Edge-core®
NETWORKS

Aggregation Router
AS7946-74XKSB

AGR420 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.

AGR420 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)
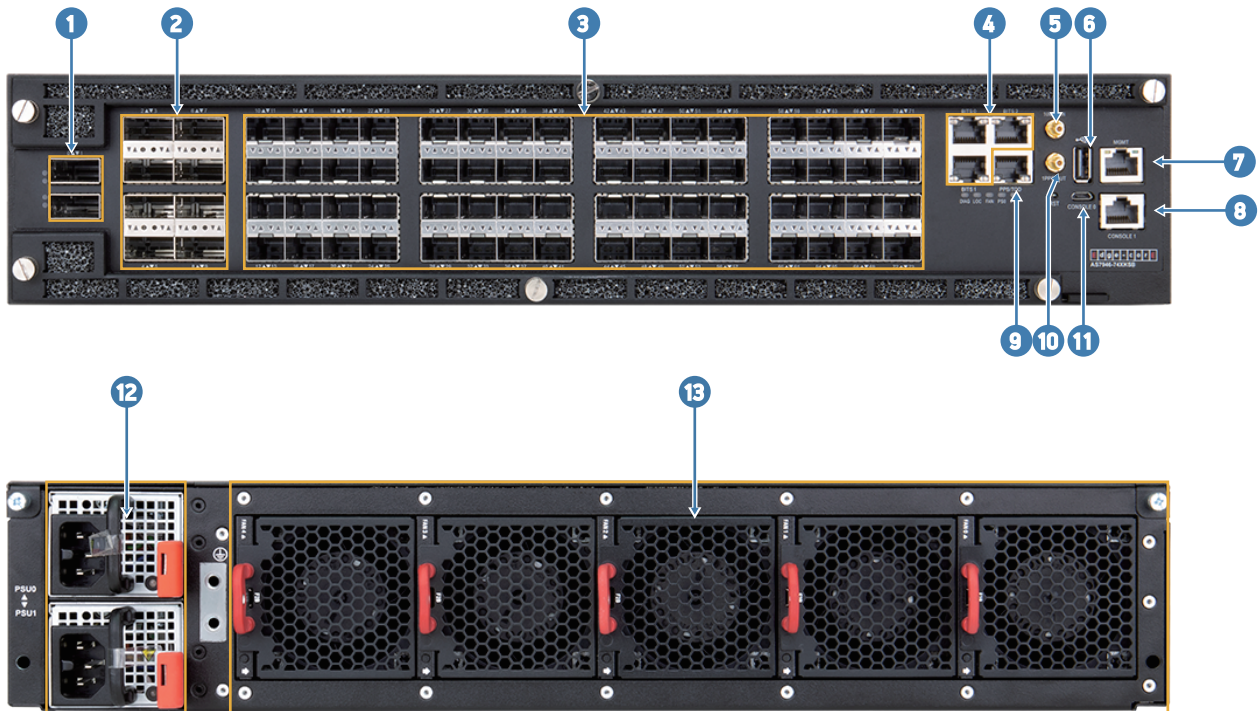
Freedom of choice   Greater control   Rapid innovation   Reduced CAPEX and OPEX

Free Software Included

onie

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:
  1 x RJ-45 Console Port
  1 x RJ-45 10/100/1000BASE-T Management Port
  1 x USB 2.0 Port
  1 x Micro USB Console Port
- Supported Transceivers and Cables:
  10GBASE-SR/LR/ER/ZR
  10G-DAC/AOC Cable
  25GBASE-SR/LR/ER/ZR
  25G-DAC/AOC Cable
  40GBASE-SR/LR/ER/ZR
  40G-DAC/AOC Cable
  100GBASE-SR4/LR4/ER4/DR1/CWDM4
  100G-DAC/AOC Cable
  Note: More optics and cabling detailed information can be found
  at www.edge-core.com.
- 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 Componets

- Switch Silicon: Broadcom Qumran-2C BCM88820
- External TCAM: Broadcom BCM16K
- CPU Modules:
  Intel® D-1548 8C
  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

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

- 1 + 1 Redundant and Hot-swappable
- 48 VDC Power Supply:
  36-72 VDC input
  Front-to-back airflow
  Supports load-sharing function
- AC Power Supply:
  90-240 VAC input
  Front-to-back airflow
  Supports load-sharing function
- Maximum PSU Capacity: 1300 W

* NEBS Pre-Test. Certificate is by request with fees.

Regulatory: (Preliminary)

- Safety
  UL (CAN/CSA 22.2 No 60950-1 & UL60950-1)
  IEC 62368-1:2014
  CB (IEC/EN60950-1)
  CCC (GB4943.1-2011)
- 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
- CCC (GB9254-2008)
- 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)

Warranty
Please check www.edge-core.com for the warranty terms in your country.

For More Information
To find out more about Edgecore Networks Corporation products and solutions, visit www.edge-core.com.

About Edgecore Networks Corporation
Edgecore Networks Corporation is in the business of providing innovative network solutions. In the service provider network, in the data center or in the cloud, Edgecore Networks Corporation delivers the software and systems that transform the way the world connects. Edgecore Networks Corporation serves customers and partners worldwide. Additional information can be found at www.edge-core.com.

Edgecore Networks Corporation is a subsidiary of Accton Technology Corporation, the leading network ODM company. The Edgecore data center switches are developed and manufactured by Accton.

To purchase Edgecore Networks solutions, please contact your Edgecore Networks Corporation representatives at +886 3 563 8888 (HQ) or +1 (949)-336-6801 or authorized resellers.

Ordering Information

Base model: AS7946-74XKSB; Intel® D-1548 8C; 64 x 10G/25G SFP28, 8 x 100GE QSFP28, and 2 x 100G QSFP-DD fixed ports. ONIE software installer.

Model Number	Part Number	PSU	Airflow	Region (power cord)
AS7946-74XKSB-O-AC-F	FNPEC7946008Z	Modular Dual AC PSUs	Front to Back Airflow	N/A
AS7946-74XKSB-O-DC-F	FNPEC7946007Z	Modular Dual DC PSUs	Front to Back Airflow	N/A