| Bare Metal Switch

B6510-48VS8CQ

Overview

The Ruijie B6510-48VS8CQ is a new generation high performance and high density 25GbE 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.

B6510-48VS8CQ introduces 48-port fully backward-compatible 25GbE SFP28 interface and 8-port 100GbE QSFP28 interface to transparently migrate existing data center fabrics from 10Gbps and 40Gbps speeds to 25Gbps and 100Gbps. The platform provide hot-pluggable 1+1 redundancy power module and 3+1 redundancy cooling fan module to meet the high reliability requirement of datacenter and carrier networks.

NOTE:
Ruijie B6510-48VS8CQ 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

- 8 × QSFP28 100GbE Ports & 48 × SFP28 25GbE Ports
- Base on Broadcom Trident 3
- Flexible 100GbE, 40GbE, 25GbE and 10GbE support

- Up to 4.0 Tbps (full duplex)
- Up to 2003.4 Mpps
- Wire speed L2 and L3 forwarding
- Latency from 814ns for 25GbE (cut-through mode)

Data Center Optimized Design

- Typical power of under 4W per 100GbE port and 1.5W per 25GbE port
- Over 94% efficient power supplies
- 1+1 redundant & hot-swappable power
- 3+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 32MB Buffer with burst absorption
- Up to 288K MAC and 168K Host entries
- Over 344K IPv4 Routes
- Over 96K IPv6 Routes

Resilient Control Plane

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

INNOVATION
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Specifications

Switch Model	B6510-48VS8CQ
Ports	48 × SFP28 + 8 × QSFP28
Max 100/40GbE Ports	8
Max 25/10GbE Ports	48
Throughput (full duplex)	4.0Tbps
Packets/Second	2003.4Mpps
Latency (cut-through mode)	814ns
CPU	Intel Xeon D-1527
System Memory	8GB (Up to 32GB)
System Storage	≥64GB
BMC Option	Yes
Switch ASIC	Broadcom Trident 3
Packet Buffer Memory	32MB (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	4 (3+1 redundant)
Airflow Option	Yes (Forward and Reversed airflow)
Typical/Max Power Draw	258.9W/301.0W
Typical/Max Heat Dissipation	883.6/1027.3 BTU/hr
Size(W × H × D)	17.40 × 1.73 × 22.04 in. (442 × 44 × 560mm)
Weight	22.7 pounds (10.3kg)
Power Supplies	550W (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	10 to 90% non-condensing
Altitude (Operating)	Designed to meet: 0 to 5,906ft
Altitude (Non-operating)	-1640ft to 16,404ft

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	550W
Input Voltage	100-240V AC 240V DC
Typical Input Current	7.2-3.5A (AC) 3.6A (DC)
Input Frequency (AC)	50~60Hz
Input Connector	IEC 320-C13
Efficiency (Typical)	94% Platinum

Order Information

Model	Description
B6510-48VS8CQ	48 fixed 25G SFP28 ports, 8 fixed 100G QSFP28 ports. 2 slots for power supply modules. 4 slots for fan modules. 2 power supply modules and 4 fan modules already included.
M6510-FAN-F	Fan module, front-to-rear airflow. With up to 4 fan modules, support 3+1 redundancy.
RG-PA550I-F	AC power supply module, front-to-rear airflow. With up to 2 power modules, support 1+1 redundancy.

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For further information, please visit our website https://www.ruijienetworks.com