

# PA-800 Series

Palo Alto Networks PA-800 Series ML-Powered NGFWs, comprising the PA-850 and PA-820, are designed to provide secure connectivity for organizations' branch offices as well as midsize businesses.



PA-850

The controlling element of the PA-800 Series ML-Powered Next-Generation Firewall (NGFW) is PAN-OS®, which natively classifies all traffic, inclusive of applications, threats, and content, and then ties that traffic to the user regardless of location or device type. The application, content, and user—in other words, the elements that run your business—then serve as the basis of your security policies, resulting in improved security posture and reduced incident response time.

# Key Security and Connectivity Features

## Classifies all applications, on all ports, all the time

- Identifies the application, regardless of port, SSL/SSH encryption, or evasive technique employed.
- Uses the application, not the port, as the basis for all your safe enablement policy decisions: allow, deny, schedule, inspect, and apply traffic-shaping.
- Categorizes unidentified applications for policy control, threat forensics, or App-ID™ technology development.
- Provides full visibility into the details of all TLS-encrypted connections and stops threats hidden in encrypted traffic, including traffic that uses TLS 1.3 and HTTP/2 protocols.

## Enforces security policies for any user, anywhere

- Deploys consistent policies to local and remote users running on the Windows®, macOS®, Linux, Android®, or Apple iOS platforms.
- Enables agentless integration with Microsoft Active Directory® and Terminal Services, LDAP, Novell eDirectory™, and Citrix.
- Easily integrates your firewall policies with 802.1X wireless, proxies, network access control, and any other source of user identity information.

## Extends native protection across all attack vectors with cloud-delivered security subscriptions

- **Threat Prevention**—inspects all traffic to automatically block known vulnerabilities, malware, vulnerability exploits, spyware, command and control (C2), and custom intrusion prevention system (IPS) signatures.
- **WildFire® malware prevention**—protects against unknown file-based threats, delivering automated prevention in seconds for most new threats across networks, endpoints, and clouds.
- **URL Filtering**—prevents access to malicious sites and protects users against web-based threats.
- **DNS Security**—detects and blocks known and unknown threats over DNS while predictive analytics disrupt attacks using DNS for C2 or data theft.
- **IoT Security**—discovers all unmanaged devices in your network, identifies risks and vulnerabilities, and automates enforcement policies for your ML-Powered NGFW using a new Device-ID™ policy construct.

## Enables SD-WAN functionality

- Easily adopt SD-WAN by simply enabling it on your existing firewalls.
- Enables you to safely implement SD-WAN, which is natively integrated with our industry-leading security.
- Delivers an exceptional end user experience by minimizing latency, jitter, and packet loss.

**Table 1: PA-800 Series Performance and Capacities<sup>1</sup>**

	PA-850	PA-820
Firewall throughput (HTTP/appmix) <sup>2</sup>	2.1/2.1 Gbps	1.8/1.6 Gbps
Threat Prevention throughput (HTTP/appmix) <sup>3</sup>	1.0/1.2 Gbps	850/900 Mbps
IPsec VPN throughput <sup>4</sup>	1.6 Gbps	1.3 Gbps
New sessions per second <sup>5</sup>	13,000	8,600
Max sessions	192,000	128,000

1. Results were measured on PAN-OS 10.0.  
 2. Firewall throughput is measured with App-ID and logging enabled, using 64 KB HTTP/appmix transactions.  
 3. Threat Prevention throughput is measured with App-ID, IPS, antivirus, anti-spyware, WildFire, file blocking, and logging enabled, utilizing 64 KB HTTP/appmix transactions.  
 4. IPsec VPN throughput is measured with 64 KB HTTP transactions and logging enabled.  
 5. New sessions per second is measured with application override utilizing 1 byte HTTP transactions.

PA-800 Series ML-Powered NGFWs support a wide range of networking features that enable you to more easily integrate our security features into your existing network.

**Table 2: PA-800 Series Networking Features**

Interface Modes
L2, L3, tap, virtual wire (transparent mode)
Routing
OSPFv2/v3 with graceful restart, BGP with graceful restart, RIP, static routing
Policy-based forwarding
Point-to-Point Protocol over Ethernet (PPPoE)
Multicast: PIM-SM, PIM-SSM, IGMP v1, v2, and v3
SD-WAN
Path quality measurement (jitter, packet loss, latency)
Initial path selection (PBF)
Dynamic path change
IPv6
L2, L3, tap, virtual wire (transparent mode)
Features: App-ID, User-ID, Content-ID, WildFire, and SSL Decryption
SLAAC
IPsec VPN
Key exchange: manual key, IKEv1, and IKEv2 (pre-shared key, certificate-based authentication)
Encryption: 3DES, AES (128-bit, 192-bit, 256-bit)
Authentication: MD5, SHA-1, SHA-256, SHA-384, SHA-512

**Table 2: PA-800 Series Networking Features (cont.)**

VLANs
802.1Q VLAN tags per device/per interface: 4,094/4,094
Aggregate interfaces (802.3ad), LACP
Network Address Translation
NAT modes (IPv4): static IP, dynamic IP, dynamic IP and port (port address translation)
NAT64, NPTv6
Additional NAT features: dynamic IP reservation, tunable dynamic IP and port oversubscription
High Availability
Modes: active/active, active/passive
Failure detection: path monitoring, interface monitoring
Zero Touch Provisioning (ZTP)
Available with -ZTP SKUs (PA-850-ZTP, PA-820-ZTP) Requires Panorama 9.1.3 or higher

**Table 3: PA-800 Series Hardware Specifications**

I/O
PA-850: 10/100/1000 (4), Gigabit SFP (8) or PA-850: 10/100/1000 (4), Gigabit SFP (4), 10 Gigabit SFP+ (4) PA-820: 10/100/1000 (4), Gigabit SFP (8)
Management I/O
10/100/1000 out-of-band management port (1) 10/100/1000 high availability (2) RJ-45 console port (1) USB port (1) Micro USB console port (1)
Storage Capacity
240 GB SSD
Power Supply
PA-850: AC 450 W power supplies (2); one is redundant PA-820: Fixed AC 200 W power supply (1)
Power Consumption
Maximum: PA-850: 240 W; PA-820: 120 W Average: PA-850: 64 W; PA-820: 41 W

**Table 3: PA-800 Series Hardware Specs. (cont.)**

Max BTU/hr
256
Input Voltage (Input Frequency)
100–240 VAC (50–60 Hz)
Max Current Consumption
PA-850: 2.0 A @ 100 VAC, 1.0 A @ 240 VAC PA-820: 1.0 A @ 100 VAC, 0.5 A @ 240 VAC
Max Inrush Current
PA-850: 1.0 A @ 230 VAC, 1.84 A @ 120 VAC PA-820: 0.4 A @ 230 VAC, 0.96 A @ 120 VAC
Rack Mount (Dimensions)
PA-850: 1U, 19" standard rack (1.75" H x 14.5" D x 17.125" W) PA-820: 1U, 19" standard rack (1.75" H x 14" D x 17.125" W)
Weight (Standalone Device/As Shipped)
PA-850: 13.5 lbs / 21.5 lbs PA-820: 11 lbs / 18 lbs
Safety
cTUVus, CB
EMI
FCC Class A, CE Class A, VCCI Class A
Certifications
See <a href="https://paloaltonetworks.com/company/certifications.html">paloaltonetworks.com/company/certifications.html</a>
Environment
Operating temperature: 32° to 104° F, 0° to 40° C Non-operating temperature: -4° to 158° F, -20° to 70° C
Airflow
Front to back

To learn more about the features and associated capacities of the PA-800 series, please visit [paloaltonetworks.com/network-security/next-generation-firewall/pa-800-series](https://paloaltonetworks.com/network-security/next-generation-firewall/pa-800-series).