Edge-corE®
NETWORKS

Aggregation Router
AS7946-30XB

The AGR400 is a high-performance 100GbE aggregation router that consists of fixed 2 x 400G QSFP-DD (21.3 W), 2 x 400G QSFP-DD (16.5 W), 4 x 100G QSFP-DD (16.5 W), 18 x 100G QSFP28 (5 W), and 4 x 25G SFP28 (2 W) network interfaces in a 2RU compact design that can be deployed as a disaggregated or standalone router.

The AGR400 is engineered with the latest Broadcom StrataDNX™ Qumran2C silicon that targets use cases including OpenBNG, 100GbE aggregation router, PE router, or data center TOR switch/router.

The AGR400 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 100GbE router for telecom and data center applications
- Incorporates Broadcom StrataDNX™ Qumran2C silicon
- Supports front-to-back airflow SKUs
- Hot-swappable, load-sharing, and 1+1 redundant DC-DC/AC-DC PSUs
- 4+1 redundant, hot-swappable fan modules
- Support Synchronous Ethernet, and IEEE 1588v2 PTP

Applications

- Disaggregated aggregation or PE router
- Standalone 100GbE aggregation router

Freedom
of choice
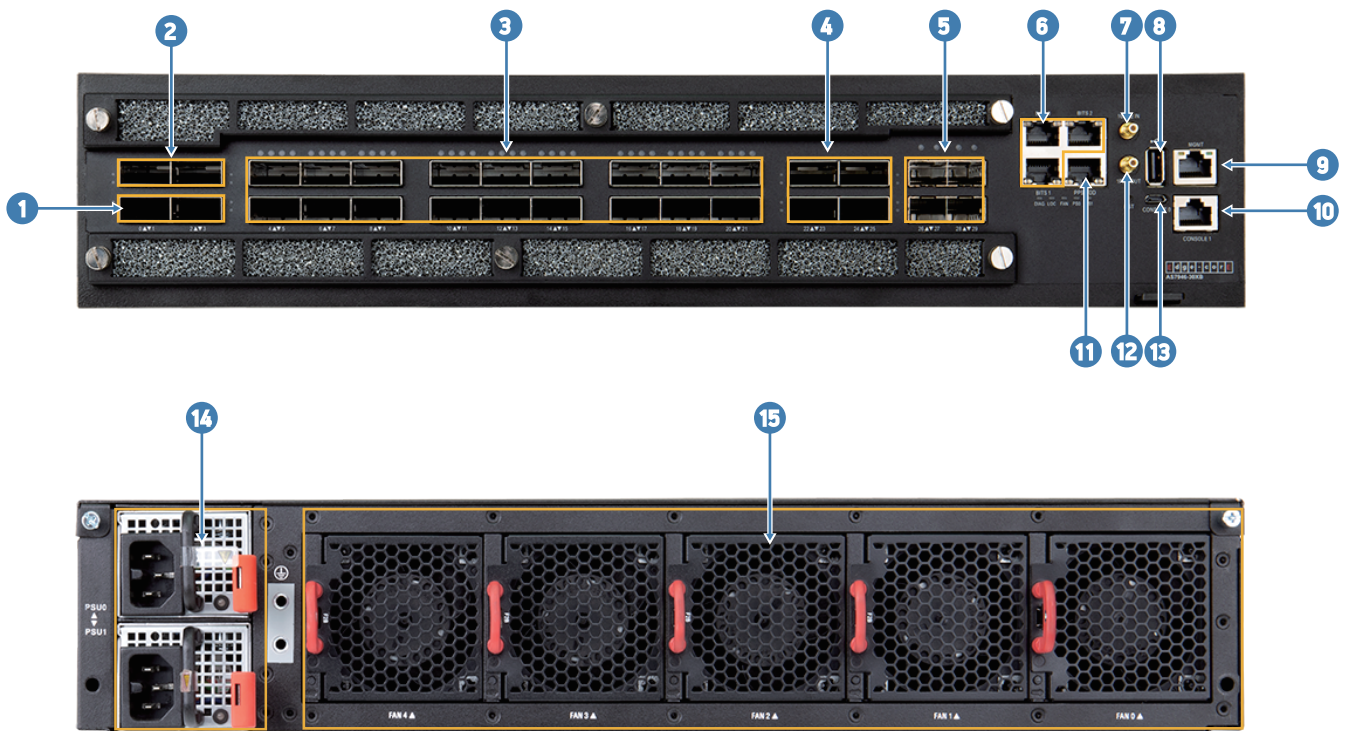
Greater
control

Rapid
innovation

Reduced
CAPEX and OPEX

Free Software Included

onie

Interfaces

Description

1.	2 x 400GE QSFP-DD ports (16.5 W)	9.	1 x RJ-45 management port
2.	2 x 400GE QSFP-DD ports (21.3 W)	10.	1 x RJ-45 console management port
3.	18 x 100GE QSFP28 ports (5 W)	11.	1 x RJ-45 (1PPS) port
4.	4 x 100GE QSFP-DD ports (16.5 W)	12.	1 x SMB 1PPS out
5.	4 x 1/10/25GE SFP28 ports (2 W)	13.	1 x Micro USB console port
6.	3 x RJ-45 BITS ports	14.	1+1 DC-DC/AC-DC redundant PSUs
7.	1 x SMB 10MHz in	15.	4 +1 redundant fans
8.	1 x USB Type A		

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Ports
- Interface:
  4 x 10G/25G SFP28
  18 x 100G QSFP28
  4 x 100G QSFP-DD
  4 x 400G QSFP-DD
  Supports 1GE, 10G, 40GE and 100GE modes
  Supports standard 1GE, 10GE, 25GE, 50GE configurations by using DAC breakout cables into 2x50GE, 4x25GE, or 4x10GE
- Management Ports:
  1 x RJ-45 serial console port
  1 x RJ-45 10/100/1000BASE-T management port
  1 x USB2.0 Port
  1 x Micro USB console port
- Timing:
  3 x RJ-45 (BITS)
  1 x RJ-45 (1PPS)
  1 x SMB (1PPS out)
  1 x SMB (10MHz input)

Key Componets
- Switch Silicon: Broadcom Qumran-2C BCM88823
- CPU Modules:
  Intel® D1548 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 full duplex

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 PSUs
- 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
- Power Consumption:
  527 W@25°C
  684 W@45°C
  (Test performed fully loaded with eLoads, which uses more power than real transceivers.)

Regulatory
- 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:
  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: AS7946-30XB; Intel® D-1548 8C; 4 x 10G/25G SFP28, 22 x 100GE QSFP28, and 4 x 400G QSFP-DD fixed ports. ONIE software installer.

Model Number	Part Number	PSU	Airflow	Region (power cord)
AS7946-30XB-O-AC-F-US	FNPEC7946401Z	Modular Dual AC PSUs	Front-to-Back Airflow	N. America
AS7946-30XB-O-AC-F-EU	FNPEC7946201Z	Modular Dual AC PSUs	Front-to-Back Airflow	EU
AS7946-30XB-O-AC-F-UK	FNPEC7946301Z	Modular Dual AC PSUs	Front-to-Back Airflow	UK
AS7946-30XB-O-AC-F-JP	FNPEC7946501Z	Modular Dual AC PSUs	Front-to-Back Airflow	JP
AS7946-30XB-O-48V-F	FNPEC7946005Z	Modular Dual DC PSUs	Front-to-Back Airflow	N/A