DATA SHEET

Motorola AXS1800™

GPON Optical Line Terminal

Overview:

The Motorola AXS1800 next generation optical line terminal (OLT) is designed to deliver end-to-end Ultra-Broadband. The cornerstone of Motorola's fiber deep access portfolio, the AXS1800 offers unparalleled density, scalability and flexibility that allows service providers to deliver quality video, voice and data to every subscriber they pass.

The Motorola AXS1800 OLT extends fiber to the edge of service provider networks to enable the delivery of end-to-end Ultra-Broadband services to subscribers in single-family, small office, and multi-dwelling units. Optimized for the delivery of video, the AXS1800 features unparalleled density, scalability and flexibility to provide superior capacity for growth in services such as IPTV, high definition VOD and time-shifted television. Proven to be reliable in tier one service provider networks across the globe, the Motorola AXS1800 helps service providers stay ahead of consumer demand for high quality personalized communications and entertainment experiences.

The AXS1800 features flexible and high capacity GPON access and WAN uplinks, unparalleled scalability and line rate performance with a 200 Gbps fully non-blocking switch fabric in a high density chassis that supports over 4600 residential and business subscribers.

Highlights include:

- 200 Gbps fully non-blocking switch fabric
- Up to 14 four-port GPON cards in the chassis supporting 1792 subscribers per chassis with 32:1 optical split or 3584 subscribers per chassis with 64:1 optical split
- Designed for multicast to Unicast service migration.
- Supports a complete set of ONTs for SFU, Desktop, SOHO, SBU, MDU and MTU applications. Interfaces include: POTS, GbE, MoCA and RF video
- Flexible video delivery with RF overlay/return, hybrid RF overlay/IP return and full IPTV
- Carrier Class redundancy

The AXS1800 Offers:

- Symmetrical Throughput – end-to-end Ultra-Broad band service delivery
- Video Optimized Design – sustained full bandwidth to subscribers with superior capacity for growth in high definition unicast services such as VOD and time-shifted television
- Service Delivery Flexibility – rapid video deployment with evolution to IPTV
- Proven Solutions – deployed, operational and scaled in tier one service provider networks
- Scalability – enables service providers to reach to every subscriber they pass
- Advanced Configuration Management Tools – reduces cost to connect and maintain

Alexander and Walter Soto., Ex. 2026
Nokia of America Corporation v. Alexander and Walter Soto, IPR2023-00960

Specifications:

Physical Description*
- Height: 62.2 cm
- Width: 44.5 cm
- Depth: 43.2 cm with cabling
- Weight: 24 kg empty; 45 kg fully loaded
- Mounting: ANSI 19" and 23", 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 applications units)
- 160 Gbps non-blocking, redundant switch fabricModules
- 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: ONT1100GE, (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)

FTTN Support
- IP DSLAMs via GbE interface

Power & 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: -40C to 65C
- Storage Temperature: -40C to 70C
- Operating Humidity: 5% to 95% relative humidity, non-condensing
- Altitude: 60 m below sea level to 4,000 m above sea level

Interface Configuration
- GPON: Single fiber SFP with LC connector, 28 dB (Class B+)optical loss budget per ITU-T G.984.2/Amd.1
- Uplink: Dual fiber SFP/XFP with LC connector
- Ethernet (8): 10/100BaseT RJ-45 for network management and DVS-178 video return
- Power : A & B feeds with doubled-threaded stud and integrated circuit breaker/switch
- MLT analog response (8): wire-wrap connectors
- BITS Timing (10): wire-wrap connectors

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 forDTMF 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 Document; SBC TP 76200; AT&T NEDS
- 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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