic routing support (future):
 - BGPv4/v6
 - OSPFv2/v3
- Bidirectional Forwarding Detection (BFD)
- Virtual Router Redundancy Protocol (VRRP)
- Label Distribution Protocol (LDP) (future)
- Multiprotocol Label Switching (MPLS) (future)
- Layer 2 VPN (VPWS/VPLS) (future)
- Layer 3 VPN (future)
- Multicast routing support:
 - Source-specific Mode (SSM)
 - Any Source Multicast (ASM)
 - Sparse Mode (PIM-SM) (future)
 - Dense Mode (PIM-DM) (future)
- Multicast Listener Discovery Version 2 (MLDv2) (future)
- IGMP v2/v3, IGMP snooping, and IGMP proxy support
- Media Access Control Security (MACsec) (SDX 8205-54M only)

LEDs

- Port LEDs: Link Status, Activity, Rate
- Ethernet management port LED: Link Status, Activity
- Console port LED: Link Status
- System LEDs: Diagnostic, Locator, PSU, and Fan Status

Regulatory standards

- FCC Part 15 Class A
- FCC Part 68
- UL 60950, CAN/CSA C22.2 No.60950
- EN 60950, IEC 60950, AS 3260/ AS NZS60950
- RoHS compliant
- ITU-T K21:2000
- CE marking
- NEBS Level 3 capable

SDX 8200/8100 Series

Ordering information

Equipment		Part No.
SDX 8230	400/100GbE aggregation switch	11971222F1*
SDX 8205-54	48-port 10GbE Carrier Ethernet switch	11971221F1*
SDX 8205-54M	48-port 10GbE Carrier Ethernet switch with MACsec	11971221F2*
SDX 8120	14-port 1GbE Carrier Ethernet switch DC-powered	11971230F1*
SDX 8120	14-port 1GbE Carrier Ethernet switch AC-powered	11971230F2*
SDX 8210 bundles	48-port 10GbE Carrier Ethernet switch	
SDX 8210	DC-powered, 19-in brackets	41971111F1**
SDX 8210	AC-powered, 19-in brackets	41971111F31**
SDX 8210	DC-powered, 21-in brackets	41971111F12**
SDX 8210	AC-powered, 21-in brackets	41971111F32**
SDX 8210	DC-powered, 23-in brackets	41971111F13**
SDX 8210	AC-powered, 23-in brackets	41971111F33**
SDX Aggregation Suite software licensing		Perpetual
Base license	Includes Base software with Layer 2 capabilities. Enables VLAN forwarding, translation and QoS management for efficient traffic handling.	119711SW10F1***
Carrier Ethernet license	Builds on Base license with advanced Carrier Ethernet features. Supports E-LAN, E-Line, ELPS and Ethernet OAM for enhanced reliability and performance.	119711SW11F1***

* Unit includes the base chassis, fans, power supply and 19-in brackets.

** Bundles include the base chassis, fans, power supply, power cords and brackets.

*** Additional licenses are available. Please consult with a sales representative for more information.

Updated October 29, 2025

