



DATASHEET

EXA300-27X

The Exaware's EXA300-27X is an open cell site gateway platform that is OCP Accepted and TIP DCSG compliant. The EXA300 features a combination of 1/10 Gbps, 25 Gbps, and 100 Gbps interfaces with optimized performance by utilizing merchant silicon and a standard x86 processor for access and aggregation networks.

With a temperature-hardened design, the EXA300-27X is able to operate at a wide operational temperature range from -40°C to 65°C and it is equipped with load-sharing redundant/hot-swappable PSUs and fan modules that provide high availability and hassle-free maintenance. In particular, the EXA300-27X supports a stacking option for scalability and redundancy for a resilient network topology.

The EXA300-27X has built-in industry-leading network timing and synchronization functions that make it an ideal solution for current LTE and 5G mobile backhaul networks. The EXA300-27X is installed with ONIE (Open Network Install Environment) that provides a freedom of choice for the preferred NOS (Network Operating System) integration.

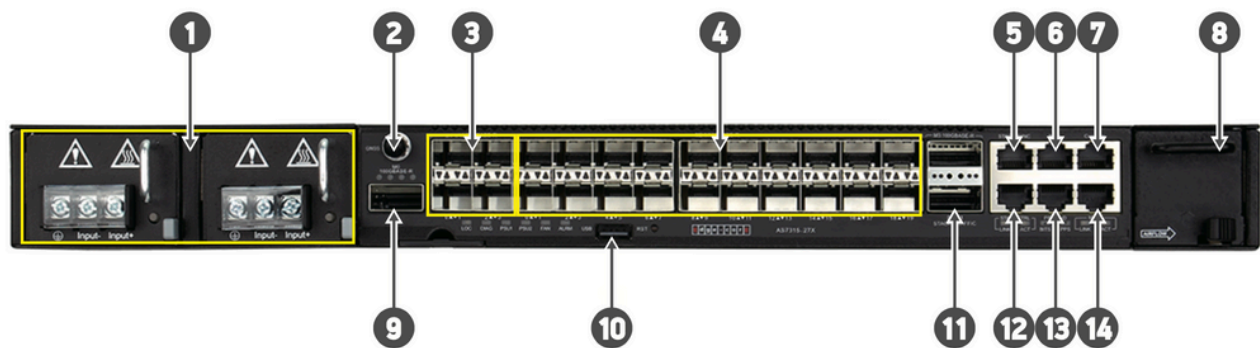
KEY FEATURES AND BENEFITS

- Open cell site gateway platform for mobile backhaul networks.
- 20 x 1G/10G SFP+, 4 x 1G/10G/25G SFP28, and 3 x 100G QSFP28 fixed ports.
- Full line-rate Layer 2 and Layer 3 forwarding at 300 Gbps.
- High resilience in a stacking configuration of two EXA300-27X units.
- Supports IEEE1588v2 and SyncE functions in hardware.
- Rack mountable in standard 19" racks.
- Supports side-to-side airflow SKU.
- All ports and PSUs are accessible at the front.
- Hot-swappable, load sharing, redundant AC and 48 VDC PSUs.
- Hot swappable redundant fan modules.
- Management: Ethernet and console RJ-45 ports; USB storage port.
- Hardware switch pre-loaded with Open Network Install Environment (ONIE).
- Compatible with Open Network Linux (ONL).

SOFTWARE



INTERFACES



Description

1. Power Supply	8. Fan tray
2. GNSS antenna input	9. 1 x 100G QSFP28 port
3. 4 x 25G SFP28 ports	10. USB storage port
4. 20 x 10G SFP+ port	11. 2 x 100G QSFP28 stacking ports
5. Stack sync RJ-45 port	12. Stack control RJ-45 port
6. BITS port	13. TOD RJ-45 port
7. RJ-45 console port	14. Management port (MGMT)

PORTS

- Switch Ports
 - 20 x SFP+ (each supporting 10 GbE or 1 GbE)
 - 4 x SFP28 (each supporting 1GbE, 10 GbE or 25 GbE)
 - 3 x 100G QSFP28 (each supporting 1 x 40/100 GbE or 4 x 10/25 GbE or 2 x 50 GbE)
- Management Ports on Front Panel:
 - 1 x RJ-45 serial console
 - 1 x RJ-45 1000BASE-T management Ethernet port (MGMT) 1 x USB (storage)
- Clocking and Timing ports
 - Stacking Clock Input and Output ports
 - PRTC: ITU-T G.8272
 - Pulse-per-Second (PPS) input and output
 - Time-of-Day (TOD) input
 - Integrated GNSS receiver
- Stacking Interface
 - 2 out of 3 100G QSFP28 can be used for stacking
 - 1 x 1 GbE from CPU (control signal)
 - 1 x RJ-45 for sync signals
 - Optics and cables for stacking:

QSFP28 DAC up to 2 m

QSFP28 AOC up to 30 m

KEY COMPONENTS

- Switch Silicon: Broadcom BCM88470 Qumran-AX
- CPU module:
 - Processor: Intel® Atom C3508 4-Core
 - Memory: 16G RAM DDR4-2400
- Stratum 3E compliant oscillator (OCXO)
- SSD M.2, 32 Gbytes

PERFORMANCE

- 300 Gbps bidirectional switching capacity
- 300 Mpps packet processing rate
- Scales to 600 Gbps per node in stacked configuration (2 x EXA300-27X)

PHYSICAL AND ENVIRONMENTAL

- Dimensions (WxDxH): 440 x 300 x 44 mm (17.32 x 11.81 x 1.73 in)
- Weight 5.35 kg (11.79 lb), with two installed PSUs
- Can be mounted in standard 19", 21", 23", and ETSI 600 mm racks or cabinets, as well as OCP 21" Open Racks

PSU

- DC Input: 36V -72V, 10 A
- AC Input: 100V-240V, 5 A
- Power Capacity: 300 W (maximum)

REGULATORY COMPLIANCE

- Safety Compatibility
 - EN/IEC 62368-1
- Electromagnetic Compatibility
 - EN 300 386 V1.6.1
 - Installation Environment: Telecommunication center ITU-T K.80
 - FCC 47 CFR Part 15, Subpart B, Class A
 - EN 301 489-1 V2.1.1
 - EN 301 489-19 V2.1.0
 - EN 303 413 V1.1.1
 - Radio Equipment Directive 2014/53/EU

ENVIRONMENTAL

- Usage altitude 60 m below sea level (106 kPa air pressure) to 3000 m (70 kPa)
- Storage:
 - IEC60068-2-14
 - Temperature: -40°C to 70°C (-40°F to 158°F)
- Transportation:
 - ETSI EN 300 019-1-2 Class 2.3
 - Temperature: -40°C to +70°C (-40°F to +158°F)
- Operating Conditions:
 - [ETSI EN 300 019-1-3] Class 3.2
 - Temperature Range: -40°C to +65°C (-40°F to 149°F)
 - Relative Humidity: 5% to 95%
- The product complies with the current version of the following
 - EU directives:

RoHS

WEEE

REACH

ROUTING PROTOCOLS

- IPv4, IPv6 Dual stack
- eBGP, iBGP at scale
- MP-BGP
- Multi-AS VPN/BGP-LU
- BGP signaling for L3VPN
- BGP signaling for L2VPN
- Seamless MPLS
- L3VPN
- L2VPN
- Inter-AS L3VPN
- 6PE and 6VPE
- VPWS
- H-VPLS
- OSPFv2, v3
- IS-IS – IPv4/IPv6, Multi topology
- Route distribution across protocols
- PIM-SSM/SM
- IGMPv3
- LDP, T-LDP
- RSVP-TE
- IGP shortcut
- OSPF-TE
- ISIS-TE
- Internet Access
- NH Tracking
- VRRP V2, V3 IPv4/IPv6
- Static-Route
- BGP RPKI
- Route leak
- DHCP Snooping

TIMING

- SyncE
- IEEE1588

MANAGEMENT

- Hierarchical, Commit based CLI
- NETCONF
- SSH
- Telnet
- Out-of-band and in-band management
- SNMPv2/V3
- RBAC
- AAA/TACACS+/Radius
- NTP
- Syslog
- Rich, Hierarchical Policy
- Language
- Enhanced logging
- Optical monitoring

SECURITY

- Data Path ACL
- Control Plane ACL
- Management VRF Separation
- Hardware policing for CPU traffic
- MD5 for routing protocols
- BGP FlowSpec

HIGH AVAILABILITY

- Process restart
- Graceful restart for all routing protocols

QOS & POLICY

- Hierarchical Shaping
- Per PORT/VLAN rate control
- WRED
- Weighted and strict priority queues
- Minimum latency queues
- 8 Queues per port/VLAN
- Ingress policing
- PRI/DSCP/EXP classification
- Flexible packet fields classification
- Ethernet EBN (MW dynamic rate)

DATA PATH

- VLAN
- QinQ for all services
- LAG
- MPLS FRR
- IP-LFA
- Hierarchical FIB
- BGP-PIC Core/Edge
- Two level load-balancing
- VRF at scale
- BFD

INFRASTRUCTURE

- ONIE Bootloader
- Standard ONL
- Embedded KVM Hypervisor

Ordering Part Number:

Description:

EXA300-27X-A-AC	Router System with Software and AC Power Supplies
EXA300-27X-A-DC	Router System with Software and DC Power Supplies
EXA300-27X-A-NOS	Router System Software
EXA300-27X-A-FAN	Spare Fan
EXA300-27X-A-PSU-AC	Spare AC Power Supply
EXA300-27X-A-PSU-DC	Spare DC Power Supply

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