

# SDX 8000 Series

## SD-Access Aggregation Switches


 CE 2.0  
Compliant

 100  
Gbps

 Open  
Architecture

 SDN  
Enabled


Cloud


 Packet  
Timing

## Benefits

- Accelerates Differentiated Service Creation Via Open, Multivendor, 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, and Cabinet Racking Options
- Supports Stringent Backhaul Services with Enhanced Features Including Low Latency and Network Timing Sync
- Mitigates the Uncertain Demand of Emerging Differentiated Services Through Data Center Switching Architectures
- Improves Customer Experience Via Strong Traffic Management and Quality of Service (QoS)
- Delivers SLA-Based Enterprise Services Via Comprehensive Carrier Ethernet Support

## Overview

The Adtran® SDX 8000 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 8000 Series supports horizontal scalability (scaling out versus up) which affords the operator the ability 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 either 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.

### Traffic Management and Service Assurance

To elevate customer quality of experience, these switches use efficient meshed network protocols like Layer 3 BGP with equal-cost multipath (ECMP) routing, segmented routing, and multi-chassis load sharing, providing strong performance guarantees when scaling

the system. These switches also support Virtual Extensible LAN (VXLAN) for virtualized data center environments, allowing for faster scale while logically isolating tenant apps and physical compute resources.

### Multimarket, Multiservice Consolidation

These switches are an integral part of a next-generation access solution supporting the consolidation of 1 Gbps and 10 Gbps 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 combined with 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 Operations Administration and Maintenance (OAM), and performance monitoring as well as support for stringent network timing distribution and synchronization.

### 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. These switches support multiple Linux-based Network Operating Systems and offer Open-Flow and NETCONF/YANG APIs for Software Defined Networking (SDN) programmability.

# SDX 8000 SERIES

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## Portfolio Summary

### SDX 8120-14

- 10-Port 1GE Carrier Ethernet Switch
- 10x1GE, 4x10GE Uplinks
- Advanced CE Features with H-QoS
- Side-to-side Airflow
- Edge Router and P2P Ethernet Access Function
- Fits in 300mm ETSI Rack
- Temperature Hardened



### SDX 8205-54

- 48-Port 10GE Carrier Ethernet Switch
- 48x10GE, 6x100GE Uplinks
- Advanced CE Features with H-QoS
- Side-to-side Airflow
- Remote OLT and Carrier Ethernet Services Aggregation
- Fits in 300mm ETSI Rack
- Temperature Hardened



### SDX 8210-54

- 48-Port 10GE Carrier Ethernet Switch
- 48x10GE, 6x100GE Uplinks
- Advanced CE Features with H-QoS
- Side-to-side Airflow
- Remote OLT and Carrier Ethernet Services Aggregation



### SDX 8305-20

- 20-Port 100GE Switch
- 20x100GE Uplinks
- Side-to-side and Front-to-back Airflow Options
- Front-to-top
- Fits in 300mm ETSI Rack



### SDX 8310-32

- 32-Port 100GE Switch
- 32x100GE Uplinks
- High Capacity L2/L3 Forwarding
- Front-to-back Airflow
- High-density OLT Aggregation



### SDX 8310-64

- 64-Port 100GE Switch
- 64x100GE Uplinks
- High Capacity L2/L3 Forwarding
- Front-to-back Airflow
- High-density OLT Aggregation





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## Product Specifications

### Ethernet Services Support

- Classification of Traffic Based on:
  - Per UNI Port, CE VLAN ID (C-tag) and/or CE
  - VLAN P-Bits, Source and/or Destination MAC Address
  - Single Stack VLAN and Double Stack VLANs (Q-in-Q)
- Manipulation Based on 802.1Q
- STAG TPID Provisioning Supports 802.1ad and 802.1Q Standards
- Port-based Service Support
- Service Scale and Flexibility
- MEF Compliant for E-Line and E-LAN
- Strict Priority and WDRR Scheduling
- Ingress Policers (tr3CM), CIR and EIR Settings
- EBS and CBS Settings
- Shaping Per Port and Per Queue

### IPTV Support

- IGMP v2 and v3
- IGMP Snooping
- IGMP Proxy
- Dynamic Host Configuration Protocol (DHCP) Support with Option 82

### Layer 3 Features

- Virtual Extensive LAN (VXLAN)
- Virtual Routing and Forwarding (VRF)
- BGPv4
- RIPv2
- OSPFv3
- BFD
- VRRP
- MPLS Labeling
- RSVP
- Segment Routing
- Multicast Routing (PIM-SM, DM, SSM)

### Network Management and Monitoring

- NETCONF/YANG
- CLI
- Telnet/SSH
- FTP/SFTP
- IPv4/IPv6 Management
- DHCPv4, DHCPv6
- Port Mirroring
- Syslog

### Network Timing and Synchronization

- Synchronous Ethernet

### 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

### Security

- Accounting and Authorization (RADIUS, TACACS+)
- ACL Logging and Mirroring
- DHCP Snooping
- DOS Protection
- Ingress/Egress L2/L3/L4 ACL
- Management IP Filtering (Telnet/SSH)
- Port MAC Locking
- Static MAC Filtering

### 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

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## Ordering Information

Equipment		Part No.
SDX 8120-14	10-Port 1GE Carrier Ethernet Switch	11971230F1
SDX 8205-54	48-Port 10GE Carrier Ethernet Switch	11971221F1
SDX 8210-54	48-Port 10GE Carrier Ethernet Switch	11971111F1*
SDX 8305-20	20-Port 100GE Switch	11971211F1
SDX 8310-32	32-Port 100GE Switch	11971101F1*
SDX 8310-64	64-Port 100GE Switch	11971103F1*

*\*Additional part numbers available for AC and DC powering*



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