Introducing two new, preconfigured M4500 10GE switches: M4500-32C and M4500-48XF8C. The trend of moving matrix switching into the Ethernet network is accelerating and a new class of switches has come to market. Combining the configurability of a matrix switch with the power and scalability of Ethernet, they support hundreds of AV over IP endpoints, at a price point dramatically lower than comparable matrix switches. The Layer 3 feature set includes static and dynamic routing with VRRP, OSPF, BGP, VRF-Lite and PIM. Removing the need for PIM routing, these new switches offer IGMP Plus and greatly simplify system architectures with the same well-known IGMP techniques across the entire AV over IP network while still operating at Layer 2. Installers opting to use M4500-48XF8C switch in their installation will find that it is already preconfigured out of the box. It comes with 48 10G Fiber ports with 8 100G uplink ports with true AV and multicast Zero Touch network configuration. Connect AV over IP encoders and decoders, and power on the switches.

**Key features**

- Cost effective 100G aggregation and 10G access layer for AV deployments and redundant spine & leaf topologies
- Zero Touch AV-over-IP with pre-configured L2 Multicast on all models (10G AV encoders and decoders) and SDVoE-ready
- Advanced Layer 3 feature set including IP Multinetting/CIDR, Static, PBR, VRRPv2, OSPFv3, PIM-SM, VxLAN, BGP4, VRF-Lite
- Optimized for “Spine and Leaf” redundant AV installations, with or without MLAG between spine switches
- Up to 320 TX / 320 RX (10 Gigabit) nodes all line rate with each other in a redundant spine and leaf architecture
- 2 power supply units (APS750W) and 6 redundant fan trays (AFT402) pre-installed for 1+1 power and 4+2 fan redundancy
- Ultra-low latency (spine 0.13µs @100G, leaf 0.119µs @10G) and scalable table size (32K MAC, 8K ARP, 4K VLANs, 32K routes)

**Software**

- Advanced classifier-based, time-based hardware implementation for L2 (MAC), L3 (IP) and L4 (UDP/TCP) security and prioritization
- Selectable Port-Channel / LAG (B02.3ad – B02.1AX) L2/L3/L4 hashing for fault tolerance and load sharing with any Ethernet channeling
- Up to 64 Link Aggregation Groups (LAG, Port-Channel, LACP) with 32 ports per LAG and Multi-chassis Link Aggregation (MLAG)
- Comprehensive IPv4/IPv6 static and dynamic routing including IP Multinetting/CIDR, PBR, VRRPv2, OSPFv3, PIM-SM6, BGP4, VRF-Lite
- Enhanced IPv4/IPv6 multicast forwarding with IGMPv3/MLDv2 and IGMP Plus enhancement at the VLAN level
- IGMP Plus enhanced implementation for automatic multicast across a L2 network (igmp-plus <vlan-id> easy macro-command)
- High performance IPv4/IPv6 multicast routing with PIM-SM and PIM-SM6 associated with unicast static routes, or other L3 protocol
- Advanced IPv4/IPv6 security including malicious code detection, DHCP Snooping, IP Source Guard, and Control Plane Policing (CoPP)
- Priority-Based Flow Control (PFC), DCBX Bridging, Enhanced Transmission Selection (ETS) and VXLAN Gateway for server installations

**Availability**

- Two (2) redundant, modular power supplies are pre-installed contributing to business continuity management
- Six (6) hot-swappable fan trays are pre-installed for 4+2 fan redundancy
- Spine and leaf architecture with every leaf switch (10G/25G access) connecting to every spine switch (distributed 100G core)
- Up to 48 paths ECMP routing for load balancing and redundancy
- Link Dependency feature enables or disables ports based on the link state of different ports

**Management**

- Industry standard SNMP, RMON, MIB, LLDP, AAA, sFlow and RSPAN remote mirroring implementation
- Service port for out-of-band 1 Gigabit Ethernet management (OOB)
- Standard RS232 straight-through RJ45 for local management console (USB 2.0 to RS232 converter with PL-203 chipset is advised)
- Non-Disruptive Configuration for applying a new configuration file without disrupting the operation of unchanged features
- Industry standard command line interface (CLI) only

**NETGEAR Warranty**

- M4500 series is backed by a NETGEAR ProSAFE® Limited Lifetime Hardware Warranty*
- Lifetime Next Business Day Hardware Replacement
- ProSUPPORT 24x7 Advanced Technical Support via phone for 90 days (Remote diagnostics performed by our technical experts for prompt resolution of technical issues. ProSUPPORT coverage can be extended by purchasing one, three, or five year contracts)
- ProSUPPORT Lifetime 24x7 Advanced Technical Support via chat.
## Hardware at a Glance

<table>
<thead>
<tr>
<th>Model name</th>
<th>Form Factor</th>
<th>Switching Fabric</th>
<th>25GBASE-X SFP28 ports</th>
<th>100GBASE-X QSFP28 ports</th>
<th>PSU</th>
<th>Fans</th>
<th>Out-of-band Console</th>
<th>Model number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4500-32C</td>
<td>Full width 1-unit 1U rack mount</td>
<td>6.4 Tbps</td>
<td>32 ports 1x100G, 1x50G, 1x40G, 4x25G, 4x10G</td>
<td>1x100G default mode</td>
<td>Modular 2 bays 2 PSU included (1+1 redundancy) 2 x APS750W</td>
<td>Modular 6 slots 6 Fans included (4+2 redundancy)</td>
<td>6 x ATF402 Front-to-back 68.0dB</td>
<td>Ethernet: Out-of-band 1G port (Front) Console: RJ45 RS232 (Front) Storage: USB (Front)</td>
</tr>
<tr>
<td>M4500-48XF8C</td>
<td>Full width 1-unit 1U rack mount</td>
<td>4 Tbps</td>
<td>48 ports 1x25G, 1x10G, 1x1G</td>
<td>1x100G default mode</td>
<td>8 ports 1x100G, 1x100G, 1x50G, 1x40G, 4x25G, 4x10G</td>
<td>Modular 2 bays 2 PSU included (1+1 redundancy)</td>
<td>2 x APS750W</td>
<td>Ethernet: Out-of-band 1G port (Front) Console: RJ45 RS232 (Front) Storage: USB (Front)</td>
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</tbody>
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### Front View

- **M4500-32C**

- **M4500-48XF8C**

### Rear View

- **M4500-32C**

- **M4500-48XF8C**
### Performance at a Glance

<table>
<thead>
<tr>
<th>Model name</th>
<th>MAC ARP/ NDP</th>
<th>Routing / Switching Capacity</th>
<th>Throughput</th>
<th>Application Route Scaling</th>
<th>Packet Buffer Latency</th>
<th>IP Multicast Forwarding Entries</th>
<th>CPU</th>
<th>Multicast IGMP Group membership</th>
<th>VLANs</th>
<th>Link Aggregation Port Channel</th>
<th>sFlow</th>
<th>Model number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4500-32C</td>
<td>32K MAC</td>
<td>6.4 Tbps Line-rate</td>
<td>2 Bpps</td>
<td>Static routes: 128</td>
<td>256 Mb</td>
<td>64-byte frames</td>
<td>x86 Intel Atom® Processor C3558</td>
<td>4K IPv4 / IPv6</td>
<td>4K VLANs</td>
<td>64 groups (LAG)</td>
<td>802.3ad with LACP</td>
<td>64 groups (MLAG)</td>
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<tr>
<td></td>
<td>2.5K NDP</td>
<td></td>
<td></td>
<td>IPv4 routes: 32K</td>
<td></td>
<td>&lt;0.13μs 100G QSFPP2B</td>
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<td>IPv6 routes: 24K</td>
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<td>&lt;0.417μs 50G QSFPP2B</td>
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<td>IP IGMP/ MLD: 2.048 KB</td>
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<td>&lt;0.11μs 40G QSFPP+</td>
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<td>PIM-SM: 1536</td>
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<td>&lt;0.125μs 4x25G Breakout</td>
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<td>PIM-SMv6: 512</td>
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<td>&lt;0.76μs 4x10G Breakout</td>
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<td>M4500-48XF8C</td>
<td>32K MAC</td>
<td>4 Tbps Line-rate</td>
<td>2 Bpps</td>
<td>Static routes: 128</td>
<td>256 Mb</td>
<td>64-byte frames</td>
<td>x86 Intel Atom® Processor C3558</td>
<td>4K IPv4 / IPv6</td>
<td>4K VLANs</td>
<td>64 groups (LAG)</td>
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<td>IPv4 routes: 32K</td>
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<td>&lt;0.117μs 25G QSFPP2B</td>
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<td>IPv6 routes: 24K</td>
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<td>&lt;0.119μs 10G QSFPP+</td>
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<td>PIM-SMv6: 512</td>
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* This product comes with a limited warranty that is valid only if purchased from a NETGEAR authorized reseller, and covers unmodified hardware, fans and internal power supplies – not software or external power supplies, and requires product registration at https://www.netgear.com/business/registration within 90 days of purchase; see https://www.netgear.com/about/warranty for details. Intended for indoor use only.

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