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
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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