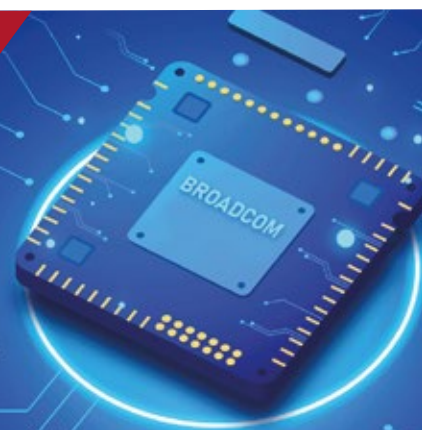


Core Aggregation Switch NX-3875 Series



OVERVIEW

The NX-3875 series switches are a set of next-generation multiservice switches that provide exceptional performance and security. The switches offer increased table capacity, higher hardware processing speed, and easier user operation thanks to an industry-leading hardware design and Nodexon's newest OS modular operating system. Flexible gigabit access and high-density 10G port scaling are supported by the NX-3875 series switches.

All variants come with four fixed 10G fiber ports, allowing for high-density, high-performance port uplinks. These cutting-edge characteristics are ideal for high-density access and demanding aggregation. The NX-3875 series switches are suited for aggregating large-scaled networks, serving as the heart of small to medium-sized networks, and providing access to data center servers

FEATURES HIGHLIGHTS

- Support ACL, MPLS, SDN, L2 Multicast, Functions/DHCP Server
- Capable of supporting up to 8 Units Switch Stacking
- IPv4/IPv6 Dual-Stack Technology
- Supports CLI/WEB/SNMP/SSH
- 1+1 Hot-Swappable Power Supplies and 2+1 Smart Fans
- Advanced Layer 3 routing, MPLS and SDN
- 4 10GE SPF+ Ports. 1-port QSFP+ Dedicated Stack Card
- Up to 598Gbps/5.95Tbps switching capacity
- 48-port PoE+ Power Supply



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PRODUCT FEATURES

IPv4/IPv6 Dual-Stack Multi-Layer Switching

The NX-3875 series supports IPv4/IPv6 multilayer switching at line rates, hardware differentiation and processing of IPv4 and IPv6 packets, and various IPv6 network communication methods for network deployment planning or preserving current network status. The switches also handle a variety of IPv4 routing protocols, including static routing protocols, RIP, OSPF, IS-IS, and BGP4, allowing customers to choose the best protocol for their needs. IPv6 routing protocols come in a variety of flavors. Static routing protocols, RIPng, OSPFv3, and BGP4+, for example, allow users to choose the best protocol for updating an existing IPv6 network or constructing a new IPv6 network.

Energy Efficiency

The NX-3875 series offers next-generation hardware architecture, better energy-efficient circuit design, and components to reduce energy consumption and noise. The switch is equipped with variable-speed axial fans that dynamically adjust fan speed based on current environmental temperature, reducing power consumption and noise while maintaining device stability.

Easy Network Management

For routine network diagnosis and maintenance, NX-3875 series supports the Simple Network Management Protocol (SNMP), Remote Network Monitoring (RMON), log and configuration backup via USB flash drives, and Syslog. Administrators can also control and maintain devices via CLI, Web-based administration, telnet, and other diverse techniques.

Stacking

The NX-3875 series switches support stacking, in which multiple devices are connected through aggregate links and virtualized into one device. The logical device uses one single IP address, Telnet process, command-line interface (CLI), and enables auto version inspection and configuration. The benefits are multiplied work efficiency and enhanced user experience of several devices.

Performance and Scalability

The NX-3875 series has four 10G fiber ports that are fixed. Users may pick from a variety of 10G fiber or copper ports in different amounts to match their specific deployment requirements. The unrivaled scalability fully enables large-scale enterprise campus network aggregation or core deployment of small to medium-sized networks. The series can handle up to 64K MAC addresses.



Core Aggregation Switch NX-3875 Series



Sound Security Protection Policies

Using several intrinsic mechanisms such as anti-DoS attack, anti-IP scanning, validity check of ARP packets on ports, and several hardware ACL rules, the NX-3875 series efficiently defends against and controls the spread of viruses and hacker assaults. It also supports hardware-based IPv6 ACLs, which allow you to simply manage IPv6 user access at the network border, even while other IPv6 users are present. NX-3875 SERIES supports hardware-based IPv6 ACLs, which can easily regulate IPv6 user access at the network edge even when IPv6 users are present on an IPv4 network. The switch allows IPv4 and IPv6 users to coexist, and it can govern IPv6 user access rights, such as restricting access to important network resources.

Hardware assistance Mechanism for CPU protection. It's a particular CPU-protection strategy in which data traffic transmitted to the CPU is categorized and processed according to queue priority, and bandwidth is reduced as needed. This approach entirely protects the CPU against unauthorized traffic occupancy, malicious assaults, and resource consumption, assuring CPU security and switch protection.

DHCP Snooping: flexibly bind a port or switch to a user's IP address and MAC address in order to restrict access to users connected to a port or switch. Support for DHCP snooping allows the NX-3875 series to only receive DHCP answers from trustworthy ports, preventing spoofing by illegitimate DHCP servers.

ARP Packets: The switch monitors ARP packets dynamically, checks users' IP addresses, and discards illegitimate packets. Effectively eliminating ARP spoofing and source IP address spoofing. Support the source IP-based Telnet device access control.

Secure Shell (SSH) and SNMPv3: Encryption of management information in the telnet and SNMP processes, ensuring information security and preventing the device from hackers. Multi-element binding, port security, time-based ACL, and data flow-based bandwidth limit.

Network Foundation Protection Policy: A security measure for switches which separates attack sources in order to safeguard the switch's CPU and channel bandwidth resources, assuring regular packet forwarding and protocol status.

Hardware-Based Traffic Visualization

The NX-3875 series supports spanning tree protocols such as 802.1D, 802.1w, and 802.1s to enable faster convergence, increase fault tolerance, provide stable network operation, load balancing, and redundant connections.

Virtual Router Redundant Protocol (VRRP): Effectively ensure network stability.

Rapid Link Detection Protocol (RLDP): Detect the connectivity of links and whether an optical fiber link is normal from both ends, supporting the loop detection function based on the port preventing network faults due to loops generated by the connection of hubs to ports.



Core Aggregation Switch NX-3875 Series

Ethernet Ring Protection Switching (ERPS) (G.8032): Loop blocking and link recovery on the master device. The ERSP's link failover rate can be completed within 50ms under ideal conditions.

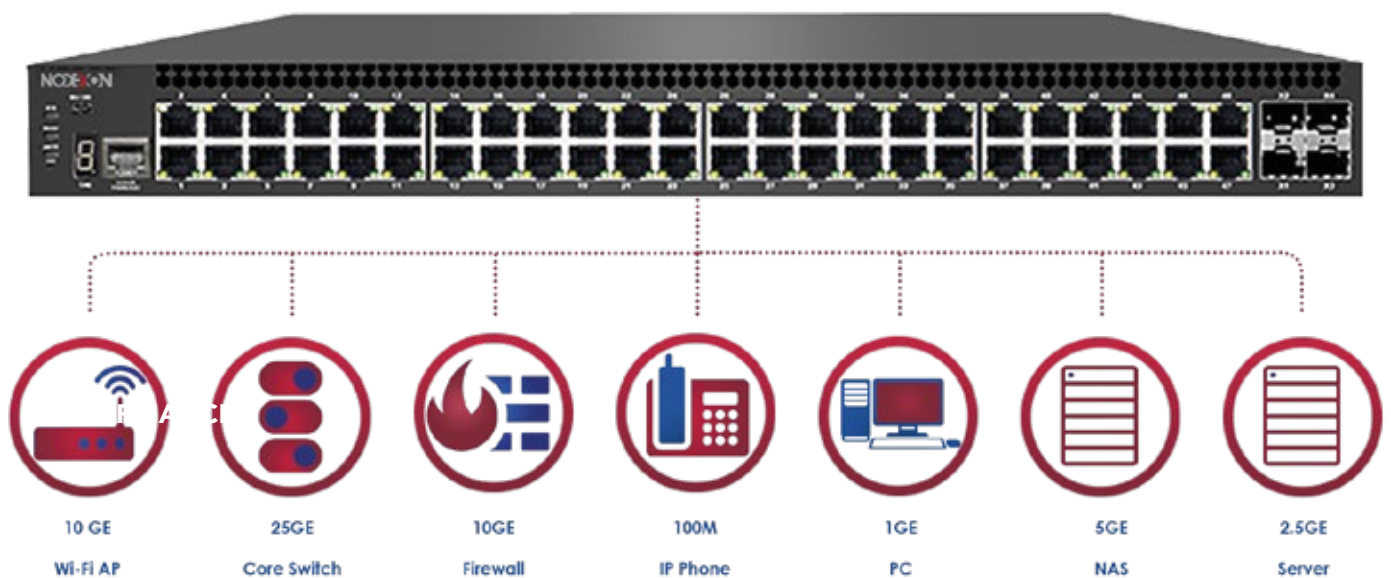
Rapid Ethernet Uplink Protection Protocol (REUP): Provide basic link redundancy through the rapid uplink protection function when STP is disabled with faster sub second-level fault recovery than STP.

Bidirectional Forwarding Detection (BFD): Provide a method for upper-layer protocols such as routing protocols and MPLS to rapidly detect the connectivity of forwarding paths between routing devices, reducing the convergence time of upper-layer protocols greatly in the case of changes in link status.

Nonstop PoE (Z-PoE): NX-3875 series conveniently supports 48-port PoE+ power supply. providing nonstop PoE power supply to IP cameras, IP phones and other PD (Powered Device), even when a reboot happens.

Strong Multi-Service Support Capability

Multi Service Coverage



Core Aggregation Switch NX-3875 Series



TECHNICAL SPECIFICATIONS

SPECIFICATIONS	NX-3875-28G4X	NX-3875-48G4X	NX-3875-28S4X	NX-3875-48S4X	NX-3875-48G4XH
GE RJ45 Port & GE SFP port	28 - 4 (Combo)	48 - N/A	8 (Combo) - 28	N/A - 48	48 - N/A
10GE SFP+ port	4	4	4	4	4
Card Slot	2	2	2	2	N/A
Flexible Card Type	1-port QSFP+ dedicated stack card	1-port QSFP+ dedicated stack card 4-port 10GE SFP+ interface card	1-port QSFP+ dedicated stack card	1-port QSFP+ dedicated stack card 4-port 10GE SFP+ interface card	N/A
ETH Management Port	1	1	1	1	1
Console port (RJ45)	1	1	1	1	1
Console port (Mini USB)	1	1	1	1	1
USB 2.0 port	1	1	1	1	1
Switching Capacity	598Gbps/5.98Tbps	598Gbps/5.98Tbps	598Gbps/5.98Tbps	598Gbps/5.98Tbps	598Gbps/5.98Tbps
Forwarding Rate	222Mpps	252Mpps	222Mpps	252Mpps	132Mpps
MAC Table Size	64,000	64,000	64,000	64,000	64,000
ARP Table Size	20,000	20,000	20,000	20,000	20,000
Jumbo Frame	9216 Bytes	9216 Bytes	9216 Bytes	9216 Bytes	9216 Bytes
Packet Buffer	32Mbit	32Mbit	32Mbit	32Mbit	32Mbit
Maximum PoE Power Budget	N/A	N/A	N/A	N/A	1480W (w/ 2 RGPA1150P-F)
PoE/PoE+ Enabled Port	N/A	N/A	N/A	N/A	48
Standard	N/A	N/A	N/A	N/A	IEEE802.3af/at
Physical	440 X 280 X 44mm	440 X 300 X 44mm	440 X 300 X 44mm	440 X 340 X 44mm	440 X 420 X 44mm
Unit Weight	3.9 KG	4.2 KG	4.2 KG	4.7 KG	6.1 KG
Power Supply Type	Hot Swappable				
Redundancy	1 + 1				
AC Frequency	50/60 Hz				
Rated AC Voltage	240V DC				
Maximum HVDC Voltage	5 (4+1 Redundancy)				
Rated DC Voltage	-36V ~ -72V DC				



Core Aggregation Switch NX-3875 Series



TECHNICAL SPECIFICATIONS

SPECIFICATIONS	NX-3875-28G4X	NX-3875-48G4X	NX-3875-28S4X	NX-3875-48S4X	NX-3875-48G4XH
Maximum Power Rating	140W	140W	140W	300W	2300W
Idle Power Rating	45W	45W	55W	100W	70W
Dissipation Mode	Air-cooled heat dissipation. Intelligent speed adjustment				
Number of Fans	3				
Airflow	Air flows in from the left and exhausts from the right				
Safety Certification	EN 60960-1, IEC 60950-1			EN 60960-1	
EMC Certification	EN 300 386				
Emissions Certification	EN 55022, EN55032				
Immunity Generic Certification	EN 55024				
ESD Certification	EN 61000-4-2				
Radiated Certification	252Mpps				
EFT/Burst	EN 61000-4-4				
Surge	EN 61000-4-5				
Conducted	EN 61000-4-6				
Power Frequency Magnetic Field	EN 61000-4-8				
Voltage Dips And Interruptions	EN 61000-4-11				
Harmonics	EN 61000-3-2				
Flicker	EN 61000-3-3				
Anti-Gas Corrosion	GB-T2423.51-2012(Refer to IEC 60068-2-60)				
Operating Temperature	0°C~ 50°C				
Storage Temperature	-40°C~ 70°C				
Operating Humidity	10%~90% RH				
Storage Humidity	5%~95% RH				
Operating Altitude	-500 ~ 5000m				
MTBF(hours)	555960	513460	596320	523510	451400
ERPS	G.8032 v1/v2, Single-ring, Tangent-ring, Intersecting-ring, Load balancing				



Core Aggregation Switch NX-3875 Series



TECHNICAL SPECIFICATIONS

SPECIFICATIONS	NX-3875-28G4X	NX-3875-48G4X	NX-3875-28S4X	NX-3875-48S4X	NX-3875-48G4XH
Ethernet	Full-duplex, Half-duplex, Auto negotiation, Flow control on interface, Jumbo frames, Link aggregation (IEEE802.3ad, LACP, maximum 8 member ports per AP), 2048 maximum aggregation ports, Load balancing, Broadcast storm control				
VLAN	IEEE802.1Q, 4094 VLAN ID, 4094 VLANIF interface, Access mode, Trunk mode, Default VLAN, Port-based VLAN, MAC-based VLAN, Protocol based VLAN, IP subnet-based VLAN, Voice VLAN, GVRP, Super VLAN, Private VLAN, Guest VLAN				
MAC	Automatic learning and aging of MAC addresses, Static and dynamic MAC address entries, Interface-based and VLAN-based MAC address learning limiting, Sticky MAC, MAC address spoofing guard				
ARP	Static ARP, Trusted ARP, Gratuitous ARP, Proxy ARP, Local proxy ARP, ARP trustworthiness detection, ARP-based IP guard				
STP	STP(IEEE802.1D), RSTP(IEEE802.1w), MSTP(IEEE802.1s), 64 MST instances, Port Fast, BPDU guard, BPDU filter, TC guard, TC filter, Root guard, Auto edge, BPDU transparent transmission, BPDU tunnel, VLAN-Specific Spanning Tree(VSST, working with PVST, PVST+ and RPVST)				
L2 multicast	IGMP v1/v2/v3 snooping, IGMP filter, IGMP fast leave, IGMP querier, IGMP security control, IGMP profile, MLD v1/v2 snooping, MLD filter, MLD fast leave, MLD source check				
QinQ	Basic QinQ, Selective QinQ(Flexible QinQ), 1:1 VLAN switching, N:1 VLAN switching VLAN mapping, TPID configuration, MAC address replication, L2 transparent transmission, Priority replication, Priority mapping				
IPv4 Unicast Routing	IPv4 static routing, RIPv1/v2, OSPFv2, BGP4, MBGP, IS-IS, PBR, VRF, ECMP, WCMP, Routing policies, 12000 IPv4 routing table				
IPv6 Routing Protocols	IPv6 static routing, RIPng, OSPFv3, BGP4+, IS-ISv6, PBRv6, VRFv6, Packet-based load balancing and flow-based load balancing, 6000 IPv6 routing table				
IPv6 feature	ND(Neighbor Discovery), 10000 ND entries, ND snooping, 6 over 4 manual tunnel, 6 to 4 auto tunnel, ISATAP, IPv4 over IPv6 tunnel, IPv6 over IPv6 tunnel, GRE tunnel (4 over 6), GRE tunnel (6 over 6), IPv6 extender option head, Manually configure local address, Automatically create local address, 0-64 bit mask, 65-128 bit mask				
Multicast Routing	IGMPv1/v2/v3, MLDv1/v2, PIM-DM, PIM-SM, PIM-SSM, PIM-DMv6, PIM-SMv6, MSDP, MCE, IGMP proxy, MLD proxy, Multicast static routing, 8000 IPv4 multicast routing table, 4000 IPv6 multicast routing table				
DHCP	DHCP server/relay/client, DHCPv6 server/relay/client, DHCP option 43/82/138				
MPLS	MPLS labels and forwarding, LSP, LDP, Inter-domain LDP LSP				
MPLS L3 VPN	BGP VPN, IS-IS VPN, OSPF VPN				
BFD	Single-hop BFD, BFD for IPv4 static routes/OSPF/IS-IS/BGP4/VRRP/MPLS/PBR, BFD for IPv6 static routes/OSPFv3/IS-ISv6/BGP4+/VRRPv6/PBRv6				
DLDP	DLDP for IPv4 static routes/OSPF/BGP4/VRRP/PBR				
LLDP	IEEE802.1AB 2005, ANSI/TIA-1057, LLDP, LLDP-MED, LLDP-PoE				



Core Aggregation Switch NX-3875 Series



SPECIFICATIONS	NX-3875-28G4X	NX-3875-48G4X	NX-3875-28S4X	NX-3875-48S4X	NX-3875-48G4XH
RLDP	Uni-directional link detection, Bi-directional forwarding detection, Downlink loop detection				
VSU	9 VSU(Virtual Switch Unit) stacked members, 80Gbps maximum stacking bandwidth with service port VSL connection, Traffic balancing				
VRRP	VRRPv3, VRRP+				
REUP	REUP(Nodexon Rapid Ethernet Uplink Protection Protocol) for dual uplink backup, VLAN load balancing				
GR	GR for RIP/OSPF/IS-IS/BGP/MPLS L3 VPN/LDP				
RNS	RNS test for ICMP/DNS/TCP, Track support for RNS				
Stream Classification	Classification based on IEEE802.1p/DSCP/TOS				
Shaping	Rate-limit on ingress/egress traffic on interface				
Congestion Avoidance	RED, WRED, Tail drop				
Congestion Management	SP, WRR, DRR, WFQ, SP+WFQ, SP+WRR, SP+DRR, 8 queue priorities per port				
ACL entries	3500 IPv4/v6 rules				
ACL type	Standard IP ACL, Extended IP ACL, MAC-extended ACL, Time-based ACL, Expert ACL, ACL80, IPv6 ACL, SVI router ACL, ACL logging, ACL counter, ACL remark, ACL redirection, Security channel, Protected port, Port security				
ARP security	ARP check, DAI, Trusted ARP, ARP trustworthiness detection, Gateway-targeted ARP spoofing prevention, ARP rate-limit,				
Attack Defense	CPP(CPU Protection Policy), NFPP(Network Foundation Protection Policy) guard for ARP/IP/ICMP/DHCP/DHCPv6/ND/Self-defined attack, URPF				
IP	IP source guard v4/v6, 3500 IPv4 source guard user capacity, 1500 IPv6 source guard user capacity				
DHCP	DHCP snooping, DHCPv6 snooping, DHCP snooping on option 82				
AAA	Local, RADIUS, RADIUS v6, TACACS+				
IEEE802.1X	IEEE802.1X port/MAC based authentication, Dynamic VLAN & ACL assignment, MAC authentication bypass				
Web Portal	Nodexon 1st & 2nd-Gen portal authentication, Portal authentication/accounting, Portal detection & escape				
Login	CLI, Console, Telnet, Telnet for IPv6, SSH v1.5/v2.0, SSH for IPv6, SCP, SNMPbased NMS, Web-based UI, Fast deploy(Nodexon Cloud App), Cloud management				
File	Multiple boot configuration, Multiple firmware				
Network	Ping(v4/v6), Traceroute(v4/v6), sFlow, SNMPv1/v2c/v3, HTTP, HTTPS, RMON(1,2,3,9), CWMP(TR069), Syslog, MIB,				



Core Aggregation Switch NX-3875 Series



TECHNICAL SPECIFICATIONS

SPECIFICATIONS	NX-3875-28G4X	NX-3875-48G4X	NX-3875-28S4X	NX-3875-48S4X	NX-3875-48G4XH
Application	DNS client v4/v6, TFTP Server/Client, TFTP Client v6, FTP Server/Client, FTP Server/Client v6, NTP Server/Client, NTP Server/Client v6, SNTP, IEEE(IEEE802.3az), OpenFlow v1.0, OpenFlow v1.3, Hot patch, Z-PoE (Non-stop PoE)				
Mirroring	Many-to-one mirroring, One-to-many mirroring, Flow-based mirroring, Over devices mirroring, VLAN-based mirroring, VLAN-filtering mirroring, AP-port mirroring, SPAN, RSPAN, ERSPAN				
Hardware monitoring	Power supply monitoring, Fan status and alarm monitoring				

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