



DATASHEET

EXA800-28X-A

The EXA800-28X-A is a platform that provides a combination of 1/10/25Gbps, 50/100Gbps, and 100/400Gbps interfaces, utilizing a powerful Qumran family merchant silicon and an Intel Xeon x86 processor with hyper threading technology providing optimized performance for service provider access and aggregation networks.

EXA800-28X-A is a temperature hardened design product, able to operate at a wide operational temperature range from -40°C to 65°C, and with redundant/hot swappable power modules and 5+1 high efficient modular fans that provide high availability and hassle-free maintenance for mission critical applications, making the hardware an ideal choice for current LTE and emerging 5G mobile xhaul network solutions.

EXA800-28X-A is installed with ExaNOS carrier grade operating system.

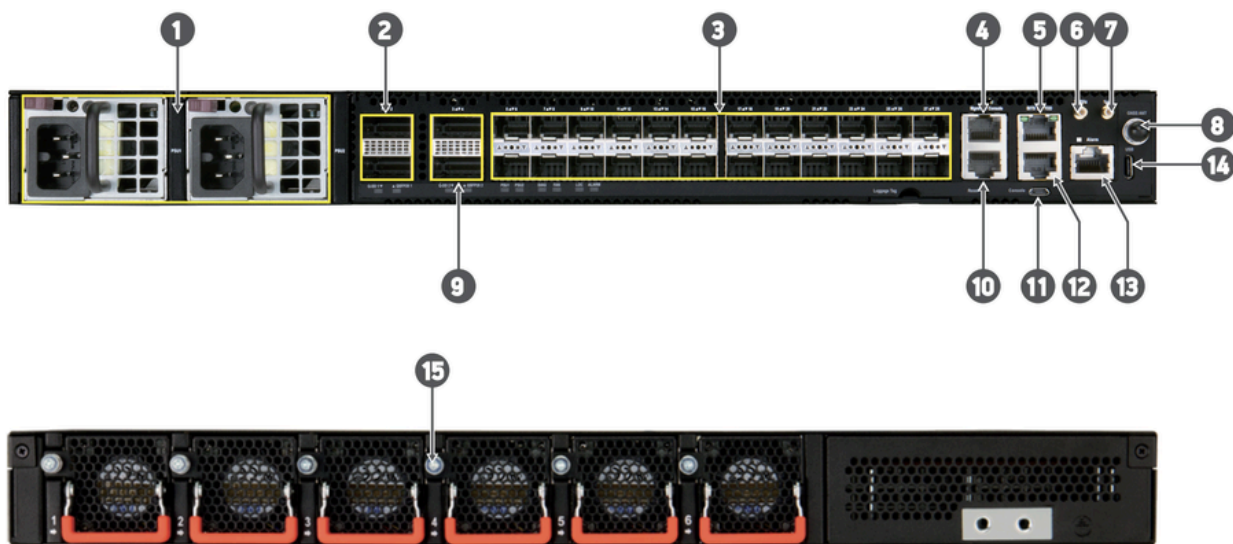
KEY FEATURES AND BENEFITS

- Open disaggregated cell site gateway for mobile fronthaul, backhaul, and O-RAN networks.
- 24 x 25G SFP28, 2 x 100G QSFP28 and 2 x 400G QSFP-DD fixed ports.
- Supports IEEE1588v2 and SyncE functions in hardware.
- Supports TSN (Time-Sensitive Networking) IEEE 802.1CM in hardware.
- Rack mountable in standard 19" racks.
- All ports and PSUs on front; fan modules on rear.
- Hot-swappable, load sharing, redundant AC/48VDC PSUs.
- Hot-swappable 5+1 redundant fan modules.
- Management: Ethernet and console RJ-45 ports; USB storage port.
- Pre-loaded with Open Network Install Environment (ONIE).

SOFTWARE



INTERFACES



Description

1. Power Supply	9. 2 x 40G/100G QSFP28 Ethernet ports
2. 2 x 50G/100G/400G QSFP-DD Ethernet ports	10. 1 x RJ-45 console port
3. 24 x 10G/25G SFP28 Ethernet ports	11. USB console port
4. 1 x RJ-45 management port	12. 1 x TOD RJ-45 port
5. 1 x BITS port	13. 1 x Alarm port
6. 1 x 10MHz I/O	14. Micro USB Type-B console port
7. 1 x PPS I/O	15. Hot-swappable 5 + 1 redundant fans
8. GNSS antenna input	

PORTS

- Switch Ports
 - 24 x SFP28 (each supports 1/10/25 GbE)
 - 2 x 100G QSFP28 (each supports 40/100 GbE)
 - 2 x 400G QSFP-DD (each supports 50/100/200/400 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 Type C (Storage)
 - 1 x Micro USB console port
 - 1 x RJ-45 Alarm port
- Clocking and Timing ports
 - 1 x 1PPS I/O port
 - 1 x 10MHz I/O port
 - 1 x Time of day (ToD) RJ-45 port
 - 1 x Building-Integrated Timing System port (BITS) RJ-45 port
- GNSS Antenna: 1 x GNSS antenna Input port
- Supported Transceivers and Cables:
 - 1000BASE-SX/LX/EX/ZX
 - 10GBASE-SR/LR/ER/ZR
 - 25GBASE-SR/LR
 - 100GBASE-SR4/LR4/ER4/ZR4/PSM4-2
 - 400GBASE-SR8/DR4/FR4

KEY COMPONENTS

- Broadcom Qumran-2A
- CPU Modules:
 - Processor: Intel 1.6GHz 8-Core
 - Memory: DDR4 SO-DIMM 2x 8GB SDRAM with ECC support
 - Storage: 1 x 128GB mSATA SSD

PERFORMANCE

- 800 Gbps bidirectional switching capacity
- 600 Mpps packet processing rate

PSU

- DC Input: -44 - -60V, 15.5-9.6 A, per PS
- AC Input: 100V-240V, 6.0-2.4 A, per PS

PHYSICAL AND ENVIRONMENTAL

- Dimensions (WxDxH): 438.4 x 300 x 43.3 mm
- Weight: 7.5 kg (NW) 16.53 lb
- Fans: Hot-swappable 5+1 redundant fans
- Operating Temperature: -40°C to 65°C (-40°F to 149°F)
- Storage Temperature: -40°C to 70°C (-40°F to 158°F)
- Operating Humidity: 5% to 95% non-condensing

POWER CONSUMPTION

- Max: 383.6 W
- Minimum: 78.68 W

ELECTROMAGNETIC COMPATIBILITY

- Safety
 - UL (CAN/CSA 22.2 No 62368-1 & UL62368-1)
 - CB (IEC/EN60950-1 & IEC/EN62368-1)
 - BSMI (CNS15598-1)*
- Electromagnetic Compatibility
 - CE Mark
 - EN 55032 Class A
 - EN 55024 (Immunity) for Information Technology Equipment
 - EN 55035 Class A
 - EN 61000-3-3
 - EN 61000-3-2
 - FCC Title 47, Part 15, Subpart B Class A
 - VCCI Class A
 - CNS 15936 (BSMI)*

ENVIRONMENTAL

- NEBS Level 3 compliance (Pre-test)*
- Bump: IEC60068-2-29- packaged
- Shock: ETSI EN 300 019-2-3 -Operational Tests, Class T3.2 op
- RoHS 2.0 Compliant
- WEEE Standards: The switches complied with the following WEEE standards: Waste Electrical and Electronic Equipment (WEEE Directive 2002/96/EC)

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:

EXA800-28X-A-AC	Router System with Software and AC Power Supplies
EXA800-28X-A-DC	Router System with Software and DC Power Supplies
EXA800-28X-A-NOS	Router System Software
EXA800-28X-A-FAN	Spare Fan
EXA800-28X-A-PSU-AC	Spare AC Power Supply
EXA800-28X-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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