



DATASHEET

EXA300-27X

The EXA300-27X is an open cell site gateway platform. 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.

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 device is designed for optimal accessibility, with all interfaces and accessories, including the fan tray, conveniently located at the front. It features a side-to-side airflow fan design, ensuring compatibility with compact enclosures that have limited depth space. The EXA300-27X is installed with ExaDOS carrier grade operating system.

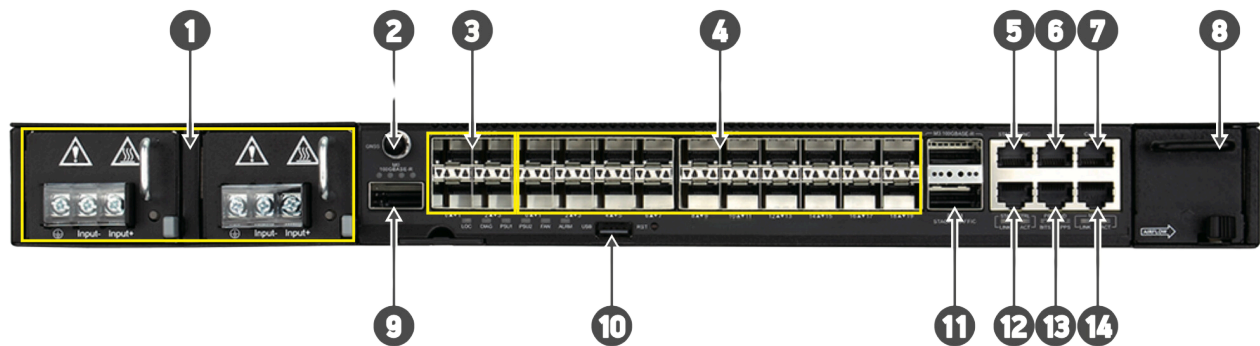
KEY FEATURES AND BENEFITS

- 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.
- Supports IEEE1588v2 and SyncE functions.
- 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).

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 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

KEY COMPONENTS

- Broadcom Qumran-AX
- CPU module:
 - Processor: Intel 4-Core 1.6GHz
 - Memory: 16G RAM DDR4-2400
- SSD M.2, 32 GB

PERFORMANCE

- 300 Gbps bidirectional switching capacity
- 300 Mpps packet processing rate

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
- Say Power Supply Maximum Capacity: 300W

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
- Segment Routing (MPLS)
- 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
EXA-M&S-System	Annual System Maintenance and Support (M&S) including software updates, bugs fixes

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