Motorola AXS2200™

GPON Optical Line Terminal

Overview:

The Motorola AXS2200 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 AXS2200 offers unparalleled density, scalability and flexibility that allows service providers to deliver quality video, voice and data to every subscriber they pass

The Motorola AXS2200 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 AXS2200 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 AXS2200 helps service providers stay ahead of consumer demand for high quality personalized communications and entertainment experiences.

The AXS2200 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 with 10 Gbps to each slot

- 1 Tbps backplane

- Up to 18 four-port GPON cards in the chassis sup porting 2304 subscribers per chassis with 32:1 op tical split or 4608 subscribers per chassis with 64:1 optical split

- Flexible and expandable WAN capacity and/or Ethernet aggregation capability providing up to 20x 10GbE or 180x GbE ports
- Designed for multicast to Unicast service migration

- Supports up to 112 T1 and 84 E1 ports interfaces for GR-303, TR-008, T1/CAS Voice Gateway and CES in protected and unprotected operating modes

- Supports a complete set of ONTs for SFU, Desk top, SOHO, SBU, MDU and MTU applications. Interfaces include: POTS, GbE, MoCA and RF video

- Flexible video delivery with RF overlay/return, hybrid RFoverlay/IPreturn and full IPTV

- Carrier Class redundancy

The AXS2200 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
- Quality Voice – quality and reliable delivery of legacy voice services with an integrated voice gateway
- 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

Specifications:

Physical Description*
- Height: 22.75" (57.79 cm)
- Width: 21.4" (54.36 cm)
- Depth: 12.0" (30.48 cm) without cabling; less than 18" (45.7 cm) with cabling
- Weight: 60 lbs (27 kg) empty; 120 lbs (54 kg) fully loaded
- Cooling: front intake through air filter; rear exhaust through fan assembly

Shelf/Switch Capacity
- 22 slots (2 system controllers, 2 switch cards,18 applications units)
- 200 Gbps non-blocking, redundant switch fabric
- 1 Tbps backplane with 40 Gbps slot capacity
- Common: 200 Gbps switch/WAN with 10GbE and six GbE ports, system controller
- Application: IP voice gateway (56x DS1 and 42x E1), 4-port 2.488Gbps/1.244Gbps GPON, 1x GbE / 1x GbE WAN

ONT Support
- SFU: ONT1000GT/GT-JI (2x POTS, GbE, MoCA, +18 dBmV RF Video)
- Desktop: ONT1100GE (4x GbE)
- SFU2: ONT1400GT-RP (2xPOTS, 2x GbE, MoCA, +18 dBmV RF video, RF return)
- SOHO: ONT1500GT (8x POTS, 2x GbE, MoCA, SyncE, +18 dBmV RF video)
- MDU-ENET: ONT6000GET (24x POTS, 12x GbE, SyncE, +33 dBmV RF Video)
- MDU-VDLS2: ONT6000GVT (24x POTS, 12x VDSL2, +33 dBmV RF Video)

Power & Electrical
- Power: -48 VDC, 30 A (maximum)
- Power Consumption: 1500 W (maximum)

Timing Options
- External DS1/E1 BITS timing
- Internal Stratum 3 for self-timing and holdover
- SyncE Line timing

Interface Configuration
- GPON: simplex SC
- GbE: LC
- 10 GbE: XFP LC
- Discrete alarm inputs and CO audible/visual alarm outputs: one DB38 female
- Management port: four 10/100BaseT Ethernet RJ-45
- Aux port (RPD): four 10/100BaseT Ethernet RJ-45
- Voice gateway DS1 ports: eight DB64 female
- BITS timing: ten wire-wrap pins
- CLI console: one RS-232 DB9
- Power: A & B feeds with double-threaded studs and integrated circuit breaker/40 A fuse
- MLT analog response

Management Features
- ITU-T G.984.4 OMCI
- SNMP v2, TELNET, SNTP for AXSvision
- CLI, remote CLI with TELNET and FTP

Environmental
- Operating Temperature: 0C to 50C (32F to 122F)
- Storage Temperature: -40C to 70C (-40F to 158F)
- Operating Humidity: 5% to 85%, non-condensing
- Altitude: 60 m (197 ft) below sea level to 4,000 m (13,123 ft) above sea level

Redundancy & Protection
- Redundant switch, system controller, BITS timing and voice gateway

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 tagging, IEEE 802.3ad link aggregation
- Ethernet QoS
- IGMP multicasting control, snooping, Ethernet multicasting
- SIP-enabled VoIP: RFC2617 (authentication), RFC2806bis (Tel URI), RFC2833 (RTP Payload for DTMF Digits), and RFC3261 (SIP)
- GR-303, TR-08 Mode 1, T1CAS

Regulatory & Safety
- Safety: UL/cUL UL60950-1, CE Mark EN60950-1, CB Scheme IEC950-1, AS/NZS60950
- Laser safety: 21CFR1040, CE Mark 60825-1/-2
- EMC: FCC Part 15 Class A, CE Mark EN55022 Class A & EN300 386-2
- NEBS: GR-63-CORE, Issue 2; GR-1089-CORE, Issue 3; TCG NEBS Checklist, Verizon NEBS Compliance Clarification Document, SBC TP 76200, AT&T NEDS

Miscellaneous
- MLT/BORSCHT test support
- 4-node OLT voice gateway clustering
- Aggregation of 4600 video return paths

Warranty
- One year hardware, 90 days software

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