



DATASHEET

EXA800-54XK

The EXA800-54XK is a carrier grade aggregation router capable of reaching a line-rate of 800 Gbps full duplex and provides a wide range of routing and switching protocol functions such as IP MPLS, OSPF, BGP, and IS-IS. The router is equipped with a high-capacity TCAM chipset, enabling support for large-scale IPv4 and IPv6 routing tables. It offers versatile deployment options, serving as a top-of-rack router in data centers, a carrier access edge aggregation device, an IP MPLS backbone router, or an edge router. The EXA800-54XK system is a high-availability design that includes a pair of redundant hot-swappable AC or 48 VDC PSUs, and 5+1 redundant fan modules with front-to-back airflow. The EXA800-54XK router meets the high-performance and reliability requirements of mobile, broadband, WISP, and telecom network applications. The EXA800-54XK is installed with ExaNOS carrier grade operating system.

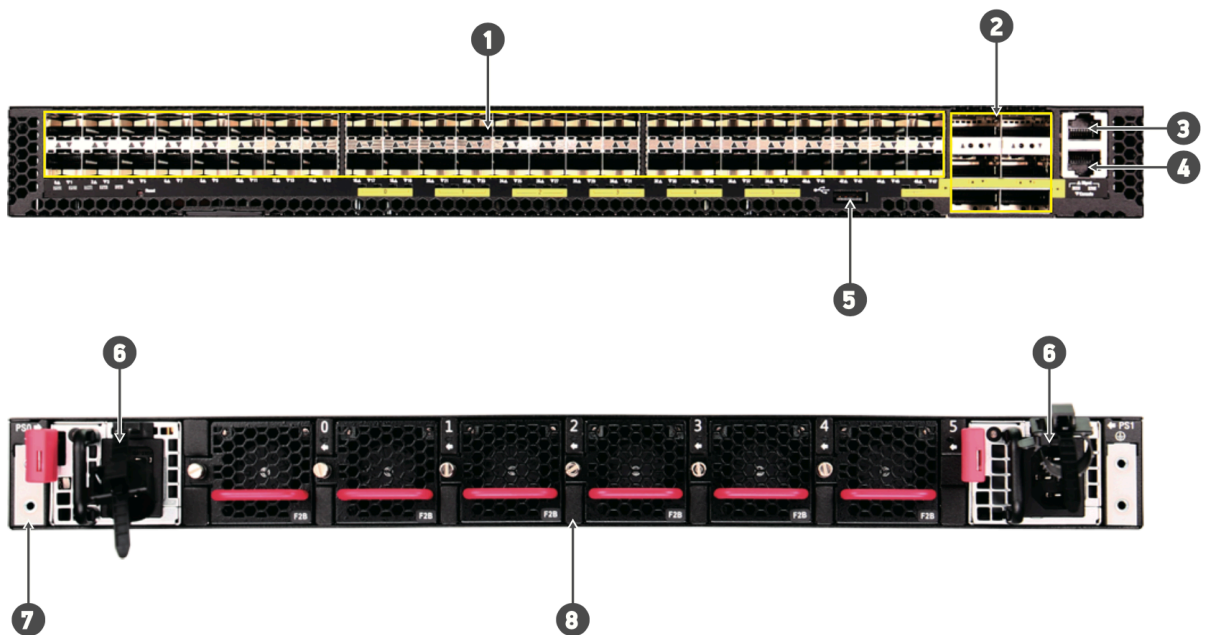
KEY FEATURES AND BENEFITS

- High-performance data center top-of-rack and carrier access/aggregation switch or edge router.
- 48 x SFP+ switch ports, supporting 10 GbE (DAC, AOC, 10GBASE-SR/LR) or 1 GbE (1000BASE-T/SX/LX).
- 6 x 100G QSFP28 ports on the front.
- Support for IEEE1588v2 and SyncE functions in system.
- Rack mountable in standard 19" racks.
- Hot-swappable, load sharing, redundant AC or -48 VDC PSUs.
- Hot swappable 5+1 redundant fan modules.
- Management: Ethernet and console RJ-45 ports.
- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of
- compatible open source and commercial NOS offerings.
- Compatible with Open Network Linux (ONL)

SOFTWARE



INTERFACES



Description

| | |
|--------------------------|---------------------------------------|
| 1. 48 x SFP+ ports | 5. USB storage port |
| 2. 6 x QSFP28 port | 6. DC or AC PSU |
| 3. RJ-45 management port | 7. Grounding screw |
| 4. RJ-45 console port | 8. Hot-swappable 5 + 1 redundant fans |

PORTS

- Switch Ports:
 - 48 x SFP+ each supporting 10 GbE or 1 GbE
 - 6 x 100G QSFP28 each supporting 1 x 40/100 GbE
- Management Ports on Front Panel:
 - 1 x RJ-45 serial console
 - 1 x RJ-45 100/1000BASE-T management port
 - 1 x USB (storage)
- 40GBASE-CR4 DAC: Up to 3 m passive; up to 10 m active 40GBASE-CR4 DAC: Up to 4 x SFP+ 10GBASE-CR DAC; up to 3 m passive; up to 10 m active
- 40GBASE-SR4: Up to 100 m over OM3 MMF, 150 m over OM4 MMF 40GBASE-LR4: Up to 10 km over SMF
- 100GBASE-SR4: 100 Gbps short-reach transceiver 100GBASE-LR4: 100 Gbps long-reach transceiver
- QSFP28 AOC Cable: 100 Gbps to 100 Gbps AOC cable with up to 30 m 100G QSFP28 to 100G QSFP28

KEY COMPONENTS

- Network Processor : Broadcom Qumran-MX with External TCAM
- CPU module:
 - Processor: Processor: Intel 8-Core 2.0GHz
 - Memory: DDR4 SO-DIMM 16 GB x 2

PERFORMANCE

- Switching Capacity: 800 Gbps full-duplex
- Processing Rate: 700 Mpps
- Jumbo Frame: 9 Kbytes
- 16MB on-chip Buffering
- Deep DRAM Buffering: 8 GB

SUPPORTED OPTICS AND CABLES

- SFP+ Ports:
 - 10GBASE-CR DAC: Up to 3 m passive; up to 10 m active 10GBASE-SR: Up to 100/300 m over OM3 MMF 10GBASE-LR: Up to 10 km over SMF
 - 10GBASE-ER4: Up to 40 km over SMF
 - 10GBASE-ZR: Up to 80 km over SMF
 - 1000BASE-SX, 1000BASE-LX, 100/1000BASE-T
- QSFP28 Ports:
 - 40GBASE-CR4 DAC: Up to 3 m passive; up to 10 m active 40GBASE-CR4 DAC: Up to 4 x SFP+ 10GBASE-CR DAC; up to 3 m passive; up to 10 m active

PHYSICAL AND ENVIRONMENTAL

- Dimensions (WxDxH): 438.4 x 501.9 x 44 mm (17.26 x 19.76 x 1.73 in)
- Weight: 9.7 kg (21.38 lb), with two installed PSU modules
- Fans: Hot-swappable 5+1 redundant fans
- Operating Temperature: 0°C to 40°C (32°F to 104°F)
- Storage Temperature: -40°C to 70°C (-40°F to 158°F)
- Operating Humidity: 5% to 95% non-condensing

POWER

- PSUs: 2 redundant, load-sharing, hot-swappable AC or -48 VDC
- AC Input Range: 100 – 240 VAC
- DC Input Range: -36 – -72 VDC

REGULATORY COMPLIANCE

- Safety Compatibility
 - CB
 - UL/cUL
- EMI
 - CE Mark
 - EN55032 Class A
 - EN55024
 - EN61000-3-2
 - EN61000-3-3
 - FCC Part 15 Subpart B Class A VCCI Class A
- Environmental: NEBS Level 3
- 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:

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|----------------------|--|
| EXA800-54XK-A-AC | Router System with Software and AC Power Supplies |
| EXA800-54XK-A-DC | Router System with Software and DC Power Supplies |
| EXA800-54XK-A-NOS | Router System Software |
| EXA800-54XK-A-FAN | Spare Fan |
| EXA800-54XK-A-PSU-AC | Spare AC Power Supply |
| EXA800-54XK-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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