



| Bare Metal Switch

B6520-64CQ

Overview

Ruijie B6520-64CQ switch is a new generation high density 100GbE switch designed for cloud-scale datacenter and campus networks, which provide a powerful cache capacity and advanced scheduling mechanism driven large scale line-rate non-blocking network.

B6520-64CQ provides 64-port backward-compatible 100GbE QSFP28 interface to transparently migrate existing data center fabrics from 40Gbps speeds to 100Gbps. The platform provide hot-pluggable 1+1 redundancy power module and 2+1 redundancy cooling fan module to meet the high reliability requirement of datacenter and carrier networks.

NOTE:

Ruijie B6520-64CQ is a bare metal switch hardware system with Open Network Install Environment (ONIE). Customer should install networking operation system before use, or contact Ruijie Networks co. for OS support.

Product Highlights

Performance

- 64 × QSFP28 100GbE Ports
- Base on Broadcom Tomahawk 2
- Flexible 100GbE, 40GbE support

- Up to 12.8 Tbps (full duplex)
- Up to 4400 Mpps
- Wire speed L2 and L3 forwarding
- Latency from 1137ns for 100GbE (cut-through mode)

Data Center Optimized Design

- Typical power of under 4.5W per 100GbE port
- Over 94% efficient power supplies
- 1+1 redundant & hot-swappable power
- 2+1 redundant & hot-swappable fans
- Front-to-rear cooling
- Tool less maintenance and simple installation

Cloud Networking Ready

- 128 ECMP for hyper-scale networks
- Dynamic Load Balancing for advanced multi-pathing
- Advanced Congestion Management for NVMe and AI workloads
- Flow aware traffic scheduling
- Shared 42MB Buffer with burst absorption
- Up to 264K MAC and 128K Host entries
- Over 384K IPv4 Routes
- Over 128K IPv6 Routes

Resilient Control Plane

- Intel Xeon D-1527 Processor (Formerly Broadwell DE)
- 8GB DRAM

Specifications

Switch Model	B6520-64CQ
Ports	64 × QSFP28
Max100/40GbE Ports	64
Throughput (full duplex)	12.8Tbps
Packets/Second	4400Mpps
Latency (cut-through mode)	1137ns
CPU	Intel Xeon D-1527
System Memory	8GB (Up to 32GB)
System Storage	≥64GB
BMC Option	Yes
Switch ASIC	Broadcom Tomahawk 2
Packet Buffer Memory	42MB (Dynamic Buffer Allocation)
10/100/1000 MGMT Ports	1
RS-232 Serial Ports	1 (RJ-45)
USB Ports	1
Hot-swap Power Supplies	2 (1+1 redundant)
Hot-swappable Fans	3 (2+1 redundant)
Airflow Option	Yes (Forward and Reversed airflow)
Typical/Max Power Draw	610W/785W
Typical/Max Heat Dissipation	2081.41/2678.53 BTU/hr
Size(W × H × D)	17.32 × 3.39 × 22.83 in. (440 × 86 × 580mm)
Weight	38.5 pounds (17.5kg)
Power Supplies	800W (Forward and Reversed airflow)

Environmental Characteristics

Operating Temperature	32 to 113° F (0 to 45° C)
Storage Temperature	-40 to 158° F (-40 to 70° C)
Relative Humidity	5 to 95% non-condensing
Altitude (Operating)	Designed to meet: 0 to 10,000ft
Altitude (Non-operating)	-1000ft to 30,000ft

Standard Compliance

EMC	Emissions: FCC, EN55022, EN61000-3-2, EN61000-3-3 or EN61000-3-11, EN61000-3-12 (as applicable) Immunity: EN55024 Emissions and Immunity: EN300 386
Safety	UL/CSA 60950-1, EN 60950-1, IEC 60950-1 CB Scheme with all country differences
Certifications	North America (NRTL) European Union (EU) BSMI (Taiwan) C-Tick (Australia) CCC (PRC) MSIP (Korea) EAC (Customs Union) VCCI (Japan)
European Union Directives	2006/95/EC Low Voltage Directive 2004/108/EC EMC Directive 2011/65/EU RoHS Directive

Power Supply Specifications

Power Supply	800W
Input Voltage	100-240V AC 240V DC
Typical Input Current	10-5A (AC) 4.5A (DC)
Input Frequency (AC)	50-60Hz
Input Connector	IEC 320-C13
Efficiency (Typical)	94% Platinum

Order Information

Model	Description
B6520-64CQ	64 fixed 100G QSFP28 ports. 2 slots for power supply modules. 3 slots for fan modules. 2 power supply modules and 3 fan modules already included.
M6520-FAN-F	Fan module, front-to-rear airflow. With up to 3 fan modules, support 2+1 redundancy.
RG-PA800I-F	AC power supply module, front-to-rear airflow. With up to 2 power modules, support 1+1 redundancy.



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