



# Motorola AXS1800

## Enterprise Aggregation Switch Passive Optical LAN Solution



### Highlights Include:

Delivers significant levels of capital and operational expense savings from day one

Greatly reduces costs related to service contracts, network upgrades and network management

Enables the delivery of secure converged networks providing VoIP, video, and ultra-high speed data services over a single fiber

Enables "Green IT" with tremendous reduction in enterprise wide power and space consumption

### Overview

The Motorola AXS1800 Enterprise Aggregation Switch (EAS) is a next generation passive optical LAN (POL) solution that delivers rapid return on investment (ROI) and very low total cost of ownership (TCO). From the datacenter to the desktop, the Motorola AXS1800 EAS all-fiber solution increases the size of the network building block and greatly simplifies enterprise network deployment, operation, and management. As enterprise IT organizations look to optimize capital and operational expenses, the Motorola AXS1800 EAS solution delivers tremendous advantages over traditional LAN architectures with up to 60% reduction in capital and 75% in long-term operational costs.

The Motorola AXS1800 EAS provides enterprises a pathway to responsibly evolve their network. By providing significant savings in energy (kwh/sq. ft.), cooling, and deployment footprint compared to legacy LAN architectures, the Motorola AXS1800 EAS is ready to serve the enterprise network today with technology that will readily grow and adapt into the future.

The Motorola AXS1800 EAS is a high-density layer 2 aggregation device that extends fiber for miles directly from the datacenter to any Ethernet end point, eliminating costly access and distribution switches. Designed to deliver quality IP-voice, any type of video, and ultra-high speed data over a single highly reliable and secure Gigabit Passive Optical Network (GPON), the AXS1800 EAS solution truly represents the next generation in enterprise networking. Based on the same Motorola passive fiber optic technology deployed in carrier networks around the world, the Motorola AXS1800 EAS delivers carrier class performance, or five 9s of reliability, and ease of use, providing IT managers the opportunity to focus on new IT projects and business needs while delivering a high quality Web 2.0 experience throughout the enterprise.

The Motorola POL portfolio includes the AXS1800 EAS, the ONT1120GE workgroup terminal, the ONT6000GET high density workgroup terminal, and AXSvision, Motorola's simple and highly graphical user interface.

## DATA SHEET

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### The Motorola AXS1800 EAS Offers:

Support of up to 7168 GE ports per chassis via 56 Passive Optical LANs, each supporting up to 64 desktop terminals

Line rate performance with 200Gbps switching fabric, 10Gbps dedicated to each switch and line card

High capacity WAN uplinks with 12x1GE, 2x10GE uplinks in the base configuration and configurable 10GE and multi-port 1GE line cards

1 + 1 protection for system controller card and switch card, NEBS certified

A high level of security with 128 bit AES Encryption, 802.1x authentication for access control, and fiber-based security that eliminates electronic eavesdropping risks

Converged architecture for multiple services; capable of providing IP video, voice, and data services from the same platform

Comprehensive QoS and CAC feature-set

# AXS1800 Specifications

## Physical Description\*

Dimensions	24.48 in H x 17.51 in. W x 17.0 in. D (62.2 cm x 44.5 cm x 43.2 cm)
Weight	52.91 lb (24 kg) empty; 99.20 lb (45 kg) fully loaded
Mounting	ANSI 19 in and 23 in, ETSI 515 mm
Cooling	front intake through air filter; rear exhaust through fan assembly

## Shelf/Switch Capacity

18 slots (2 system controllers, 2 packet switch cards, 14 access cards)	
160 Gbps non-blocking, redundant switch fabric Modules	
Common	200 Gbps (160 Gbps effective) switch/WAN with 10GbE and six GbE ports, system controller
Application	4-port ITU-T G.984 2.488/1.244 Gbps GPON line card with 1.64 splits per port, 1x 10GbE/10x 1 GbE interface card
Aggregation of 3584 video return paths	

## ONT Support

SFU	ONT1000GT/GT-JI (2x POTS, GbE, MoCA, +18 dBmV RF video, RF return)
SFU	ONT1400GT-RP (2x POTS, 2x GbE, MoCA, +18 dBmV RF video, RF return)
SOHO	ONT1500GT (8x POTS, 2x GbE, MoCA, SyncE, +18 dBmV RF video)
Desktop	ONT1120GE (4x GbE)
MDU-ENET	ONT6000GET (24x POTS, 12x GbE, SyncE, +33 dBmV RF Video)
MDU-VDSL2	ONT6000GVT (24x POTS, 12x VDSL2, +33 dBmV RF Video)

## Power and Electrical

Voltage	-48/-60 VDC (dual, redundant, load shared)
Power Consumption	1500 W (maximum)
Current	30 A (maximum)

## Timing Options

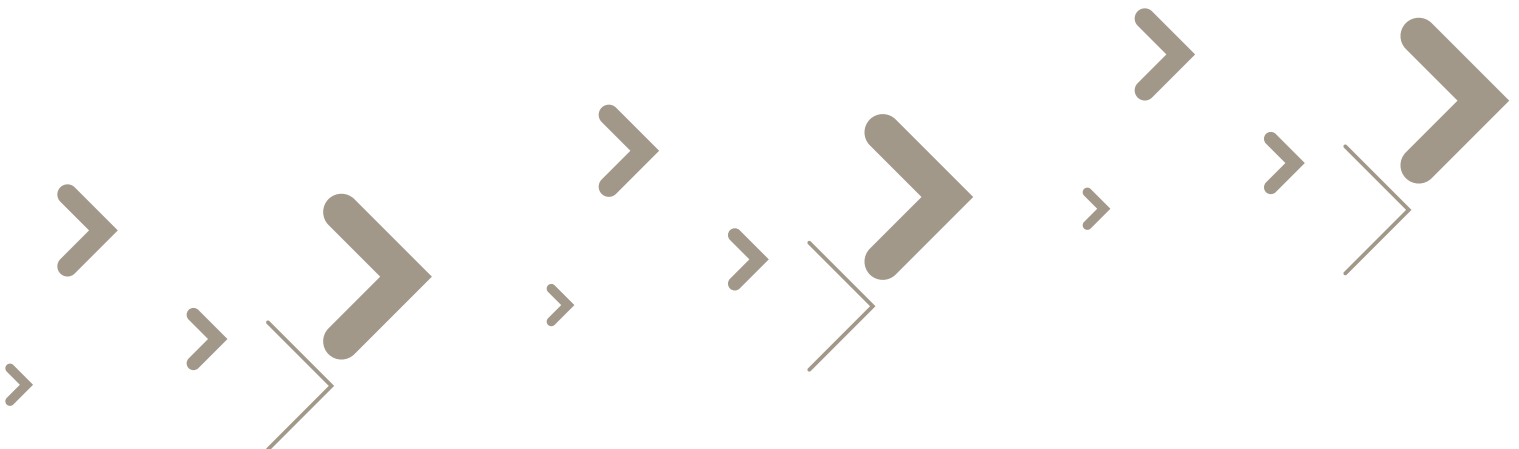
Internal Stratum 3 for self-timing and holdover
SyncE line timing

## Operations

PLOAM channel and OMCI (ITU-T G.984.3)
SNMPv2
CLI
XML northbound to NMS from AXSvision Redundancy & Protection
Redundant switch, system controller, BITS timing and voice gateway

## Environmental

Operating Temperature	-40 °F to 149 °F (-40 °C to 65 °C)
Storage Temperature	-40 °F to 158 °F (-40 °C to 70 °C)
Operating Humidity	5% to 95% relative humidity, non-condensing
Altitude	60 m below sea level to 4,000 m above sea level



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### Interface Configuration

GPON	Single fiber SFP with SC/UPC connector, 28 dB (Class B+) optical loss budget per ITU-T G.984.2/Amd.1
Uplink	Dual fiber SFP/XFP with LC connector
DS1/E1 Standard Telco 64 Pin	
Ethernet (4)	10/100BaseT RJ-45 for network management and DVS-178 video return
Power	A & B feeds with double-threaded studs and integrated circuit breaker/40 A fuse
CLI console	one RS-232 DB9
MLT analog response (8)	wire-wrap connectors
BITS Timing (10)	wire-wrap connectors
Aux port (RPD)	four 10/100BaseT Ethernet RJ-45
Discrete alarm inputs and CO audible/visual alarm outputs	one DB37 female

### Protocols

ITU-T G.984.1, G.984.2, G.984.3, G.984.4
GPON Encapsulation Method (GEM)
IEEE Std 802.1D™ (bridging)
IEEE 802.1Q VLAN
Transparent LAN service (TLS)
IEEE 802.1ad provider bridge support
IEEE 802.3ad link aggregation
Ethernet QoS
IGMPV2 & V3 multicast group management, snooping & proxy
Ethernet multicasting
IEEE 802.1p priority tagging (Ethernet QoS)
SNTPv4
SIP-based VoIP: RFC2617 (authentication), RFC2806bis (Tel URI), RFC2833 (RTP Payload for DTMF Digits), and RFC3261 (SIP)

### Regulatory & Safety

Safety	UL/cUL UL60950-1, CE Mark EN60950-1, CB Scheme IEC60950-1, AS/NZS60950
Laser safety	21CFR1040, CE Mark EN60825-1/-2
EMC	FCC Part 15 Class A, EN55022/CISPR 22 Class A & EN300 386, AS/NZSCISPR 22
Telcordia	GR-63-CORE, Issue 3; GR-1089-CORE, Issue 3; TCG NEBS Checklist-Verizon; IEC 60068; ETSI EN300 019-2-3; NEBS Compliance Clarification
EMEA Compliance	RoHS & WEEE, lead-free, % recyclable, unique markings/labeling EMEA (ETSI), CE Marking
APAC	Compliance: MII certification – China
Stationary Use	EN300 019-1-x, Class 3.1E & 3.3
Transportation & Storage Conditions	EN300 019-1-x, Class 2.3 & 1.2
Acoustic Noise	EN300 353, Edition 1

### Warranty

One year hardware, 90 days software



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