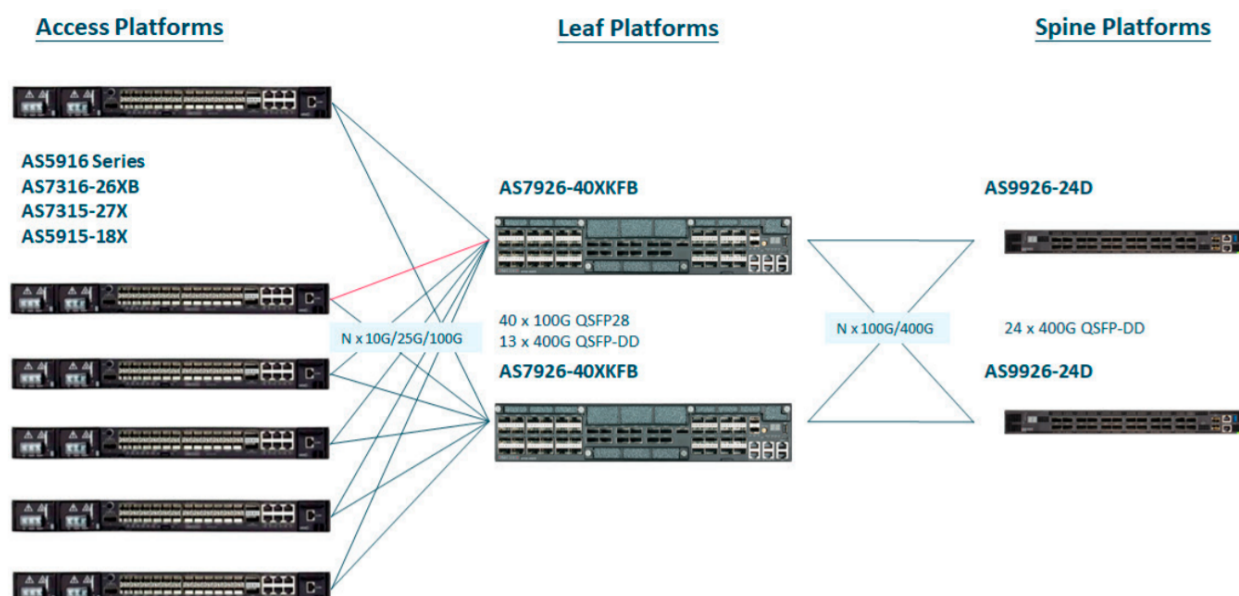# OPEN ROUTER SOLUTIONS - 400G & 100G Carrier Grade Networking Application

An Upcoming Boom - 5G

With the introduction of 5G mobile networks, carrier and cloud service providers are planning to upgrade their network infrastructure to address the major growth in bandwidth driven by new innovative services and the increased number of users.

Edgecore's solution based on Broadcom StrataDNX family chipsets with deep buffers design, accelerated table lookup, high port density, and horizontal scale-out flexibility, providing an open and disaggregated platform that serves a variety of use cases, including core, metro, and aggregation routers.
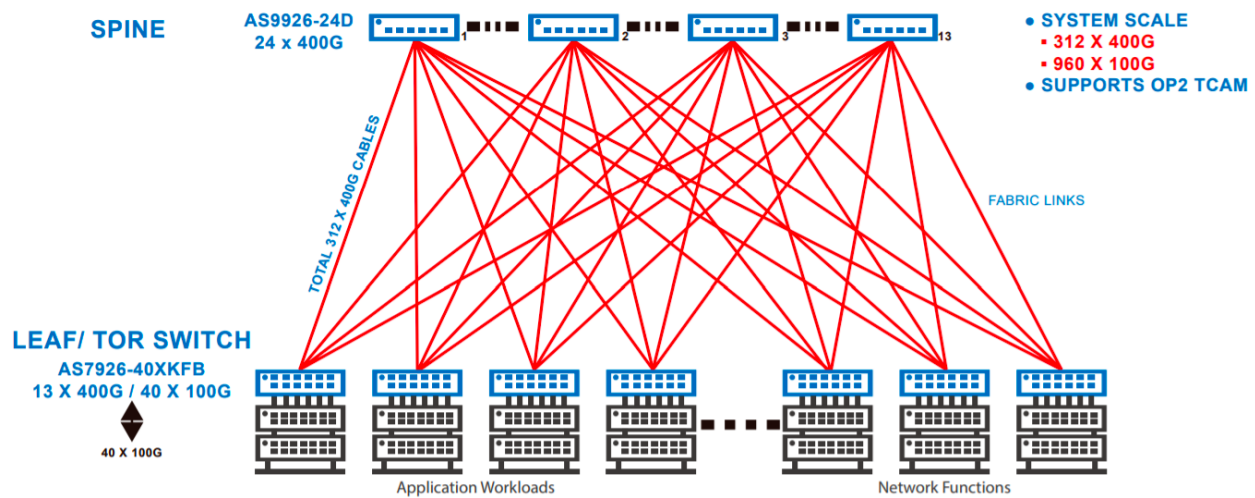
Leaf & Spine Router System Overview

Disaggregated Open Platform For Carrier Grade Networking Application

Edgecore provide a disaggregated platform for telecom service providers can unlock the potential for exponential improvement and growth needed to meet the surge in data demand caused by 5G. Edgecore's experience in open networking solutions covers a wide range, from passive optical networks for residential broadband access to aggregation switches and routers, as well as 3G/4G/5G mobile network backhaul devices. Building on its achievements, Edgecore is now actively engaged in bringing next-generation disaggregated open solutions to leading global operators.
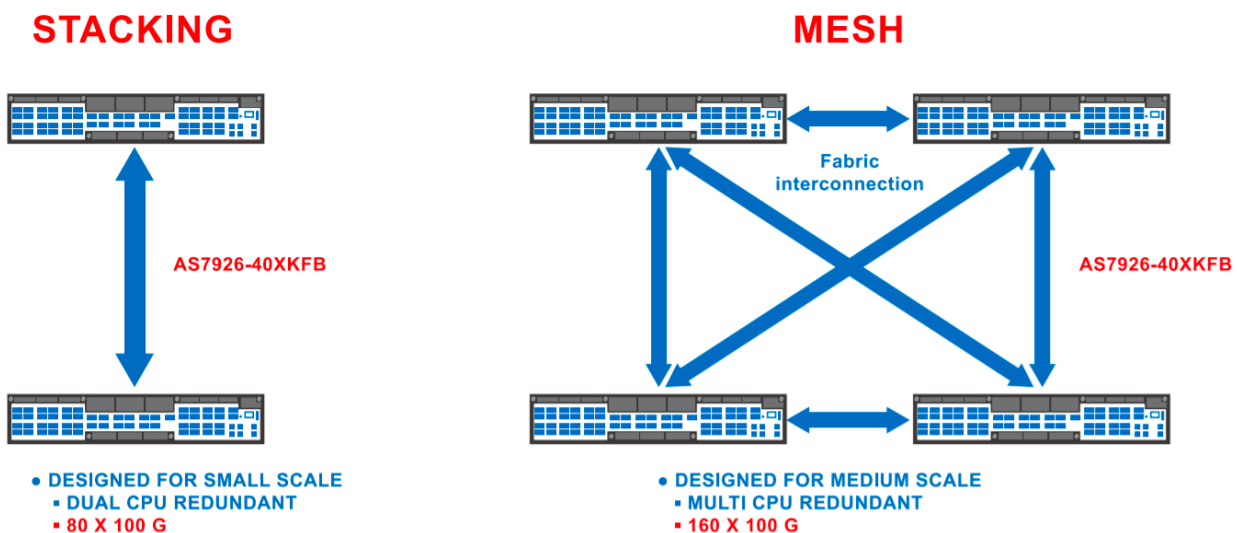
Jericho 2 & Ramon Application

Together with the 400G Ramon core router, the Jericho 2 router forms a distributed chassis architecture to build a scalable and flexible network infrastructure that provides high throughout bandwidth for routing, packet processing, and efficient traffic management.

Jericho 2 Stand-alone Application

As a standalone router, the Jericho 2 router can be deployed at the edge network to enable transport services. It is also suitable for central office data centers and network aggregation.

100GbE Core Router - Broadcom's Jericho 2 Silicon

Edgecore Jericho 2 product family is delivering the industry's best-in-class solution for the next generation of cloud router and service provider infrastructure. This solution helps carriers to upgrade their network infrastructure to address the network challenges for the 5G deployment.

Edgecore Jericho 2 100G router provides bandwidth over 9.6 Tbps. The router comes with a high-availability design including 4 + 1 redundant, hot-swappable fan modules, and 1 + 1 redundant PSU. The enhanced temperature performance allows it to be deployed in the harsh weather environments. In addition, the compact 2RU form factor with 635mm dee, which is 17% less rack depth than competitors, makes the field service becomes easier.

Edgecore Jericho 2 product family supports precise Synchronous Ethernet and IEEE1588v2 PTP, enabling an accurate time distribution over a network, which makes it ideal for current LTE and emerging 5G network solutions.

- [AS7926-40XKFB 100G Core Router](#)

Features Highlights:
- High-performance 100G core router for telcoms and data center applications
- Consists of 40 x 100G QSFP28 and 13 x 400G QSFP-DD fabric interface
- Hot-swappable, load-sharing, and 1 + 1 redundant DC-DC/AC-DC PSUs
- 4 + 1 redundant, hot-swappable fan modules
- Support Synchronous Ethernet, IEEE 1588v2 PTP
- Carrier grade air filter support
- High temperature operating temperature support up to 55°C
- Compact 635mm depth size

Key Components:
- Switch Silicon: BCM88690
- CPU Modules: Intel® Xeon® D-1548 processor 8C 2.0 GHz
- SDRAM DDR4 SO-DIMM 32 GB (16 GB x 2)
- SSD: M.2 128 GB
- BMC: ASPEED AST2600

400GbE Core Router - Broadcom's Ramon Silicon

Edgecore's Distributed Disaggregated Core Router provides massive scalability, flexibility, and choice of network operating system. A critical element of the system is the high-capacity cell-based fabric element, the AS9926-24D. The AS9926-24D provides 400G connectivity between the AS7926-40XKF Jericho 2 leaf routers.

The AS9926-24D is powered by Broadcom's StrataDNX Ramon ASIC and a powerful Intel Xeon CPU. The device supports 50G PAM4 and 25G NRZ SERDES interfaces allowing flexible connectivity to Jericho+, Jericho 2, and Jericho 2C leaf routers.

The AS9926-24D supports self-routing with dynamic load balancing, fabric multicast, multicast load balancing, and three pipelines with flexible allocation, e.g., TDM/OTN, unicast data and multicast data. These features maximize switching performance and optimize resource allocation to distribute loading between fabric interfaces. This provides service providers a better way to scale the DDC fabric.

- AS9926-24D 400G Core Router

Features Highlights:
• High-performance 400G router for telcoms and data center fabric
• 24 x QSFP-DD switch fabric ports
• Self-routing with dynamic load balancing
• Hot-swappable, load-sharing, 1+1 redundant 1300 W PSUs
• 5+1 redundant, hot-swappable fan modules

Key Components:
• Switch Silicon: BCM88795
• CPU Modules: Intel® Broadwell-DE® D-1548 processor 8C 2.0 GHz
• SDRAM DDR4 SO-DIMM 32 GB (16 GB x 2)
• SSD: 128 GB MLC
• SPI Flash: 16 MB x 2