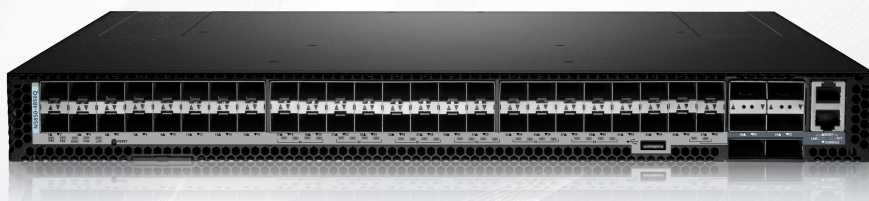


N5850-48S6Q Switch

IDEAL FOR DATA CENTER NETWORKS AND HIGH-END CAMPUS NETWORKS

Model: N5850-48S6Q



Overview

The N5850-48S6Q leaf switch is a high-performance switch that provide 10G/40G wirespeed connectivity for high-density availability and uplink options, designed to be deployed as Top-of Rack (ToR) or leaf-spine switches in data center applications.

Combined with self-developed extensible open networking operating system FSOS, the N5850-48S6Q switch is packed with software features that support complete Layer 3 IPv4 and IPv6 routing protocol, etc. built for the small and medium data center, and the medium and large campus networks.

Benefits

- Broadcom Switch Chip
- Complete IPv4/IPv6 Dual Stack Protocol
- VXLAN Scales Data Center Capacity
- BFD for VRRP Enhances Reliability
- CLI/ SNMPv1/v2/v3/Telnet
- 1+1 Redundant Power Supplies
- N+1 Redundant Fan Modules
- Open Network Install Environment (ONIE)

Key Features

Performance and Scalability

Support rich and complete Layer 2 switching and Layer 3 routing functions.

Support IPv4/IPv6 dual stack protocol.

Support VxLAN

Support x86, ARM, PPC, MIPS and other architecture CPUs.

Support various switch chips from mainstream manufacturers.

Support flexible upgrade method, such as ONIE, USB, remote online upgrade.

Superior Network Management

Support varied management interfaces, such as Console, MGMT port, USB port.

Support SNMPv1/v2/v3.

Support Command Line Interface (CLI) and Telnet to make management more convenient.

Support SSH2.0, SSL to make management more secure.

Support user operation logs.

Quality of Service (QoS)

Support traffic classification based on Layer 2 headers, Layer 3 protocols, Layer 4 protocols, and 802.1p priority.

Support ACLs and actions such as Committed Access Rate (CAR), re-marking, and scheduling.

Support Queuing algorithms, such as PQ, RR, WRR, DRR, PQ+WRR, and PQ+DRR.

Support Layer 2/3/4 packet filtering, providing based on source MAC address, destination MAC address, source IP address, destination IP address, TCP/UDP port number, protocol type, VLAN traffic classification.

Security Control Features

Support RADIUS and TACACS authentication for login users.

Support command line hierarchical protection.

Support dynamic or static binding of user identification elements such as IP, MAC, VLAN, port, etc, to prevent illegal access by users.

Technical Specification

N5850-48S6Q switch come with the industry-standard hardware and FSOS. Here’s a look at the details.

CHARACTERISTICS

	N5850-48S6Q
Port	
100G QSFP28	--
40G QSFP+	6
25G SFP28	--
10G SFP+	48
RJ45 Management Port	1
Console Port	1
USB Type A Storage Port	1
Operating System	
OS	FSOS
Key Components	
Switch Chip	Broadcom BCM56864 Trident II+
CPU	Intel Atom C2538 2.4Ghz quad-core 2.4GHz x86 processor
DRAM	8GB SO-DIMM DDR3 RAM with ECC
SPI Flash	16MB
SSD	32GB

CHARACTERISTICS

	N5850-48S6Q
Performance	
Layer Type	Layer 3
Switching Capacity	1.44 Tbps full duplex
Forwarding Rate	1 Bpps
MAC Addresses	64K
Packet Buffer	16MB integrated packet buffer
VLAN IDs	4K
Jumbo Frames	Up to 9216 Bytes
Status Indicators	
10G SFP+ Port LEDs	Link Speed, Link Status, Activity
25G SFP28 Port LEDs	--
40G QSFP+ Port LEDs	Link Status, Activity
100G QSFP28 Port LEDs	--
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

CHARACTERISTICS

	N5850-48S6Q
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Physical and Environmental

Dimensions (HxWxD)	1.71"x17.26"x18.62" (43.4x438.4x473mm)
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Rack Space	1U
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Hot-swappable Power Supplies	2 (1+1 Redundancy)
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Hot-swappable Fans	5 (4+1 Redundancy)
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Airflow	Back-to-Front
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Operating Temperature	32°F to 104°F (0°C to 40°C)
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Storage Temperature	-40°F to 158°F (-40°C to 70°C)
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Operating Humidity	5% to 95% (Non-condensing)
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Weight	19.73 lbs (8.95 kg), with two installed PSUs
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Warranty

Hardware Warranty	5 Years
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Software Warranty	5 Years
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FEATURES

Functionality	Description
Layer 2 Features	Ethernet Features
	IEEE 802.3x for full duplex mode
	Port Statistics
	Port rate control
	MTU configuration of vlanif interface
	Eth-Trunk
	LACP for link aggregation
	Port isolation
	Broadcast/Multicast/Unknown Unicast Storm Control
	Support loopback interface
	VLAN Features
	Access, trunk, and hybrid interface types
	1:1 VLAN Mapping
	N:1 VLAN Mapping
	VLAN mapping based on 802.1p
	IEEE 802.1ad QinQ
	IPv4 address and IPv6 address for VLAN interface
	MVRP/compatible GVRP
	Private VLAN
	MAC Address Table
	Dynamic MAC address learning and aging
	Static, dynamic, and blackhole MAC address entries
	ARP
	Static ARP
	Dynamic ARP
	ARP entry aging
	Proxy ARP
	Rlink
	Resilient link and Monitor link
	VXLAN
	Link Layer Discovery Protocol (LLDP)
	UDLD

FEATURES

Functionality	Description
Layer 2 Features	MSTP
	Spanning Tree Protocol (STP)
	<ul style="list-style-type: none">• Rapid Spanning Tree Protocol (RSTP)• Multiple Spanning Tree Protocol (MSTP)• Bridge Protocol Data Unit (BPDU), root protection, loop protection and TC-BPDU protection
Layer 3 Features	G.8032
	<ul style="list-style-type: none">• G.8032 Ethernet Ring Protection Switching (ERPS)
	IPv4
IPv6	<ul style="list-style-type: none">• Unicast static routing• IPv4 dynamic routing protocols: RIP, OSPF, IS-IS, and BGP• DHCP snooping• DHCP Server/Relay/client• Support BFD for BGP/IS-IS/OSPF• Route-policy• ECMP
	Neighbor Discovery Protocol (NDP)
	PINGv6
Multicast Features	Trace route v6
	IPV6TELNET Server
	IPV6TELNET Client
	IPv6 static routing
	ACLv6
	OSPFv3
	BGP4+
	Support IGMP v1/v2/v3
	IGMP v1/v2/v3 snooping
	IGMP Snooping Proxy
	PIM-SM (ASM/SSM)
	Fast leave
	Multicast VLAN
	Multicast querier
	Multicast protocol packet suppression
	Multicast replication

FEATURES

Functionality	Description
Quality of Service (QoS)	<p>Traffic Classification</p> <p>Traffic classification based on Layer 2 headers, Layer 3 protocols, Layer 4 protocols, and 802.1p priority</p>
	<p>Traffic Action</p> <p>ACLs and actions, such as Committed Access Rate (CAR), re-marking, and scheduling</p>
	<p>Queuing Algorithms</p> <p>Queuing algorithms, such as PQ, RR, WRR, DRR, PQ+WRR, and PQ+DRR</p>
Configuration and Maintenance	<p>Terminal Services</p> <p>Command-Line Interface (CLI) access via console, Telnet and SSH</p>
	<p>File Transfer</p> <p>Upload and download files through FTP client</p> <p>Upload and download files through TFTP client and server</p>
	<p>Configuration and Maintenance</p> <p>User operation logs</p> <p>Switched port analyzer (SPAN)</p>
	<p>Reliability</p> <p>VRRP</p> <p>BFD for VRRP</p>
	<p>Software Upgrade</p> <p>Open Network Install Environment (ONIE)</p> <p>USB Upgrade</p> <p>Online upgrade</p>
	<p>Security</p> <p>RADIUS and TACACS authentication for login users</p> <p>L2 ACL/IPv4 ACL/hybrid ACL/IPv6 ACL</p> <p>SSH v2.0</p> <p>Port isolation</p> <p>CPU Protection (CPP)</p> <p>IP source guard</p> <p>Command line authority control based on user levels to prevent unauthorized users from using command configurations</p>

FEATURES

Functionality	Description
Management	Simple Network Management Protocol (SNMP) v1/v2/v3 Command Line Interface (CLI) SSL Ping and traceroute RMON

Accessories



Console Cable*1



Power Cords*2



Rack Mount Kit Bracket*1



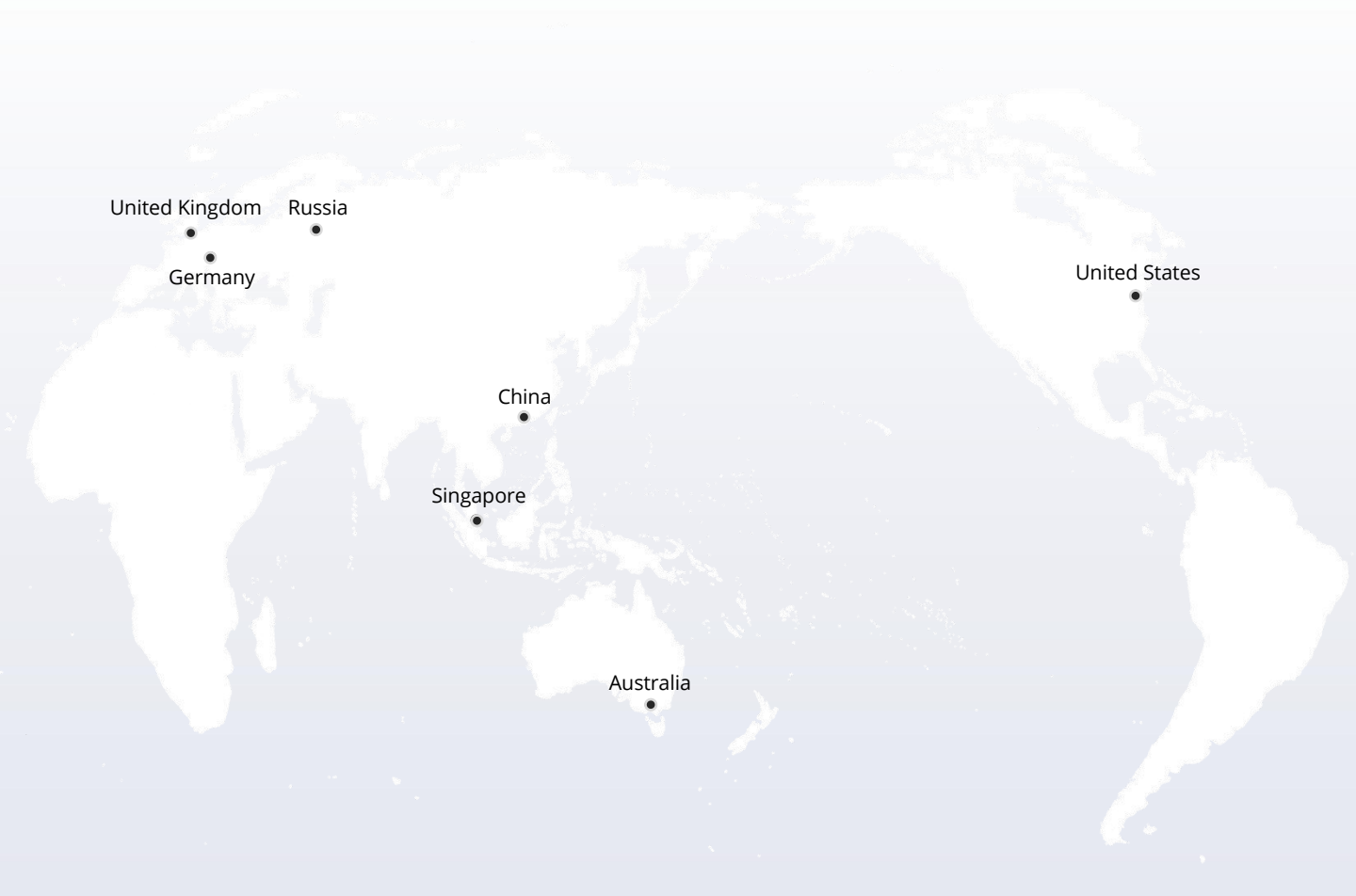
M4 Screws*20



Ear-locking Screws*2



User Manual*1



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