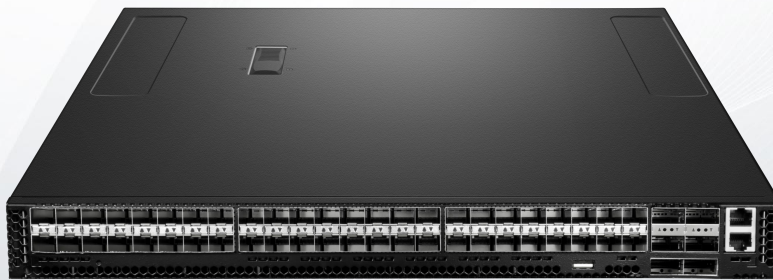


# N8520-48B6C Bare Metal Switch

IDEAL FOR DATA CENTER NETWORKS AND HIGH-END CAMPUS NETWORKS

N8520-48B6C bare metal switch is designed for data center networks and high-end campus networks, providing stable, reliable and secure Layer 2/Layer 3 switching services.



## Overview

N8520-48B6C is a Top-of-Rack (TOR) or spine switch for high-performance data centers. In a compact 1RU form factor, the switch provides line-rate L2 and L3 switching across the 48x 25GbE SFP28 with 6x 100GbE QSFP28, supporting up to 48x 10/25 GbE, 6x 40/100 GbE connections.

Loaded with the Open Network Install Environment (ONIE), N8520-48B6C supports the installation of compatible Network Operating System software, including the open source options Open Network Linux and OpenSwitch, plus commercial NOS offerings.

## COMPATIBLE OPERATING

### SYSTEM

- Big-Switch-BMF
- Cumulus - Cumulus Linux
- SONiC
- Pica8 - PICOS®
- Pluribus Netvisor ONE

## What is ONIE (Open Network Install Environment)?

The Open Network Install Environment (ONIE) is an Open Compute Project open source initiative driven by a community to define an open "install environment" for bare metal network switches, such as N-series switches. ONIE enables a bare metal network switch ecosystem where end users have a choice among different network operating systems.

This family provides 10G/25G/40G/100G bare metal switches, enabling users to freely install and use Cumulus Linux, SONiC, PICOS®, etc. As the switch operating system, which breaks the dependency of using vendor-specific, closed-source software development kits (SDK).

## Key Features and Benefits

### Product Highlights

Cost-effective, bare-metal switch infrastructure for data center fabric.

Deploy as Top-of-Rack switch supporting 10 or 25 GbE to servers, with 40 or 100 GbE uplinks.

Deploy as spine switch supporting 10, 25, 40, or 100 GbE ToR and spine interconnects.

48x 25G SFP28 plus 6x 100G QSFP28 ports, each SFP28 supporting 1x 10 or 25 GbE and each QSFP28 supporting 1x 100G or 1x 40G.

Layer 2 or Layer 3 forwarding of 3.6 Tbps full duplex.

All ports on front; PSUs and fans accessible from rear.

### Power Supply and Fan Modules

Hot-swappable, load-sharing, redundant AC.

5+1 redundant, hot-swappable fan modules.

### Software

Bare-Metal hardware switch pre-loaded with diagnostics software and with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings.

Compatible with Open Network Linux (ONL), the open-source, OCP reference NOS.

Compatible with future release of Big Monitoring Fabric 5.6.0 and later version from Big Switch Networks.

Compatible with Cumulus® Linux® r4.2.0 and before version from Cumulus Networks®.

Compatible with SONiC open source network software.

Compatible with PicOS™ from Pica8 Inc.

Compatible with SnapRoute CN-NOS, Cloud Native - NOS software.

Compatible with Netvisor ONE Network operating system from Pluribus Networks.

## Technical Specification

N8520-48B6C bare metal switch comes with the industry-standard hardware. Here’s a look at the details.

### CHARACTERISTICS

	N8520-48B6C
Port	
Ports	48x 25G SFP28 and 6x 100G
SFP28 Port	Each port supports 1x 10 GbE or 25 GbE
QSFP28 Port	Each port supports 1x 40/100 GbE or 4x 25 GbE or 4x 10 GbE per port using splitter cables
RJ45 Management Port	1
Console Port	1
USB Type A Storage Port	1
Operating System	
OS	ONIE (Bare Metal Switch)
Key Components	
Switch Chip	Broadcom BCM56967 Tomahawk+
CPU	Intel Atom® C2538 quad-core 2.4 GHz x86 processor
DRAM	2x 8 GB SO-DIMM with ECC
SPI NOR Flash	2x 8MB
SSD	32GB MLC
Performance	
Layer Type	Layer 3
Switching Capacity	3.6 Tbps full duplex
Forwarding Rate	2.6 Bpps

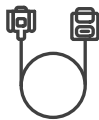
CHARACTERISTICS

	N8520-48B6C
MAC Addresses	8K min./136K max.
Packet Buffer	22MB integrated packet buffer
VLAN IDs	4K
Jumbo Frames	Up to 9216 Bytes
IPv4/32	16 K L3 LPM entries with TCAM-only mode
IPv6/64	8 K L3 LPM entries with TCAM-only mode
IPv6/128	4 K L3 LPM entries with TCAM-only mode
Status Indicators	
10G SFP+ Port LEDs	Link Speed, Link Status, Activity
25G QSFP+ Port LEDs	Link Status, Activity
100G QSFP28 Port LEDs	Link Status, Activity
100G QSFP28 Breakout LEDs	Show Link, Status, Activity with 4x 25G breakout
Ethernet Management Port LED	Link Status, Activity
System LEDs	Diagnostic, Locator, PSU and Fan Status
Power	
Input Voltage	100-240VAC, 50-60Hz, 10–5A or 8.2-3.5A or 7.8-3.8A
Max. Power Consumption	584W
PSU Efficiency	Up to 93% for AC PSUs
Physical and Environmental	
Dimensions (HxWxD)	1.73"x17.26"x18.62" (44x438.4x473mm)

CHARACTERISTICS

	N8520-48B6C
Rack Space	1U
Hot-swappable Power Supplies	2 (1+1 Redundancy)
Hot-swappable Fans	6 (5+1 Redundancy)
Airflow	Back-to-Front
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)
Operating Humidity	5% to 95% (Non-condensing)
Weight	20.78 lbs (9.43 kg), with two installed PSUs
Warranty	
Warranty	5 Years

Accessories



Console Cable\*1



Power Cords\*2



Rack Mount Kit Bracket\*1



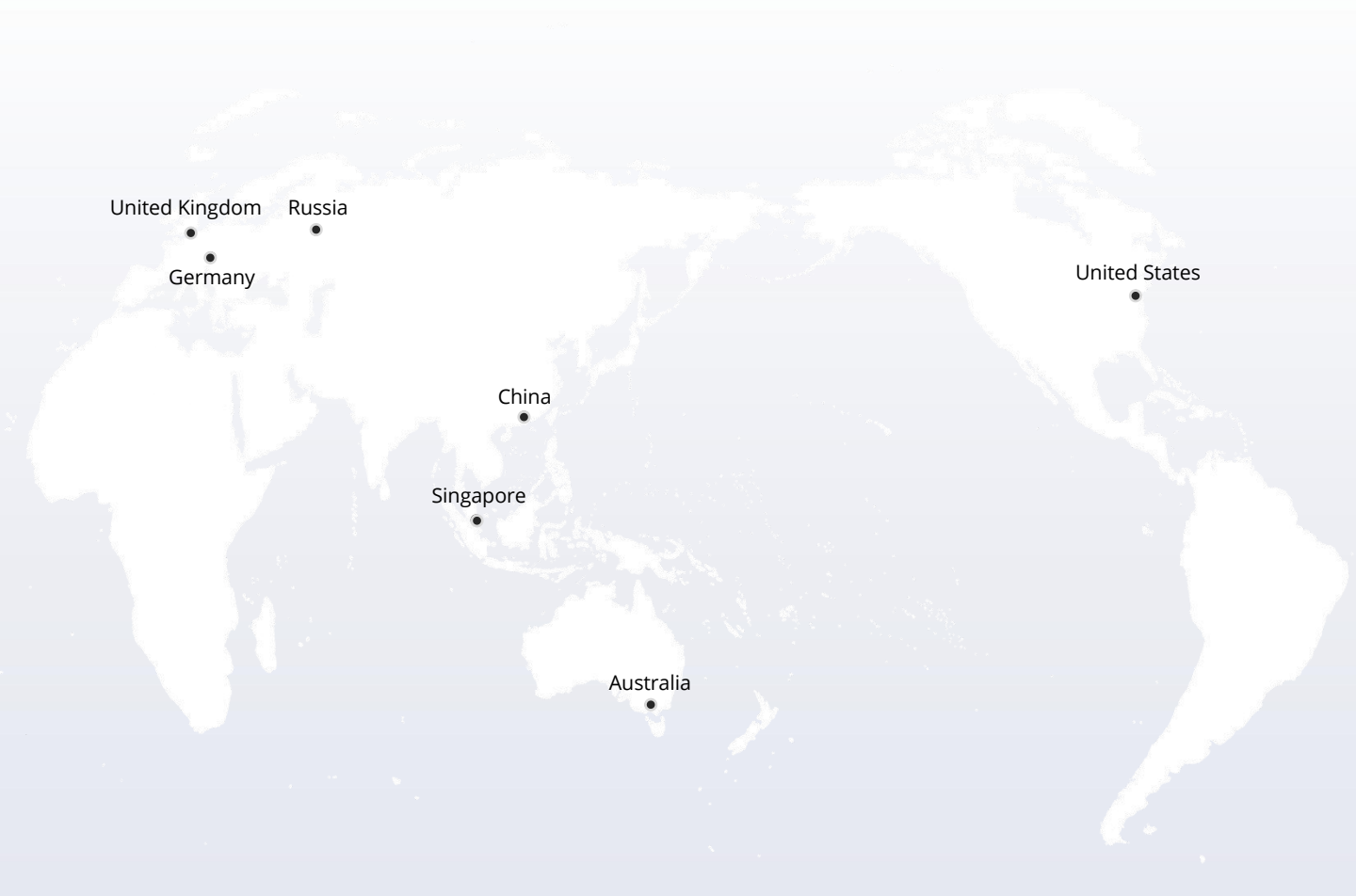
M4 Screws\*20



Ear-locking Screws\*2



User Manual\*1



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