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DATASHEET

EXA2400-74XK

The Exaware's EXA2400-74XK is a high performance 25GbE aggregation router that consists of fixed 64 x 10G/25G SFP28, 8 x 100GE QSFP28 and 2 x 100G QSFP-DD (supporting high power optics only, compatible with QSFP28 also) network interface configuration with External BCM16K Lookup Engine enables the 2RU compact design to be deployed as a disaggregated or standalone router.
The BCM16K Knowledge-Based Processor (KBP) performs high-speed operations on large-rule databased for a wide range of telecommunications applications. It provides network awareness, enables real-time modifications, and updates to the routing configuration, making it ideal for packet classification, policy enforcement, and forwarding.

EXA2400-74XK is engineered with the latest Broadcom StrataDNX™ Qumran2C silicon with an external lookup engine that target for use cases including OpenBNG, 25G pre-aggregation router, PE router or data center TOR switch/router. This open networking router is loaded with the Open Network Install Environment (ONIE), which supports the installation of compatible Network Operating System (NOS) software, including the open source option Open Network Linux (ONL), plus commercial NOS offerings

KEY FEATURES AND BENEFITS

- High performance 25GbE router for Telecom and Data Center applications
- Incorporates Broadcom StrataDNX™ Qumran2C Silicon
- Integrated BCM16K External Lookup Table for expansion
- Supports Front-to-Back Airflow SKU
- Hot-Swappable, Load-sharing, and 1+1 redundant DC-DC/AC-DC PSUs
- 4+1 Redundant, Hot-Swappable Fan Modules
- Support Synchronous Ethernet(SyncE), and IEEE 1588v2 PTP

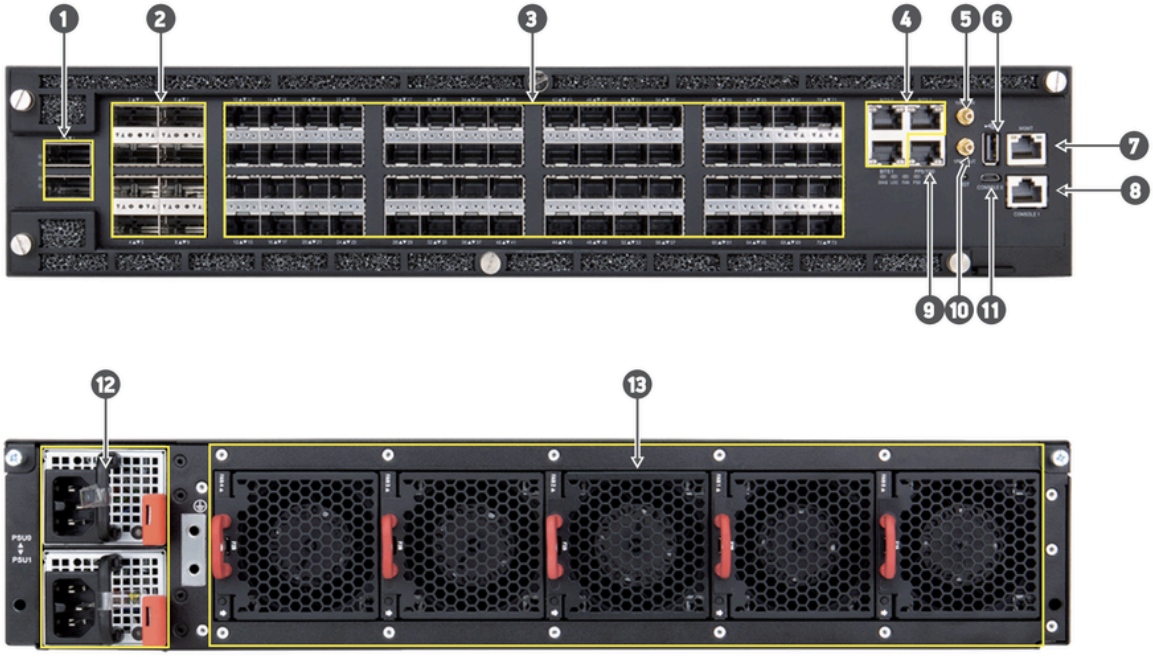
APPLICATIONS

- Disaggregated edge, PE or pre-aggregation router
- Standalone 25GbE aggregation router
- Virtual Broadband Gateway (vBNG)

SOFTWARE

exaNOS

INTERFACES



Description

1. 2 x 100G QSFP-DD ports	8. 1 x RJ-45 console port
2. 8 x 100G QSFP28 ports	9. 1 x PPS/TOD port
3. 64 x 25GE SFP28 ports	10. 1 x SMB1PPS out
4. 3 x RJ-45 BITS ports	11. 1 x Micro USB console port
5. 1 x SMB10MHz in	12. 1+1 DC-DC/AC-DC PSUs redundant
6. 1 x USB Type A	13. 4 +1 redundant fans
7. 1 x RJ-45 OOB management port	

PORTS

- Switch Ports
  - 64 x 10G/25G SFP28
  - 8 x 100G QSFP28
  - 2 x 100G QSFP-DD (support high power 100G optics only)
  - Support 1GE, 10G, 40GE and 100GE modes
  - Support standard 1GE, 10GE, 25GE, 50GE configurations by using DAC breakout cables into 2x50GE, 4x25GE, or 4x10GE
- Management Ports on Front Panel:
  - 1 x RJ-45 Console Port
  - 1 x RJ-45 10/100/1000BASE-T Management Port
  - 1 x USB (storage)
  - 1 x Micro USB Console Port
- Supported Transceivers and Cables:
  - 1000BASE-EX/ZX
  - 10GBASE-SR/LR/ER/ZR
  - 100GBASE-SR4/LR4/ER4/ZR4/PSM4-2
- Timing:
  - 3 x RJ45 (T12 or E12 input/output)
  - 1 x RJ45 ToD/PPS
  - 1 x SMB (1PPS out)
  - 1 x SMB (10MHz input)

KEY COMPONENTS

- Switch Silicon: Broadcom BCM88820 Qumran-2C
- External TCAM: Broadcom BCM16K
- CPU Modules:
  - Intel® Xeon® D-1548 8-Core
  - SDRAM DDR4 SO-DIMM 32GB (16 GB x 2)
  - SPI Boot Flash redundant (2 x 16 MB)
  - SSD: M.2 128GB
- BMC: ASPEED AST2600

PERFORMANCE

- Capacity: 2.4 Tb/s

PSU

- DC Input: -40 - -75V, 40 A, per PS
- AC Input:
  - 100V-120V, 12 A, per PS
  - 200V-240V, 7.5 A, per PS

PHYSICAL AND ENVIRONMENTAL

- Dimensions (WxDxH): 440 mm x 480 mm x 87 mm (2RU)
- Weight: 16 Kg with PSUs and Fans
- Fans: Hot-swappable 4+1 redundant fans
- Operating Temperature/Humidity: 0°C to 45°C (32°F ~ 113°F)/5% to 85%

POWER CONSUMPTION

- Max: 692 W
- Typical: 201 W

REGULATORY: (PRELIMINARY)

- Safety
  - UL (CAN/CSA 22.2 No 60950-1 & UL60950-1)
  - IEC 62368-1
  - CB (IEC/EN60950-1)
- Electromagnetic Compatibility
  - CE Mark
  - EN 55032 Class A
  - EN 55024 (Immunity) for Information Technology Equipment
  - EN 61000-3-3
  - EN 61000-3-2
- FCC Title 47, Part 15, Subpart B Class A
- Environmental
  - NEBS Level 3*
  - 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)

ExaNOS - Specifications

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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

Ordering Part Number:	Description:
EXA2400-74XK-A-AC	Router System with Software and AC Power Supplies
EXA2400-74XK-A-DC	Router System with Software and DC Power Supplies
EXA2400-74XK-A-NOS	Router System Software
EXA2400-74XK-A-FAN	Spare Fan
EXA2400-74XK-A-PSU-AC	Spare AC Power Supply
EXA2400-74XK-A-PSU-DC	Spare DC Power Supply

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