



Dell EMC PowerSwitch N1500 Series Switches

Extending enterprise features to small and mid-sized businesses

The N1500 switch series offers a power-efficient Gigabit Ethernet (GbE) network-access switching solution with integrated 10GbE uplinks. With high-performance capabilities and wire-speed performance, utilizing a non-blocking architecture to easily handle unexpected traffic loads, the switches offer simple management and scalability via an 40Gbps (full-duplex) high availability stacking architecture that allows management of up to four switches from a single IP address. An integrated 80PLUS-certified power supply and features such as Energy-Efficient Ethernet and short cable detection provide energy efficiency to help decrease power and cooling costs.

Modernize campus network architectures

Modernize campus network architectures with a power-efficient and resilient 1/10GbE switching solution with Power over Ethernet Plus (PoE+). Select N1500 models offer 24 or 48 ports of PoE+ to deliver clean power to network devices such as wireless access points (APs), Voice-over-IP (VoIP) handsets, video conferencing systems and security cameras.

Leverage familiar tools and practices

All N-Series switches include Dell EMC Networking OS6, designed for easier deployment, greater interoperability and a lower learning curve for network administrators. OS6 common command line interface (CLI) and graphic user interface (GUI) using a well-known command language gets skilled network administrators productive quickly. With USB auto-configuration, network administrators can rapidly deploy mirrored configurations to numerous devices by simply inserting a USB key.

Deploy with confidence at any scale

N1500 series switches help create performance assurance with a data rate up to 176Gbps (full duplex) and a forwarding rate up to 164Mpps. Scale easily by stacking with 10GbE ports. Switch stacks of up to 200 1GbE ports can be managed from a single screen using the highly available stacking architecture for high-density aggregation with seamless redundant availability. N-Series switches help provide certainty with a lifetime warranty that covers software upgrades, hardware repair or replacement, and optics and cables purchased with the switch.*

Hardware, performance and efficiency

- Up to 48 line-rate GbE RJ-45 ports and four integrated 10GbE SFP+ ports.
- Up to 48 ports of PoE+ with an optional external power supply.
- Up to 200 1GbE ports in a 4-unit stack for high-density, high-availability in IDFs, MDFs and wiring closets.
- Non-stop forwarding and fast failover in stack configurations.
- Energy-Efficient Ethernet and lower power PHYs reduce power to inactive ports and idle links, providing energy savings from the power cord to the port.
- Fresh Air compliance for operation in environments up to 113°F (45°C) helps reduce cooling costs in temperature-constrained deployments.

*Select Networking products carry a Lifetime Limited Warranty with Basic Hardware Service (repair or replacement) for life. Repair or replacement does not include troubleshooting, configuration, or other advanced service provided by Dell EMC ProSupport. For details, visit <https://www.dell.com/en-us/work/shop/networkingwarranty/cp/networkingwarranty>.

Deploying, configuring and managing

- USB auto-configuration rapidly deploys the switch without setting up complex TFTP configurations or sending technical staff to remote offices.
- Management via an intuitive and familiar CLI, embedded web server (GUI), SNMP-based management console application (including Dell EMC OpenManage Network Manager), Telnet or serial connection.
- Private VLAN extensions and Private VLAN Edge support.

Product	Description
N1500 series	N1524: 24x RJ45 10/100/1000Mb auto-sensing ports, 4x SFP+ ports, 1 integrated 40W PSU N1524P: 24x RJ45 10/100/1000Mb PoE+ (up to 30.8w) auto-sensing ports, 4x SFP+ ports, 1 integrated 600W PSU (requires C15 plug) N1548: 48x RJ45 10/100/1000Mb auto-sensing ports, 4x SFP+ ports, 1 integrated 100W PSU N1548P: 48x RJ45 10/100/1000Mb PoE+ (up to 30.8w) auto-sensing ports, 4x SFP+ ports, 1 integrated 600W PSU (requires C15 plug)
Power cords	C13 to NEMA 5-15, 3M C13 to C14, 2M C15 to NEMA 5-15, 2M (C15 for POE N-Series only)
Power supplies (optional)	RPS720 external power supply for N1500 non-POE (720 watts): N1524 and N1548 (sold separately) MPS1000 external power supply for N1500 PoE+ switches (1000 watts): N1524P and N1548P (sold separately)
Optics (optional)	Transceiver, SFP, 1000BASE-T Transceiver, SFP, 1000BASE-SX, 850nm wavelength, up to 550m reach Transceiver, SFP, 1000BASE-LX, 1310nm wavelength, up to 10km reach Transceiver, SFP, 1000BASE-ZX, 1550nm wavelength, up to 80km reach Transceiver, SFP+, 10GbE, SR, 850nm wavelength, up to 300m reach Transceiver, SFP+, 10GbE, LR, 1310nm wavelength, up to 10km reach Transceiver, SFP+, 10GbE, ER, 1550nm wavelength, up to 40km reach
Cables (optional)	Dell Technologies Networking cable, SFP+ to SFP+, 10GbE, copper twinax direct

Technical specifications

Hardware specifications

Physical

4 integrated front 10GbE SFP+ dedicated ports,
2 10GbE can be used as stacking ports
USB (Type A) port for configuration via USB flash drive
Auto-negotiation for speed and flow control
Auto MDI/MDIX, port mirroring
Flow-based port mirroring
Broadcast storm control
Energy-Efficient Ethernet per port settings
Redundant variable speed fans
Air flow: I/O to power supply
Integrated power supply: 40W AC (N1524), 100W AC (N1548), 600W AC (N1524P, N1548P)
RJ45 console port with RS232 signaling (RJ-45 to female DB-9 connector cable included)
Dual firmware images on-board
Switching engine model: Store and forward

Chassis

Size (1RU, H x W x D):
N1524 and N1548: 1.7 in x 17.3 in x 10.1 in (43.2 mm x 440.0 mm x 257.0 mm)
N1524P and N1548P: 1.7 in x 17.3 in x 15.2 in (43.2 mm x 440.0 mm x 387.0 mm)
Approximate weight: 6.6lbs/3kg (N1524), 12.8lbs/5.8kg (N1524P), 8.8lbs/4kg (N1548), 15.4lbs/7kg (N1548P)
Rack mounting kit with 2 mounting brackets, bolts and cage nuts

Environmental

Power supply efficiency: 80% or better in all operating modes
Max. thermal output (BTU/hr): 103.1 (N1524), 2972 (N1524P), 152.2 (N1548), 5824.3 (N1548P)
Power consumption max (watts): 30.2 (N1524), 871 (N1524P), 44.6 (N1548), 1704 (N1548P)
Operating temperature: 32° to 113°F (0° to 45°C)
Operating humidity: 95%
Storage temperature: -40° to 149°F (-40° to 65°C)
Storage relative humidity: 85%

Performance

MAC addresses: 16K
Static routes: 256 (IPv4)/128 (IPv6)
Dynamic routes: 256 (IPv4)
Switch fabric capacity: 128Gbps (N1524 and N1524P) (full duplex); 176Gbps (N1548 and N1548P)
Forwarding rate: 128Mpps (86 Gbps) N1524 and N1524P
164Mpps (110 Gbps) N1548 and N1548P
Link aggregation: 64 LAG groups, 144 dynamic ports per stack, 8 member ports per LAG
Priority queues per port: 8
Line-rate Layer 2 switching: All (non-blocking)
Line-rate Layer 3 routing: All (non-blocking)
Flash memory: 256MB
Packet buffer memory: 1.5MB
CPU memory: 1GB
RIP routing interfaces: 128
VLAN routing interfaces: 128
VLANs supported: 512

Protocol-based VLANs: Supported
ARP entries: 2,048 (IPv4)/512 (IPv6)
NDP entries: 400
Access control lists (ACL): Supported
MAC and IP-based ACLs: Supported
Time-controlled ACLs: Supported
Max number of ACLs: 100
Max ACL rules system-wide: 2,048
Max rules per ACL: 1,023
Max ACL rules per interface (IPv4): 1,023 (ingress), 1,023 (egress)
Max ACL rules per interface (IPv6): 512 (ingress), 509 (egress)
Max VLAN interfaces with ACLs applied: 24

IEEE compliance

802.1AB LLDP
Dell Voice VLAN
Dell ISDP (inter-operates with devices running CDP)
802.1D Bridging, Spanning Tree
802.1p Ethernet Priority (User Provisioning and Mapping)
Dell Adjustable WRR and Strict Queue Scheduling
802.1Q VLAN Tagging, Double VLAN Tagging, GVRP
802.1S Multiple Spanning Tree (MSTP)
802.1v Protocol-based VLANs
802.1W Rapid Spanning Tree (RSTP)
Dell RSTP-Per VLAN (compatible with Cisco's RPVST+)
Dell Spanning tree optional features: STP root guard, BPDU guard, BPDU filtering
802.1X Network Access Control, Auto VLAN

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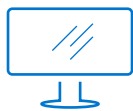
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