

N8500-48B6C 25GbE Leaf or Spine Data Center Switch



Overview

FS's N8500-48B6C is a 48 port 25GbE plus 6 port 100GbE switch in a compact 1U form factor, ideally suited for Data Center environments in either Leaf or Spine deployments. The N8500-48B6C provides 48 SFP28 ports plus 6 QSFP28 ports. A total of 1800Gbps capable ports are supported. It delivers superior low latency and power efficiency in a clean PHYless design, while offering high reliability features such as redundant and hot swappable power supplies and fans in forward and reverse airflow configurations.

The N8500-48B6C supports current and future network requirements, including an x86-based control plane COM-E with BMC and Timing options for easier integration of automation tools familiar to server administrators, and an ONIE installer to support 3rd party network operating systems.

Dimensions

Height 43.8mm (1.73") 1 EIA unit
Width 438 mm (17.3")
Depth 520 mm (20.5")

Features

Interfaces 48 SFP28 25GbE ports, 6 QSFP28 100GbE ports, Management (RJ45) and Console Ports (RJ45), USB2.0 (A type)



Datasheet

Switching Capacity 1.8Tbps I/O, 1.8Tbps BW @ 64B packets, 16MByte Buffer

Latency ~500ns Port to Port (cut-through mode)

Data Center DCB, TRILL, Virtual Port (VM) Switching, L2 GRE, NVGRE and VXLAN including endcap/ decap TEP"

CPU Intel Broadwell DE 2.2Ghz Dual-core (up to 16-core), 4-32GB ECC DDR4, 64GB up to 1TB M.2 SSD

Routing Tables Unified Forwarding Tables: 512K, Configurable

Total ECMP members: 16K (2 Level hierarchy)

L3 LPM: Up to 128K IPv4, 85K IPv6/64

802.3ad LAG: 1024

Virtual Ports: 16.7M (VXLAN)"

Jumbo packet 9K bytes

Content Aware Processing Layer 2-7 packet classification

Transceivers SFP28 up to 1.7W power, SR to 300m, LR to 10km, DAC (to 5m passive).

QSFP28 up to 4W power, SR to 300m, LR to 10km, DAC (to 5m passive)

IEEE1588 and SyncE Timing Option

- Supports IEEE 1588 TC and BC mode
- Supports SyncE recovery

BMC System Management Option

- DDR3 1Gb~4Gb/SPI 8Mb~64Mb Flash for dual boot
- IPMI 2.0
- NC-SI shared management port
- Serial over LAN (SOL)
- Supports remote (BIOS/firmware) online upgrading

Layer Two Hardware Supported

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

Datasheet

Layer Three Hardware Supported

- Hardware-based IP Forward (IPv4/IPv6)
- IPv4/v6 Routing Protocols: OSFP, RIP, IS-IS, BGP
- VRF, ECMP/WCMP, VRRP
- VPWS, VPLS, L3VPN
- Hardware-based Tunneling: IPv4/v6, GRE
- IGMPv1/v2/v3
- IP Multicast: PIM-SM, PIM-DM, PIM-SSM
- ECMP
- Enhanced IPF widths and keys for SDN

Traffic Management Hardware Supported

- 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
- IEEE 1588 1-step and 2-step time stamping,
- SyncE recovery

Power and Cooling

- < 550W peak consumption DAC configuration, 1+1 redundant, hot swap PSUs
- 100 - 240VAC auto-ranging, 47-63Hz or 180-300VDC auto input
- 3+1 redundant fans, front to back system cooling
- 4+1 redundant fans, back to front system cooling

Environmental: Operating

Temperature 0C to 45C

Humidity 10% - 90% non-condensing

Approvals

EMC CN(GB9254-2008), EU(EN55022, EN55024), FCC, VCCI, CCC

Safety IEC60950-1, GB4943, UL/CSA, CB, CCC



Datasheet

Order Information

N8500-48B6C-2C-B2F Broadwell-DE 2C 2.2Ghz, 4GB/64GB, Back to Front, AC

Operating System

Broadcom - ICOS

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