The M6100 switch series consists of Gigabit access layer and 10 Gigabit distribution layer switches in NETGEAR modular chassis switch product line. The M6100 switch series offers high-quality, high-density chassis alternative to stackable switches in campus LAN and midsize organizations demanding networks. With more than 1.4 Tbps switching and routing capacity, passive backplane, management and fabric nonstop forwarding redundancy, the M6100 series delivers world-class resiliency and scalability. Ultimately, operating software and system management features take the complexity out of delivering L2/L3/L4 rich services for enterprise edge and SMB core deployments.

NETGEAR M6100 series key features:
- Proficient access layer in campus LAN networks, and competent distribution or core layer for midsize organizations networks
- Advanced Layer 2, Layer 3 and Layer 4 feature set - no license required - including PBR, BGP, DCBX, PFC, ETS and FCoE FIP
- Innovative distributed fabric, with nonstop forwarding and hitless failover redundancy between supervisory I/O modules
- Up to 144 (Gigabit) ports, or 72 (10 Gigabit) ports, or a combination of both in dense form factor models
- PoE+ (30 watts per port) and UPOE (60 watts per port) modular, flexible implementation
- Ultra-low latency and scalable table size with 32K MAC, 8K ARP/NDP, 4K VLANs, 12K routes

NETGEAR M6100 series PoE features:
- Any Gigabit copper blade can receive PoE+ or UPOE daughter cards for easy upgrade / downgrade and best investment protection
- Up to 3,000W PoE budget is provided by internal power supplies when 6,000W are available with additional 1U power shelf
- All set for rapid proliferation of PoE/PoE+ devices, such as IP telephony endpoints, 802.11n / 802.11ac access points and IP security cameras
- Future-proof 60W UPOE power delivered to next-gen VDI clients or physical security devices, UPOE is backward compatible with PoE/PoE+

NETGEAR M6100 series software features:
- Advanced classifier-based, time-based hardware implementation for L2 (MAC), L3 (IP) and L4 (UDP/TCP transport ports) security and prioritization
- Voice VLAN with SIP, H323 and SCCP protocols detection and LLDP-MED IP phones automatic QoS and VLAN configuration
- Efficient authentication tiering with successive DOT1X, MAB and Captive Portal methods for streamlined BYOD
- Best-in-class IPv4/IPv6 static and dynamic routing including Proxy ARP, OSPF, BGP, Policy-based routing and automatic 6-to-4 tunneling
- Enhanced IPv4/IPv6 multicast forwarding with IGMPv3/MLDv2 Querier and Control Packet Flooding protection
- High performance IPv4/IPv6 multicast forwarding with PIM timer accuracy and unhandled PIM (S,G,rpt) state machine events transitioning
- Advanced IPv4/IPv6 security implementation including malicious code detection, DHCP Snooping, IP Source Guard protection and DoS attacks mitigation
- Innovative multi-vendor Auto-iSCSI capabilities for easier virtualization optimization
- Datacenter-ready features include DCBX (802.1Qaz), Priority Flow Control (PFC), Enhanced Transmission Selection (ETS) and FCoE FIP Snooping

NETGEAR M6100 series resiliency and availability features:
- Passive backplane, distributed redundant fabric and redundant management provide hitless, nonstop forwarding failover protection for always-on availability
- Redundant N+1 power protection contributes to business continuity management
- Distributed Link Aggregation across all I/O blades allows for multi-resiliency and advanced load balancing capabilities
- Multi Chassis Link Aggregation (MILAG) between two M6100 switches overcomes limitations of Spanning Tree, increasing bandwidth while preserving redundancy
- Per VLAN Spanning Tree and Per VLAN Rapid Spanning Tree (PVSTP/PVRRSTP) offer interoperability with PVST+ infrastructures

NETGEAR M6100 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 remote mirroring implementation
- Selectable service port for out-of-band Ethernet management (OOB)
- Selectable standard RS232 straight-through serial RJ45 and Mini-USB ports for local 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 M6100 series warranty and support:
- NETGEAR ProSAFE Lifetime Hardware Warranty*
- Included Lifetime Technical Support
- Included Lifetime Next Business Day Hardware Replacement
### Hardware at a Glance

<table>
<thead>
<tr>
<th>Model name</th>
<th>Form-Factor</th>
<th>I/O Slots</th>
<th>PSU Bay</th>
<th>Fan Tray</th>
<th>External PSU Bay</th>
<th>Height</th>
<th>Depth</th>
<th>Model number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M6100-3S</td>
<td>Chassis</td>
<td>3 open line-card slots</td>
<td>4 power supply slots (N+1)</td>
<td>1 fan tray slot (front-to-back)</td>
<td>Connectors RPS/EPS</td>
<td>4U height 6.93 in (17.59 cm)</td>
<td>17.39 in (44.16 cm)</td>
<td>XCM8903</td>
</tr>
</tbody>
</table>

Passive backplane, management and fabric 1+1 redundancy with hitless failover and non-stop forwarding.

Supports a maximum of 144 RJ45 10/100/1000 ports or 120 SFP 10/1000 ports, 72 RJ45 10GBASE-T ports or 48 SFP+ 1000/10GBASE-X ports, or a combination.

### LINE-CARDS

<table>
<thead>
<tr>
<th>Model name</th>
<th>Form-Factor</th>
<th>10/100/1000BASE-T RJ45 ports</th>
<th>100/1000X Fiber SFP ports</th>
<th>100/1000/1000BASE-T RJ45 ports</th>
<th>1000/10GBASE-X Fiber SFP+ ports</th>
<th>POE+ or UPOE upgradeable</th>
<th>Out-of-band Management (Ethernet)</th>
<th>Management Console (Serial)</th>
<th>Storage (image, config, log files)</th>
<th>Model number</th>
</tr>
</thead>
<tbody>
<tr>
<td>XCM8948B</td>
<td>I/O Blade</td>
<td>48</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>1 x RJ45 Ethernet OOB 10/100/1000 (service port)</td>
<td>1 x RJ45 R5232 (straight-through wiring)</td>
<td>1 x Mini-USB</td>
<td>XCM8948</td>
</tr>
<tr>
<td>XCM8944</td>
<td>I/O Blade</td>
<td>40</td>
<td>-</td>
<td>2</td>
<td>2 (independent)</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td>XCM8944</td>
</tr>
<tr>
<td>XCM8944F</td>
<td>I/O Blade</td>
<td>-</td>
<td>40</td>
<td>2</td>
<td>2 (independent)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>XCM8944F</td>
</tr>
<tr>
<td>XCM8924X</td>
<td>I/O Blade</td>
<td>-</td>
<td>-</td>
<td>24</td>
<td>16 (shared with 10GBASE-T)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>XCM8924X</td>
</tr>
</tbody>
</table>

### ACCESSORIES

<table>
<thead>
<tr>
<th>Model name</th>
<th>Form-Factor</th>
<th>Add PoE+ 802.3at functionality to XCM8948 and XCM8944 blades (1 daughter card per blade required; up to 30W per 1G RJ45 port; backward compatible with PoE)</th>
<th>Model number</th>
</tr>
</thead>
<tbody>
<tr>
<td>XCM89P</td>
<td>Daughter Card</td>
<td>Add PoE+ 802.3at functionality to XCM8948 and XCM8944 blades (1 daughter card per blade required; up to 60W per 1G RJ45 port; backward compatible with PoE+)</td>
<td>XCM89P</td>
</tr>
<tr>
<td>XCM89UP</td>
<td>Daughter Card</td>
<td>Add UPOE functionality to XCM8948 and XCM8944 blades (1 daughter card per blade required; up to 60W per 1G RJ45 port; backward compatible with PoE+/PoE)</td>
<td>XCM89UP</td>
</tr>
<tr>
<td>APS1000W</td>
<td>Power Supply</td>
<td>PSU 1,000W AC (up to four PSUs in M6100-3S chassis; up to four more PSUs in RPS4000v2 external power supply bay)</td>
<td>APS1000W</td>
</tr>
<tr>
<td>AFT603</td>
<td>Fan Tray</td>
<td>Fan Tray for M6100-3S chassis (front-to-back cooling principle; one fan tray per chassis required)</td>
<td>AFT603</td>
</tr>
<tr>
<td>RPS4000v2</td>
<td>External PSU Bay</td>
<td>Additional 1U power shelf (RPS/EPS unit with four open power supply slots)</td>
<td>RPS4000v2</td>
</tr>
</tbody>
</table>

### Software at a Glance

|------------|------------|---------------------------------|------------------------------|------------------------------------|-------------------------------|-------|----------------------|---------------------------------|------------------------|----------------------|------------------------|---------------|

** CLI only

### Performance at a Glance

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Passive Backplane</th>
<th>Fabric Speed</th>
<th>Routing/ Switching Capacity</th>
<th>Throughput</th>
<th>High Availability</th>
<th>Packet Buffer CPU Latency</th>
<th>MAC, ARP/ NDP VLANs ; DHCP</th>
<th>Application Route Scaling</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>M6100-3S</td>
<td>Each Slot provides 2 x 40G access to the backplane 80G half-duplex 160G full-duplex per slot</td>
<td>480 Gbps Inter-Module Distributed Fabric</td>
<td>1.4 Tbps Intra-Module Each line-card provides line-rate capacity</td>
<td>357 Mpps Intra-Module</td>
<td>Dual Supervisory Modules Fabric and Management Nonstop Forwarding Failover (NSF)</td>
<td>1G/10G Blades 32M/72Mb Packet Buffer CPU 800 MHz 1GB RAM 64MB Flash Latency 3.7us 10G RJ45 1.5us 10G SFP+ 32K MAC BK ARP/ NDP ARP 1.2Kpps</td>
<td>4K VLANs DHCPv4: 4K leases in 256 pools</td>
<td>Static: 512 RIP: 512 OSPF and BGP: 12,000 routes</td>
<td>Static: 512</td>
<td>1.5K IPv4 IPv6</td>
<td>232 samplers IPv4 IPv6 52 receivers</td>
<td>XCM8903</td>
</tr>
</tbody>
</table>

Each Line Card provides line-rate switching and routing capacity. Each Slot provides 2 x 40G channels (80G half-duplex/160G full-duplex) access to passive backplane.