

# Dell EMC PowerSwitch N1108EP-ON Switch



Fully managed 1GbE Layer 2 switching with Open Networking capabilities

The N1108EP-ON switch offers a power-efficient Gigabit Ethernet (GbE) network-access switching solution with integrated 1GbE uplinks. The switch supports flexible power options such as PoE pass-through or an external power adapter or both to provide power redundancy to the switch. The switch comes with high-performance capabilities and wire-speed performance, utilizing a non-blocking architecture to easily handle unexpected traffic loads. Fanless operation 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 1GbE switching solution with up to 8 PoE/PoE+ ports. PoE power budgets up to 137W delivering 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

N1108EP-ON switch includes Dell EMC Networking OS6, 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 N1108EP-ON switch also supports the Open Network Install Environment (ONIE), enabling installation of alternate network operating systems.

### Deploy with confidence

N1108EP-ON switch helps create performance assurance with a data rate up to 24Gbps (full duplex) and a forwarding rate up to 18Mpps. N1108EP-ON switch provides 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 10 line-rate GbE RJ45 ports and two integrated 1GbE SFP ports
- Up to 8 PoE/PoE+
- PoE pass-through to power the switch as well as PoE end devices (switch draws power from an uplink PoE device without needing a dedicated power supply)
- External power adapter
- Power redundancy between PoE pass-through and external power adapter
- 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
- 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

Product	Description
N1108EP-ON series	8x 10/100/1000Mbps half/full duplex ports, 2x GbE RJ45 and 2x GbE SFP interfaces, 8xPoE/PoE+, 137W PoE power budget RJ45, FastPoE, Perpetual PoE, 1 RU half-width, fanless operation
Power cords	C13 to NEMA 5-15, 3M C13 to C14, 2M
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

## Technical specifications

### Physical

8x 1GbE RJ-45 ports with 802.3at PoE  
2x 1GbE RJ-45 uplink ports with PoE pass through capability  
2x 1GbE SFP 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  
PoE pass through using 2x1GbE RJ-45 uplinks  
External power adapter: 280W  
PoE power budgets: 25W with one 60W PoE uplink, 75W with two 60W PoE uplink, and up to 137W with external power adapter  
Micro USB Console port (Micro USB to USB cable included)  
Dual firmware images on-board  
Switching engine model: Store and forward;

### Chassis

Size (H x W x D) in inches:  
1.62 x 8.23 x 9.84  
280W External Power Adapter:  
1.69x3.94x7.87  
Approximate weight:  
4lbs, 1.81kg  
280W External Power Adapter: 2.0lbs, 0.91kg  
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): 66.53  
Power consumption max (watts): 19.51

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  
Switch fabric capacity: 24Gbps  
Forwarding rate: 18Mpps (12 Gbps)  
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)  
Flash memory: 1GB  
Packet buffer memory: 1.5MB  
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  
Max ACL logging rules (system-wide): 128  
Max number of ACLs: 100  
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  
802.2 Logical Link Control  
802.3 10BASE-T  
802.3ab Gigabit Ethernet (1000BASE-T)  
802.3ac Frame Extensions for VLAN Tagging  
802.3ad Link Aggregation with LACP  
802.3ae 10 Gigabit Ethernet (10GBASE-X)  
802.3af PoE  
802.3at PoE+  
802.3AX LAG Load Balancing  
802.3az Energy Efficient Ethernet (EEE)  
802.3u Fast Ethernet (100BASE-TX) on Management Ports  
802.3x Flow Control  
802.3z Gigabit Ethernet (1000BASE-X)  
ANSI LLDP-MED (TIA-1057)  
MTU 9,216 bytes

### RFC compliance and additional features

#### General Internet protocols

General Internet protocols are supported. For a detailed list, please contact your Dell Technologies representative.

#### General IPv4 protocols

General IPv4 protocols are supported. For a detailed list, please contact your Dell Technologies representative.

## Technical specifications

### General IPv6 protocols

General IPv6 protocols are supported. For a detailed list, please contact your Dell Technologies representative.

### Multicast

2932 IPv4 MIB  
4541 IGMP v1/v2/v3 Snooping and Querier  
IEEE 802.1ag draft 8.1—Connectivity Fault Management

### Quality of service

2474 DiffServ Field  
2475 DiffServ Architecture  
2597 Assured Fwd PHB  
Dell L4 Trusted Mode (TCP/UDP)  
Dell UDLD  
Dell Flow Based QoS Services Mode (IPv4/IPv6)  
Dell Port Based QoS Services Mode

### Network Management and Security

1155 SMIv1  
1157 SNMPv1  
1212 Concise MIB Definitions  
1213 MIB-II  
1215 SNMP Traps  
1286 Bridge MIB  
1442 SMIv2  
1451 Manager-to-Manager MIB  
1492 TACACS+  
1493 Managed Objects for Bridges MIB  
1573 Evolution of Interfaces  
1612 DNS Resolver MIB Extensions  
1643 Ethernet-like MIB  
1757 RMON MIB  
1867 HTML/2.0 Forms with File Upload Extensions  
1901 Community-based SNMPv2  
1907 SNMPv2 MIB  
1908 Coexistence Between SNMPv1/v2  
2011 IP MIB  
2012 TCP MIB  
2013 UDP MIB  
2068 HTTP/1.1  
2096 IP Forwarding Table MIB  
2233 Interfaces Group using SMIv2  
2246 TLS v1

2271 SNMP Framework MIB  
2295 Transport Content Negotiation  
2296 Remote Variant Selection  
2576 Coexistence Between SNMPv1/v2/v3 SMIv2  
2578 SMIv2  
2579 Textual Conventions for SMIv2  
2580 Conformance Statements for SMIv2  
2613 RMON MIB  
2618 RADIUS Authentication MIB  
2620 RADIUS Accounting MIB  
2665 Ethernet-like Interfaces MIB  
2674 Extended Bridge MIB  
2737 ENTITY MIB  
2818 HTTP over TLS  
2819 RMON MIB (groups 1, 2, 3, 9)  
2863 Interfaces MIB  
2865 RADIUS  
2866 RADIUS Accounting  
2868 RADIUS Attributes for Tunnel Prot.  
2869 RADIUS Extensions  
3410 Internet Standard Mgmt. Framework  
3411 SNMP Management Framework  
3412 Message Processing and Dispatching  
3413 SNMP Applications  
3414 User-based security model  
3415 View-based control model  
3416 SNMPv2  
3418 SNMP MIB  
3577 RMON MIB  
3580 802.1X with RADIUS  
3737 Registry of RMOM MIB  
4086 Randomness Requirements  
4113 UDP MIB  
4251 SSHv2 Protocol  
4252 SSHv2 Authentication  
4253 SSHv2 Transport  
4254 SSHv2 Connection Protocol  
4419 SSHv2 Transport Layer Protocol  
4521 LDAP Extensions  
4716 SECSH Public Key File Format  
5246 TLS v1.2  
6101 SSL  
Dell Enterprise MIB supporting routing features draft-ietfhubmib-etherifmibv3-00.txt (Obsoletes RFC 2665)  
Dell LAG MIB Support for 802.3ad Functionality  
Dell sflow version 1.3 draft 5  
Dell 802.1x Monitor Mode

Dell Custom Login Banners  
Dell IP Address Filtering  
Dell Tiered Authentication  
Dell RSPAN  
Dell Python Scripting  
Dell Support Assist

### Regulatory, environment and other compliance

#### Safety and emissions

Australia/New Zealand: ACMA RCM Class A  
Canada: ICES Class A; cUL  
China: CCC Class A; NAL  
Europe: CE Class A  
Japan: VCCI Class A  
USA: FCC Class A; NRTL UL; FDA 21 CFR 1040.10 and 1040.11  
Eurasia Customs Union: EAC  
Germany: GS mark

Product meets Dell Technologies and safety standards in many countries inclusive of USA, Canada, EU, Japan, China. For more country-specific regulatory information and approvals, please see your Dell Technologies representative.

#### Immunity

EN 61000-4-5: Surge

#### RoHS

Product meets RoHS compliance standards in many countries inclusive of USA, EU, China, and India. For more country-specific RoHS compliance information, please see your Dell Technologies representative.  
EU WEEE  
EU Battery Directive  
REACH

#### Energy

Japan: JEL  
Certifications (available or coming soon)  
Available with US Trade Agreements Act (TAA) compliance.  
N-Series products have the necessary features to support a PCI-compliant network topology.

## IT Lifecycle Services for Networking

### Experts, insights and ease

Our highly trained experts, with innovative tools and proven processes, help you transform your IT investments into strategic advantages.



#### Plan & Design

Let us analyze your multivendor environment and deliver a comprehensive report and action plan to build upon the existing network and improve performance.



#### Deploy & Integrate

Get new wired or wireless network technology installed and configured with ProDeploy. Reduce costs, save time, and get up and running fast.



#### Educate

Ensure your staff builds the right skills for long-term success. Get certified on Dell EMC Networking technology and learn how to increase performance and optimize infrastructure.



#### Manage & Support

Gain access to technical experts and quickly resolve multivendor networking challenges with ProSupport. Spend less time resolving network issues and more time innovating.



#### Optimize

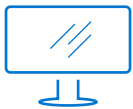
Maximize performance for dynamic IT environments with Dell EMC Optimize. Benefit from in-depth predictive analysis, remote monitoring and a dedicated systems analyst for your network.



#### Retire

We can help you resell or retire excess hardware while meeting local regulatory guidelines and acting in an environmentally responsible way.

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