NETGEAR®

Intelligent Edge Managed Switches

M4300 series

The M4300 Stackable L3 Managed Switch Series comes with 40G, 10G and 1G models in a variety of form factors including PoE+ full provisioning. SDN-ready with OpenFlow 1.3, M4300 Switch Series delivers IPv4/IPv6 rich services for mid-enterprise edge and SMB core with mixed stacking between 40-, 10- and 1-Gigabit models. Layer 3 feature set includes static and policy-based routing, RIP, VRRP, OSPF, and PIM dynamic routing. M4300 is ideal for server aggregation, wireless access, unified communications and Video-over-IP.

NETGEAR M4300 series key features:

- Cost effective 1G access layer in campus LAN networks, and high performance 10G / 40G distribution layer for midsize organizations networks
- Zero Touch AV-over-IP with pre-configured L2 Multicast (SDVoE-ready)
- Advanced Layer 2, Layer 3 and Layer 4 feature set – no license required – including Policy Based Routing, RIP, VRRP, OSPF and PIM
- Innovative mixed "Spine and Leaf", 1G, 10G and 40G stacking with nonstop forwarding (NSF) and hitless failover redundancy
- Low acoustics, half-width 16-port and 24-port 10G models can be paired in a single rack space for redundant Top of Rack
- Modular 12-slot 2RU model scaling up to 96-port 10G by multiple of 8 ports or 24-port 40G by multiple of 2 ports
- Up to 768 (10 Gigabit) ports, 192 (40 Gigabit) ports or 384 (1 Gigabit) ports, or a combination in a single logical switch
- PoE+ (30 watts per port) with hot swap, redundant power supplies and full provisioning
- SDN-Ready OpenFlow 1.3 support for maximum investment protection

NETGEAR M4300 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 dynamic routing including Proxy ARP, OSPF, Policy-based routing and automatic 6-to-4 tunneling
- Enhanced IPv4/IPv6 multicast forwarding with IGMPv3/MLDv2 ASM and SSM Proxy and Control Packet Flooding protection
- High performance IPv4/IPv6 multicast routing 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

NETGEAR M4300 series resiliency and availability features:

- Dual redundant, modular power supplies equipping full width models contribute to business continuity management
- Vertical or horizontal flexible stacking with management unit hitless failover and nonstop forwarding (NSF) across operational stack members
- Spine and leaf architecture with every leaf switch (1G access switches) connecting to every spine switch (distributed 10G "core" switches)
- Stacking and distributed link aggregation allow for multi-resiliency with zero downtime and load balancing capabilities
- 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 M4300 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 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 M4300 series warranty and support:

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

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Hardware at a Glance

10G models Model name	Form-Factor	Switching Fabric	FRONT			REAR		MANAGEMENT	Model number
			10GBASE-T RJ45 ports	10GBASE-X SFP+ ports	40GBASE-X QSFP+ports	PSU	Fans	Out-of-band Console	
M4300-8X8F	Half-width 1-unit 1U 2-unit 1U rack mount	320 Gps	8 ports (independent) 100M; 1G; 10G	8 ports (independent) 1G; 10G	–	Modular 1 bay 1 PSU included: APS250W	Fixed Front-to-back 36.9dB	Ethernet: Out-of-band 1G port (Front) Console: RJ45 RS232 (Front) Console: Mini–USB (Front) Storage: USB (Front)	XSM4316S
M4300-12X12F	Half-width 1-unit 1U 2-unit 1U rack mount	480 Gps	12 ports (independent) 100M; 1G; 10G	12 ports (independent) 1G; 10G	–	Modular 1 bay 1 PSU included: APS250W	Fixed Front-to-back 36.9dB	Ethernet: Out-of-band 1G port (Back) Console: RJ45 RS232 (Back) Console: Mini–USB (Front) Storage: USB (Front)	XSM4324S
M4300-24X	Half-width 1-unit 1U 2-unit 1U rack mount	480 Gps	24 ports 100M; 1G; 10G	4 ports (shared, back) 1G; 10G	–	Modular 1 bay 1 PSU included: APS250W	Fixed Front-to-back 37dB	Ethernet: Out-of-band 1G port (Back) Console: RJ45 RS232 (Back) Console: Mini–USB (Front) Storage: USB (Front)	XSM4324CS
M4300-24X24F	Full width 1-unit 1U rack mount	960 Gps	24 ports (independent) 100M; 1G; 10G	24 ports (independent) 1G; 10G	–	Modular 2 bays 1 PSU included: APS250W	Fixed Front-to-back 35.8dB	Ethernet: Out-of-band 1G port (Front) Console: RJ45 RS232 (Front) Console: Mini–USB (Front) Storage: USB (Front)	XSM4348S
M4300-48X	Full width 1-unit 1U rack mount	960 Gps	48 ports 100M; 1G; 10G	4 ports (shared) 1G; 10G	–	Modular 2 bays 1 PSU included: APS250W	Fixed Front-to-back 40.3dB	Ethernet: Out-of-band 1G port (Back) Console: RJ45 RS232 (Back) Console: Mini–USB (Front) Storage: USB (Front)	XSM4348CS
M4300-96X	Modular 1-unit 2U rack mount	1.920 Tbps	up to 96 ports 100M; 1G; 2.5G; 5G; 10G	up to 96 ports 1G; 10G	Up to 24 ports 40G	Modular 2 bays for APS600W or APS1200W	Fixed Front-to-back 35.8dB (no PoE) 66.8dB (max PoE)	Ethernet: Out-of-band 1G port (Back) Console: RJ45 RS232 (Back) Console: Mini–USB (Back) Storage: USB (Back)	

12 slots for port expansion cards:

	10GBASE-T RJ45	10GBASE-X SFP+	40GBASE-X QSFP+		
	APM408C (8 ports) APM408P (8 ports PoE+)*	APM408F (8 ports)	APM402XL (2 ports)	Empty switch version, no PSU (PSU must be purchased separately)		XSM4396K0

* Only first 6 slots are delivering PoE power to APM408P cards for 48 PoE+ ports per switch. APS1200W PSU is preferred for PoE applications.

Starter Kit with the switch, 48 x SFP+ (6 x APM408F) and 1 PSU APS600W — XSM4396K1

110V/220V AC	34W (min) 232W (max) PoE Budget with 1 x APS600W PSU, or 1+1 redundant*	
110V/220V AC	634W (min) 832W (max) PoE Budget with 2 x APS600W PSUs in shared mode	
110V AC	484W (min) 682W (max) PoE Budget with 1 x APS1200W PSU, or 1+1 redundant	
220V AC	634W (min) 832W (max) PoE Budget with 1 x APS1200W PSU, or 1+1 redundant	

110V/220V AC	1,440W (min/max) PoE Budget with 2 x APS1200W PSUs in shared mode*
110V AC	1,084W (min) 1,282W (max) PoE Budget with APS600W+APS1200W PSUs in shared mode
220V AC	1,234W (min) 1,432W (max) PoE Budget with APS600W+APS1200W PSUs in shared mode

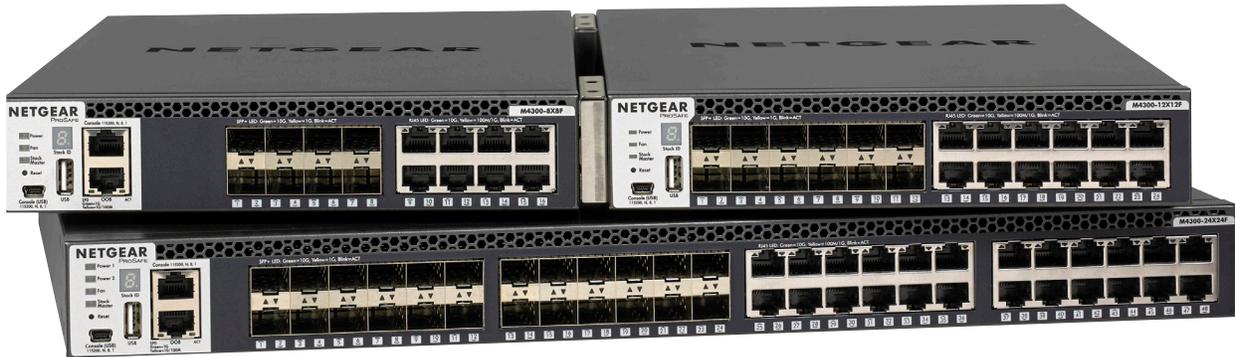M4300-96X online configurator: www.netgear.com/96x-config

* PoE Budget depends on number of PSU and APM port cards per switch. Min values above are guaranteed when 6xAPM408P (48x10G PoE+) plus any combination of 6 other port cards. Max values are guaranteed when only 6xAPM408P (48x10G PoE+) per switch, or less. APS600W provides 600W@110V/220VAC; APS1200W delivers 1,050W@110VAC or 1,200W@220VAC per PSU. The system consumes 110W, plus 5W per empty slot. APM408C/APM408P consume 38W per port card. APM408F/APM402XL consume 23W per port card.

SDVoE-Ready M4300-96X

Up to 96-port 10G, PoE options

Modular. Granular. Unique.

SDVoE™ ALLIANCE

Hardware at a Glance

			FRONT			REAR		MANAGEMENT	
1G models Model name	Form-Factor	Switching Fabric	10/100/1000 BASE-T RJ45 ports	100/1000/10G BASE-T RJ45 ports	1000/10G BASE-X SFP+ ports	PSU	Fans	Out-of-band Console	Model number
M4300-28G	**Full width** 1-unit 1U rack mount	128 Gps	**24 ports** (No 10M/ half on ports 17–24)	**2 ports** (independent) 100M; 1G; 10G	**2 ports** (independent) 1G; 10G	**Modular** **2 bays** 1 PSU included: APS150W	**Fixed** Front-to-back 30.3dB	Ethernet: Out-of-band 1G port (Front) Console: RJ45 RS232 (Back) Console: Mini-USB (Front) Storage: USB (Front)	GSM4328S
M4300-52G	**Full width** 1-unit 1U rack mount	176 Gps	**48 ports** (No 10M/ half 17–24 and 41–48)	**2 ports** (independent) 100M; 1G; 10G	**2 ports** (independent) 1G; 10G	**Modular** **2 bays** 1 PSU included: APS150W	**Fixed** Front-to-back 31.5dB	Ethernet: Out-of-band 1G port (Front) Console: RJ45 RS232 (Back) Console: Mini-USB (Front) Storage: USB (Front)	GSM4352S
M4300-28G-PoE+	**Full width** 1-unit 1U rack mount	128 Gps	**24 ports** **PoE+** (No 10M/ half on ports 17–24)	**2 ports** (independent) 100M; 1G; 10G	**2 ports** (independent) 1G; 10G	**Modular** **2 bays**	**Fixed** Front-to-back 39.8dB	Ethernet: Out-of-band 1G port (Front) Console: RJ45 RS232 (Back) Console: Mini-USB (Front) Storage: USB (Front)	
				480W PoE Budget with 1 PSU 480W PoE Budget with 2 PSUs in RPS mode 720W PoE Budget with 2 PSUs in EPS mode		1 PSU included: APS550W			GSM4328PA
			110V AC input	630W PoE Budget with 1 PSU 630W PoE Budget with 2 PSUs in RPS mode 720W PoE Budget with 2 PSUs in EPS mode		1 PSU included: APS1000W			GSM4328PB
			220V AC input	720W PoE Budget with 1 PSU 720W PoE Budget with 2 PSUs in RPS mode					
M4300-52G-PoE+	**Full width** 1-unit 1U rack mount	176 Gps	**48 ports** **PoE+** (No 10M/ half 17–24 and 41–48)	**2 ports** (independent) 100M; 1G; 10G	**2 ports** (independent) 1G; 10G	**Modular** **2 bays** RPS connector	**Fixed** Front-to-back 39.8dB	Ethernet: Out-of-band 1G port (Front) Console: RJ45 RS232 (Back) Console: Mini-USB (Front) Storage: USB (Front)	
			110V/220V AC input	480W PoE Budget with 1 PSU 480W PoE Budget with 2 PSUs in RPS mode 720W PoE Budget with 2 PSUs in EPS mode		1 PSU included: APS550W	External RPS4000 for power redundancy (RPS) when 2 internal PSUs are used in EPS mode		GSM4352PA
			110V AC input	591W PoE Budget with 1 PSU 591W PoE Budget with 2 PSUs in RPS mode 1,010W PoE Budget with 2 PSUs in EPS mode		1 PSU included: APS1000W	External RPS4000 for power redundancy (RPS) when 2 internal PSUs are used in EPS mode		GSM4352PB
			220V AC input	860W PoE Budget with 1 PSU 860W PoE Budget with 2 PSUs in RPS mode 1,440W PoE Budget with 2 PSUs in EPS mode					

PoE models: APS550W and APS1000W cannot be mixed and matched. A switch can only have two APS550W, or two APS1000W. PA versions can be upgraded to PB, but their APS550W must be replaced by APS1000W (and reversely).
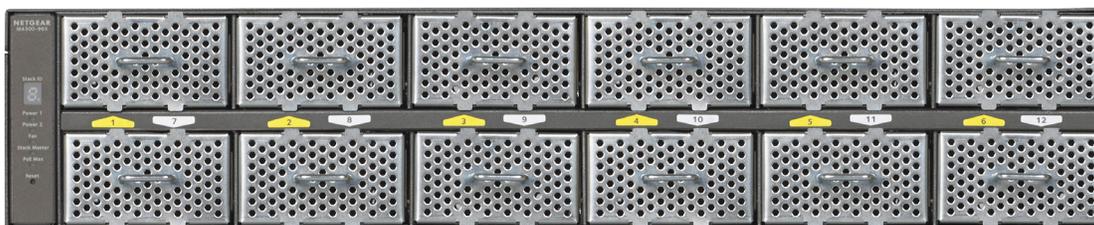
Software at a Glance

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/IPv6 Dynamic Routing	Model number
				LAYER 3 PACKAGE								
M4300 series	Out-of-band; Web GUI; HTTPs; CLI; Telnet; SSH / SNMP, MIBs RSPAN / Radius Users, TACACS+	Stacking NSF with Hitless Failover / 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/ egress / 1 Kbps shaping Time-based / Single Rate Policing	IGMPv3 MLDv2 Snooping, Proxy ASM & SSM / IGMPv1,v2 Querier / Control Packet Flooding	Auto-VoIP / Auto-iSCSI / Policy-based routing (PBR) / LLDP-MED	STP, MTP, RSTP / PV(R)STP[1] / BPDU/STRG Root Guard / EEE (802.3az)	Static, Dynamic, Voice, MAC / GVRP/ GMRP / QinQ, / Private VLANs	Distributed LAG across the stack / Static or Dynamic LACP / (LACP automatically reverts to and from Static LAG) / Seven (7) L2/L3/ L4 hashing algorithms	Successive Tiering (DOT1X; MAB; Captive Portal) / DHCP Snooping Dynamic ARP Inspection / IP Source Guard	Port, Subnet, VLAN routing, DHCP Relay; / Multicast static routes; / Stateful DHCPv6 Server	IPv4: RIP, VRRP / IPv4/IPv6: OSPF, Proxy ARP, PIM-SM, PIM-DM, 6-to-4 tunnels	All models

[1] CLI only

Performance at a Glance

Model name	MAC ARP/ NDP	Routing / Switching Capacity	Through-put	Application Route Scaling	Packet Buffer	Latency	IP Multicast Forwarding Entries	CPU	Multicast IGMP Group member-ship	VLANs	DHCP	sFlow	Model number
						TABLE SIZE*							
M4300-96X	256K MAC / 8K ARP/ NDP	1.920 Tbps / Line-rate	2,857 Mpps	Static: 64v4/ 64v6 / RIP: 512 / OSPF: 12,000	96Mb	64-byte frames / <2.56µs 10G RJ45 / <0.89µs 10G SFP	2,048 IPv4 / 1,024 IPv6	CPU 1.4 Ghz / 2GB RAM / 256MB Flash					XSM4396K0 XSM4396K1
M4300-24X24F M4300-48X	128K MAC / 8K ARP/ NDP	960 Gbps / Line-rate	714 Mpps	Static: 64v4/ 64v6 / RIP: 512 / OSPF: 12,000	56Mb	64-byte / M4300-24X24F <2.39µs 10G RJ45 <0.88µs 10G SFP+ / M4300-48X <2.41µs 10G RJ45 <1.51µs 10G SFP+	1,024 IPv4 / 512 IPv6	CPU 800 Mhz / 1GB RAM / 256MB Flash	2K IPv4 2K IPv6	4K VLANs	DHCP Server: 2K leases / IPv4: 256 pools / IPv6: 16 pools	416 samplers / 416 pollers / 8 receivers	XSM4348S XSM4348CS
M4300 other models	16K MAC / 888 ARP/ NDP	Up to 480 Gbps / All models Line-rate	Up to 357 Mpps	Static: 64v4/ 64v6 / RIP: 512 / OSPF: 512	M4300-12X12F: 32Mb / Others: 16Mb	M4300-8X8F: <2.43µs 10G RJ45 <0.89µs 10G SFP+ / All others: <2.76µs 10G RJ45 <1.83µs 10G SFP+	96 IPv4 / 32 IPv6	CPU 800 Mhz / 1GB RAM / 256MB Flash					All other models

* For mixed stacking between more capable devices and less capable devices, SDM mixed stacking template is used based on "least common denominator" set of capacities and capabilities
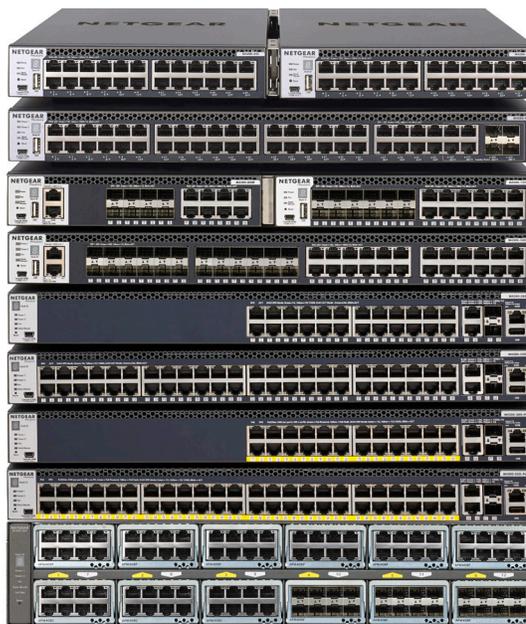
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Ordering Information

ORDERING INFORMATION	
M4300-8X8F	
Americas, Europe	XSM4316S-100NES
Asia Pacific	XSM4316S-100AJS
China	XSM4316S-100PRS
M4300-12X12F	
Americas, Europe	XSM4324S-100NES
Asia Pacific	XSM4324S-100AJS
China	XSM4324S-100PRS
M4300-24X	
Americas, Europe	XSM4324CS-100NES
Asia Pacific	XSM4324CS-100AJS
China	XSM4324CS-100PRS
M4300-24X24F	
Americas, Europe	XSM4348S-100NES
Asia Pacific	XSM4348S-100AJS
China	XSM4348S-100PRS
M4300-48X	
Americas, Europe	XSM4348CS-100NES
Asia Pacific	XSM4348CS-100AJS
China	XSM4348CS-100PRS
M4300-96X	
Worldwide (Empty Switch, No PSU)	XSM4396K0-10000S
Americas, Europe (Starter Kit 48xSFP+)	XSM4396K1-100NES
Asia Pacific (Starter Kit 48xSFP+)	XSM4396K1-100AJS
Worldwide (10G Copper card)	APM408C-10000S
Worldwide (10G Copper PoE+ card)	APM408P-10000S
Worldwide (10G Fiber card)	APM408F-10000S
Worldwide (40G Fiber card)	APM402XL-10000S
Americas, Europe (600W PSU)	APS600W-100NES
Asia Pacific (600W PSU)	APS600W-100AJS
Americas, Europe (1,200W PSU)	APS1200W-100NES
M4300-28G	
Americas, Europe	GSM4328S-100NES
Asia Pacific	GSM4328S-100AJS
China	GSM4328S-100PRS
M4300-28G-PoE+ with 550W PSU	
Americas, Europe	GSM4328PA-100NES
Asia Pacific	GSM4328PA-100AJS
China	GSM4328PA-100PRS
M4300-28G-PoE+ with 1,000W PSU	
Americas, Europe	GSM4328PB-100NES
Asia Pacific	GSM4328PB-100AJS
China	GSM4328PB-100PRS
M4300-52G	
Americas, Europe	GSM4352S-100NES
Asia Pacific	GSM4352S-100AJS
China	GSM4352S-100PRS
M4300-52G-PoE+ with 550W PSU	
Americas, Europe	GSM4352PA-100NES
Asia Pacific	GSM4352PA-100AJS
China	GSM4352PA-100PRS
M4300-52G-PoE+ with 1,000W PSU	
Americas, Europe	GSM4352PB-100NES
Asia Pacific	GSM4352PB-100AJS
China	GSM4352PB-100PRS

Front View

M4300-24X
M4300-48X
M4300-8X8F
M4300-12X12F
M4300-24X24F
M4300-28G
M4300-52G
M4300-28G-PoE+
M4300-52G-PoE+
M4300-96X

Rear View

M4300-24X
M4300-48X
M4300-8X8F
M4300-12X12F
M4300-24X24F
M4300-28G
M4300-52G
M4300-28G-PoE+
M4300-52G-PoE+
M4300-96X