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

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.

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
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.

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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.

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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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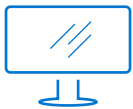
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