ProSAFE® Next-Gen Edge Managed Switches

Unmatched Gigabit performance and 10GBase-T scalability for virtualized servers, storage and sensitive audio/video deployments

M5300 series

The NETGEAR® Next-Gen Edge M5300 series consists of seven fully managed stackable Gigabit Ethernet switches, with embedded 10 Gigabit Ethernet uplink connectivity. There are 24-port and 48-port models including Gigabit copper versions, powerful PoE+ versions with up to 1,520 watts and even a Fiber aggregation solution. They are ideal for all organizations considering reliable, affordable and simple 10 Gigabit Ethernet backbone architectures. As a proficient component of converged voice, video and data networking solutions, NETGEAR M5300 series delivers a resilient access layer in server rooms for virtualization, campus LAN environments and commercial buildings. Virtual Chassis stacking technology—including non-stop forwarding—scales both the entire network’s performance and its redundancy.
Why 10 Gigabit Ethernet for edge distribution of mid-sized networks?

- Mid-sized organizations, hospitals and schools have the same bandwidth needs as large enterprises.

- With the wide adoption of virtualization, audio-video-data convergence, and rapid growth of bandwidth intensive applications, there is a continued demand for faster network connectivity.

- The widespread deployment of Gigabit to the desktop is becoming a bottleneck for any network access layer.

- 10 Gigabit Ethernet represents the solution to many of the scaling challenges presented by the edge of today’s networks.
Get started today with NETGEAR M5300 series

NETGEAR 10 Gigabit Aggregation managed switches and NETGEAR Next-Gen Edge M5300 series managed switches are ideal for all organizations considering reliable, affordable and simple 10 Gigabit Ethernet backbone architectures. The move toward deploying 10GbE closer to the network’s edge makes sense given the current requirements of modern networks. Such high-performance connections are necessary to enable the following business-critical applications:

- **Desktop and workstations data workload aggregation**
  - Bandwidth requirements among desktop users within organizations is increasing exponentially as workloads and associated applications require greater, more intense processing power
  - For example, PC backup programs that run continuously and automatically in the background place a such heavy strain on the network that, without 10 Gigabit Ethernet, can slow overall network performance

- **IP voice and video applications**
  - Bandwidth-rich IP voice and video applications stand to improve productivity and reduce costs
  - Executives can use teleconferencing, for example, to build stronger relationships with geographically dispersed teams, speed up decision-making and reduce travel time
  - Yet such media-rich applications can generate many megabytes of data in a very short amount of time, resulting in significant network bandwidth consumption

- **Vertical Industry-specific applications**
  - Many vertical industry-specific applications are extremely bandwidth-intensive and require higher-speed connectivity
  - For example, digital imaging applications used by the healthcare industry to enable procedures such as CAT scans and MRIs, or CAD and CAM programs used in the manufacturing industry, require more robust, powerful and real-time performance only possible over 10 Gigabit Ethernet connections
  - Deploying 10 Gigabit Ethernet at the aggregation layer will increase network performance and reliability, mid-sized businesses should look for a high-capacity, scalable architecture that can support continued growth and increasing bandwidth requirements over time

- **In modern networks, key applications for 10 Gigabit Ethernet are:**
  - Low-cost aggregation of uplinks from Gigabit edge switches
  - Edge switch stacking for easier management and resiliency
  - Low-latency interconnect switching for servers and network storage
  - Used as a foundation for virtualized applications in the server room

**M5300 series intelligent switching solutions a Must**

Successful 10 Gigabit Ethernet deployments require intelligent switching solutions with advanced features such as integrated security, high availability, delivery optimization, enhanced manageability, and support for new applications. Such solutions are most beneficial if they enable organizations to leverage their existing investments in network infrastructure. Key requirements include:

- **High performance backbone links**
  - In desktop switching environments, wire-speed performance with full QoS control for all 10/100/1000 interfaces is critical
  - Switches that provide flexibility through the use of 10 Gigabit Ethernet Combo ports simplify integration with existing copper or fiber cabling

- **High level of redundancy**
  - Distributed link aggregation, redundant links and sub-second failover capabilities are essential to minimize downtime
  - They largely increase network reliability and availability

- **Stacking capability for network growth and reduced management**
  - When switches function as a single stack, they are much easier to monitor and manage
  - Stacking also adds network resiliency and allows for easier network scaling

10 Gigabit Virtual Chassis hardware stacking technology and 10 Gigabit distributed link aggregation present an opportunity to scale both the entire network’s performance and redundancy. M5300 series edge switches and servers benefit from greater bandwidth capacity with traditional active-active teaming (LACP—link aggregation control protocol) and load balancing. Stackable M5300 series switches allow for redundancy, distributing these multiple connections across the stack. The stack acts as a single logical switch and it's transparent for the server or the aggregation switch. Virtual Chassis stacking allows IT administrators to easily add more ports to their switch fabric, simplifying management and adding network resiliency.
True, Virtual Chassis Stacking

NETGEAR Virtual Chassis stacking technology provides resilient network architecture: up to 8 independent switches are consolidated around a single management IP address, which simplifies network operations. Up to 384 Gigabit ports and 16 available 10 Gigabit uplinks per virtual chassis for unparalleled density at this price point.

Each 5300 series joins the Virtual Chassis architecture with a 48 Gbps switching stack interconnect: when 8 members in the stack, overall stacking “backplane” performance is 384 Gbps full duplex.

Within the stack, a switch is elected as the “Master”: the master is responsible for the control plane and forwarding/routing tables for the stack members. As for a Chassis switch, the control plane and the management plane are unified but each switch performs its local, line-rate switching and routing.

Automatic Unit Replacement guarantees stack members’ smooth replacement without manual reconfiguration. Stack master redundancy is also automatic with sub-second failover. As for a Chassis switch, VLAN tagging, port mirroring and link aggregation are available from every port to every port across the stack.

Virtual Chassis Stacking Technology

Full Mesh Topology

- In full mesh topology (4 ports 10GbE used per switch), each 5300 can join the Virtual Chassis architecture with a switching stack interconnect of up to 88 Gbps
  - Overall stacking “backplane” performance can scale up to 704 Gpbs
Virtual Chassis Stacking Technology

The stack acts as a single switch in the network
• One CLI and one web interface managing the virtual chassis
• The other switches in the network also “see” the stack as a virtual chassis
  – The virtual chassis has only one configuration file, and VLANs/LAGs/Port mirroring
    are available across the member units as for “blades”, similar to a typical modular
    chassis switch

NETGEAR Virtual Chassis stacking technology is flexible
• M5300 series switches intelligently join the Virtual Chassis architecture with a
  48Gbps switching stack interconnect, when using local AX742 stacking kits for dual
  ring topology
• 10 Gigabit copper (10GBase-T) and 10 Gigabit fiber (SFP+) are also available for
  distant M5300 series units – local and distant switches can join the same stack

NETGEAR Virtual Chassis stacking technology delivers a bi-directional, highly
resilient topology
• Higher throughput capacity with lower latency and jitter for VoIP and Multicast traffic
• Each switch in the stack understands the shortest path to forward traffic, bi-
  directionally both up and down
• Dual ring architecture (or better) ensures that if a switch fails within the stack, all
  others switches can still communicate with one another
• Automatic Unit Replacement (AUR) guarantees stack member’s replacement without
  even a stack reboot or manual configuration
• Stack master redundancy is also automatic: with sub-second failover, the secondary
  master will take over and become the new master without any significant network
  interruption for the clients

Virtual Chassis functionality
• Within the stack, a switch is elected as the “Master”: the master is responsible for the
  control plane and forwarding/routing tables for the stack members
• Simultaneously, another switch is selected as the “Secondary Master” for sub-second
  failover in the unlikely event the “Master” fails

  • “Master” and “Secondary Master” unit can be manually selected within the stack,
    although the process is completely automatic by default for convenience
  • As for a Chassis switch, the data plane, the control plane and the management plane
    are unified but each switch performs its local, line-rate switching and routing
  • As for a Chassis switch, VLAN tagging, port mirroring and link aggregation are available
    from every port to every port across the stack

  • Distributed Link Aggregation
  • Distributed trunking across the stack allows redundant uplinks without creating loops
    – LACP automatic load-balancing and port failover ensure greater bandwidth network
      layers and maximize redundancy without spanning tree
  • Active-active connections radically improve performance for servers
    at the same time
  • NETGEAR true Virtual Chassis Stacking technology delivers resiliency, simplicity and
    better performance throughout the entire network
M5300 Series Features

NETGEAR Next-Gen Edge M5300 series key features:
- 24 and 48 Gigabit models, 24 and 48 Gigabit PoE+ models up to full-power capacity, and one 24 Gigabit SFP fiber model
- Layer 2+ models with Layer 3 license upgrades available, or built-in Layer 3 models for the exact fit per application and best investment protection
- IPv4 routing in Layer 2+ package (static routing) and IPv4/IPv6 routing in Layer 3 package (dynamic routing)
- Enterprise-class L2/L3 tables with 32K MAC, 6K ARP/NDP, 4K VLANs, 12K route table size
- 4 or 24 uplink fiber (SFP) ports for Fast Ethernet or Gigabit optics
- 2 built-in uplink 10 Gigabit combo ports with either 10GBase-T copper RJ45, or SFP+ fiber
- 2 additional uplink or stacking 10 Gigabit I/O bays for a large variety of modules and various 10 Gigabit installations
- Uplink capacity per switch is 4-port 10 Gigabit total, mixing 10GBase-T (RJ45), 10GBase-X (SFP+), 10GBase-CX4 (802.3ak) and 48 Gbps stacking ports

NETGEAR Next-Gen Edge M5300 series power and PoE+ features:
- 380W PoE+ budget built-in per switch and full PoE+ power budget capacity with external EPS
- Example: 96-port PoE+ in a 3 rack unit (RU) form factor and 30W power on all ports (2,880W budget) using two units M5300-52G-POE+ and one RPS4000
- Redundant power supply functionality with one hot-swap modular power supply
  - Optional single switch RPS option (RPS5412, one-to-one protection)
  - Optional four-switch RPS option (RPS4000, providing power backup up to four switches concurrently as for one-to-one mode)
  - Optional four-switch EPS option (RPS4000 in External Power Supply mode for PoE+ application of up to 2,880W PoE+ budget)

NETGEAR Next-Gen Edge M5300 series software features:
- Automatic multi-vendor Voice over IP prioritization based on SIP, H323 and SCCP protocol detection
- Voice VLAN and LLDP-MED for automatic IP phones QoS and VLAN configuration
- Multi-hop RP multicast PIM routing advanced implementation for resilient video deployments
- Advanced classifier-based hardware implementation for L2 (MAC), L3 (IP) and L4 (UDP/TCP transport ports) security and prioritization
- Innovative multi-vendor Auto-iSCSI capabilities for easier virtualization optimization

NETGEAR Next-Gen Edge M5300 series management features:
- DHCP/BootP innovative auto-installation including firmware and configuration file upload automation
- Industry standard SNMP, RMON, MIB, LLDP, AAA, sFlow and RSPAN implementation
- Selectable serial RS232 DB9 and Mini-USB port for management console
- Standard USB port for local storage, logs, configuration or image files
- Dual firmware image and configuration file for updates with minimum service interruption
- Industry standard command line interface (CLI) for IT admins used to other vendors commands
- Fully functional Web console (GUI) for IT admins who prefer an easy to use graphical interface
- Single-pane-of-glass NMS300 management platform with mass-configuration support

NETGEAR Next-Gen Edge M5300 series warranty and support:
- NETGEAR ProSAFE Lifetime Hardware Warranty*
- Included Lifetime Online Chat Technical Support
- Included Lifetime Next Business Day Hardware Replacement

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M5300 Series Features
# Hardware at a Glance

<table>
<thead>
<tr>
<th>Model name</th>
<th>10/100/1000 Base-T RJ45 ports</th>
<th>100/1000X Fiber SFP ports</th>
<th>100/1000/10GBase-T RJ45 ports</th>
<th>1000/10GBase-X Fiber SFP+ ports</th>
<th>Additional 10 Gigabit I/O bays</th>
<th>Modular PSU (hot-swap when RPS)</th>
<th>RPS connector</th>
<th>PoE budget</th>
<th>Management console</th>
<th>Storage (image, config, log files)</th>
<th>Model number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M5300-28G</td>
<td>24</td>
<td>4 (shared)</td>
<td>24</td>
<td>4 (shared)</td>
<td>2 modules</td>
<td>1 (APS135W)</td>
<td>1 (RPS)</td>
<td>-</td>
<td>1 x RS232 DB9, 1 x Mini-USB (selectable)</td>
<td>1 x USB</td>
<td>GSM7228S v1h1</td>
</tr>
<tr>
<td>M5300-52G</td>
<td>48</td>
<td>4 (shared)</td>
<td>48</td>
<td>4 (shared)</td>
<td>2 modules</td>
<td>1 (APS135W)</td>
<td>1 (RPS)</td>
<td>-</td>
<td>1 x USB</td>
<td></td>
<td>GSM7252S v1h2</td>
</tr>
<tr>
<td>M5300-28G-POE+</td>
<td>24 PoE+ 380W</td>
<td>4 (shared)</td>
<td>24</td>
<td>4 (shared)</td>
<td>2 modules</td>
<td>1 (APS525W)</td>
<td>1 (RPS or EPS)</td>
<td>Up to 720W (EPS)</td>
<td></td>
<td>GSM7228PS v1h2</td>
<td></td>
</tr>
<tr>
<td>M5300-52G-POE+</td>
<td>48 PoE+ 380W</td>
<td>4 (shared)</td>
<td>48</td>
<td>4 (shared)</td>
<td>2 modules</td>
<td>1 (APS525W)</td>
<td>1 (RPS or EPS)</td>
<td>Up to 1,440W (EPS)</td>
<td></td>
<td>GSM7328FS v2h1</td>
<td></td>
</tr>
<tr>
<td>M5300-28GF3</td>
<td>4 (shared)</td>
<td>24</td>
<td>24</td>
<td>4 (shared)</td>
<td>2 modules</td>
<td>1 (APS135W)</td>
<td>1 (RPS)</td>
<td>-</td>
<td>1 x USB</td>
<td></td>
<td>GSM7328S v2h2</td>
</tr>
<tr>
<td>M5300-28G3</td>
<td>24</td>
<td>4 (shared)</td>
<td>24</td>
<td>4 (shared)</td>
<td>2 modules</td>
<td>1 (APS135W)</td>
<td>1 (RPS)</td>
<td>-</td>
<td>1 x USB</td>
<td></td>
<td>GSM7352S v2h2</td>
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<tr>
<td>M5300-52G3</td>
<td>48</td>
<td>4 (shared)</td>
<td>48</td>
<td>4 (shared)</td>
<td>2 modules</td>
<td>1 (APS135W)</td>
<td>1 (RPS)</td>
<td>-</td>
<td>1 x USB</td>
<td></td>
<td>GSM7352S v2h2</td>
</tr>
</tbody>
</table>

**M5300-28G** is a “24 + 4x10GBe” version, Layer 2+ (Upgradable to Layer 3)

**M5300-52G** is a “48 + 4x10GBe” version, Layer 2+ (Upgradable to Layer 3)

**M5300-28G-POE+** is a “24 + 4x10GBe” version, Layer 2+ (Upgradable to Layer 3). All ports PoE+.

**M5300-48G-PoE+** is a “48 + 4x10GBe” version, Layer 2+ (Upgradable to Layer 3). All ports PoE+.

**M5300-28GF3** is a “24 fiber + 4x10GBe” version, Layer 3

**M5300-28G3** is a “24 + 4x10GBe” version, Layer 3

**M5300-52G3** is a “48 + 4x10GBe” version, Layer 3

- M5300 series rear view with two I/O bays, RPS connector
- Management ports (DB9, mini-USB), storage port (USB)
- Each M5300 series ships with its installed modular PSU
- Spare PSU units are available for hot swap HA with RPS
- External Power Supply (EPS) available for PoE+ versions
## Software at a Glance

<table>
<thead>
<tr>
<th>Model name</th>
<th>Layer 2+ Package</th>
<th>Layer 3 Package</th>
<th>Model number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M5300-28G</td>
<td>IPv4/IPv6 ACL and QoS</td>
<td>IPv6 Static Routing</td>
<td>GSM7228S v1h1</td>
</tr>
<tr>
<td></td>
<td>IPv4/IPv6 Multicast filtering</td>
<td>IPv4 Dynamic Routing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Auto-VoIP Auto-ICSI</td>
<td>IPv6 Dynamic Routing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VLANs</td>
<td>IPv4/IPv6 Multicast Routing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Convergence</td>
<td>Model number</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IPv4 Static Routing</td>
<td>Layer 3 licence upgrade: GSM7228L-10000S</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L2, L3, L4, time-based, ingress, egress, 1 Kbps</td>
<td>Layer 3 licence upgrade: GSM7252L-10000S</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IGMP and MLD Snooping, Querier mode, MVR</td>
<td>Layer 3 licence upgrade: GSM7228PL-10000S</td>
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</tr>
<tr>
<td></td>
<td>Static, Dynamic, Voice, MAC, Subnet, Protocol-based, QinQ, Private VLANs</td>
<td>Layer 3 licence upgrade: GSM7252PL-10000S</td>
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</tr>
<tr>
<td></td>
<td>LLDP-MED, RADIUS, 802.1X, PoE timer</td>
<td>Layer 3 licence upgrade: GSM7328FS v2h1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Layer 3 licence upgrade: GSM7228PS v1h2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Port-based, Subnet, VLANs, Loopback)</td>
<td>Layer 3 licence upgrade: GSM7252PS v1h2</td>
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</tr>
<tr>
<td></td>
<td>Static, Dynamic, Voice, MAC, Subnet, Protocol-based, QinQ, Private VLANs</td>
<td>Layer 3 licence upgrade: GSM7328S v2h2</td>
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<tr>
<td></td>
<td>LLDP-MED, RADIUS, 802.1X, PoE timer</td>
<td>Layer 3 licence upgrade: GSM7328FS v2h1</td>
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<td></td>
<td>LLDP-MED, RADIUS, 802.1X, PoE timer</td>
<td>Layer 3 licence upgrade: GSM7328FS v2h1</td>
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</tbody>
</table>

## Performance at a Glance

<table>
<thead>
<tr>
<th>Model name</th>
<th>Packet buffer</th>
<th>CPU</th>
<th>ACLs</th>
<th>MAC ARP/NDP VLANs DHEP server</th>
<th>Number of Routes (IPv4/IPv6)</th>
<th>RIP/OSPF application route scaling</th>
<th>Static Routes</th>
<th>Multicast IGMP Group membership</th>
<th>IP Multicast Forwarding Entries</th>
<th>sFlow</th>
<th>Model number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M5300-28G</td>
<td>16 Mb</td>
<td>800 Mhz</td>
<td>100 ACLs</td>
<td>32K MAC 6K ARP/NDP VLANs 4K DHCP: 16 pools 1,024 max leases</td>
<td>L3 route table size 12,256</td>
<td>RIP: 512 OSPF: 12,256</td>
<td>S12 IPv4</td>
<td>2K IPv4</td>
<td>1K IPv4 or 512 IPv4 256 IPv6</td>
<td>32 samplers 52 pollers 8 receivers</td>
<td></td>
</tr>
<tr>
<td>M5300-52G</td>
<td>32 Mb</td>
<td>128 M Flash</td>
<td>16,384 rules ingress, egress</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M5300-28G-POE+</td>
<td>16 Mb</td>
<td>512 M RAM</td>
<td></td>
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<td></td>
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<tr>
<td>M5300-52G-POE+</td>
<td>32 Mb</td>
<td>128 M Flash</td>
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<tr>
<td>M5300-28GF3</td>
<td>16 Mb</td>
<td>800 Mhz</td>
<td>100 ACLs</td>
<td>32K MAC 6K ARP/NDP VLANs 4K DHCP: 16 pools 1,024 max leases</td>
<td>L3 route table size 12,256</td>
<td>RIP: 512 OSPF: 12,256</td>
<td>S12 IPv4</td>
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<td>M5300-28GF3</td>
<td>32 Mb</td>
<td>128 M Flash</td>
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<td>M5300-52G3</td>
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</tbody>
</table>
RPS4000
RPS/EPS unit for up to 4 concurrent switches

Ordering information
- Americas, Europe: RPS4000-200NES
- Asia Pacific: RPS4000-200AJS
- Warranty: 5 years

- RPS mode: provide power backup for up to four switches concurrently
  - With same level of protection as with four dedicated, “one-to-one” RPS units

- EPS mode: provide supplemental PoE power up to four switches concurrently
  - Up to 2,880W shared PoE+ budget
  - When in EPS mode, RPS4000 supersedes each switch main PSU
  - Switch main PSU system power reverts to redundant power supply (RPS) function

Front view
- RPS4000 is 1RU unit with four (4) empty slots
- Power modules (APS1000W) are sold separately
- APS1000W requirement depends on RPS, EPS, PoE application

Rear view
- Four (4) embedded RPS connectors
- Switch selectors for RPS/EPS power modes
- Switch selectors for power modules two-by-two bridging

Included:
- Four (4) RPS cables - 60cm each (~2 ft)
- Rack mount kit
- Power cord
### Accessories

<table>
<thead>
<tr>
<th>Number of APS1000W</th>
<th>1 POWER MODULE</th>
<th>2 POWER MODULES</th>
<th>3 POWER MODULES</th>
<th>4 POWER MODULES</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPS mode</td>
<td>Up to 4 switches (non-PoE versions)</td>
<td>Up to 4 switches (PoE versions)</td>
<td>Up to 4 switches (PoE versions)</td>
<td>4 switches (PoE versions)</td>
</tr>
<tr>
<td></td>
<td>M5300-28G or M5300-52G or M5300-28GF3 or M5300-28G3 or M5300-52G3</td>
<td>M5300-28G-PoE+ or M5300-52G-PoE+</td>
<td>M5300-28G-PoE+ or M5300-52G-PoE+</td>
<td>M5300-28G-PoE+ or M5300-52G-PoE+</td>
</tr>
<tr>
<td></td>
<td>Complete protection 12V system power</td>
<td>Complete protection 12V system power and -56V PoE power</td>
<td>Complete protection 12V system power and -56V PoE power</td>
<td>Complete protection 12V system power and -56V PoE power</td>
</tr>
<tr>
<td></td>
<td>Or: Up to 2 switches (PoE versions)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M5300-28G-PoE+ or M5300-52G-PoE+</td>
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<tr>
<td>EPS mode</td>
<td>720W PoE budget available (total) for up to 2 switches (PoE versions)</td>
<td>1,440W PoE budget available (total) for up to 2 switches (PoE versions)</td>
<td>2,160W PoE budget available (total) for up to 4 switches (PoE versions)</td>
<td>2,880W PoE budget available (total) for up to 4 switches (PoE versions)</td>
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<tr>
<td></td>
<td>M5300-28G-PoE+ or M5300-52G-PoE+</td>
<td>M5300-28G-PoE+ or M5300-52G-PoE+</td>
<td>M5300-28G-PoE+ or M5300-52G-PoE+</td>
<td>M5300-28G-PoE+ or M5300-52G-PoE+</td>
</tr>
<tr>
<td></td>
<td>12V system power</td>
<td>96 ports full power 802 3af PoE</td>
<td>144 ports full power 802 3af PoE</td>
<td>192 ports full power 802 3af PoE</td>
</tr>
<tr>
<td>Example for PoE</td>
<td>One M5300-28G-PoE+ providing 720W</td>
<td>Two M5300-28G-PoE+ providing 720W each</td>
<td>Three M5300-28G-PoE+ providing 720W each</td>
<td>Four M5300-28G-PoE+ providing 720W each</td>
</tr>
<tr>
<td>applications</td>
<td>48 ports full power 802 3af PoE</td>
<td>96 ports full power 802 3af PoE</td>
<td>144 ports full power 802 3af PoE</td>
<td>192 ports full power 802 3af PoE</td>
</tr>
<tr>
<td>(802.3af full power)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example for PoE+</td>
<td>One M5300-28G-PoE+ (24 ports) providing 720W</td>
<td>One M5300-28G-PoE+ (48 ports) providing 1,440W</td>
<td>One M5300-28G-PoE+ providing 720W</td>
<td>Two M5300-28G-PoE+ providing 1,440W each</td>
</tr>
<tr>
<td>applications</td>
<td>24 ports full power 802 3at PoE</td>
<td>48 ports full power 802 3af PoE</td>
<td>One M5300-52G-PoE+ providing 720W</td>
<td>96 ports full power 802 3at PoE</td>
</tr>
<tr>
<td>(802.3at full power)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EPS mode (External Power Supply)**

- **720W PoE budget available (total) for up to 2 switches (PoE versions):**
  - M5300-28G-PoE+
  - M5300-52G-PoE+

- **1,440W PoE budget available (total) for up to 2 switches (PoE versions):**
  - M5300-28G-PoE+
  - M5300-52G-PoE+

- **2,160W PoE budget available (total) for up to 4 switches (PoE versions):**
  - M5300-28G-PoE+
  - M5300-52G-PoE+

- **2,880W PoE budget available (total) for up to 4 switches (PoE versions):**
  - M5300-28G-PoE+
  - M5300-52G-PoE+

**Example for PoE applications: (802.3af full power)**

- **One M5300-28G-PoE+ providing 720W:**
  - 48 ports full power 802 3af PoE

**Example for PoE+ applications: (802.3at full power)**

- **One M5300-28G-PoE+ (24 ports) providing 720W:**
  - 24 ports full power 802 3at PoE

- **One M5300-52G-PoE+ (48 ports) providing 1,440W:**
  - 48 ports full power 802 3af PoE
**APS1000W**  
*Power Module for RPS4000*

**Ordering information**  
- Americas, Europe: APS1000W-100NES  
- Asia Pacific: APS1000W-100AJS  
- Warranty: 5 years

**Capacity:**  
- 110V–240V AC power input  
- Up to 960W DC 12V output power for up to 4 switches (RPS)  
- Up to 720W DC -56V PoE budget output power for up to 2 PoE switches (EPS)

---

**RPS5412**  
*RPS unit for 1 switch by Optimal Power®*

**Ordering information**  
- Americas: RPS5412-100NAS  
- Europe: RPS5412-100EUS  
- Asia Pacific: RPS5412-100AJS  
- Warranty: 3 years

- Optimal Power® RPS unit certified by NETGEAR for M4100 series  
- Includes the RPS cable for the switch RPS connector  
- Provides seamless “one-to-one” redundant power to the Switch  
- 56V DC power limited to 308W (maximum PoE budget)

---

**Modular PSUs for M5300 series**

**APS135W**  
*Modular Power Supply*

**Ordering information**  
- Worldwide: APS135W-10000S  
- Warranty: 5 years

- PSU unit for M5300 series non-PoE switches  
  - M5300-28G  
  - M5300-52G  
  - M5300-28GF3  
  - M5300-28G3  
  - M5300-52G3  
- Hot swap replacement when the switch is powered by an RPS unit

**APS525W**  
*Modular Power Supply*

**Ordering information**  
- Worldwide: APS525W-10000S  
- Warranty: 5 years

- PSU unit for M5300 series POE switches  
  - M5300-28G-POE+  
  - M5300-52G-POE+  
- Hot swap replacement when the switch is powered by an RPS unit
## Accessories

### I/O Modules for M5300 series rear bays

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AX742 v1h3</strong>&lt;br&gt;24/48 Gbps Stacking Kit</td>
<td><strong>Ordering information</strong>&lt;br&gt;- Worldwide: AX742&lt;br&gt;- Warranty: 5 years</td>
<td>• AX742 is a bundle: 2 CX4 I/O modules AX744 + 1 stacking CX4 cable (1m - 3.3 ft)&lt;br&gt;• One AX742 Stacking Kit per switch is required for dual ring topology&lt;br&gt;• Each module half-duplex speed is 12 Gbps (24 Gbps full duplex) with 1 m cable&lt;br&gt;• Dual ring stacking interconnect is 48 Gbps per switch (384 Gbps per stack)&lt;br&gt;  – When one AX742 kit per switch (two modules)&lt;br&gt;• Longer version of the stacking cable is available as an option (AXC743)</td>
</tr>
<tr>
<td><strong>AX743</strong>&lt;br&gt;SFP+ I/O Module</td>
<td><strong>Ordering information</strong>&lt;br&gt;- Worldwide: AX743-10000S&lt;br&gt;- Warranty: 5 years</td>
<td>• 1 port 10 Gigabit SFP+ for M5300 series rear I/O bays&lt;br&gt;• Compliant with 10-GbE SFP+ fiber optics (GBICs) MSA&lt;br&gt;• Supports passive Direct Attach copper cables (10GSFP+Cu)&lt;br&gt;• Allows for distant (fiber) stacking or uplinks</td>
</tr>
<tr>
<td><strong>AX745</strong>&lt;br&gt;10GBase-T I/O Module</td>
<td><strong>Ordering information</strong>&lt;br&gt;- Worldwide: AX745-10000S&lt;br&gt;- Warranty: 5 years</td>
<td>• 1 port 10 Gigabit RJ45 for M5300 series rear I/O bays&lt;br&gt;• Compliant with 10GBase-T (IEEE 802.3an-2006) standard&lt;br&gt;• Supports 100Mbps, 1000Mbps speeds&lt;br&gt;• Supports 10Gbe speed up to 100m (328 ft) with Cat6A RJ45 or better&lt;br&gt;• Supports 10Gbe speed up to 30m (98 ft) with legacy Cat6 RJ45&lt;br&gt;• Allows for local (copper) stacking or uplinks</td>
</tr>
</tbody>
</table>
## Accessories

### GBIC SFP Optics for M5300 series

<table>
<thead>
<tr>
<th>Ordering Information</th>
<th>Multimode Fiber (MMF)</th>
<th>Single mode Fiber (SMF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worldwide: See Table Below</td>
<td>OM1 or OM2 62.5/125µm</td>
<td>9/125µm</td>
</tr>
<tr>
<td>Warranty: 5 Years</td>
<td>OM3 or OM4 50/125µm</td>
<td></td>
</tr>
</tbody>
</table>

**10 Gigabit SFP+**

- Fits into M5300 series built-in SFP+ interfaces (front)
- Fits into AX743 I/O modules SFP+ interface (rear)

<table>
<thead>
<tr>
<th>AXM763</th>
<th>AXM763</th>
<th>AXM762</th>
</tr>
</thead>
<tbody>
<tr>
<td>10GBase-LRM long reach multimode 802.3aq - LC duplex connector up to 220m (722 ft)</td>
<td>10GBase-LRM long reach multimode 802.3aq - LC duplex connector up to 260m (853 ft)</td>
<td>10GBase-LR long reach single mode LC duplex connector up to 10km (6.2 miles)</td>
</tr>
<tr>
<td>AXM763-10000S (1 unit)</td>
<td>AXM763-10000S (1 unit)</td>
<td>AXM762-10000S (1 unit)</td>
</tr>
</tbody>
</table>

**Gigabit SFP**

- Fits into M5300 series SFP interfaces (front)

<table>
<thead>
<tr>
<th>AGM731F</th>
<th>AGM731F</th>
<th>AGM732F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000Base-SX short range multimode LC duplex connector up to 275m (902 ft)</td>
<td>1000Base-SX short range multimode LC duplex connector up to 550m (1,804 ft)</td>
<td>1000Base-LX long range single mode LC duplex connector up to 10km (6.2 miles)</td>
</tr>
<tr>
<td>AGM731F (1 unit)</td>
<td>AGM731F (1 unit)</td>
<td>AGM732F (1 unit)</td>
</tr>
</tbody>
</table>

**Fast Ethernet SFP**

- Fits into M5300 series SFP interfaces (front)

<table>
<thead>
<tr>
<th>AFM735</th>
<th>AFM735</th>
</tr>
</thead>
<tbody>
<tr>
<td>100Base-FX IEEE 802.3 LC duplex connector up to 2km (1.24 miles)</td>
<td>100Base-FX IEEE 802.3 LC duplex connector up to 2km (1.24 miles)</td>
</tr>
<tr>
<td>AFM735-10000S (1 unit)</td>
<td>AFM735-10000S (1 unit)</td>
</tr>
</tbody>
</table>

**AGM734**

- 1 port Gigabit RJ45 for M5300-28GF3 (SFP ports)
- Supports only 1000Mbps full-duplex mode
- Up to 100m (328 ft) with Cat5 RJ45 or better
- Conveniently adds copper connectivity density to M5300-28GF3 fiber switch

### AGM731F

- Fits into M5300 series built-in SFP+ interfaces

**AGM734**

- 1000Base-T Gigabit RJ45 SFP

- Worldwide: AX745-10000S
- Warranty: 5 years
This product comes with a limited warranty that is valid only if purchased from a NETGEAR authorized reseller and modifications to product may void the warranty; covers hardware, fans and internal power supplies - not software or external power supplies. See http://www.netgear.com/about/warranty/ for details. Lifetime technical support includes basic phone support for 90 days from purchase date and lifetime online chat support when purchased from a NETGEAR authorized reseller.

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