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

<table>
<thead>
<tr>
<th>Netgate Model</th>
<th>CPU</th>
<th>Storage</th>
<th>Memory</th>
<th>Network Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netgate 1100</td>
<td>Dual Core Cortex-A53 ARMv7 Soc @ 1.2GHz</td>
<td>8 GB eMMC</td>
<td>1 GB DDR4</td>
<td>8-pin header ports: 2.1 Gbps (50% with 50% load) or (2.5 Gbps with 50% load)</td>
</tr>
<tr>
<td>Netgate 2100</td>
<td>Dual Core Cortex-A53 ARMv7 Soc @ 1.2GHz</td>
<td>8 GB eMMC</td>
<td>4 GB DDR4</td>
<td>8-pin header ports: 4.8 Gbps (50% with 50% load) or (3.2 Gbps with 50% load)</td>
</tr>
<tr>
<td>Netgate 3100</td>
<td>Dual Core Cortex-A53 ARMv7 Soc @ 1.2GHz</td>
<td>8 GB eMMC</td>
<td>4 GB DDR4</td>
<td>8-pin header ports: 4.8 Gbps (50% with 50% load) or (3.2 Gbps with 50% load)</td>
</tr>
<tr>
<td>Netgate 5100</td>
<td>Quad Core Intel Atom™ C3358 @ 2.2GHz</td>
<td>8 GB eMMC</td>
<td>8 GB DDR4</td>
<td>8-pin header ports: 16 Gbps (50% with 50% load) or (8.0 Gbps with 50% load)</td>
</tr>
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<td>Netgate 6100</td>
<td>Quad Core Intel Atom™ C3358 @ 2.2GHz</td>
<td>8 GB eMMC</td>
<td>8 GB DDR4</td>
<td>8-pin header ports: 16 Gbps (50% with 50% load) or (8.0 Gbps with 50% load)</td>
</tr>
<tr>
<td>Netgate 7100</td>
<td>Quad Core Intel Atom™ C3358 @ 2.2GHz</td>
<td>8 GB eMMC</td>
<td>8 GB DDR4</td>
<td>8-pin header ports: 16 Gbps (50% with 50% load) or (8.0 Gbps with 50% load)</td>
</tr>
<tr>
<td>Netgate 1537</td>
<td>Eight Core Intel Xeon® 1.7 GHz</td>
<td>8 GB DDR4</td>
<td>8 GB DDR4</td>
<td>8-pin header ports: 16 Gbps (50% with 50% load) or (8.0 Gbps with 50% load)</td>
</tr>
<tr>
<td>Netgate 1541</td>
<td>Eight Core Intel Xeon® 2.1 GHz</td>
<td>8 GB DDR4</td>
<td>8 GB DDR4</td>
<td>8-pin header ports: 16 Gbps (50% with 50% load) or (8.0 Gbps with 50% load)</td>
</tr>
</tbody>
</table>

### WHO
- **Netgate 1100**
  - Home
  - Home Pro
- **Netgate 2100**
  - Home Pro
  - Branch/Small Business
- **Netgate 3100**
  - Home
  - Home Pro
  - Branch/Small Business
- **Netgate 5100**
  - Home
  - Branch/Small Business
  - Medium Business
- **Netgate 6100**
  - Home
  - Branch/Small Business
  - Medium Business
- **Netgate 7100**
  - Medium Business
  - Large Business
  - Data Center
- **Netgate 1537**
  - Medium Business
  - Large Business
  - Data Center
- **Netgate 1541**
  - Medium Business
  - Large Business
  - Data Center

### NEEDS
- **Netgate 1100**
  - Cost efficient / Low power
  - Sleek, compact
  - Silent operation (fanless)
  - Put on a desktop, shelf, or wall
- **Netgate 2100**
  - Cost efficient / Low power
  - Sleek, compact
  - Silent operation (fanless)
  - Put on a desktop, shelf, or wall
- **Netgate 3100**
  - Cost efficient / Low power
  - Sleek, compact
  - Silent operation (fanless)
  - Put on a desktop or shelf
- **Netgate 5100**
  - Cost efficient / Low power
  - Sleek, compact
  - Silent operation (fanless)
  - Put on a desktop, shelf, or wall
- **Netgate 6100**
  - Desktop face factor only
  - Silent operation (fanless)
  - Compact
  - Quiet (A53 @ 1.2GHz)
  - Upgradeable memory and storage
  - QuickAssist & AES-NI
  - Runs pfSense® Plus or TIGER Software
- **Netgate 7100**
  - Desktop or Rack Mount
  - Expandable memory
  - Expandable storage
  - Network expansion
  - High Availability
  - Runs pfSense® Plus or TIGER Software
- **Netgate 1537**
  - Rack Mount
  - Expandable memory
  - Expandable storage
  - Network expandable
  - High Availability
  - Runs pfSense® Plus or TIGER Software
- **Netgate 1541**
  - Rack Mount
  - Expandable memory
  - Expandable storage
  - Network expandable
  - High Availability
  - Runs pfSense® Plus or TIGER Software

### PERFORMANCE
- **Netgate 1100**
  - L3 Forwarding: 460 Gbps
  - L2 Forwarding: 480 Gbps
- **Netgate 2100**
  - L3 Forwarding: 1,056 Gbps
  - L2 Forwarding: 1,100 Gbps
- **Netgate 3100**
  - L3 Forwarding: 2,048 Gbps
  - L2 Forwarding: 2,100 Gbps
- **Netgate 5100**
  - L3 Forwarding: 3,048 Gbps
  - L2 Forwarding: 3,100 Gbps
- **Netgate 6100**
  - L3 Forwarding: 3,048 Gbps
  - L2 Forwarding: 3,100 Gbps
- **Netgate 7100**
  - L3 Forwarding: 4,064 Gbps
  - L2 Forwarding: 4,100 Gbps
- **Netgate 1537**
  - L3 Forwarding: 7,424 Gbps
  - L2 Forwarding: 7,520 Gbps
- **Netgate 1541**
  - L3 Forwarding: 9,408 Gbps
  - L2 Forwarding: 9,480 Gbps

### FOR MORE INFORMATION VISIT OUR BLOG POST

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Footer:

1. All performance tests are based upon maximum memory configuration and base model port configuration (as port expanders). Throughput measurements are made based upon maximum bidirectional traffic across all available ports.
2. Packet size is 1,000 bytes unless noted. For PPPoE packets, 1,500 bytes packets, 1,500 bytes packets, plus Ethernet framing overhead.
3. A 2.4GHz performance number exceeds that of the other 3.1GHz, in all tests were run by measuring throughput across available core model physical ports (29.7 Gbps with 10 ports vs. 32.1 Gbps with only 4 ports). The 32.1 Gbps exceed the 32.0 Gbps by 0.1 Gbps performance.
4. Performance tests for the Netgate 1100, 2100, 3100, 5100, and 6100 were done using pfSense® version 2.4.0 and the Netgate 7100 performance tests on a Linux 4.9.14 kernel.

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For more information visit our blog post.