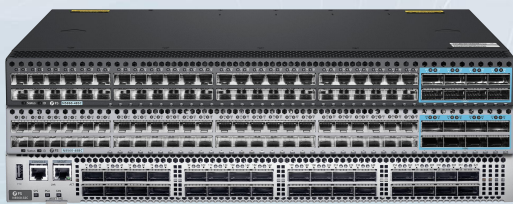# N5850 & N8550 Series And N5860 & N8560 Series Data Center Switches Competitive Comparison

N5860 & N8560 Series Data Center Switches

N5850 & N8550 Series Data Center Switches

Product Comparison Models

- N5860 & N8560 Series Data Center Switches：

  N5860-48SC; N8560-48BC; N8560-32C

- N5850 & N8550 Series Data Center Switches：

  N5850-48S6Q; N8550-48B8C; N8550-32C

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- Product Software Function

- Product Hardware Performance

Product Software Function

N5850 & N8550 Series Data Center Switches are high-effective mainly based on EVPN VXLAN[1] and M-LAG[2] functions. N5860 & N8560 Series Data Center Switches are high-performance mainly based on EVPN VXLAN, ECN[3], PFC[4], RDMA[5], M-LAG, etc. Abundant data center software functions are suitable for multiple types of data center architectures. N5860 & N8560 Series Data Center Switches support visual GRPC 6 communication protocol, and the security mechanism is mor e complete.

Models	N5860-48SC/N8560-48BC/N8560-32C	N5850-48S6Q/N8550-48B8C/N8550-32C
Routing Protocol	• IPV4: static routing, RIP, OSPF, IS-IS, BGP4 • IPV6: static routing, RIPng, OSPFv3, BGP4+	• IPV4: static routing, RIP, OSPF, IS-IS, BGP4 • IPV6: static routing, OSPFv3, BGP4+
Security	• Support IP source guard • RADIUS/TACACS • Plain text of RIPv2 and BGPv4 messages • MD5 cipher-text authentication • DHCP Snooping • CPP • NFPP • REUP • Anti-DoS attack • uRPF	• Support IP source guard • RADIUS/TACACS • Plain text of RIPv2 and BGPv4 messages • MD5 cipher-text authentication • DHCP Snooping
IPv6	ND, DHCPv6, ACLv6, TCP/UDP for IPv6, SNMP v6,IPv6 RADIUS, FTP/TFTP v6, IPv6 MIB support for SNMP, VRRP for IPv6	ND, ACLv6, TCP/UDP for IPv6, SNMP v6,IPv6TELNET Server, IPv6TELNET Client, FTP/FTP v6
DataCenter Network Features	• Support static/EVPN VXLAN • Support M-LAG • Support priority-based flow control • Support PFC deadlock • Support ECN • Support Buffer-Manage	• Support static/EVPN VXLAN • Support M-LAG
Management	SNMP v1/v2c/v3, RMON, SSHv1/v2, Telemetry, NetConf	SNMP v1/v2c/v3, RMON1/2, SSHv1/v2

Product Hardware Performance

The performance of the N5860 & N8560 Series Data Center Switches and N5850 & N8550 Series Data Center Switches are not much different overall. N5850 & N8550 Series Data Center Switches have bigger routing table, which is suitable for applications with more node devices between networks.

Models	N5860-48SC vs N5850-48S6Q		N8560-48BC vs N8550-48B8C		N8560-32C vs N8550-32C	
Ports	48x 10G SFP+, 8x 100G QSFP28	48x 10G SFP+, 6x 40G QSFP+	48x 25G SFP+, 8x 100G QSFP28	48x 25G SFP+, 8x 100G QSFP28	32x 100G QSFP28	32x 100G QSFP28
Application	Leaf	Leaf	Leaf	Leaf	Spine	Spine
Switch Chip	TD3	TD2+	TD3	TD3	TD3	TD3
Switching Capacity	4Tbps	1.44Tbps	4Tbps	4Tbps	6.4Tbps	6.4Tbps
Forwarding Rate	1.90 Bpps	1 Bpps	2.98 Bpps	2.9 Bpps	4.76 Bpps	4.7 Bpps
MAC Address	96K	98k	96K	98k	96K	98k
ARP Table	100K	48K	100K	48K	100K	48K
Routing Table	ipv4:28K IPv6:12K	ipv4:32k IPv6:24k	ipv4:28K IPv6:12K	ipv4:32k IPv6:24k	ipv4:28K IPv6:12K	ipv4:32k IPv6:24k

Features Explanation

EVPN VXLAN[1]: EVPN VXLAN refers to a network fabric that extends layer 2 connectivity as a network overlay over an existing physical network. It is an open standards technology that creates more agile, secure, and scalable networks in campuses and data centers.

M-LAG[2]: Multi-Chassis Link Aggregation (M-LAG) is a type of link aggregation group (LAG) with constituent ports that terminate on separate chassis, primarily for the purpose of providing redundancy in the event one of the chassis fails.

ECN[3]: Explicit congestion notification (ECN) allows end-to-end notification of network congestion without dropping packets.

PFC[4]: Priority-based Flow Control (PFC) is a link-level flow control mechanism. Instead of pausing all traffic on a link, PFC allows you to selectively pause traffic according to its class.

RDMA[5]: Remote Direct Memory Access (RDMA) is a direct memory access from the memory of one computer into that of another without involving either one's operating system. This permits high-throughput, low-latency networking, which is especially useful in massively parallel computer clusters.

GRPC[6]: GRPC Remote Procedure Calls is an open source remote procedure call (RPC) system. It uses HTTP/2 for transport, Protocol Buffers as the interface description language, and provides features such as authentication, bidirectional streaming and flow control, blocking or nonblocking bindings, and cancellation and timeouts. It generates cross-platform client and server bindings for many languages.

REUP[7]: Rapid Ethernet Uplink Protection provides a fast on-chain protection function. It is a solution that provides a reliable and efficient backup and switching mechanism for dual uplinks. It can provide faster convergence performance and is often used in dual-uplink networking. Suitable for scenarios that require quick failure recovery.

NFPP[8]: Network Foundation Protection Policy (NFPP) is a protection system for enhancing the anti-attack capability of a switch. When a switch encounters malicious attacks, NFPP employs a series of countermeasures, such as ratelimiting, identifying, and isolating the attack source, to ensure the normal control and management flows of the system, thereby protecting the computing and channel resources of the switch CPU.

Online Resources

N5860 & N8560 Series Data Center Switches

N5860-48SC: https://img-en.fs.com/file/datasheet/n5860-48sc-switches-datasheet.pdf

N8560-48BC: https://img-en.fs.com/file/datasheet/n8560-48bc-switch-datasheet.pdf

N8560-32C: https://img-en.fs.com/file/datasheet/n8560-32c-switch-datasheet.pdf

N5850 & N8550 Series Data Center Switches

N5850-48S6Q: https://img-en.fs.com/file/datasheet/n5850-48s6q-bare-metal-switch-datasheet.pdf

N8550-48B8C: https://img-en.fs.com/file/datasheet/n8550-48b8c-bare-metal-switch-datasheet.pdf

N8550-32C: https://img-en.fs.com/file/datasheet/n8550-32c-bare-metal-switch-datasheet.pdf