



Hardware Comparison

The Netgate® hardware comparison chart is designed to give visitors a quick side-by-side comparison of Netgate appliances running pfSense® Plus software against one another. While most of this data (and more) exists on individual product pages, we believe the chart makes it fast and easy for viewers to quickly determine which appliance is best for their needs.




The comparison matrix has two critical dimensions:

1. Packet Sizes: iPerf3 and IMIX
2. Secure Networking Function: Routing (Forwarding), Firewall, VPN

This provides a very clear manner by which products can be compared - and under different levels of user-experienced traffic conditions. We see this as crucial given our user base varies, literally, from home consumers (with relatively light bandwidth and firewall needs) all the way to sophisticated enterprises (who demand predictable performance under the most strenuous encryption and packet mix conditions).



Netgate Hardware Comparison Chart

WHO			NEEDS	PERFORMANCE ⁵		HARDWARE			
				iPerf3 ² Basic Traffic (Primarily Data Download)	IMIX ³ Complex Traffic (Voice, Data, and Video)	CPU	Storage	Memory	Network Ports
 Netgate 1100 Desktop \$189	Home	✓	<ul style="list-style-type: none"> - Cost efficient / Low power - Sleek, compact - Silent operation (fanless) - Put on a desktop, shelf, or wall 	L3 Forwarding: 927 Mbps Firewall: 607 Mbps (10k ACLs) IPsec VPN: 247 Mbps (AES-GCM-128 + SHA1 w/ SafeKey)	L3 Forwarding: 472 Mbps Firewall: 191 Mbps (10k ACLs) IPsec VPN: 90 Mbps (AES-GCM-128 + SHA1 w/ SafeKey)	Dual Core Cortex-A53 ARM64 SoC @ 1.2GHz	8 GB eMMC	1 GB DDR4	(3) switched ports: (3) 1 Gbps Marvell switch with 1 Gbps uplink
 Netgate 2100 Desktop \$349	Home Home Pro Branch/Small Business	✓ ✓ ✓	<ul style="list-style-type: none"> - Cost efficient / Low power - Sleek, compact - Silent operation (fanless) - Put on a desktop, shelf, or wall - Upgradeable Storage - Equipped for memory-intensive packages, e.g., IDS/IPS 	L3 Forwarding: 2.20 Gbps Firewall: 964 Mbps (10k ACLs) IPsec VPN: 254 Mbps (AES-GCM-128 + SHA1 w/ SafeKey)	L3 Forwarding: 594 Mbps Firewall: 249 Mbps (10k ACLs) IPsec VPN: 90 Mbps (AES-GCM-128 + SHA1 w/ SafeKey)	Dual Core Cortex-A53 ARM64 SoC @ 1.2GHz	8 GB eMMC (Upgradeable)	4 GB DDR4	(5) independent and switched ports: (1) 1 GbE (RJ45/SFP combo) (4) 1 Gbps LAN Marvell switch with 2.5 Gbps uplink
 Netgate 4100 Desktop \$599	Home Branch/Small Business Medium Business	✓ ✓ ✓	<ul style="list-style-type: none"> - Silent operation (fanless) - Desktop, wall, or 1U rack mounting - Upgradeable storage (M.2 slots) - Handles demanding IDS/IPS needs - QuickAssist Technology & AES-NI - High Availability - 1 and 2.5 GbE Network Interfaces 	L3 Forwarding: 8.15 Gbps Firewall: 4.09 Gbps (10k ACLs) IPsec VPN: 960 Mbps (AES-GCM-128 w/GAT)	L3 Forwarding: 3.24 Gbps Firewall: 1.40 Gbps (10k ACLs) IPsec VPN: 312 Mbps (AES-GCM-128 w/GAT)	Intel® Atom® C3338R with QAT, 2-core @ 1.8 GHz	16 GB eMMC (Upgradeable to 128 GB NVMe M.2 SSD)	4 GB DDR4	(6) independent ports: (2) 1 Gbps (RJ45 copper / SFP fiber) Combo WAN ports (4) 2.5 Gbps RJ-45 "direct" (unswitched) ethernet LAN ports
 Netgate 6100 Desktop \$799	Home Branch/Small Business Medium Business	✓ ✓ ✓	<ul style="list-style-type: none"> - Silent operation (fanless) - Desktop, wall, or 1U rack mounting - Upgradeable storage (M.2 slots) - Handles demanding IDS/IPS needs - QuickAssist Technology & AES-NI - High Availability - 1, 2.5, and 10 GbE Network Interfaces - Runs pfSense® Plus or TNSR® Software 	L3 Forwarding: 18.50 Gbps Firewall: 9.93 Gbps (10k ACLs) IPsec VPN: 1.77 Gbps (AES-GCM-128 w/GAT)	L3 Forwarding: 6.08 Gbps Firewall: 2.73 Gbps (10k ACLs) IPsec VPN: 552 Mbps (AES-GCM-128 w/GAT)	Quad Core Intel® Atom™ C3558 @ 2.2GHz	16 GB eMMC (Upgradeable to 128 GB NVMe M.2 SSD)	8 GB DDR4	(8) independent ports: (2) 10 GbE SFP+ (4) 2.5 GbE Intel® i225 (2) 1 GbE Combo Ports (RJ45/SFP) Intel SoC Integrated MAC
 Netgate 8200 Rack \$1395	Medium Business Large Business Data Center	✓ ✓ ✓	<ul style="list-style-type: none"> - Rack Mount - Quiet integrated cooling fan - Upgradeable storage (M.2 slots) - QuickAssist Technology & AES-NI - High Availability - 1, 2.5, and 10 GbE Network Interfaces - Runs pfSense® Plus or TNSR® Software 	L3 Forwarding: 18.60 Gbps Firewall: 18.55 Gbps (10k ACLs) IPsec VPN: 3.24 Gbps (AES-GCM-128 w/GAT)	L3 Forwarding: 11.76 Gbps Firewall: 5.1 Gbps (10k ACLs) IPsec VPN: 810 Mbps (AES-GCM-128 w/GAT)	Eight Core Intel® Atom™ C3758R @ 2.4GHz	128 GB NVMe M.2 SSD	16 GB DDR4	(8) independent ports: (2) 10 GbE SFP+ (4) 2.5 GbE Intel® i226 (2) 1 GbE Combo Ports (RJ45/SFP) Intel SoC Integrated MAC
 Netgate 1537 Rack \$2349	Medium Business Large Business Data Center	✓ ✓ ✓	<ul style="list-style-type: none"> - Rack Mount - Expandable memory - Expandable storage - Network expandable - High Availability - Runs pfSense® Plus or TNSR® Software 	L3 Forwarding: 18.80 Gbps Firewall: 18.62 Gbps (10k ACLs) IPsec VPN: 7.12 Gbps (AES-GCM-128 w/GAT)	L3 Forwarding: 15.22 Gbps Firewall: 10.24 Gbps (10k ACLs) IPsec VPN: 1.65 Gbps (AES-GCM-128 w/GAT)	Eight Core Intel Xeon® 1.7 GHz	500 GB M.2 SSD (Expandable to 2x 256GB SSD SATA RAID1)	8 GB DDR4 RDIMM (Expandable to 32GB ECC)	Up to (8) independent ports: (2) 1 GbE LAN/WAN via Intel i350-AM2 (2) 10 GbE SFP+ LAN/WAN via SoC (Expandable to 4-Port Intel 1 GbE) (Expandable to 2- or 4-Port X710 Intel 10 GbE SFP+)
 Netgate 1541 Rack \$2899	Medium Business Large Business Data Center	✓ ✓ ✓	<ul style="list-style-type: none"> - Rack Mount - Expandable memory - Expandable storage - Network expandable - High Availability - Runs pfSense® Plus or TNSR® Software 	L3 Forwarding: 18.80 Gbps Firewall: 18.64 Gbps (10k ACLs) IPsec VPN: 9.30 Gbps (AES-GCM-128 w/GAT)	L3 Forwarding: 15.10 Gbps Firewall: 12.30 Gbps (10k ACLs) IPsec VPN: 1.77 Gbps (AES-GCM-128 w/GAT)	Eight Core Intel Xeon® 2.1 GHz	500 GB M.2 SSD (Expandable to 2x 256GB SSD SATA RAID1)	16 GB DDR4 RDIMM (Expandable to 32GB ECC)	Up to (8) independent ports: (2) 1 GbE LAN/WAN via Intel i350-AM2 (2) 10GBase-T LAN/WAN via SoC (Expandable to 4-Port Intel 1 GbE) (Expandable to 2- or 4-Port X710 Intel 10 GbE SFP+)

Footnotes:
1. All performance tests are based upon maximum memory configuration and base model port configuration (no port expansion). Throughput measurements are based upon maximum bidirectional traffic across all available ports.
2. iPerf3 traffic is TCP - 1460 byte payload and TCP framing.
3. Simple IMIX traffic is sets of 7 (40) byte packets, (4) 576 byte packets, (1) 1500 byte packets, plus ethernet framing overhead.
5. Performance tests for all appliances was performed using latest pfSense Plus version.