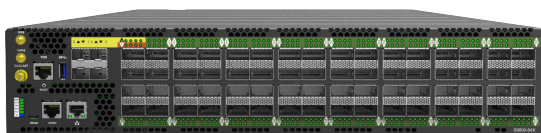# S9600-64X

Open Aggregation Router

The S9600-64X open aggregation router is a multi-function, disaggregated white box aggregation routing platform. It is equipped with Broadcom Qumran2c merchant silicon chips and an Intel Skylake processor featuring 64 high speed 100G ports with a switching capacity of up to 4.8Tbps.

The S9600-64X can be deployed at C-RAN hubs to provide 5G fronthaul transport aggregation or be positioned at the backhaul for aggregating BBU pooling. It can also be programmed to be a Broadband Network Gateway (BNG) to enable the next generation broadband network. Equipped with high port density, Class C timing and fully supporting SyncE and IEEE 1588v2, our S9600-64X is capable of fulfilling the role of any type of network aggregation.

Specializing in 5G Time Sensitive Networking applications, the S9600-64X complies to the IEEE 802.1CM and addressing the demand of a high precision and low latency fronthaul transport. Our open aggregation router is compatible with high accuracy fronthaul synchronization and timing requirements (802.1CM-2018 category A, ITU-T G.8273.2 T-BC, Class C) to ensure error free operation of 5G and cooperative radio techniques.

KEY FEATURES

- High density, 64x100G ports with 4 x 25G breakout ports
- 4.8Tbps switching capacity
- 8GB Deep buffer
- Intel Skylake 8 Core, 1.9GHz CPU
- Supports full SyncE and IEEE 1588v2
- Rich timing interfaces: GNSS, 1PPS, 10MHz, TOD
- Integrated Stratum 3E OCXO
- Class C timing accuracy
- Internal GNSS receiver for master clock implementations
- Redundant and hot swappable power and fan modules
- Designed for quick and easy installation onto 19" server racks

KEY BENEFITS

- Enable Time Sensitive Networking (TSN) and Class C timing for 5G services
- Ultra-low forwarding latency, high precision frequency and phase timing synchronization supporting the evolving requirements of 5G
- Integrated traffic manager and packet processor
- Simplify inventory and reduce opex using the same model accross multiple applications throughout the network
- Open NOS applications for highly reliable composable networks

SPECIFICATIONS

PHYSICAL

- 64 x 40/100G QSFP28 ports
- 4 x 1/10/25G SFP28 ports
  (In-band port share with 100GE Port 0)
- 1 x RJ45 serial console port
- 1 x Micro USB serial console port
- 1 x 100/1000M RJ45 management port
- 1 x USB 3.0 Type-A port

Processor	Intel Skylake-D 8-Core @ 1.9GHz
Memory	32GB DDR4
Storage	128GB SSD
ASIC	Broadcom Qumran2c BCM88820
BMC	AST2400
Timing Interfaces	1 x GNSS input SMA 1 x 1PPS input/output SMB 1 x 10MHz input/output SMB 1 x ToD input/output RJ45
Timing Support*	Stratum 3E OCXO ITU-T Synchronous Ethernet (SyncE) **IEEE 1588v2** - Default, G.8265.1 G.8275.1, G.8275.2, SMPTE ST 2059-2**, T-GM, T-BC/OC, T-TC Time Sensitive Networking (TSN)
Chassis (WxDxH)	2RU, 436 x 762 x 87.7 mm or 17.17" x 30" x 3.45" Weight: 19.15kg or 42.21lb
Redundancy	Hot swappable, 1+1 redundant PSUs Hot swappable, 3+1 redundant Fans

*NOS integration is necessary to activate the specific feature.
**Additional license is required

ENVIRONMENTAL

Power Specs.	AC input: 200 to 240V, 10A DC input: -40 to -72V, 50A Typical power: 565 Watts (no transceiver)
Max. Operating Specs.	Operating temperature: 0°C to 45°C (32°F to 113°F) Operating humidity: 5% to 85% (RH), non-condensing
Max. Non-Operating Specs.	Storage temperature: -40°C to 70°C (-40°F to 158°F) Storage humidity: 5% to 93% (RH), non-condensing

PERFORMANCE

Switching Capacity	4.8Tbps
Deep Buffer	8GB

REGULATORY COMPLIANCE

Safety	UL 62368-1 IEC 60950-1 IEC 62368-1 BSMI	EMC	FCC Part 15, Subpart B, Class A ICES-003, Class A EN 55032, Class A EN 55024 EN 55035 EN 62479 EN 50663 EN 300 386 EN 301 489 EN 303 413 BSMI VCCI CISPR 32, Class A
Environment	RoHS WEEE		

S9600-64X

Telecom Networking Solutions

S9600-64X Front and Back Views

ACCESSORIES

Compatible Transceiver Types
100G QSFP28 SR4, 100G QSFP28 LR4, 100G QSFP28 ER4, 100G QSFP28 ZR4, 25G SFP28 SR, 25G SFP28 LR, 25G SFP28 ER, 10G SFP+ SR, 10G SFP+ LR, 10G SFP+ ER

Compatible Timing Cable Types
50 ohms SMA coaxial cable with 1/4-36UNS-2B connector for GNSS
50 ohms SMB coaxial cable with 10-32UNF-2A connector for 1PPS and 10MHz
Shield cable with RJ45 for ToD

Available to Order
Power Supply Types
PSU-162-DESR, 1600W DC, exhaust air flow
PSU-162-AESR, 1600W AC, exhaust air flow

Fan Types
FAN-803816-HI, exhaust air flow

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