DELL EMC NETWORKING N1100 SERIES
SWITCHES

Fully managed 1/10GbE Layer 2 switching with Open Networking capabilities

The N1100 switch series offers a power-efficient Gigabit Ethernet (GbE) network-access switching solution with integrated 1GbE and 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 a 1Gbps (full-duplex) high availability stacking architecture that allows management of up to four switches from a single IP address. Fanless operation on select models, 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 up to 24 PoE/PoE+ ports. PoE power budgets up to 380W deliver clean power to network devices such as wireless access points (APs), Voiceover-IP (VoIP) handsets, video conferencing systems and security cameras.

Leverage familiar tools and practices

All N-Series switches include Dell EMC Networking OS 6, designed for easier deployment, greater interoperability and a lower learning curve for network administrators. One common command line interface (CLI) and graphic user interface (GUI) using a well-known command language gets skilled network administrators productive quickly. The N1100 switch series also supports the Open Network Install Environment (ONIE), enabling installation of alternate network operating systems.

Deploy with confidence at any scale

N1100 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 192 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. Details at Dell.com/LifetimeWarranty.*

Hardware, performance and efficiency

- Up to 48 line-rate GbE RJ45 ports and four integrated 10GbE SFP+ ports.
- Up to 12 PoE/PoE+ ports without an optional external power supply.
- Up to 192 1GbE ports in a 4-unit stack for high-density, high-availability in IDF's, MDFs and wiring closets.
- Non-stop forwarding and fast failover in stack configurations (24- and 48-port models only).
- Energy-Efficient Ethernet and lower power Ph-y's 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.

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 OpenManage Network Manager), Telnet or serial connection.
- Deploy, monitor and troubleshoot via integration with HiveManager cloud or on-premise management.
- Private VLAN extensions and Private VLAN Edge support.
- AAA authorization, TACACS+ accounting and RADIUS support for comprehensive secure access support.
- Authentication tiering allows network administrators to tier port authentication methods such as 802.1x, MAC Authentication
- Bypass and Captive Portal in priority order so that a single port can provide flexible access and security.
- Remote Switch Port Analyzer (RSPAN) monitors ports across a Layer 2 domain without costly dedicated network taps.

*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.
### Product | Description
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N100 series | N1108T-ON: 8x 10/100/1000Mbps half/full duplex RJ45 ports, 2x GbE RJ45 and 2x GbE SFP interfaces, 1 RU half-width form factor, fanless operation  
N1108P-ON: 8x 10/100/1000Mbps half/full duplex ports, 2x GbE RJ45 and 2x GbE SFP interfaces, 4xPoE/PoE+  
N1124T-ON: 24x 10/100/1000Mbps half/full duplex RJ45 ports, 4x SFP/SFP+  
N1124P-ON: 24x 10/100/1000Mbps half/full duplex RJ45 ports, 4x SFP+  
N1148T-ON: 48x 10/100/1000Mbps half/full duplex RJ45 ports, 4x SFP/SFP+/ 4x SFP+  
N1148P-ON: 48x 10/100/1000Mbps half/full duplex RJ45 ports, 4x SFP/SFP+/ 4x SFP+  

### Power cords | C33 to NEMA 5-15, 3M  
C33 to C14, 2M  
C15 to NEMA 5-15, 2M (C15 for PoE N-Series only)

### Optics (optional) | Transceiver, SFP, 1000BASE-T  
Transceiver, SFP, 1000BASE-SX, 850nm wavelength, up to 40km reach  
Transceiver, SFP, 1000BASE-LX, 1310nm wavelength, up to 10km reach  
Transceiver, SFP, 1000BASE-ZX, 1550nm wavelength, up to 300m reach  
Transceiver, SFP, 10GBase-SR, 850nm wavelength, up to 300m reach  
Transceiver, SFP, 10GBase-LR, 1310nm wavelength, up to 10km reach  
Transceiver, SFP, 10GBase-ER, 1550nm wavelength, up to 40km reach

### Cables (optional) | Dell Networking cable, SFP+ to SFP+, 10GbE, copper twinax direct

### Technical specifications

#### Physical
- 4x integrated front 10GbE SFP+ dedicated ports,  
- 2x 10GbE can be used as stacking ports (24  
- 48-port models), 2x 1GbE SFP links (8-port models)
- 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
- MAC and IP-based ACLs
- Time-controlled ACLs
- Max ACL rules (system-wide): 4K
- Max configurable rules per list: 1023
- Max ACL rules per interface and direction  
- (IPv4/L2): 1023
- Max ACL rules per interface and direction (IPv6):  
- 1021 ing/253 egr
- Max ACL logging rules (system-wide): 128
- Max number of ACLs: 100
- VLAN interfaces with ACLs applied: 24

#### Chassis
- Size (H x W x D):  
- N1108T-ON, N1108P-ON: 1.75 in x 8.5 in x 10 in  
- N1124T-ON, N1124P-ON, N1148T-ON, N1148P-ON: 1.75 in x 17 in x 10 in  
- Approximate weight: 3.54lbs, 1.61kg (N1108T-ON), 4.43lbs, 2.01kg (N1108P-ON), 6.72lbs, 3.05kg (N1124T-ON), 8.33lbs, 3.78kg (N1124P-ON), 8.33lbs, 3.78kg (N1148T-ON), 9.19lbs, 4.17kg (N1148P-ON)
- Rack mounting kit with 2 mounting brackets, bolts and cage nuts  
- 1RU tray to accommodate two half rack width switches (kit includes L-brackets for 800mm deep rack/ cabinet)

#### Environmental
- Power supply efficiency: 80% or better in all operating modes
- Max. thermal output (BTU/hr):  
- N1108T-ON: 35.72  
- N1108P-ON: 50.885  
- N1124T-ON: 85.166  
- N1124P-ON: 102.988  
- N1148T-ON: 156.615  
- N1148P-ON: 156.615  
- Power consumption max (watts):  
- N1108T-ON: 10.47  
- N1108P-ON: 10.89  
- N1124T-ON: 19.3  
- N1124P-ON: 30.18  
- N1148T-ON: 45.9  
- N1148P-ON: 45.9  
- Operating temperature: 32° to 113°F (0° to 45°C)
- Operating humidity: 85%  
- Storage relative humidity: 85%
- Storage temperature: 85%

#### Performance
- Switch fabric capacity: 24Gbps (N1108T-ON and N1108P-ON), 128Gbps (N1124T-ON and N1124P-ON), 176Gbps (N1148T-ON and N1148P-ON)
- Forwarding rate: 18Mpps (N1108T-ON and N1108P-ON)
- Link aggregation: 64 LAG groups, 144 dynamic ports per stack, 8 member ports per LAG
- Queues per port: 8
- Line-rate Layer 2 switching: All (non-blocking)

#### Access control lists (ACL)
- MAC addresses: 16K
- Switch fabric capacity: 24Gbps (N1108T-ON and N1108P-ON), 128Gbps (N1124T-ON and N1124P-ON), 176Gbps (N1148T-ON and N1148P-ON)
- Forwarding rate: 18Mpps (N1108T-ON and N1108P-ON), 96Mpps (N1124T-ON and N1124P-ON), 132Mpps (N1148T-ON and N1148P-ON)
- Link aggregation: 64 LAG groups, 144 dynamic ports per stack, 8 member ports per LAG
- Queues per port: 8

#### Line rate
- Packet buffer memory: 1.5MB (N1108T-ON and N1108P-ON), 4MB (N1124T-ON and N1124P-ON)
- CPU memory: 1GB
- 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 ACL rules (system-wide): 4K
- Max configurable rules per list: 1023
- Max ACL rules per interface and direction  
- (IPv4/L2): 1023
- Max ACL rules per interface and direction (IPv6):  
- 1021 ing/253 egr

#### Protocol-based VLANs: Supported
- NDP entries: 1021 ing/253 egr
- Max number of ACLs: 100
- 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
- 802.2 Logical Link Control
- 802.3 10BASE-T
- 802.5ab Gigabit Ethernet (1000BASE-T)
- 802.3ac Frame Extensions for VLAN Tagging
- 802.3ad Link Aggregation with LACP
- 802.3ae 10 Gigabit Ethernet (10GBASE-X)