

NETGATE 8300



FIREWALL. VPN. ROUTER.

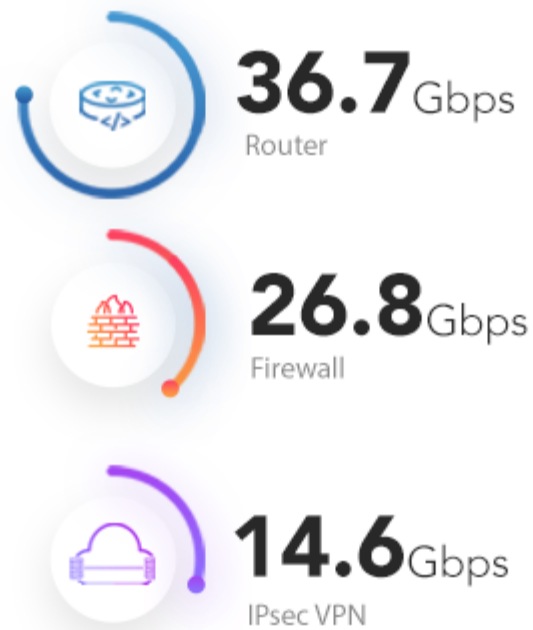
Experience unparalleled value and performance with the Netgate® 8300 Security Gateway powered by pfSense® Plus software. The Netgate 8300 is tailored for medium to large business, xSP, MSP/MSSP with high connectivity and stability requirements. This unit is enterprise-ready, featuring Netgate's most expandable chassis and hot-swappable PSUs, ensuring mission critical reliability and ease of maintenance.

This security gateway boasts a formidable 2.0 GHz, 8-core, 16-thread Intel® Xeon® D-1733NT processor with Intel AVX-512 for exceptional Firewall and VPN performance. The Netgate 8300 harnesses the power of Intel AVX-512 to accelerate VPN operations, bolstering throughput and reducing overhead while optimizing core firewall functions for enhanced network security and performance. With quad 10G SFP+ ports, quad 1G SFP ports, and triple 2.5G RJ-45 ports, plus expandability to 25G and 100G ports via PCIe cards, the Netgate 8300 future-proofs your network infrastructure, scaling effortlessly with your business.

The Netgate 8300 maximizes your investment by delivering high-performance throughput at an incredibly competitive cost per gigabit. Compared to the 1541, it boasts a remarkable 47% firewall performance gain, 100% improvement in VPN and routing throughput, and a 175% increase in port density.

This compact 1U chassis optimizes space efficiency in server rooms and data centers, ideal for mission-critical deployments requiring robust high availability options and hotswap dual-power capability. Redefine your network standards by offering superior scalability, performance, and cost efficiency that exceeds industry expectations with Netgate's 8300 Security Gateway.

PERFORMANCE



iperf3-bidir (32 Streams) tests were used to measure throughput.
See our hardware comparison chart below for greater detail.

L3 Forwarding

(Router)

- IPERF3 Traffic: 36.7 Gbps

Firewall

(10k ACLs)

- IPERF3 Traffic: 26.8 Gbps

IPsec VPN

(AES-GCM-128 w/AES-NI)

- IPERF3 Traffic: 14.6 Gbps

Netgate 8300 performance tests conducted with pfSense Plus software version 24.03

The Netgate 8300 is also available with TNSR software. TNSR is a high-performance software router capable of producing considerable VPN and Routing performance increases far beyond the limits of pfSense Plus software.

SPECIFICATIONS



**Eight Core Intel
Xeon 2.0 GHz CPU**



**(11) independent ports +
(2) PCIe expansion slots**



32 GB ECC DDR4

CPU: Eight Core 2.0 GHz Intel Xeon CPU. Delivers 36 Gbps routing for everyday iPerf3-bidirectional traffic and over 26 Gbps of firewall throughput

Network Ports: 11 Independent 1G, 2.5G, and 10G ports. Maximum port flexibility - with 1G, 2.5G, and 10G Ethernet configurable as WAN or LAN across the combination of 11 RJ45 and SFP ports

Expandability: 1 x PCIe 3.0 x8 port for half-length low profile cards and 1 x PCIe 4.0 x16 port for full-height three-quarters length cards

Storage: 512 GB NVMe 2280 M-Key M.2 SSD

Memory: 32 GB DDR4, ECC, 3200MHz via 2x 16 GB UDIMM

Power: Dual hot-swappable PSU bays. 1 x Internal 500W PSU (hot-swappable) included, 110V/240V AC input

Cooling: Active - 7x chassis fans at the rear of the enclosure



Netgate's world-class firewall, VPN,
and router solution



1 MILLION+

business, government and educational institutions across
the world rely on pfSense Plus software for business-assured
edge and cloud secure networking

pfSense Plus software provides the performance, flexibility, reliability, and business assurance expected from leading secure networking applications:

- Exceptional performance
- Flexible 3rd-party application options
- Traditional management mechanisms
- Proven reliability
- Complete business assurance support

All at a fraction of the cost of proprietary alternatives, pfSense Plus software is the perfect answer. Popular pfSense Plus use cases include firewall, VPN, routing, load balancing, traffic shaping, captive portal, DNS/DHCP Server, IDS/IPS, failover WAN, and more.

HARDWARE SPECIFICATIONS:

CPU	Intel Xeon D-1733NT, 8-core @ 2.0 GHz (Ice Lake Family)
CPU Cores	8-core
Physical Network I/O ports	(4) 10GbE SFP+ cage ports (4) 1GbE SFP cage ports (3) 2.5GbE RJ-45 "direct" (unswitched) Intel i226 ethernet ports
Storage	512 GB NVMe 2280 M-Key M.2 SSD
Memory	32 GB DDR4, ECC, 3200MHz via 2x 16 GB UDIMM
Physical Expansion Card Slots	2x m.2 M-Key slots for NVMe SSD storage via custom vertical PCIe riser card 1x PCIe 3.0 x8 slot Supports half-length low profile cards and "up-plugging" of x16 cards (limited to x8 speeds) 1x PCIe 4.0 x16 slot Supports full-height three-quarter-length cards
Console Port	1x RJ45 auto-detect console port Cisco pinout USB-A to RJ45 console cable included
Management Port	1x IPMI management port via dedicated RJ45
USB Ports	2 x USB 3.2 jacks (USB-A female)
RTC (battery)	CR2032 (20mm) lithium coin cell onboard, 3VDC
LED	3x RGB LEDs – software/firmware controllable via Aspeed AST2620 BMC
Power Buttons / Switches	1x illuminated push button (front) - software controlled 1x mechanical toggle switch (rear)
Enclosure	Sheet steel enclosure, powder-coated finish 16.92 x 13 x 1.72 inches* 430 x 330 x 43.8 mm 13.33 lbs. / 6.05 kg. *excluding rack ears, handles, and hot-swap PSU protrusions
Mounting	1U rackmount - chassis is compatible with industry standard sliding rails Netgate 8300 Sliding Rail Kit
Cooling	Active - internal chassis cooling fans at the rear of the enclosure *airflow direction is front-to-back
Power	BASE:

	2x Hot-swappable PSU bays 1 x Internal 500W PSU 100V/240V AC input (hot-swappable) included AC Inlet: IEC320-C16 (3-pin) 1 x NEMA 5-15P to IEC320-C15 US power cord included Note: All 8300 systems have dual hot-swappable PSU bays. BASE systems come with 1 PSU only. If you need 2 PSUs, choose a MAX or TAA systems with dual PSUs pre-installed.
Environmental	Ambient temperature range of 0°C (32°F) to 40°C (104°F)
Certifications	CE, CB, FCC (Class A), ISED (Class A), RoHS, UL, ACMA, UKCA

KEY FEATURES

LOW TOTAL COST OF OWNERSHIP

- pfSense+ software updates and security patches are provided free of charge for the life of the product
- No artificial limits or add-ons are needed for full functionality
- Enjoy unlimited users, firewall rules, IPsec tunnels, dual WAN, and more without additional usage or feature-based pricing
- Low power requirements to save money
- Designed for an extended deployment lifetime

GROWS WITH YOU

- Get all the security features you need to protect your business
- Flexible configuration and support for multi-WAN, High Availability, VPN, load balancing, reporting and monitoring, etc
Add optional packages such as [Snort](#) or [Suricata](#) for IDS/IPS and network security monitoring. ¹

EASY GUI MANAGEMENT

- Intuitive web-based GUI includes :
 - Configure advanced routing, firewall rules, VPNs, multi-WAN, and traffic shaping
 - Dashboard with real-time traffic graphs
 - Detailed diagnostics and reporting tools

SECURE REMOTE ACCESS

- Highly flexible, suitable for remote access and site-to-site connections, supporting a wide range of VPN types, including IPsec, OpenVPN, and WireGuard,
- Simplified multi-vendor supported VPN creation and management
- Secure connectivity for mobile and remote workers to the cloud
- Use the Amazon VPC Wizard to easily set up VPN connections with your Amazon EC2 cloud.

Best For:

- Medium-to-large sized organizations and businesses
- Enterprise
- Co-location, high availability use cases
- Service Providers and Managed Service Providers

Software Features

Router:

- Policy-based routing
- Multiple IP addresses per interface
- Multiple WAN connections (with load balancing and failover)
- Complex NAT mapping (outbound and inbound)
- Concurrent IPv4 and IPv6 support
- Optional multi-node High Availability (HA) clustering
- Dynamic routing protocol support [w/pkg]

Firewall, Attack Prevention, & Content Filtering:

- Extensive firewall rules
- Stateful filtering & packet inspection
- Per-interface configuration
- Ethernet (layer 2) rule-based packet filtering
- IP/DNS-based filtering and blacklisting [w/pkg]
- IDS/IPS with Snort-based packet analyzer [w/pkg]
- Layer 7 application detection and blocking [w/pkg]
- Reverse proxy [w/pkg]
- Geo/country blocking, IP block lists [w/pkg]

VPN:

- Site-to-site and remote access VPNs
- IPsec, OpenVPN, WireGuard®
- Split tunneling
- IPsec policy-based and route-based protocol support

- OpenVPN Data Channel Offload (DCO)
- Intel IPsec Multi-Buffer (IIMB)
- Intel QuickAssist Technology (QAT)

User Authentication & System Security:

- User and group-based privileges
- LDAP authentication
- Automatic lockout after repeated attempts
- Optional key-based SSH access
- Traffic and bandwidth shaping
- Captive portal with user data transfer quotas
- External RADIUS authentication [w/pkg]

Configuration:

- Setup wizard for initial configuration
- Encrypted automatic backup to Netgate server
- Easy configuration backup/restore
- Multi-language support

Monitoring & Reporting:

- Customizable dashboard with widgets
- Local monitoring graphs
- Remote logging
- Network usage monitoring [w/pkg]
- Network diagnostics [w/pkg]