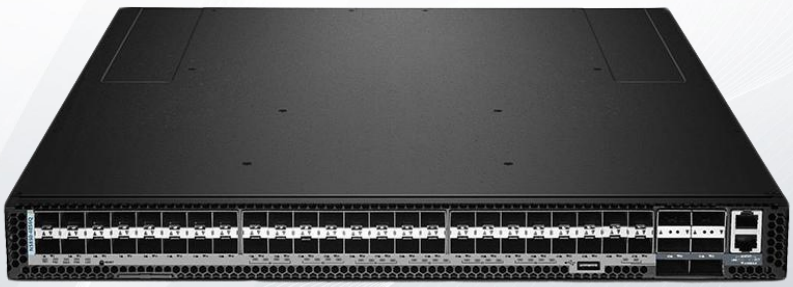
N5850-48S6Q Bare Metal Switch

IDEAL FOR DATA CENTER NETWORKS AND HIGH-END CAMPUS NETWORKS

N5850-48S6Q 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

N5850-48S6Q bare metal switchesh meets the high-performance, availability, and network-scaling requirements of enterprise and cloud data centers which provides full line-rate switching at Layer 2 or Layer 3 across 48x 10GbE ports and 6x 40GbE uplinks.

Deployed either as a Top-of-Rack switch, or as part of a 10GbE or 40GbE distributed spine, forming a non-blocking folded-Clos data center fabric, N5850-48S6Q is an ideal Top-of-Rack switch for virtualized data centers, with its support of VXLAN and NVGRE tunneling functions in hardware.

COMPATIBLE OPERATING SYSTEM

- Cumulus - Cumulus Linux
- Pica8 - PICOS®
- SnapRoute - CN-NOS
- Ixia Vision Edge OS™ 4.7.5

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/100G bare metal switches, enabling users to freely install and use Cumulus Linux, 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.
48x SFP+ switch ports, supporting 10GbE (DAC, 10GBASE-SR/LR) or 1GbE (1000BASE-T/SX/LX).
6x 40 QSFP switch ports, each supporting 40GbE (DAC, 40GBASE-SR4/LR4) or 4x 10GbE (DAC or fiber breakout cable).
Port Grouping to group 4x 10G ports into one 40G port at the physical layer for maximum bandwidth utilization, and for 300 m optical reach over MMF (Subject to NOS options).
VXLAN and NVGRE tunneling support in hardware for network virtualization.
Rack mountable in standard 19" racks. Mountable in 21" Open Rack with the Open Rack Switch Adapter.
All ports on front; PSUs, fan modules on rear.
Management: Ethernet and console RJ-45 ports; USB storage port.

Power Supply and Fan Modules

Hot-swappable, load sharing, redundant AC PSUs.
Hot swappable 4+1 redundant fan modules.

Software

Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commerical NOS offerings.
Compatible with Open Network Linux (ONL), the open-source, OCP reference NOS.
Compatible with Switch Light OS from Big Switch Networks and Big Cloud Fabric™ SDN applications.
Compatible with Cumulus® Linux® r4.2.0 and before version from Cumulus Networks®.
Compatible with IP Infusion OcNOS.
Compatible with PicOS™ version 2.8.0 from Pica8 Inc.
Compatible with SnapRoute CN-NOS, Cloud Native - NOS software.
Compatible with Ixia Vision Edge OS™ 4.7.5 and later version.

Technical Specification

N5850-48S6Q bare metal switch comes with the industry-standard hardware. Here's a look at the details.

CHARACTERISTICS

	N5850-48S6Q
Port	
Ports	48x 10G SFP+ and 6x 40G QSFP+
SFP+ Port	Each port supporting 10GbE or 1GbE
QSFP+ Port	Each port supporting 40GbE or 4x 10GbE
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 BCM56864 Trident 2+
CPU	Intel Atom C2538 2.4Ghz quad-core 2.4GHz x86 processor
DRAM	8GB SO-DIMM DDR3 RAM with ECC
SPI Flash	16MB
mSATA SSD	32GB
Performance	
Layer Type	Layer 3
Switching Capacity	1.44 Tbps full duplex

CHARACTERISTICS

	N5850-48S6Q
Forwarding Rate	1 Bpps
MAC Addresses	32K min./288K max.
Packet Buffer	16MB integrated packet buffer
VLAN IDs	4K
Jumbo Frames	Up to 9216 Bytes
L3 Routes	IPv4 16K min/112K max. ; IPv6 8K min/56K max.
Status Indicators	
10G SFP+ Port LEDs	Link Speed, Link Status, Activity
40G QSFP+ Port LEDs	Link Status, Activity
40G QSFP+ Breakout LEDs	Set of 24 LEDs, 4 per QSFP+ port, show Link, Status, Activity 10G links with 4x 10G breakout
Ethernet Management Port LED	Link Status, Activity
Console Port LED	Link Status
System LEDs	PSU1, PSU2, Diagnostic, Fans, Locator
Power	
Input Voltage	100-240VAC, 50-60Hz, 6-3A
Max. Power Consumption	282W
PSU Efficiency	Up to 93% for AC PSUs
Physical and Environmental	
Dimensions (HxWxD)	1.71"x17.26"x18.62" (43.4x438.4x473mm)
Rack Space	1U

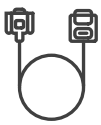
CHARACTERISTICS

	N5850-48S6Q
Airflow	Back-to-Front
Hot-swappable Power Supplies	2 (1+1 Redundancy)
Hot-swappable Fans	5 (4+1 Redundancy)
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	19.73 lbs (8.95 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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