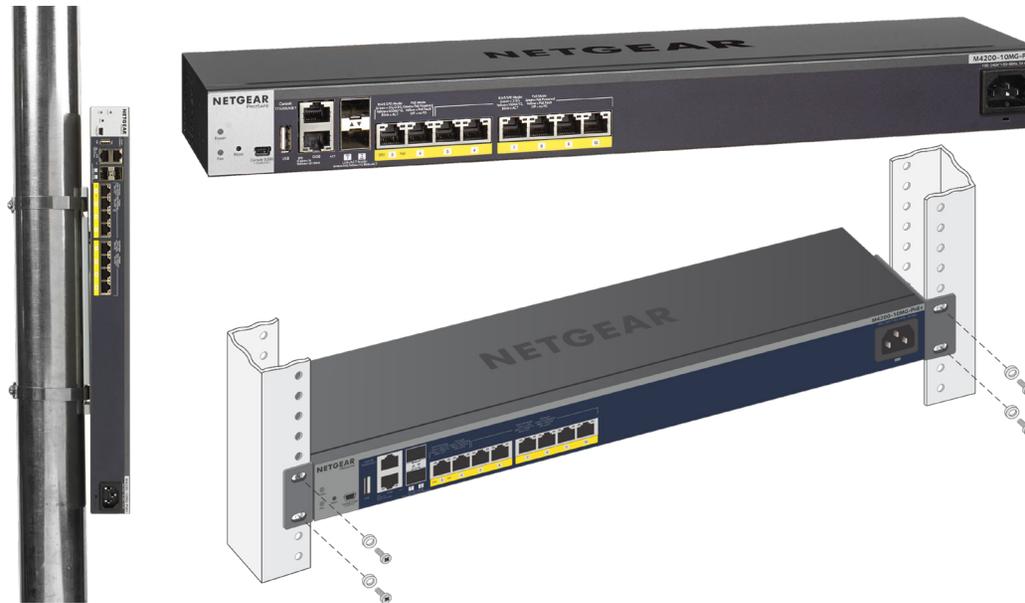


ProSAFE® M4200 Intelligent Edge Series

Multigigabit Ethernet for Wave 2 11ac



M4200 Series

The ProSAFE® M4200-10MG-PoE+ Managed Switch was designed from the ground up to optimize the installation of Wave 2 11ac access points. Includes eight full power PoE+ and multi-speed 1G, 2.5G ports for 100 meter cable runs, combined with two 10G uplinks for a fully non-blocking deployment of eight Wave 2 11ac access points from any vendor. Plenum rated, slim design and mounting accessories allow for access point placement optimization and cabling efficiency even outside the rack.



Wave 2 11ac Access Point deployment

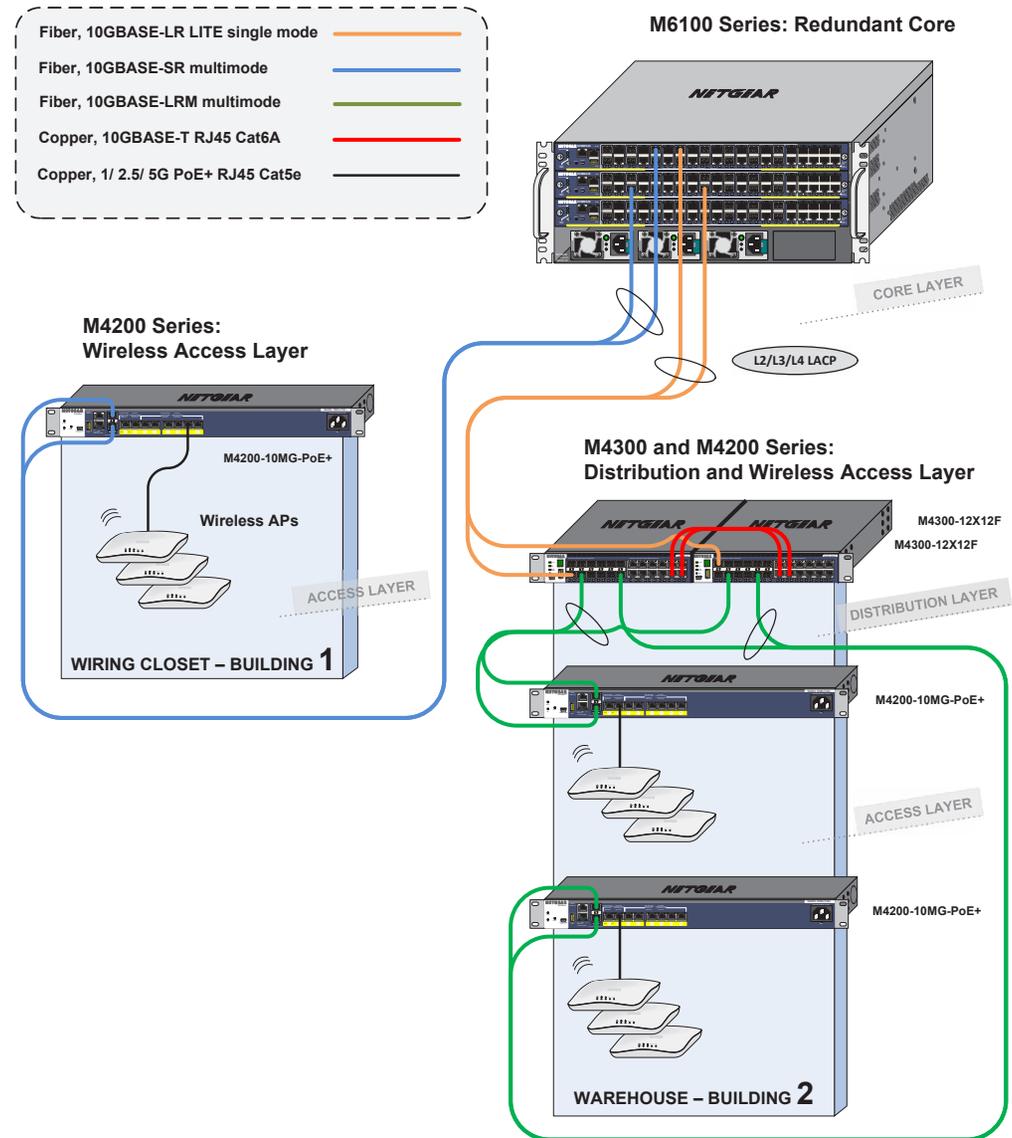
M4200 is the world's first Multigigabit Ethernet switch with eight full power PoE+ and multi-speed 1G, 2.5G ports combined with two 10G uplinks for a fully non-blocking deployment of eight Wave 2 11ac access points from any vendor.

Building 1: Wireless Access Layer

- With Wave 2 802.11ac, wired networks need to expand their reach and scope to support speeds greater than 1 Gigabit
- In addition, power-constrained environments can benefit from full power PoE+ to support access points in a range of environments
- The M4200-10MG-PoE+ was designed from the ground up to optimize the installation of Wave 2 11ac access points
- With 8 x 2.5G to the APs and 2 x 10G line rate aggregation, M4200 connects redundantly directly to a M6100 core chassis
- The two SFP+ uplinks connect to two different 10G blades using link aggregation (L2/L3/L4 LACP) with load-balancing and failover
- M6100 management unit hitless failover and nonstop forwarding ensure no single point of failure
- Using LACP in aggregation to this redundant core, M4200 allows for wire-speed wireless access layer, with PoE+ full provisioning

Building 2: M4300 and M4200 Distribution and Wireless Access Layer

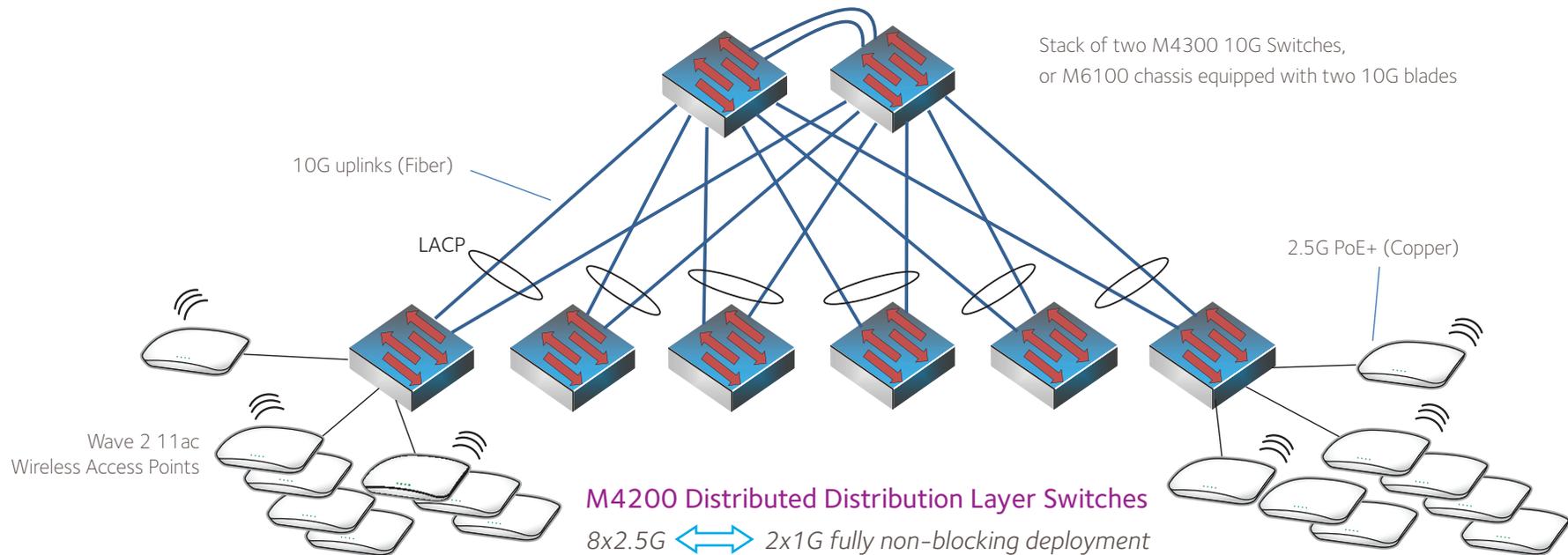
- In this warehouse, two half-width M4300 10GbE models are paired in a single rack space for redundant distribution layer
- Compared with a single aggregation switch, such two-unit horizontal stacking is cost-effective yet highly efficient for HA
- Management unit hitless failover and nonstop forwarding ensures no single point of failure for M4200 access switches
- Every M4200 can connect to both redundant distribution switches using link aggregation (L2/L3/L4 LACP) with load-balancing and failover
- When too far from the wiring closet, M4200 distant switches are securely mounted on poles across the warehouse
- This redundant topology allows for wire-speed 8x2.5G wireless access layer, with PoE+ full provisioning.



How to deploy Wave 2 11ac Access Points

Key positioning attributes of the ProSAFE® M4200-10MG-PoE+

- Provide eight full power PoE+ and multi-speed 1G, 2.5G ports combined with two 10G SFP+ uplinks
- Allow for a fully non-blocking deployment of eight Wave 2 11ac access points, with 240W PoE budget
- 8x2.5G to the access points and 2x10G line-rate aggregation to the wiring closet
- Deliver 240W full Power over Ethernet (PoE+) across 8 ports
- Two of these multi-speed 1G, 2.5G PoE+ ports also support 5G
- NETGEAR Multigigabit Ethernet is compatible with most major wireless and switching vendors
- Multi-speed 2.5G/5G for 100 meter Cat5e/Cat6 cable runs with 1G backward compatibility
- Plenum rated, slim design and mounting accessories allow to place this switch to optimize access points placement and cabling efficiency, inside and outside the rack
- Lifetime hardware warranty, Lifetime Next Business Day and Lifetime online technical chat for investment protection and post-sales support.



M4200 Series Features

The ProSAFE® M4200-10MG-PoE+ Managed Switch was designed from the ground up to optimize the installation of Wave 2 11ac access points. Includes eight full power PoE+ and multi-speed 1G, 2.5G ports for 100 meter cable runs, combined with two 10G uplinks for a fully non-blocking deployment of eight Wave 2 11ac access points. NETGEAR Multigigabit Ethernet is compatible with most major wireless and switching vendors managed solutions, and the only one with 8x2.5G to the AP and 2x10G line-rate aggregation to the wiring closet. Plenum rated, slim design and mounting accessories allow for access point placement optimization and cabling efficiency.

NETGEAR M4200 series key features:

- Eight full power PoE+ and multi-speed 1G, 2.5G ports combined with two 10G SFP+ uplinks
- Allow for a fully non-blocking deployment of eight Wave 2 11ac access points, with 240W PoE budget
- Two of these multi-speed 1G, 2.5G PoE+ ports also support 5G
- NBASE-T compliant Multigigabit Ethernet (basis for the upcoming IEEE 802.3bz standard)
- 2.5X to 5X faster speeds up to 100m on legacy Cat5e/Cat6 cables - yet providing 100M and 1G backward compatibility
- Whisper quiet 28.9dB acoustics when operating at 25°C (77°F), well below normal offices ambient background noise
- Secure placement above drop-down ceilings, in air passageways and where other switches will not go, vertical or horizontal, flat or perpendicular
- Easy Mount options whether it's directly on a wall, attached to a rectangular or round pole, or mounted in a standard 19-inch rack
- Low latency and scalable table size with 16K MAC, 1K ARP/NDP, 1K VLANs, 32 routes (IPv4) and 32 routes (IPv6)
- SDN-Ready OpenFlow 1.3 support for maximum investment protection

NETGEAR M4200 series software features:

- Advanced classifier-based, time-based hardware implementation for L2 (MAC), L3 (IP) and L4 (UDP/TCP transport ports) security and prioritization
- Selectable Port-Channel / LAG (802.3ad - 802.1AX) L2/L3/L4 hashing for fault tolerance and load sharing with any type of Ethernet channeling
- 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
- Comprehensive IPv4/IPv6 static and IPv4 dynamic routing including RIP
- Layer 2 multicast forwarding with IGMPv3/MLDv2 Snooping and IGMPv2/MLDv1 Snooping Querier

- Advanced security including malicious code detection, DHCP Snooping, Dynamic ARP Inspection and DoS attacks mitigation
- Innovative multi-vendor Auto-iSCSI capabilities

NETGEAR M4200 series resiliency and availability features:

- Link Dependency new feature enables or disables ports based on the link state of different ports
- Per VLAN Spanning Tree and Per VLAN Rapid Spanning Tree (PVSTP/PVRSTP) offer interoperability with PVST+ infrastructures

NETGEAR M4200 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
- Service port for out-of-band Ethernet management (OOB)
- 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 M4200 series warranty and support:

- NETGEAR ProSAFE Lifetime Hardware Warranty*
- Included Lifetime Technical Support
- Included Lifetime Next Business Day Hardware Replacement

Hardware at a Glance

			FRONT				SIDE	MANAGEMENT	
Model name	Form-Factor	Switching Fabric	100/1000/2.5G BASE-T RJ45 ports	100/1000/2.5G/5G BASE-T RJ45 ports	1000/10GBASE-X SFP+ ports	PSU	Fans	Out-of-band Console	Model number
M4200-10MG-PoE+	Full width 1-unit 1U rack mount 3.9 in (10 cm) deep	90 Gbps	6 ports PoE+ 100M; 1G; 2.5G	2 ports PoE+ 100M; 1G; 2.5G; 5G	2 ports 1G; 10G	Internal	Fixed Side-to-side 28.9dB	Ethernet: Out-of-band 1G port (Front) Console: RJ45 RS232 (Front) Console: Mini-USB (Front) Storage: USB (Front)	GSM4210P
			240W PoE budget 8-port Multigigabit and PoE+ full provisioning				Low acoustics		

Software at a Glance

LAYER 3 PACKAGE												
Model name	Management	Usability Enhancements	IPv4/IPv6 ACL and QoS, DiffServ	IPv4/IPv6 Multicast filtering	IPv4 / IPv6 Policing and Convergence	Spanning Tree Green Ethernet	VLANs	Trunking Port Channel	IPv4/IPv6 Authentication Security	IPv4/IPv6 Static Routing	IPv4 Dynamic Routing	Model number
M4200-10MG-PoE+	Out-of-band; Web GUI; HTTPs; CLI; Telnet; SSH SNMP, MIBs RSPAN Radius Users, TACACS+	Link Dependency (Enable or Disable one or more ports based on the link state of one or more different ports) Syslog and Packet Captures can be sent to USB storage	Ingress 1 Kbps shaping Time-based Single Rate Policing	IGMPv3 MLDv2 Snooping IGMPv1,v2 and MLDv1 Snooping Querier Control Packet Flooding	Auto-VoIP Auto-iSCSI LLDP-MED	STP, MTP, RSTP PV(R)STP1 BPDU/STRG Root Guard EEE (802.3az)	Static, Dynamic, Voice, MAC GVRP/GMRP QinQ, Private VLANs	Static or Dynamic LACP Seven (7) L2/L3/L4 hashing algorithms	Successive Tiering (DOT1X; MAB; Captive Portal) DHCP Snooping IPv4: Dynamic ARP Inspection	IPv4/IPv6 Port, Subnet, VLAN routing DHCPv4 Relay; DHCPv4 Server	IPv4: RIP	GSM4210P

¹CLI only

Performance at a Glance

TABLE SIZE													
Model name	MAC ARP/NDP	Routing / Switching Capacity	Throughput	Application Route Scaling	Packet Buffer	Latency	ACLs	Multicast IGMP Group membership	CPU	VLANs	DHCP	sFlow	Model number
M4200-10MG-PoE+	16K MAC 1K ARP/NDP	90 Gbps Line-rate	66.9 Mpps	Static: 32v4/32v6 RIP: 32	16Mb	64-byte frames: <2.8µs 1G RJ45 <7.2µs 2.5G RJ45 <5.7µs 5G RJ45 <0.9µs 10G SFP+	50 ACLs 512 rules per list 16K ACL rules (ingress)	1K IPv4 1K IPv6	CPU 800 Mhz 1GB RAM 256MB Flash	1K VLANs	DHCP Server: 2K leases IPv4: 256 pools	10 samplers 10 pollers 8 receivers	GSM4210P

Accessories

GBIC SFP and SFP+ Optics for M4200 series

Ordering information	Multimode Fiber (MMF)		Single mode Fiber (SMF)
	OM1 or OM2 62.5/125µm	OM3 or OM4 50/125µm	9/125µm
<p>10 Gigabit SFP+</p>  <ul style="list-style-type: none"> Worldwide: see table below Warranty: 5 years <p>Fits into M4200 models SFP+ interfaces</p>	<p>AXM763</p> <p>10GBase-LRM long reach multimode 802.3aq - LC duplex connector</p> <p>up to 220m (722 ft)</p> <p>AXM763-10000S (1 unit)</p>	<p>AXM763</p> <p>10GBase-LRM long reach multimode 802.3aq - LC duplex connector</p> <p>up to 260m (853 ft)</p> <p>AXM763-10000S (1 unit)</p>	<p>AXM762</p> <p>10GBase-LR long reach single mode LC duplex connector</p> <p>up to 10km (6.2 miles)</p> <p>AXM762-10000S (1 unit) AXM762P10-10000S (pack of 10 units)</p>
		<p>AXM761</p> <p>10GBase-SR short reach multimode LC duplex connector</p> <p>OM3: up to 300m (984 ft) OM4: up to 550m (1,804 ft)</p> <p>AXM761-10000S (1 unit) AXM761P10-10000S (pack of 10 units)</p>	<p>AXM764</p> <p>10GBase-LR LITE single mode LC duplex connector</p> <p>up to 2km (1.2 mile)</p> <p>AXM764-10000S (1 unit)</p>
<p>Gigabit SFP</p>  <ul style="list-style-type: none"> Fits into M4200 models SFP+ interfaces 	<p>AGM731F</p> <p>1000Base-SX short range multimode LC duplex connector</p> <p>up to 275m (902 ft)</p> <p>AGM731F (1 unit)</p>	<p>AGM731F</p> <p>1000Base-SX short range multimode LC duplex connector</p> <p>OM3: up to 550m (1,804 ft) OM4: up to 1,000m (3,280 ft)</p> <p>AGM731F (1 unit)</p>	<p>AGM732F</p> <p>1000Base-LX long range single mode LC duplex connector</p> <p>up to 10km (6.2 miles)</p> <p>AGM732F (1 unit)</p>
<p>Ordering information</p> <ul style="list-style-type: none"> Worldwide: AGM734-10000S Warranty: 5 years 	<p>AGM734</p> <p>1000Base-T Gigabit RJ45 SFP</p>	 <ul style="list-style-type: none"> 1 port Gigabit RJ45 for XCM8944F blade (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 	
<p>Direct Attach Cables for M4200 series</p>  <ul style="list-style-type: none"> Fits into M4200 models SFP+ interfaces 	<p>SFP+ to SFP+</p>		
	<p>10 Gigabit DAC</p> <p>1 meter (3.3 ft)</p> <p>AXC761</p> <p>10GSFP+ Cu (passive) SFP+ connectors on both end</p> <p>AXC761-10000S (1 unit)</p>	<p>3 meters (9.8 ft)</p> <p>AXC763</p> <p>10GSFP+ Cu (passive) SFP+ connectors on both end</p> <p>AXC763-10000S (1 unit)</p>	

Components

M4200-10MG-PoE+ Multigigabit Ethernet Managed Switch

Ordering information

- Americas, Europe: GSM4210P-100NES
- Asia Pacific: GSM4210P-100AJS
- Warranty: Lifetime ProSAFE Hardware Warranty



Both the switch back panel and bottom panel contain mounting holes to allow for attachment

19-inch Rack-Mount Kit



Mount for Attachment Outside the Rack



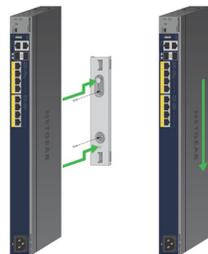
Standard Rack Mounting



10cm Hose Clamps for Round Poles



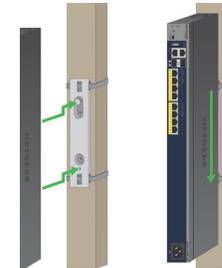
Attaching the Switch to a Wall



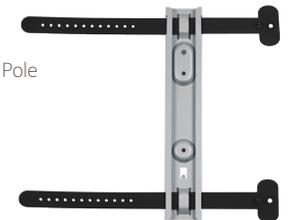
Attaching the Switch to a Round Pole



Attaching the Switch to a Rectangular Pole



Rubber Belts for Rectangular Poles



- 8-port PoE+ 1G / 2.5G (RJ45) including 2-port with 5Gbps
- NBASE-T compliant
- 2-port 10GBASE-X (SFP+)
- Non blocking 90Gbps fabric for (6 x 2.5G) + (2 x 5G) + (2 x 10G) full duplex operation
- 240W PoE budget (30W per port across 8 ports)
- Out-of-band 1G Ethernet management port
- Mini-USB and RJ45 RS232 console ports and USB storage port
- L3 feature set with static routing and RIP v1/v2 dynamic routing
- Easy Mount for standard rack mounting as well as plenum mounting on poles or walls
- Whisper quiet acoustics (28.9dB @25 °C / 77°F)



NETGEAR[®]

* 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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