



DATASHEET

N5850-48S6Q (10G ToR/Leaf Switch)

N5850-48S6Q (48*10GbE+6*40GbE) 10GbE ToR/Leaf Switch

Overview

FS.COM N5850-48S6Q is a Top-of-Rack (TOR) or Leaf switch in a compact 1U form factor, ideally suited for high performance and programmable data center environments. The N5850-48S6Q provides 48 SFP+ 10GbE ports and 6 QSFP+ 40GbE ports, and each 40GbE port can be configured as 4x10GbE up to a total system limit of 72 10GbE ports. It delivers excellent low latency and power efficiency in a PHYless design, while offering high reliability features such as redundant and hot swappable power supplies and fans in forward and reverse airflow configurations. With support for advanced features, including MLAG, VxLAN, SFLOW, SNMP, MPLS etc, this switch is ideal for traditional or fully virtualized data center.

The N5850-48S6Q supports current and future data center requirements, including a x86-based control plane for easier integration of automation tools, an ONIE installer for 3rd party network operating systems and compatibility with Software Defined Networks via OpenFlow 1.3.11. Additionally, N5850-48S6Q supports the advanced hardware based VXLAN feature to support over 16M virtual networks.

Key Features and Benefits

Layer 2 Hardware Supported

- 802.3ad LACP
- 802.1D STP, 802.1w RSTP, 802.1s MSTP, TRILL
- 802.1Q VLAN 4096, SVLAN, PVLAN
- 802.1 Q-in-Q double-tagged VLAN
- 802.1P L2 Prioritization
- 802.1AB Link Layer Discovery Protocol (LLDP)
- 802.1x Network Access Control
- IGMP/MLD Snooping
- VM Switching/VEPA/VN-Tag/802.1Qbh
- Mirroring
- Storm Control

Layer 3 Hardware Supported

- Hardware-based IP Forward
- IPv4/v6 Routing Protocols: OSPF, RIP, BGP
- VRF
- ECMP/WCMP, VRRP
- MPLS
- Hardware Based Tunneling: IPv4/v6, GRE
- IGMPv1/v2/v3
- IP Multicast: PIM-SM, PIM-DM, PIM-SSM

Traffic Management

- Flexible QoS Queuing for UC Packets
- Separate QoS Queues for UC and MC Packets (10 each/port)
- 2-Rate, 3-Color Policing
- SP, WRR, WDRR Queuing
- DCBX (ETS, PFC, CN/QCN)
- Per-Port DSCP
- Per-Port Oversubscription

Features

Ports

Switch Ports:

- 48 x SFP+ each supporting 10 GbE or 1 GbE
- 6 x 40G QSFP+ each supporting 1 x 40 GbE

Management Ports on Back Panel:

- 1 x RJ-45 serial console
- 1 x RJ-45 100/1000BASE-T management port
- 1 x USB Type A port

Key Componets

- Switch Silicon: Trident 2 BCM56854
- CPU: Intel Rangeley C2538 2.4Ghz 4-core

- 2-16GB ECC DDR3
- 4GB up to 128GB mSATA SSD and optional NGFF
- NAND flash

Performance

- Switching Capacity: 1.44Tbps full-duplex
- Forwarding Rate: 1 Bpps
- Jumbo frames support up to 9K Bytes
- Packet Buffer Size: 12 MB integrated packet buffer
- MAC Addresses: 32K
- VLAN IDs: 4 K

Physical and Environmental

- Dimensions (WxDxH): 433.8 x 520 x 44 mm (17.1 x 20.5 x 1.73 in)
- Weight: 10 kg (23 lb)
- Operating Temperature: 0° C to 45° C (32° F to 113° F)
- Storage Temperature: -40° C to 70° C (-40° F to 158° F)
- Operating Humidity: 5% to 90% non-condensing

Compatible Software Option

- Cumulus - Cumulus Linux
- Broadcom - ICOS
- Open Compute Project - Open Network Linux
- Pica8 - PicOS

LEDs

- 10G SFP+ Port LEDs: Link Status, Activity for 10G status
- 40G QSFP+ Port LEDs: Link Status, Activity for 40G status

- Ethernet Management Port LED: Link Status, Activity
- Console Port LED: Link Status
- System LEDs: Diagnostic, Locator, PSU and Fan Status

Power and Cooling

- Less than 200W consumption DAC configuration, 1+1 redundant, hot swap PSUs
- 100 - 240VAC auto-ranging, 47-63Hz or 180-300VDC auto input
- 3+1 redundant fans, back to front system cooling

Regulatory

- ISO9001, FCC, CE, CB, UL

Warranty

- Five-year warranty, including the quality of any quality problems during the free maintenance. For more information, please check www.fs.com for the warranty terms in your country.

Ordering Information

| Model Number | CPU | PSU | Airflow |
|--------------|------------------------------------|-----------|---------------|
| N5850-48S6Q | Intel Rangeley C2538 2.4Ghz 4-core | dual PSUs | Back-to-Front |
| N8500-48B6C | Broadwell-DE 2.2Ghz 2-core | dual PSUs | Back-to-Front |
| N8000-32Q | Intel Rangeley C2538 2.4Ghz 4-core | dual PSUs | Back-to-Front |
| N8500-32C | Intel Rangeley C2538 2.4Ghz 4-core | dual PSUs | Back-to-Front |

Accessories



| Item | Quantity |
|--------------------|----------|
| Grounding Cable | 1 |
| Console Cable | 1 |
| Power cord | 2 |
| M4/Screws M4 | 6 |
| M6/Screws M6 | 8 |
| Rubber Pads | 4 |
| Dummy PSU Bracket | 1 |
| Rack Mount Bracket | 4 |



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