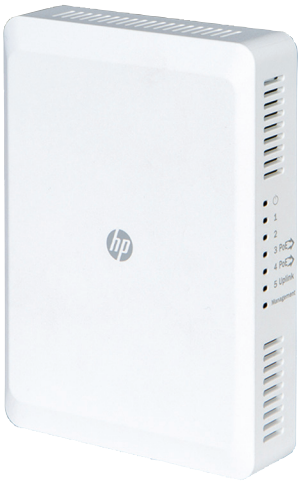
Data sheet

HP NJ5000 Walljack Switch Series



Key features

- Innovative switch with in-the-wall installation
- Easy, secure port expansion without new cabling
- PoE or PoE+ powered with PoE forwarding on up to two ports
- Supports both fully-managed and unmanaged modes
- HP Limited Lifetime warranty

Product overview

HP NJ5000 5G PoE+ Walljack is a compact 10/100/1000 switch that can be installed in a standard wall outlet box, quickly converting an existing single-port LAN wall outlet into four-switched Gigabit Ethernet ports. This walljack can provide a simple solution for adding network ports without running more cabling. Unlike conventional desktop switches, HP NJ5000 resides out of the way—literally in the wall—and so is more secure from theft and difficult to accidentally disconnect or damage.

The innovative HP NJ5000 Walljack provides four Ethernet ports for local connectivity plus one uplink port. It can be powered via standard PoE+ (IEEE 802.3at) or PoE (IEEE 802.3af), with capability of forwarding PoE on up to two ports to directly power-attached devices such as IP phones or wireless access points.

HP NJ5000 Walljack supports Layer 2 switching, with features like VLANs, Spanning Tree, RSTP, and MSTP. It comes with full enterprise-class management capability via the SNMP, CLI, and Web GUI, with flexibility of changing to unmanaged mode for plug-and-play simple deployment. The switch includes a limited lifetime warranty, as well as 24x7 phone support for the first three years of ownership.

Features and benefits

Connectivity

- Five-Port GbE wirespeed switching

  Five ports of gigabit switching; one designated uplink on the inside and four front ports facing downward

- PoE/PoE+ powered device

  Device is powered by Power over Ethernet. This simplifies set-up in a PoE-enabled environment. Compatible with IEEE 802.3af PoE or 802.3at PoE+. User must provide a standards-compliant PoE switch or PoE power injector

- Auto MDI/MDI-X

  Adjusts automatically for straight-through or crossover cables on all 10/100/1000 ports

- Half duplex and full duplex auto-negotiation on all ports

  Maximizes the performance through the network by taking advantage of full duplex operation

- IEEE 802.3x Flow Control

  Provides a flow throttling mechanism propagated through the network to prevent packet loss at a congested node

- Jumbo packet support

  Supports up to 9600-byte frame size to improve the performance of large data transfers

- Cable diagnostics

  Detects cable issues remotely using a browser-based tool

Layer 2 switching

- 8K MAC addresses

  Provide access to many Layer 2 devices

- Spanning Tree Protocol (STP)

  Supports standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

- VLAN support and tagging

  Supports up to 64 port-based VLANs and dynamic configuration of IEEE 802.1Q VLAN tagging, providing security between workgroups

- BPDU filtering

  Drops BPDU packets when STP is enabled globally but disabled on a specific port

- Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Protocol snooping

  Controls and manages the flooding of multicast packets in a Layer 2 network

Quality of service (QoS)

- Traffic prioritization

  Provides time-sensitive packets (like VoIP and video) with priority over other traffic based on DSCP or IEEE 802.1p classification; packets are mapped to eight hardware queues for more effective throughput

- Advanced classifier-based QoS

  Classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a per-port basis

- Broadcast control

  Allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic

- Rate limiting

  Sets per-port ingress enforced maximums and per-port, per-queue minimums

- Powerful QoS feature

  Supports the following congestion actions: strict priority queuing (SP), weighted round robin (WRR) queuing, and SP+WRR

- Selectable queue configuration

  Allows for the adjustment of queue priority to optimize traffic flow and increase performance. Select the number of queues and associated memory buffering that best meet the requirements of the network applications

Security

- Advanced access control lists (ACLs)

  Enables network traffic filtering and enhances network control using MAC- and IP-based ACLs; time-based ACLs allow for greater flexibility with managing network access

- IEEE 802.1X and RADIUS network logins

  Controls port-based access for authentication and accountability

- Port security

  Combines and extends IEEE 802.1X and MAC authentication to provide MAC-based network access control

- Secure Sockets Layer (SSL)

  Encrypts all HTTP traffic, allowing safe access to the browser-based management GUI in the switch

- Port isolation

  The port isolation feature isolates Layer 2 traffic for data privacy and security without using VLANs. This feature can also be used to isolate the hosts in a VLAN from one another

- ARP attack protection

  The ARP detection feature enables access devices to block ARP packets from unauthorized clients to prevent user spoofing and gateway spoofing attacks

- Automatic VLAN assignment

  Assigns users automatically to the appropriate VLAN based on their identity, location, and time of day

- STP BPDU port protection

  Blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks

- STP root guard

  Protects the root bridge from malicious attacks or configuration mistakes

- Automatic denial-of-service protection

  Monitors for malicious attacks and protects the network by blocking the attacks

- Management password

  Provides security so that only authorized access to the Web browser interface is allowed

Management

- Command-line interface (CLI)

  Provides a secure, easy-to-use CLI for configuring the module via SSH or a switch console; provides direct real-time session visibility

- Secure Web GUI

  Provides a secure, easy-to-use graphical interface for configuring the module via HTTPS

- Console port

  Simplified setup and initial configuration using an RJ-45 console port

- SNMPv1, v2c, and v3

  Facilitates management of the switch, as the device can be discovered and monitored from an SNMP management station

- Network management

  HP Intelligent Management Center (IMC) centrally configures, updates, monitors, and troubleshoots

- Management Security

  Restricts access to critical configuration commands; offers multiple privilege levels with password protection; ACLs secure Telnet and SNMP access; local and remote syslog capabilities can log administrative actions

- Network Time Protocol (NTP)

  Synchronizes timekeeping among distributed time servers and clients; keeps timekeeping consistent among all clock-dependent devices within the network so that the devices can provide diverse applications based on the consistent time

- Dual flash images

  Provides independent primary and secondary operating system files for backup while upgrading

- FTP, TFTP, and SFTP support

  Offers different mechanisms for configuration updates; FTP allows bidirectional transfers over a TCP/IP network; trivial FTP (TFTP) is a simpler method using User Datagram Protocol (UDP); Secure File Transfer Protocol (SFTP) runs over an SSH tunnel to provide additional security

- Remote monitoring (RMON)

  Uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group

- Telnet/SSH support

  Provides a secure access to remotely manage the device through a command-line interface

Convergence

- LLDP Media Endpoint Discovery (MED)

  Defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones

- PSE PoE forwarding

  Device can forward PoE power to attached downstream devices. If powered by a PoE+ switch or power injector, unit can power two attached devices with a total power budget of 15.4 watts; if powered by a PoE switch or injector, unit can power one attached device with a total power budget of 4 watts.

- PoE allocations

  Supports multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user-specified) to allocate PoE power for more efficient energy savings

- Auto voice VLAN

  Recognizes IP phones and automatically assigns voice traffic to dedicated VLAN for IP phones

Additional information

- Green initiative support

  Provides support for RoHS and WEEE regulations

- Green IT and power

  Improves energy efficiency through the use of the latest advances in silicon development; shuts off unused ports reducing energy costs

- Energy Efficient Ethernet

  Compliant with IEEE 802.3az standard requirements to save energy during periods of low data activity

Warranty and support

- Limited Lifetime Warranty 2.0

  Advance hardware replacement with next-business-day delivery (available in most countries). See hp.com/networking/warrantysummary for duration details

- Electronic and telephone support (for Limited Lifetime Warranty 2.0)

  Limited 24x7 telephone support is available from HP for the first three years; limited electronic and business hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to hp.com/networking/contact-support; for details on the duration of support provided with your product purchase, refer to hp.com/networking/warrantysummary

HP NJ5000 Walljack Switch Series

Specifications

	HP NJ5000 5G PoE+ Walljack (JH237A)
I/O ports and slots	5 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) Supports a maximum of 5 autosensing 10/100/1000 ports
Additional ports and slots	1 RJ-45 serial console port
Physical characteristics	
Dimensions	3.39(w) x 1.38(d) x 4.72(h) in. (8.6 x 3.5 x 12 cm)
Weight	0.44 lb (0.2 kg)
Memory and processor	Single Core @ 500 MHz, 32 MB flash; Packet buffer size: 512 KB, 128 MB DDR SODIMM
Mounting and enclosure	Mounts in a standard wall outlet box or on optional Flush Mount/Desktop Mount kit
Performance	
100 Mb Latency	< 40 µs (LIFO 64-byte packets)
1000 Mb Latency	< 8 µs (LIFO 64-byte packets)
Throughput	Up to 7.4 Mpps (64-byte packets)
Routing/Switching capacity	10 Gbps
MAC address table size	8192 entries
Reliability	
MTBF (years)	50
Environment	
Operating temperature	32°F to 113°F (0°C to 45°C)
Operating relative humidity	5% to 95%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	5% to 95%, noncondensing
Altitude	Up to 16,404 ft (5 km)
Acoustic	Pressure: 0 dB No Fan
Electrical characteristics	
Description	The device is powered by a standard IEEE 802.3af PoE or IEEE 802.3at PoE+ power source. Local DC power is not supported. User must provide a standards-compliant PoE/PoE+ switch or power injector in order to power this device.
Voltage	Powered by PoE (depending on power supply chosen)
Maximum power rating	26.8 W
Idle power	6.7 W
	Notes Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.

Specifications (continued)

Safety	CSA 22.2 No. 60950; EN 60950/IEC 60950; UL 60950
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A
Management	IMC—Intelligent Management Center; Command-line interface; Web browser; SNMP manager; IEEE 802.3 Ethernet MIB
Notes	Device does not come with a power adapter for local powering. Only powered by Power over Ethernet, either a PoE+ or PoE switch or a PoE power injector. Power source must be provided by the user. Console cable is not provided with HP NJ5000 5G PoE+. The console cable 5184-6719 is shipped with many HP products, such as HP 1620, HP 19XX, HP 5120 SI and HP 5130 EI switches. The part can also be purchased separately on HP parts store PartSurfer.
Services	Refer to the HP website at hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Standards and Protocols
(applies to all products in series)

Device management	RFC 2819 RMON	Web UI	
General protocols	IEEE 802.1D Spanning Tree Protocol IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1s Multiple Spanning Trees	IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3 Type 10BASE-T IEEE 802.3ab Type 1000BASE-TDeep packet inspection IEEE 802.3af Power over Ethernet	IEEE 802.3at Power over Ethernet Plus IEEE 802.3az Energy Efficient Ethernet IEEE 802.3i 10BASE-T IEEE 802.3x Flow Control
MIBs	RFC 1213 MIB II RFC 1493 Bridge MIB RFC 2021 RMONv2 MIB RFC 2233 Interface MIB RFC 2233 Interfaces MIB RFC 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB	RFC 2573 SNMP-Notification MIB RFC 2573 SNMP-Target MIB RFC 2613 SMON MIB RFC 2618 RADIUS Client MIB RFC 2620 RADIUS Accounting MIB RFC 2665 Ethernet-Like-MIB RFC 2667 IP Tunnel MIB	RFC 2668 802.3 MAU MIB RFC 2674 802.1p and IEEE 802.1Q Bridge MIB RFC 2737 Entity MIB (Version 2) RFC 3414 SNMP-User-based-SM MIB RFC 3415 SNMP-View-based-ACM MIB RFC 3418 MIB for SNMPv3
Network management	IEEE 802.1AB Link Layer Discovery Protocol (LLDP) RFC 1157 SNMPv1 RFC 1215 SNMP Generic Traps RFC 2571 SNMP Management Frameworks RFC 2572 SNMPv3 Message Processing	RFC 2573 SNMPv3 Applications RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm), and 9 (events) RFC 3414 User-based Security Model (USM) for the Simple Network Management Protocol (SNMPv3)	RFC 3415 SNMPv3 View-based Access Control Model (VACM) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)
QoS/CoS	IEEE 802.1p (CoS)	RFC 2474 DiffServ Precedence, including 8 queues/port	
Security		IEEE 802.1X Port-based Network Access Control	

HP NJ5000 Walljack Switch Series accessories

Power Supply	HP 1-port Power Injector (J9407B) HP Single-Port 802.3at Gigabit PoE In-Line Power Supply (J9867A)
Mounting Kit	HP Unified Wired-WLAN Walljack Table/Flush Wall Mount Kit (JL022A)

Learn more at
hp.com/networking

Sign up for updates
hp.com/go/getupdated

Share with colleagues

Rate this document

4AA4-5619ENW, August 2015