AV Line Managed Switches

/// AV Line

NETGEAR®



Introducing the NETGEAR AV Line of M4250 Switches, developed and engineered for audio/video professionals with dedicated service and support. M4250 has been built from the ground up for the growing AV over IP market, combining years of networking expertise in AV with M4300 and M4500 series with best practices from leading experts in the professional AV market. AV codecs



generally use 1Gbps or 10Gbps per stream and the AV Line of M4250 targets the widespread 1Gbps codecs.

PoE+, Ultra90 PoE++ and rear-facing ports ensure a clean integration in AV racks. M4250 switches come pre-configured for standard audio and video signals. When requirements are more specific, an AV user interface offers customization with port-based profiles. For audio Dante,

Switching Engineered for AV over IP

Q-SYS and AES67 profiles are available, as well as an AVB profile requiring an AVB license sold separately. For video the M4250 offers profiles for NVX, AMX, Q-SYS, NDI, Dante etc. as well as audio/ video/control mixed profiles. When multiple switches are used, NETGEAR IGMP Plus[™] brings automation for you to just connect them together, or with M4300, M4350, and M4500 switches.

Highlights

Extended AV features

- Dedicated AV web-based GUI interface for more specific AV installations
- Color-based AV profiles can be applied to the different ports
- Dante, Q-SYS, AES67 and AVB audio profiles
- The Engage™ Controller manages all M4250, M4300, and M4350 switches for your AV installations
- NVX, SVSI, Q-SYS, NDI and Dante video profiles
- Audio / video / control mixed profiles
- Automatic switch interconnect with NETGEAR Auto-Trunk, Auto-LAG and **IGMP Plus**
- Common Layer 2 and Layer 3 switching engine across all M4250 models

- Built-in IT web GUI, console, telnet and SSH consistent with other NETGEAR M4300 and M4500 series
- Feature set includes static, RIP and PIM routing, DHCP Server and PTPv2

Audio Video Bridging (AVB) services

- AVB is one of the many features designed into the M4250 product line
- AVB is an industry standard for transporting content over a network
- AVB is used most often when very low latency is required such as in live performances when lip sync is critical
- All of the AV Line M4250 switches can be optionally licensed for AVB support

Other IT use cases

• Standard or recessed mounting with all ports in the back, or all ports in the front • Fully featured L2/L3/L4 platform for midsize Enterprise campus networks, IoT and IPTV

Industry standard management

- Industry standard command line interface (CLI), main NETGEAR IT web interface (GUI), SNMP, sFlow and RSPAN
- Single-pane-of-glass NMS300 management platform with centralized firmware updates and massconfiguration support

Industry leading warranty

- NETGEAR M4250 series is covered under NETGEAR ProSAFE Limited Lifetime Hardware Warranty*
- 90 days of Technical Support via phone and email, Lifetime Technical Support through online chat and Lifetime Next Business Day hardware replacement

AV Line

Hardware-at-a-Glance

				REAR (REVERSIBLE)*			LEDs	MANAGEMENT	
Model Name	Form-Factor	Switch- ing Fabric	10/100/1000 BASE-T RJ45 ports	100/1000/2.5G BASE-T RJ45 ports	1000BASE-X SFP ports	1000/10G BASE-X SFP+ ports	PSU	Status Information	Out-of-band Console	Model Number
M4250-9G1F-PoE+	Desktop 210 x 40 x 140mm	20 Gbps	8 ports PoE+ (110W) 1 additional port	-	1 port SFP 1G	-	1 x External Power Adapter (130W)	In Front: Power LED PoE Max LED	Ethernet: 1G Out-of-band (Rear)	GSM4210PD
M4250-8G2XF-PoE+	Desktop 210 x 40 x 140mm	56 Gbps	8 ports PoE+ (220W)	-	-	2 ports SFP+ 1G; 10G	1 x External Power Adapter (254W)	Fan LED (GSM4210PX only)	Console: USB-C (Front) Storage: USB-A (Rear)	GSM4210PX
M4250-10G2F-PoE+	1U rackmount 440 x 43.2 x 200mm	24 Gbps	8 ports PoE+ (125W) 2 additional ports	-	2 ports SFP 1G	-	1 x Fixed (C14) On/off switch			GSM4212P
M4250-10G2XF-PoE+	1U rackmount 440 x 43.2 x 200mm	60 Gbps	8 ports PoE+ (240W) 2 additional ports	-	-	2 ports SFP+ 1G, 10G	1 x Fixed (C14) On/off switch			GSM4212PX
M4250-10G2XF-PoE++	1U rackmount 440 x 43.2 x 257mm	60 Gbps	8 ports PoE++** (720W) 2 additional ports	-	-	2 ports SFP+ 1G, 10G	1 x Fixed (C14) On/off switch			GSM4212UX
M4250-26G4F-PoE+	1U rackmount 440x43.2x257mm	60 Gbps	24 ports PoE+ (300W) 2 additional ports	-	4 ports SFP 1G		1 x Fixed (C14) On/Off switch			GSM4230P
M4250-26G4F-PoE++	1U rackmount 440x43.2x400mm	60 Gbps	24 ports PoE++ (1,440W)** (1 PSU/720W; 2 PSU/1,440W) 2 additional ports	-	4 ports SFP 1G		2 x Fixed (C14) On/Off switch	Available both in front and in	Ethernet: 1G Out-of-band (Rear)	GSM4230UP
M4250-26G4XF-PoE+	1U rackmount 440x43.2x400mm	132 Gbps	24 ports PoE+ (480W) 2 additional ports	-	-	4 ports SFP+ 1G; 10G	1 x Fixed (C14) On/Off switch	the rear:	Console: RJ45 RS232 (Rear) Console:	GSM4230PX
M4250-40G8F-PoE+	1U rackmount 440x43.2x400mm	96 Gbps	40 ports PoE+ (480W)	-	8 ports SFP 1G		1 x Fixed (C14) On/Off switch	Power LED PoE Max LED	USB-C (Rear) Storage:	GSM4248P
M4250-40G8XF-PoE+	1U rackmount 440x43.2x400mm	240 Gbps	40 ports PoE+ (960W)	-	-	8 ports SFP+ 1G; 10G	1 x Fixed (C14) On/Off switch	(PoE models) Fan LED	USB-A (Front) LED Ext:	GSM4248PX
M4250-40G8XF-PoE++	2U rackmount 440x86.4x350mm	240 Gbps	40 ports PoE++ (2,880W)** (1 PSU/720W; 2 PSU/1,650W; 3 PSU/2,880W)	-	-	8 ports SFP+ 1G; 10G	3 x Fixed (C14) On/Off switch	Port LEDs	USB-C (Front)	GSM4248UX
M4250-12M2XF	1U rackmount 440x43.2x100mm	100 Gbps	-	12 ports 100M, 1G, 2.5G	-	2 ports SFP+ 1G, 10G	1 x Fixed (C14) On/Off switch			MSM4214X
M4250-16XF	1U rackmount 440x43.2x200mm	320 Gbps	-	-	-	16 ports SFP+ 10G only (First 12 ports support 1G)	1 x Fixed (C14) On/Off switch			XSM4216F

^{*} Reversed mounting is possible when ports are desired on the front of the rack by using the standard rackmount ears, or the included alternate rackmount ears to mount the switch recessed by 2-Inches to allow for the cabling.

^{**} Ultra90 PoE++ 802.3bt is compatible with 802.3af PoE (15.4W), 802.3at PoE+ (30W) and 802.3bt (60W, 75W and 90W).









AV Line

Acoustic-at-a-Glance

	FAN	OFF MODE S	Setting / maxi	mum load	ling*	QL	JIET MC	DDE Setting at 2	25°C ambient*	**	COOL I	MODE Setti	ng at 25°C	
Model Name	Fanless State	Ambient	Sensor	PoE Power Load	Conditions	PoE Power Load	Fan Duty	Sensor	Case Temp (Top)	Acoustic	Fan Duty	Case Temp (Top)	Acoustic	Model Number
M4250-9G1F-PoE+	The switch is fanless	25°C	50°C	110W	All ports can be used	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	GSM4210PD
M4250-8G2XF-PoE+	0dBA / 37.4°C Case Temp	25°C	S1&2 <= 60°C S3 <= 58°C	180W	RJ45 ports only (no SFP+)	220W	10	<= 60°C	33.6℃	19.3dBA	100	28.8°C	35.3dBA	GSM4210PX
M4250-10G2F-PoE+	0dBA / 41.8°C Case Temp	25℃	<= 42°C	80W	All ports can be used	125W	25	<= 36°C	35.9°C	27.38dBA	100	27.2°C	55dBA	GSM4212P
M4250-10G2XF-PoE+	0dBA / 39.6°C Case Temp	25°C	<= 44°C	90W	All ports can be used	240W	25	<= 37°C	40.6°C	27.4dBA	100	30.9°C	56dBA	GSM4212PX
						0-250W	25	<= 49°C	42.9°C	34.57dBA				
MAGEO 4000VE D. F	0dBA/44.6°C	2500	. /700	45W	All ports can	250-380W	30	<= 49°C	43.3°C	40dBA	100	44.000	// 22 IDA	CCMACACLIV
M4250-10G2XF-PoE++	Case Temp	25℃	<= 67°C	45VV	be used	380W-500W	35	<= 49°C	44.9°C	44.22dBA	100	41.8°C	66.23dBA	GSM4212UX
						500W-720W	40	<= 49°C	52.1°C	47.19dBA				
	0dBA/40.5°C		S1<= 43°C		8 ports PoE	0-200W	25	S1<= 43°C S2<=47°C	43.5°C	28dBA				
M4250-26G4F-PoE+	Case Temp	25℃	S2<= 47°C	45W	(no SFP)	200W-300W	30	S1<= 44°C S2<=48°C	51.3°C	34dBA	100	36.7℃	57dBA	GSM4230P
						0-280W	20	S1<= 37°C S2<=39°C	52.9°C	28dBA				
						280W-360W	25	S1<= 38°C S2<=40°C	57.4°C	36dBA				
						360W-420W	30	S1<= 39°C S2<=41°C	54.4°C	41dBA				
						420W-480W	35	S1<= 40°C S2<=42°C	53.3°C	47dBA		720W 36.7°C		
M4250-26G4F-PoE++		N	ot Supported			480W-540W	40	S1<= 41°C S2<=43°C	52.3°C	50dBA	100	1,440W	69dBA	GSM4230UP
						540W-600W	45	S1<= 42°C S2<=44°C	54.4°C	54dBA		46°C		
						600W-660W	50	S1<= 43°C S2<=45°C	53.6°C	57dBA				
						660W-1,440W	55	S1<= 44°C S2<=46°C	55.7°C	60dBA				
						0-350W	20	S1<= 41°C S2<=46°C	39.3°C	25dBA				
M4250-26G4XF-PoE+	0dBA / 43.4°C Case Temp	25°C	S1<= 41°C S2<= 46°C	45W	8 ports PoE (no SFP+)	350W-480W	30	S1<= 42°C S2<=47°C	36.8°C	42dBA	100	32.3℃	67dBA	GSM4230PX
						0-150W	20	S1<= 37°C S2<=50°C	43.1°C	30dBA				
	0.104 / 45.000		C1 /= 27°C		9 ports PaE	150W-200W	25	S1<= 38°C	42.1°C	36dBA				
M4250-40G8F-PoE+	0dBA / 45.2°C Case Temp	25℃	S1<= 37°C S2<= 50°C	30W	8 ports PoE (No SFP)	200W-340W	30	S1<= 39°C S2<=51°C	44°C	40dBA	100	35.4°C	68dBA	GSM4248P
						340W-480W	35	S1<= 40°C	47.6°C	47dBA				

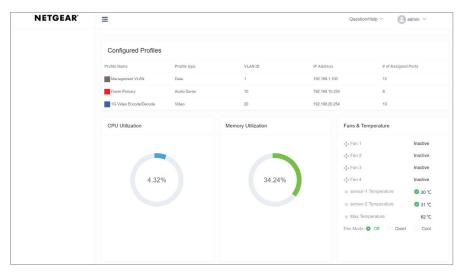
AV Line

Acoustic-at-a-Glance

	FAN (OFF MODE	Setting / maxi	mum loac	ling*	Ql	JIET MC	DDE Setting at 2	25°C ambient	**	COOL N		ng at 25°C	
Model Name	Fanless State	Ambient	Sensor	PoE Power Load	Conditions	PoE Power Load	Fan Duty	Sensor	Case Temp (Top)	Acoustic	Fan Duty	Case Temp (Top)	Acoustic	Model Number
				,		0-400W	20	S1<= 33°C S2<=46°C	54.2°C	29dBA				
						400W-480W	25	S1<= 34°C S2<=47°C	42.8°C	35dBA				
						480W-560W	30	S1<= 35°C S2<=48°C	41.9°C	41dBA				
						560W-640W	35	S1<= 36°C S2<=49°C	42.1°C	48dBA	1			
M4250-40G8XF-PoE+		N	lot Supported			640W-720W	40	S1<= 37°C S2<=50°C	40.9°C	51dBA	100	36.1℃	69dBA	GSM4248PX
						720W-800W	45	S1<= 38°C S2<=51°C	40.7°C	54dBA				
						800W-880W	50	S1<= 39°C S2<=52°C	40.4°C	57dBA				
						880W-960W	55	S1<= 40°C S2<=53°C	40.5°C	59dBA				
						0-160W	20	S1<= 37°C S2<=49°C	41.3°C	30dBA				
						160W-240W	25	S1<= 38°C	38.8°C	36dBA				
						240W-320W	30	S1<= 39°C S2<=50°C	36.4°C	42dBA		720W 31.4°C		
						320W-400W	35	S1<= 40°C	35.3°C	49dBA]	1,650W		
M4250-40G8XF-PoE++		N	lot Supported			400W-480W	40	S1<= 41°C S2<=51°C	34.4°C	51dBA	100	33.5°C	71dBA	GSM4248UX
						480W-560W	45	S1<= 42°C	34.3°C	55dBA		2,880W 35.4°C		
						560W-640W	50	S1<= 43°C S2<=52°C	35.1°C	57dBA		333		
						660W-2,880W	55	S1<= 44°C	36.5°C	60dBA				
M4250-12M2XF	0dBA / 56°C Case Temp	25°C	<= 64°C	-	8 ports 2.5G (no SFP+)	-	25	<= 58°C	53.5°C	28.5dBA	100	33.2°C	55dBA	MSM4214X
M4250-16XF	0dBA / 41.3°C Case Temp	25°C	<= 78°C	-	8 ports SFP+	-	25	<= 67°C	41.6°C	27.44dBA	100	30.3°C	57dBA	XSM4216F

^{*} Software-controlled fan adjustments enable the fans to be turned off when ambient temperature and PoE loads are appropriate for a totally fanless operation.

^{**} dBA values are SPL (Sound Pressure Level) values, testing following the ISO-7779 standard. Bystander Mode. Chamber Temp 25°C during testing. Full, 100%, Data and PoE loaded. Worst case.



AV Line

Software-at-a-Glance

					LITE LAYER	3 PACKAGE						
Model Name	Management	AV Dedicated UI	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
M4250 series	Out-of-band IT Web GUI (main) HTTPs CLI; Telnet; SSH SNMP, MIBs RSPAN Radius Users, TACACS+	AV web-based GUI Designed for AV installers AV-related controls Audio over IP profiles AVB profile* Video over IP profiles Mixed Audio and Video profiles	Ingress/ egress 1 Kbps shaping Time-based Single Rate Policing	NETGEAR IGMP™ Plus for automated IGMP between switches IGMPv3 MLDv2 Snooping, Proxy ASM & SSM IGMPv1,v2 Querier (compatible v3) Control Packet Flooding	Auto-VoIP Policy-based routing (PBR) LLDP-MED IEEE 1588 PTPv2 1-Step End-to-End Transparent Clock AVB*: 802.1AS, 802.1Qay, 802.1Qat MSRP, 802.1Qat MSRP, 802.1As MMRP	STP, MTP, RSTP PV(R)STP BPDU/STRG Root Guard EEE 802.3az (EEE is disabled by default)	Static, Dynamic, Voice, MAC GVRP/ GMRP Double VLAN mode	Auto-Trunk and Auto-LAG between M4250 Switches Static LAG, or Dynamic LACP (LACP automati- cally 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 Multicast static routes DHCPv4 Server DHCP Relay Stateful DHCPv6 Server	IPv4: RIP IPv4/IPv6: PIM-SM PIM-DM SSM	All models

^{*} Requires AVB license, sold separately. All other software features are available, license-free.









AV Line

Performance-at-a-Glance

						TA	BLE SIZE							
Model Name	MAC ARP/NDP	Routing/ Switching Capacity	Throughput 64-byte	Application Route Scaling	Packet Buffer	Latency	СРИ	IP Multicast Routing Entries	Jumbo Frames	Multicast IGMP Group membership	VLANs	DHCP	sFlow	Model Number
M4250-9G1F-PoE+	16K MAC 4K ARP/ NDP	20 Gbps Line-Rate	14.88 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<2.27μs 1G								GSM4210PI
M4250-8G2XF-PoE+	16K MAC 4K ARP/ NDP	56 Gbps Line-Rate	41.67 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<2.14μs 1G <0.84μs 10G								GSM4210P)
M4250-10G2F-PoE+	16K MAC 4K ARP/ NDP	24 Gbps Line-Rate	17.86 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<2.27μs 1G	ARM A9 1.25Ghz 32-Bit 2GB RAM							GSM4212P
M4250-10G2XF-PoE+	16K MAC 4K ARP/ NDP	60 Gbps Line-Rate	44.64 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<2.14μs 1G <0.84μs 10G								GSM4212P>
M4250-10G2XF-PoE++	16K MAC 4K ARP/ NDP	60 Gbps Line-Rate	44.64 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<1.84μs 1G <0.81μs 10G								GSM4212U>
M4250-26G4F-PoE+	16K MAC 4K ARP/NDP	60 Gbps Line-Rate	44.64 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<2.15.μs 1G						DHCP Server:		GSM4230P
M4250-26G4F-PoE++	16K MAC 4K ARP/NDP	60 Gbps Line-Rate	44.64 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<2.15μs 1G		512 IPv4 128 IPv6	Up to 12K	2K IPv4 2K IPv6	4K VLANs	2K leases IPv4: 256 pools	16 samplers 16 pollers 8 receivers	GSM4230UF
M4250-26G4XF-PoE+	16K MAC 4K ARP/NDP	132 Gbps Line-Rate	98.21 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<2.29μs 1G <0.83μs 10G	Quad-Core Cortex-A57 ARMv8					IPv6: 16 pools		GSM4230P>
M4250-40G8F-PoE+	16K MAC 4K ARP/NDP	96 Gbps Line-Rate	71.42 Mpps	Static: 894v4/126v6 RIP: 32v4	32Mb	<2.46μs 1G	1.8Ghz 64-bit 2GB RAM							GSM4248P
M4250-40G8XF-PoE+	16K MAC 4K ARP/NDP	240 Gbps Line-Rate	178.56 Mpps	Static: 894v4/126v6 RIP: 32v4	32Mb	<2.74μs 1G <0.73μs 10G								GSM4248PX
M4250-40G8XF-PoE++	16K MAC 4K ARP/NDP	240 Gbps Line-Rate	178.56 Mpps	Static: 894v4/126v6 RIP: 32v4	32Mb	<2.78μs 1G <0.73μs 10G								GSM4248U
M4250-12M2XF	16K MAC 4K ARP/ NDP	100 Gbps Line-Rate	74.40 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<2.84.μs 1G <6.02μs 2.5G <0.81μs 10G	ARM A9 1.25Ghz							MSM4214X
M4250-16XF	16K MAC 4K ARP/ NDP	320 Gbps Line-Rate	238.08 Mpps	Static: 894v4/126v6 RIP: 32v4	16Mb	<1.30µs 1G <0.86µs 10G	32-Bit 2GB RAM							XSM4216F

AV Line

Product Brief





The NETGEAR AV Line M4250 series was designed with input from AV Professionals. The result is a line of switches built from the ground up to support 1Gb audio and video over IP with customized hardware and software along with dedicated service and support.

NETGEAR M4250 series key features:

- Ranges from 8 to 48 ports with a variety of PoE+ and Ultra90 PoE++ options for 15.4W, 30W, 60W, 75W and 90W AVoIP endpoints
- Uplink options include 1G for audio installations or standalone video installations as well as 10G uplinks for larger scale video deployments
- Also includes 12-port multi-gigabit Ethernet and 16-port 1G/10G fiber models for plug and play aggregation in a star topology
- Rackmount models designed for a clean integration with traditional, rack-mounted, AV equipment
- The M4250 switches come with a sleek, black display panel with status in front and all cabling plus additional status in the back
- Reversed mounting is possible when ports are desired on the front of the rack
- A second pair of rackmount ears allows the switches to be mounted recessed by 2-inches to allow for the cabling

- Software-controlled fan adjustments enable the fans to be turned off when ambient temperature and PoE loads are appropriate for a totally fanless operation
- Threaded holes on the bottom (4xM5 for 50x100mm VESA) and in front (1xM10 for clamps) allow for universal mounting options outside the rack as well
- New! M4250 desktop versions for use outside of the AV racks in conference rooms, mobile studios, on the wall, under a table or behind a screen

NETGEAR M4250 series AV software features:

- Pre-configured for audio and video over IP out of the box, the M4250 switches enable encoders and decoders to be connected with zero configuration
- When more configuration is required, an AV web-based GUI is available
- This interface has been specially designed for AV installers with specific AV-related controls made more accessible and with port-based profiles

- For audio, profiles for Dante, Q-SYS and AES67 are built-in, as well as an AVB profile (AVB license sold separately)
- For video, the M4250 offers profiles for NVX, SVSI, Q-SYS, NDI, Kramer KDS, Aurora Multimedia, ZeeVee, Atlona, Dante and SDVoE
- Less time to install and configure using the NETGEAR Engage[™] Controller
- To further simplify star deployments, NETGEAR IGMP Plus[™] brings multicast automation between all M4250 switches, and with M4300/M4350/M4500
- With Auto-Trunk and Auto-LAG, simply connect M4250 switches together and you are done!

NETGEAR M4250 series other software features:

- All M4250 switches share the same high-end NETGEAR Layer 2 / Layer 3 switching engine for a consistent experience
- All switches in the M4250 series have another main, IT web-based GUI for midsize Enterprise campus networks, IoT and IPTV

AV Line Managed Switches

/// AV Line

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- Additional features include static, RIP and PIM-SM, DM and SSM multicast routing, DHCP Server and PTPv2 Transparent Clock (1-step E2E)
- AVB is the only feature requiring a license, all other advanced features are available license-free
- 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 Policy-based routing and 6-to-4 tunneling
- Advanced IPv4/IPv6 security implementation including malicious code detection, DHCP Snooping, IP Source Guard protection and DoS attacks mitigation

NETGEAR M4250 series management features:

- DHCP/BootP innovative auto-installation including firmware and configuration file upload automation
- Industry standard SNMP, RMON, MIB, LLDP, AAA, sFlow, RSPAN and PTPv2
- Service port for out-of-band Ethernet management (OOB)
- Standard RS232 straight-through serial RJ45 and USB Type-C ports for local management console
- Standard USB-A port for local storage, logs, configuration or image files
- Dual firmware image for updates with minimum service interruption
- Single-pane-of-glass NMS300 management platform with mass configuration support
- Industry standard command line interface (CLI) for IT admins used to other vendors commands
- Fully functional Web console (main GUI) for IT admins who prefer an easy to use graphical interface
- Dedicated AV web-based GUI interface available at [switch IP address:8080] for AV installations

NETGEAR M4250 series warranty and support:

- NETGEAR ProSAFE Limited Lifetime Hardware Warranty**
- Included Lifetime Technical Support
- Included Lifetime Next Business Day Hardware Replacement
- Offering free network design services and installation support, the NETGEAR Engineering Services Team is ready to help ensure your 1G deployments with the M4250 AV over IP switches go as smooth as possible. Just drop us an email at ProAVDesign@netgear.com to get started!









GSM4210PX GSM4210PD



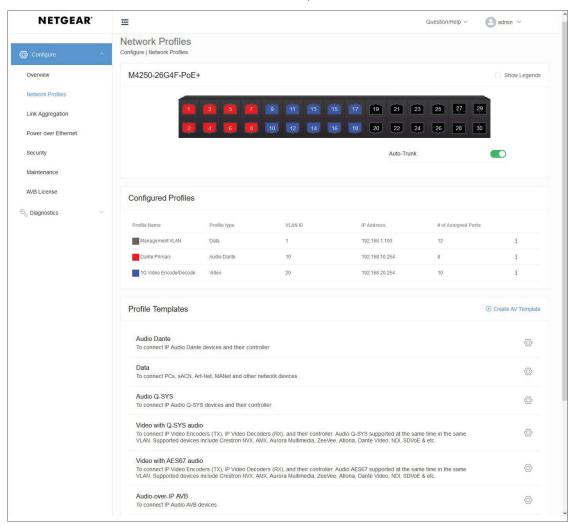
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Features highlights

Dedicated AV UI for AV installations

M4250 switch series is pre-configured for Audio and Video over IP out of the box with a dedicated AV web-based GUI interface for more specific AV installations

- Color-based AV profiles can be applied to the different ports
- Dante, Q-SYS, AES67 and AVB audio profiles (AVB license sold separately)
- NVX, AMX, Q-SYS, NDI, Kramer KDS, Aurora Multimedia, ZeeVee, Atlona, Dante, etc. video profiles
- Audio / video / control mixed profiles



Best value switching performance:

16K MAC address table, 4K ARP and 4K concurrent VLANs for typical midsize environnements

Low latency at all network speeds, including 10 Gigabit fiber interfaces

Jumbo frames support of up to 12KB accelerating performance with compatible nodes

Ranges from 8 to 48 ports with a variety of PoE+ and Ultra90 PoE++ 802.3bt options for 15.4W, 30W, 60W, 75W and 90W AVoIP (1G) endpoints

AV Line

AV Line Managed Switches

Tier 1 availability

Rapid Spanning Tree (RSTP) and Multiple Spanning Tree (MSTP) allow for rapid transitionning of the ports to the Forwarding state and the suppression of Topology Change Notification

NETGEAR PVSTP implementation follows the same rules than other vendor's Per VLAN STP for strict interoperability

- Including industry-standard PVST+ interoperability
- PVSTP is similar to the MSTP protocol as defined by IEEE 802.1s, the main difference being PVSTP runs one instance per VLAN
- In other words, each configured VLAN runs an independent instance of PVSTP
- FastUplink feature immediately moves an alternate port with lowest cost to forwarding state when the root port goes down to reduce recovery time
- FastBackbone feature selects new indirect port when an indirect port fails

NETGEAR PVRSTP implementation follows the same rules than other vendor's Per VLAN RSTP for strict interoperability

- Including industry-standard RPVST+ interoperability
- PVRSTP is similar to the RSTP protocol as defined by IEEE 802.1w, the main difference being PVRSTP runs one instance per VLAN
- In other words, each configured VLAN runs an independent instance of PVRSTP
- Each PVRSTP instance elects a root bridge independent of the other
- Hence there are as many Root Bridges in the region as there are VLANs configured
- Per VLAN RSTP has in built support for FastUplink and FastBackbone

IP address conflict detection performed by embedded DHCP servers prevents accidental IP address duplicates from perturbing the overall network stability

IP Event Dampening reduces the effect of interface flaps on routing protocols: the routing protocols temporarily disable their processing (on the unstable interface) until the interface becomes stable, thereby greatly increasing the overall stability of the network

Ease of deployment

Automatic configuration with DHCP and BootP Auto Install eases large deployments with a scalable configuration files management capability, mapping IP addresses and host names and providing individual configuration files to multiple switches as soon as they are initialized on the network

Both the Switch Serial Number and primary MAC address are reported by a simple "show hardware" command in CLI - facilitating discovery and remote configuration operations

M4300 DHCP L2 Relay agents eliminate the need to have a DHCP server on each physical network or subnet

- DHCP Relay agents process DHCP messages and generate new DHCP messages
- Supports DHCP Relay Option 82 circuit-id and remote-id for VLANs
- DHCP Relay agents are typically IP routing-aware devices and can be referred to as Layer 3 relay agents

Automatic Voice over IP prioritization with Auto-VoIP simplifies most complex multi-vendor IP telephones deployments either based on protocols (SIP, H323 and SCCP) or on OUI bytes (default database and user-based OUIs) in the phone source MAC address; providing the best class of service to VoIP streams (both data and signaling) over other ordinary traffic by classifying traffic, and enabling correct egress queue configuration

An associated Voice VLAN can be easily configured with Auto-VoIP for further traffic isolation

When deployed IP phones are LLDP-MED compliant, the Voice VLAN will use LLDP-MED to pass on the VLAN ID, 802.1P priority and DSCP values to the IP phones, accelerating convergent deployments

Ease of management and granular control

Dual firmware image and dual configuration file for transparent firmware updates / configuration changes with minimum service interruption

Flexible Port-Channel/LAG (802.3ad - 802.1AX) implementation for maximum compatibility, fault tolerance and load sharing with any type of Ethernet channeling from other vendors switch, server or storage devices conforming to IEEE 802.3ad - including static (selectable hashing algorithms) - or to IEEE 802.1AX with dynamic LAGs or port-channel (highly tunable LACP Link Aggregation Control Protocol)

LACP mode automatically reverts to and from Static LAG, useful when the host isn't LACP anymore, for instance during a factory reset or re-configuration

Auto-LAG: If more than one link between two M4250 switches, a Link Aggregation Group is created, dynamically

Unidirectional Link Detection Protocol (UDLD) and Aggressive UDLD detect and avoid unidirectional links automatically, in order to prevent forwarding anomalies in a Layer 2 communication channel in which a bi-directional link stops passing traffic in one direction

Port names feature allows for descriptive names on all interfaces and better clarity in real word admin daily tasks

//// AV Line

AV Line Managed Switches

SDM (System Data Management, or switch database) templates allow for granular system resources distribution depending on IPv4 or IPv6 applications

- ARP Entries (the maximum number of entries in the IPv4 Address Resolution Protocol ARP cache for routing interfaces)
- IPv4 Unicast Routes (the maximum number of IPv4 unicast forwarding table entries)
- IPv6 NDP Entries (the maximum number of IPv6 Neighbor Discovery Protocol NDP cache entries)
- IPv6 Unicast Routes (the maximum number of IPv6 unicast forwarding table entries)
- ECMP Next Hops (the maximum number of next hops that can be installed in the IPv4 and IPv6 unicast forwarding tables)
- IPv4 Multicast Routes (the maximum number of IPv4 multicast forwarding table entries)
- IPv6 Multicast Routes (the maximum number of IPv6 multicast forwarding table entries)

Loopback interfaces management for routing protocols administration

Private VLANs and local Proxy ARP help reduce broadcast with added security

Management VLAN ID is user selectable for best convenience

Auto-Trunk: Dynamic VLAN trunking as soon as a M4250 switch gets connected to another M4250 switch

Industry-standard VLAN management in the command line interface (CLI) for all common operations such as VLAN creation; VLAN names; VLAN "make static" for dynamically created VLAN by GVRP registration; VLAN trunking; VLAN participation as well as VLAN ID (PVID) and VLAN tagging for one interface, a group of interfaces or all interfaces at once

Simplified VLAN configuration with industry-standard Access Ports for 802.1Q unaware endpoints and Trunk Ports for switch-to-switch links with Native VLAN

System defaults automatically set per-port broadcast, multicast, and unicast storm control for typical, robust protection against DoS attacks and faulty clients which can, with BYOD, often create network and performance issues

IP Telephony administration is simplified with consistent Voice VLAN capabilities per the industry standards and automatic functions associated

Comprehensive set of "system utilities" and "Clear" commands help troubleshoot connectivity issues and restore various configurations to their factory defaults for maximum admin efficiency: traceroute (to discover the routes that packets actually take when traveling on a hop-by-hop basis and with a synchronous response when initiated from the CLI), clear dynamically learned MAC addresses, counters, IGMP snooping table entries from the Multicast forwarding database etc...

Syslog and Packet Captures can be sent to USB storage for rapid network troubleshooting

Replaceable factory-default configuration file for predictable network reset in distributed branch offices without IT personnel

All major centralized software distribution platforms are supported for central software upgrades and configuration files management (HTTP, TFTP), including in highly secured versions (HTTPS, SFTP, SCP)

Simple Network Time Protocol (SNTP) can be used to synchronize network resources and for adaptation of NTP, and can provide synchronized network timestamp either in broadcast or unicast mode (SNTP client implemented over UDP - port 123)

Embedded RMON (4 groups) and sFlow agents permit external network traffic analysis

Engineered for convergence and AV-over-IP

Audio (Voice over IP) and Video (multicasting) comprehensive switching, filtering, routing and prioritization

Auto-VoIP, Voice VLAN and LLDP-MED support for IP phones QoS and VLAN configuration

IEEE 1588 (section 10 and 11.5) PTPv2 Transparent Clock (TC) End-to-End implementation considering the residence time of PTPv2 packets from ingress to egress

- 1-step Transparent Clock mode, using the residence time of the PPTPv2 packet at the egress port level in Standalone mode, or Stack Master only
- The "Sync" & "Delay_Req" fields of passing/egressing out PTPv2 packets are updated with the residence time in the switch, the other fields in PTPv2 packets ("Announce", "Delay_Resp", "Pdelay_Req" and "Pdelay_ Resp") are not updated

NETGEAR IGMP Plus for automatic multicast across a M4250 / M4300 / M4500 L2 network (Spine and Leaf topologies), removing the need for L3 PIM routing

- IGMP Plus is pre-configured on default VLAN 1 out of the box
- IGMP Plus can be configured on another VLAN for automatic IGMP across switches on that VLAN (uplinks can make part of that VLAN in trunk mode)
- IGMP Plus allow AV-over-IP devices (TX/Encoders and RX/Decoders) to be connected across multiple switches in a star topology
- The show igmpsnooping group command in CLI and GUI displays the Source and Group IP addresses along with their corresponding MAC addresses that are learnt through IGMP Snooping in a given VLAN on a given interface

The M4250 series automatically configure the interconnect between switches for robust topologies

With IGMP Plus, Auto-Trunk and Auto-LAG, your deployment will JUST WORK

//// AV Line

AV Line Managed Switches

IGMP Snooping and Proxy for IPv4, MLD Snooping and Proxy for IPv6, and Querier mode facilitate fast receivers joins and leaves for multicast streams and ensure multicast traffic only reaches interested receivers everywhere in a Layer 2 or a Layer 3 network, including source-specific (SSM) and any-source (ASM) multicast

Multicast VLAN Registration (MVR) uses a dedicated Multicast VLAN to forward multicast streams and avoid duplication for clients in different VLANs

Multicast routing (PIM-SM and PIM-DM, both IPv4 and IPv6) ensure multicast streams can reach receivers in different L3 subnets

PoE power management and schedule enablement for powering on and powering off PoE nodes connected to the switch

AVB is one of the many features designed into the M4250 product line

- IEEE 802.1BA-2011 Audio Video Bridging (AVB) when an AVB license is properly installed in the switch (license sold separately)
- IEEE 802.1AS-2011 gPTP, IEEE 802.1Qav-2009 FQTSS, IEEE 802.1Qat-2010 MSRP, IEEE 802.1ak MMRP, IEEE 802.1ak MVRP
- Maximum of 256 AVB streams per switch
- AVB is not supported in LAG (link aggregation groups, or Etherchannel)

Layer 3 routing package

Static Routes/ECMP Static Routes for IPv4 and IPv6

- Static and default routes are configurable with next IP address hops to any given destination
- · Permitting additional routes creates several options for the network administrator
- The admin can configure multiple next hops to a given destination, intending for the router to load share across the next hops
- The admin distinguishes static routes by specifying a route preference value: a lower preference value is a more preferred static route
- A less preferred static route is used if the more preferred static route is unusable (down link, or next hop cannot be resolved to a MAC address)

Advanced Static Routing functions for administrative traffic control

- Static Reject Routes are configurable to control the traffic destined to a particular network so that it is not forwarded through the router
- $\bullet\,$ Such traffic is discarded and the ICMP destination unreachable message is sent back to the source
- Static reject routes can be typically used to prevent routing loops
- Default routes are configurable as a preference option

In order to facilitate VLAN creation and VLAN routing using Web GUI, a VLAN Routing Wizard offers following automated capabilities:

- Create a VLAN and generate a unique name for VLAN
- Add selected ports to the newly created VLAN and remove selected ports from the default VLAN
- Create a LAG, add selected ports to a LAG, then add this LAG to the newly created VLAN
- Enable tagging on selected ports if the port is in another VLAN
- Disable tagging if a selected port does not exist in another VLAN
- Exclude ports that are not selected from the VLAN
- Enable routing on the VLAN using the IP address and subnet mask entered as logical routing interface

DHCP Relay Agents relay DHCP requests from any routed interface, including VLANs, when DHCP server doesn't reside on the same IP network or subnet

- The agent relays requests from a subnet without a DHCP server to a server or next-hop agent on another
- Unlike a router which switches IP packets transparently, a DHCP relay agent processes DHCP messages and generates new DHCP messages
- Supports DHCP Relay Option 82 circuit-id and remote-id for VLANs
- Multiple Helper IPs feature allows to configure a DHCP relay agent with multiple DHCP server addresses per routing interface and to use different server addresses for client packets arriving on different interfaces on the relay agent server addresses for client packets arriving on different interfaces on the relay agent

Router Discovery Protocol is an extension to ICMP and enables hosts to dynamically discover the IP address of routers on local IP subnets

- Based on RFC 1256 for IPv4
- Routers periodically send router discovery messages to announce their presence to locally-attached hosts
- The router discovery message advertises one or more IP addresses on the router that hosts can use as their default gateway
- Hosts can send a router solicitation message asking any router that receives the message to immediately send a router advertisement
- Router discovery eliminates the need to manually configure a default gateway on each host
- It enables hosts to switch to a different default gateway if one goes down

Datasheet | M4250 series

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AV Line Managed Switches

Loopback interfaces are available as dynamic, stable IP addresses for other devices on the network, and for routing protocols

Support of Routing Information Protocol (RIPv2) as a distance vector protocol specified in RFC 2453 for IPv4

- Each route is characterized by the number of gateways, or hops, a packet must traverse to reach its intended destination
- Categorized as an interior gateway protocol, RIP operates within the scope of an autonomous system

IP Multinetting allows to configure more than one IP address on a network interface (other vendors may call it IP Aliasing or Secondary Addressing)

ICMP Throttling feature adds configuration options for the transmission of various types of ICMP messages

- ICMP Redirects can be used by a malicious sender to perform man-in-the-middle attacks, or divert packets to a malicious monitor, or to cause Denial of Service (DoS) by blackholing the packets
- ICMP Echo Requests and other messages can be used to probe for vulnerable hosts or routers
- Rate limiting ICMP error messages protects the local router and the network from sending a large number of messages that take CPU and bandwidth
- The Policy Based Routing feature (PBR) overrides routing decision taken by the router and makes the packet to follow different actions based on a policy
- It provides freedom over packet routing/forwarding instead of leaving the control to standard routing protocols based on L3
- For instance, some organizations would like to dictate paths instead of following the paths shown by routing protocols
- Network Managers/Administrators can set up policies such as:
 - My network will not carry traffic from the Engineering department
 - Traffic originating within my network with the following characteristics will take path A, while other traffic will take path B
 - When load sharing needs to be done for the incoming traffic across multiple paths based on packet entities in the incoming traffic

Enterprise security

Traffic control MAC Filter and Port Security help restrict the traffic allowed into and out of specified ports or interfaces in the system in order to increase overall security and block MAC address flooding issues

DHCP Snooping monitors DHCP traffic between DHCP clients and DHCP servers to filter harmful DHCP message and builds a bindings database of (MAC address, IP address, VLAN ID, port) tuples that are considered authorized in order to prevent DHCP server spoofing attacks

IP source guard and Dynamic ARP Inspection use the DHCP snooping bindings database per port and per VLAN to drop incoming packets that do not match any binding and to enforce source IP/MAC addresses for malicious users traffic elimination

Time-based Layer 2 / Layer 3-v4 / Layer 4 Access Control Lists (ACLs) can be binded to ports, Layer 2 interfaces, VLANs and LAGs (Link Aggregation Groups or Port channel) for fast unauthorized data prevention and right granularity

For in-band switch management, management ACLs on CPU interface (Control Plane ACLs) are used to define the IP/MAC or protocol through which management access is allowed for increased HTTP/HTTPS or Telnet/SSH management security

Out-of-band management is available via dedicated service port (1G RJ45 OOB) when in-band management can be prohibited via management ACLs

Bridge protocol data unit (BPDU) Guard allows the network administrator to enforce the Spanning Tree (STP) domain borders and keep the active topology consistent and predictable - unauthorized devices or switches behind the edge ports that have BPDU enabled will not be able to influence the overall STP by creating loops

Spanning Tree Root Guard (STRG) enforces the Layer 2 network topology by preventing rogue root bridges potential issues when for instance, unauthorized or unexpected new equipment in the network may accidentally become a root bridge for a given VLAN

Dynamic 802.1x VLAN assignment mode, including Dynamic VLAN creation mode and Guest VLAN / Unauthenticated VLAN are supported for rigorous user and equipment RADIUS policy server enforcement

Up to 48 clients (802.1x) per port are supported, including the authentication of the users domain, in order
to facilitate convergent deployments. For instance when IP phones connect PCs on their bridge, IP phones
and PCs can authenticate on the same switch port but under different VLAN assignment policies (Voice
VLAN versus other Production VLANs)

802.1x MAC Address Authentication Bypass (MAB) is a supplemental authentication mechanism that lets non-802.1x devices bypass the traditional 802.1x process altogether, letting them authenticate to the network using their client MAC address as an identifier

- A list of authorized MAC addresses of client NICs is maintained on the RADIUS server for MAB purpose
- MAB can be configured on a per-port basis on the switch
- MAB initiates after unsuccessful dot1x authentication process (configurable time out), when clients don't respond to any of EAPOL packets
- When 802.1X unaware clients try to connect, the switch sends the MAC address of each client to the authentication server
- The RADIUS server checks the MAC address of the client NIC against the list of authorized addresses
- $\bullet\,$ The RADIUS server returns the access policy and VLAN assignment to the switch for each client

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AV Line Managed Switches

With Successive Tiering, the Authentication Manager allows for authentication methods per port for a Tiered Authentication based on configured time-outs

- By default, configuration authentication methods are tried in this order: Dot1x, then MAB, then Captive Portal (web authentication)
- With BYOD, such Tiered Authentication is powerful and simple to implement with strict policies
 - For instance, when a client is connecting, M4300 tries to authenticate the user/client using the three methods above, the one after the other
- The admin can restrict the configuration such that no other method is allowed to follow the captive portal method, for instance

Double VLANs (DVLAN) pass traffic from one customer domain to another through the "metro core" in a multi-tenancy environment: customer VLAN IDs are preserved and a service provider VLAN ID is added to the traffic can pass the metro core in a simple, secure manner

Private VLANs (with Primary VLAN, Isolated VLAN, Community VLAN, Promiscuous port, Host port, Trunks) provide Layer 2 isolation between ports that share the same broadcast domain, allowing a VLAN broadcast domain to be partitioned into smaller point-to-multipoint subdomains accross switches in the same Layer 2 network

- Private VLANs are useful in DMZ when servers are not supposed to communicate with each other but need to communicate with a router
- They remove the need for more complex port-based VLANs with respective IP interface/subnets and associated L3 routing
- Another Private VLANs typical application are carrier-class deployments when users shouldn't see, snoop or attack other users' traffic

SSL version 3 and TLS version 2 ensure Web GUI sessions are secured

Secure Shell (SSH version 2) and SNMPv3 (with or without MD5 or SHA authentication) ensure SNMP and Telnet sessions are secured

2048-bit RSA key pairs, SHA2-256 and SHA2-512 cryptographic hash functions for SSLv3 and SSHv2 are supported on all M4300 models

TACACS+ and RADIUS enhanced administrator management provides strict "Login" and "Enable" authentication enforcement for the switch configuration, based on latest industry standards: exec authorization using TACACS+ or RADIUS; command authorization using TACACS+ and RADIUS Server; user exec accounting for HTTP and HTTPS using TACACS+ or RADIUS; and authentication based on user domain in addition to user ID and password

Superior quality of service

Advanced classifier-based hardware implementation for Layer 2 (MAC), Layer 3 (IP) and Layer 4 (UDP/TCP transport ports) prioritization

 $8\ queues\ (7\ in\ a\ stack)\ for\ priorities\ and\ various\ QoS\ policies\ based\ on\ 802.1p\ (CoS)\ and\ DiffServ\ can\ be\ applied\ to\ interfaces\ and\ VLANs$

Advanced rate limiting down to 1 Kbps granularity and mininum-guaranteed bandwidth can be associated with ACLs for best granularity

Single Rate Policing feature enables support for Single Rate Policer as defined by RFC 2697

- Committed Information Rate (average allowable rate for the class)
- Committed Burst Size (maximum amount of contiguous packets for the class)
- Excessive Burst Size (additional burst size for the class with credits refill at a slower rate than committed burst size)
- DiffServ feature applied to class maps

 $Automatic Voice over IP\ prioritization\ with\ protocol-based\ (SIP, H323\ and\ SCCP\)\ or\ OUI-based\ Auto-VoIP\ up\ to\ 144\ simultaneous\ voice\ calls$

Flow Control

802.3x Flow Control implementation per IEEE 802.3 Annex 31B specifications with Symmetric flow control, Asymmetric flow control or No flow control

- Asymmetric flow control allows the switch to respond to received PAUSE frames, but the ports cannot generate PAUSE frames
- $\bullet \ \ \text{Symmetric flow control allows the switch to both respond to, and generate MAC control PAUSE frames$

Allows traffic from one device to be throttled for a specified period of time: a device that wishes to inhibit transmission of data frames from another device on the LAN transmits a PAUSE frame

- A device that wishes to inhibit transmission of data frames from another device on the LAN transmits a PAUSE frame
- * Limitation: Enabling, changing, or disabling flow control on a port, a service interruption is observed on that port during 4 to 6 seconds before the traffic resumes

UDLD Support

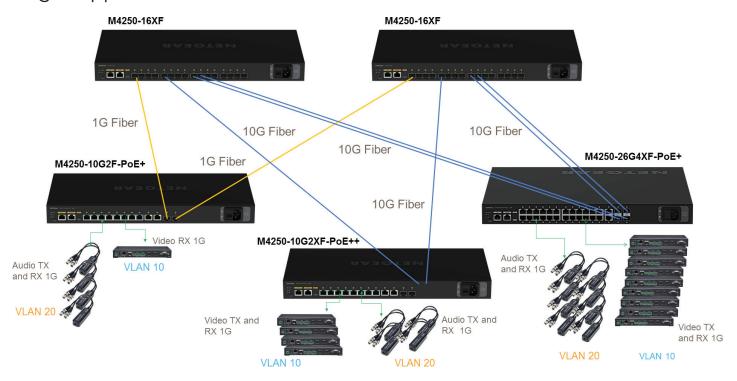
UDLD implementation detects unidirectional links physical ports (UDLD must be enabled on both sides of the link in order to detect an unidirectional link)

- UDLD protocol operates by exchanging packets containing information about neighboring devices
- The purpose is to detect and avoid unidirectional link forwarding anomalies in a Layer 2 communication
 channel.

Both "normal-mode" and "aggressive-mode" are supported for perfect compatibility with other vendors implementations, including port "D-Disable" triggering cases in both modes

//// AV Line

Target Application



A new AV Line of M4250 switches with out-of-the-box functionality and an industry-first: a concurrent second user interface solely designed with the AV Pro in mind.

NETGEAR has enhanced the experience for AV professionals by including a new user interface designed from the ground up. Pro AV customers don't have to settle for an IT-centric interface with settings and IT-specific functionality they will never need. The new M4250 AV interface presents the common AV controls right up front with user-selectable profiles for common AV platforms making it a snap to ensure the settings are correct for a specific audio or video application.

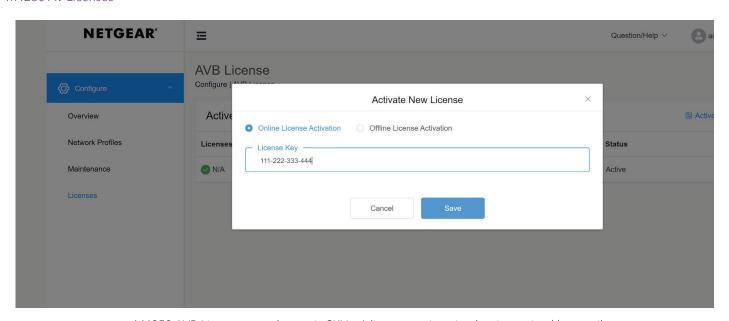
When each M4250 is simply configured with AV profiles on certain ports, the AV Line offers automatic and dynamic configuration of multiple M4250 switches connected together. This automatic configuration, known as Auto-LAG and Auto-Trunk, combined with as NETGEAR IGMP Plus™, make setting up a complicated AV over IP network easier and quicker than ever before.



/// AV Line

Components and Modules

M4250 AV Licenses



M4250 AVB Licenses are electronic SKUs. A license registration key is received by email and can be copied and pasted directly in the AV UI when the switch is online.









AV Line

Components and Modules

M4250-9G1F-PoE+ AV Line Desktop Managed Switch

Ordering information

- Americas: GSM4210PD-100NAS
- Europe: GSM4210PD-100EUS
- India: GSM4210PD-100INS
- Japan: GSM4210PD-100JPS
- South Korea: GSM4210PD-100KOS
- Taiwan: GSM4210PD-100TWS
- Hong Kong: GSM4210PD-100UKS
- Australia: GSM4210PD-100AUS
- China: GSM4210PD-100PRS
- Other APAC: GSM4210PD-100PES
- Warranty: Lifetime ProSAFE Hardware Warranty
- AVB License: AVB4210PD-10000S (sold separately)

- 8-port 10/100/1000BASE-T (RJ45) PoE+ with 110W PoE budget
- 1-port 10/100/1000BASE-T (RJ45)
- 1-port 1000BASE-X (SFP)
- 20 Gbps non-blocking fabric across 10 ports
- Out-of-band 1G Ethernet management port
- USB-C console port and USB-A storage port
- Desktop form factor for conference rooms and mobile studios
- Mounting brackets for flanges on the side
- Outside of the AV racks: on the wall, under a table or behind a screen
- External power adapter using standard AC power cord (C13)
- Totally fanless
- Switch dimensions (WxDxH): 210 x 140 x 40 mm
- Switch weight: 0.965 Kg (2.13lb)
- Power adapter dimensions (WxDxH): 169 x 72 x 35.5 mm
- Power adapter weight: 0.55Kg (1.21lb)



AV Line

Components and Modules

M4250-8G2XF-PoE+ AV Line Desktop Managed Switch

Ordering information

- Americas: GSM4210PX-100NAS
- Europe: GSM4210PX-100EUS
- India: GSM4210PX-100INS
- Japan: GSM4210PX-100JPS
- South Korea: GSM4210PX-100KOS
- Taiwan: GSM4210PX-100TWS
- Hong Kong: GSM4210PX-100UKS
- Australia: GSM4210PX-100AUS
- China: GSM4210PX-100PRS
- Other APAC: GSM4210PX-100PES
- Warranty: Lifetime ProSAFE Hardware Warranty
- AVB License: AVB4210PX-10000S (sold separately)

- 8-port 10/100/1000BASE-T (RJ45) PoE+ with 220W PoE budget
- 2-port 10GBASE-X (SFP+)
- 56 Gbps non-blocking fabric across 10 ports
- Out-of-band 1G Ethernet management port
- USB-C console port and USB-A storage port
- Desktop form factor for conference rooms and mobile studios
- Mounting brackets for flanges on the side
- Outside of the AV racks: on the wall, under a table or behind a screen
- External power adapter using standard AC power cord (C13)
- Selectable fan modes for fanless, quiet (19.3dBA), or cool operation
- Switch dimensions (WxDxH): 210 x 140 x 40 mm
- Switch weight: 0.967 Kg (2.13lb)
- Power adapter dimensions (WxDxH): 197 x 89 x 39 mm
- Power adapter weight: 0.955Kg (2.11lb)



AV Line

Components and Modules

M4250-10G2F-PoE+ AV Line Managed Switch

Ordering information

• Americas: GSM4212P-100NAS

• Europe: GSM4212P-100EUS

• Asia Pacific: GSM4212P-100AJS

• China: GSM4212P-100PRS

• Warranty: Lifetime ProSAFE Hardware Warranty

• AVB License: AVB4212P-10000S (sold separate)

Ordering information (AVB-ready version)

• Americas: GSM4212P-111NAS

• Europe: GSM4212P-111EUS

• Asia Pacific: GSM4212P-111AJS

• China: GSM4212P-111PRS

• AVB License already installed in the switch

• AVB Profile already configured on all ports

- 8-port 10/100/1000BASE-T (RJ45) PoE+ with 125W PoE budget
- 2-port 10/100/1000BASE-T (RJ45)
- 2-port 1000BASE-X (SFP)
- 24 Gbps non-blocking fabric across 12 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for fanless, quiet, or cool operation
- Dimensions (WxDxH): 440 x 200 x 43.2 mm
- Weight: 2.85Kg (6.28lb)



NETGEAR°

AV Line

Components and Modules

M4250-10G2XF-PoE+ AV Line Managed Switch

Ordering information

• Americas: GSM4212PX-100NAS

• Europe: GSM4212PX-100EUS

• Asia Pacific: GSM4212PX-100AJS

• China: GSM4212PX-100PRS

• Warranty: Lifetime ProSAFE Hardware Warranty

• AVB License: AVB4212PX-10000S (sold separately)

- 8-port 10/100/1000BASE-T (RJ45) PoE+ with 240W PoE budget
- 2-port 10/100/1000BASE-T (RJ45)
- 2-port 1000/10GBASE-X (SFP+)
- 60 Gbps non-blocking fabric across 12 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for fanless, quiet, or cool operation
- Dimensions (WxDxH): 440 x 200 x 43.2 mm
- Weight: 2.9Kg (6.39lb)



//// AV Line

Components and Modules

M4250-10G2XF-PoE++ AV Line Managed Switch

Ordering information

- Americas: GSM4212UX-100NAS
- Europe: GSM4212UX-100EUS
- Asia Pacific: GSM4212UX-100AJS
- China: GSM4212UX-100PRS
- Warranty: Lifetime ProSAFE Hardware Warranty
- AVB License: AVB4212UX-10000S (sold separately)

- 8-port 10/100/1000BASE-T (RJ45) Ultra90 PoE++ with 720W PoE budget
- 2-port 10/100/1000BASE-T (RJ45)
- 2-port 1000/10GBASE-X (SFP+)
- Compatible 802.3af (15.4W), 802.3at (30W), 802.3bt (60, 75 and 90W)
- 60 Gbps non-blocking fabric across 12 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for fanless, quiet, or cool operation
- Dimensions (WxDxH): 440 x 257 x 43.2 mm
- Weight: 3.83Kg (8.44lb)



AV Line

Components and Modules

M4250-12M2XF

AV Line Managed Switch

Ordering information

• Americas: MSM4214X-100NAS

• Americas, TAA Compliant: MSM4214X-TAANAS

• Europe: MSM4214X-100EUS

• Asia Pacific: MSM4214X-100AJS

• China: MSM4214X-100PRS

• Warranty: Lifetime ProSAFE Hardware Warranty

• AVB License: AVB4214X-10000S (sold separately)

- 12-port 100/1000/2.5GBASE-T (RJ45)
- 2-port 1000/10GBASE-X (SFP+)
- 100 Gbps non-blocking fabric across 14 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for fanless, quiet, or cool operation
- Dimensions (WxDxH): 440 x 100 x 43.2 mm
- Weight: 1.74Kg (3.85lb)



AV Line

Components and Modules

M4250-16XF

AV Line Managed Switch

Ordering information

- Americas: XSM4216F-100NAS
- Europe: XSM4216F-100EUS
- Asia Pacific: XSM4216F-100AJS
- China: XSM4216F-100PRS
- Warranty: Lifetime ProSAFE Hardware Warranty
- AVB License: AVB4216F-10000S (sold separately)

- 16-port 10GBASE-X (SFP+)
- The first 12 ports support 1000BASE-X (1G) SFP modules
- 320 Gbps non-blocking fabric across 16 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for fanless, quiet, or cool operation
- Dimensions (WxDxH): 440 x 200 x 43.2 mm
- Weight: 1.74Kg (3.85lb)



//// AV Line

Components and Modules

M4250-26G4F-PoE+ AV Line Managed Switch

Ordering information

Americas: GSM4230P-100NASEurope: GSM4230P-100EUS

• Asia Pacific: GSM4230P-100AJS

• China: GSM4230P-100PRS

• Warranty: Lifetime ProSAFE Hardware Warranty

• AVB License: AVB4230P-10000S (sold separately)

- 24-port 10/100/1000BASE-T (RJ45) PoE+ with 300W PoE budget
- 2-port 10/100/1000BASE-T (RJ45)
- 4-port 1000BASE-X (SFP)
- 60 Gbps non-blocking fabric across 30 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for fanless, quiet, or cool operation
- Dimensions (WxDxH): 440 x 43.2 x 257 mm
- Weight: 4.30Kg (9.47lb)



//// AV Line

Components and Modules

M4250-26G4F-PoE++ AV Line Managed Switch

Ordering information

- Americas: GSM4230UP-100NAS
- Europe: GSM4230UP-100EUS
- Asia Pacific: GSM4230UP-100AJS
- China: GSM4230UP-100PRS
- Warranty: Lifetime ProSAFE Hardware Warranty
- AVB License: AVB4230UP-10000S (sold separately)

- 24-port 10/100/1000BASE-T (RJ45) Ultra90 PoE++ with 1,440W PoE budget
- 2-port 10/100/1000BASE-T (RJ45)
- 4-port 1000BASE-X (SFP)
- Compatible 802.3af (15.4W), 802.3at (30W), 802.3bt (60, 75 and 90W)
- 2 internal, fixed PSUs (C14 inlets) with embedded RPS/EPS function
- When one PSU is used, PoE budget is 720W
- When two PSU are used, PoE budget is 1,440W
- 60 Gbps non-blocking fabric across 30 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for quiet or cool operation
- Dimensions (WxDxH): 440 x 43.2 x 400 mm
- Weight: 6.75Kg (14.87lb)



//// AV Line

Components and Modules

M4250-26G4XF-PoE+ AV Line Managed Switch

Ordering information

• Americas: GSM4230PX-100NAS

• Americas, TAA Compliant: GSM4230PX-TAANAS

• Europe: GSM4230PX-100EUS

• Asia Pacific: GSM4230PX-100AJS

• China: GSM4230PX-100PRS

• Warranty: Lifetime ProSAFE Hardware Warranty

• AVB License: AVB4230PX-10000S (sold separately)

- 24-port 10/100/1000BASE-T (RJ45) PoE+ with 480W PoE budget
- 2-port 10/100/1000BASE-T (RJ45)
- 4-port 1000/10GBASE-X (SFP+)
- 132 Gbps non-blocking fabric across 30 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for fanless, quiet, or cool operation
- Dimensions (WxDxH): 440 x 43.2 x 400 mm
- Weight: 5.45Kg (12.02lb)



AV Line

Components and Modules

M4250-40G8F-PoE+ AV Line Managed Switch

Ordering information

• Americas: GSM4248P-100NAS

• Europe: GSM4248P-100EUS

• Asia Pacific: GSM4248P-100AJS

• China: GSM4248P-100PRS

• Warranty: Lifetime ProSAFE Hardware Warranty

• AVB License: AVB4248P-10000S (sold separately)

- 40-port 10/100/1000BASE-T (RJ45) PoE+ with 480W PoE budget
- 8-port 1000BASE-X (SFP)
- 96 Gbps non-blocking fabric across 48 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for fanless, quiet, or cool operation
- Dimensions (WxDxH): 440 x 43.2 x 400 mm
- Weight: 5.85Kg (12.90lb)



//// AV Line

Components and Modules

M4250-40G8XF-PoE+ AV Line Managed Switch

Ordering information

- Americas: GSM4248PX-100NAS
- Americas, TAA Compliant: GSM4248PX-TAANAS
- Europe: GSM4248PX-100EUS
- Asia Pacific: GSM4248PX-100AJS
- China: GSM4248PX-100PRS
- Warranty: Lifetime ProSAFE Hardware Warranty
- AVB License: AVB4248PX-10000S (sold separately)

- 40-port 10/100/1000BASE-T (RJ45) PoE+ with 960W PoE budget
- 8-port 1000/10GBASE-X (SFP+)
- 240 Gbps non-blocking fabric across 48 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for quiet or cool operation
- Dimensions (WxDxH): 440 x 43.2 x 400 mm
- Weight: 6.31Kg (13.91lb)



AV Line

Components and Modules

M4250-40G8XF-PoE++ **AV Line Managed Switch**

Ordering information

• Americas: GSM4248UX-100NAS

• Europe: GSM4248UX-100EUS

• Asia Pacific: GSM4248UX-100AJS

• China: GSM4248UX-100PRS

• Warranty: Lifetime ProSAFE Hardware Warranty

• AVB License: AVB4248UX-10000S (sold separately)

- 40-port 10/100/1000BASE-T (RJ45) Ultra90 PoE++ with 2,880W PoE budget
- 8-port 1000/10GBASE-X (SFP+)
- Compatible 802.3af (15.4W), 802.3at (30W), 802.3bt (60, 75 and 90W)
- 3 internal, fixed PSUs (C14 inlets) with embedded RPS/EPS function
- When one PSU is used, PoE budget is 720W
- When two PSU are used, PoE budget is 1,650W
- When three PSU are used, PoE budget is 2,880W
- 240 Gbps non-blocking fabric across 48 ports
- Out-of-band 1G Ethernet management port
- USB-C and RJ45 RS232 console ports and USB-A storage port
- Front black display panel and all ports in the back
- Possible reversed mounting with ports in the front
- Rack-mounting standard brackets
- Longer brackets for recessed mounting (2 inches / 5 cm)
- Threaded hole in front (1xM10) for clamps
- Threaded holes on the bottom (4xM5) for 50x100mm VESA plates
- Selectable fan modes for quiet or cool operation
- Dimensions (WxDxH): 440 x 86.4 x 350 mm (2U)



/// AV Line

GBIC SFP and SFP+ Optics for M4250 series

Ordering information Worldwide: see table below		de Fiber MF)	Single mode Fiber (SMF)
Warranty: 5 years	OM1 or OM2 62.5/125µm	OM3 or OM4 50/125µm	9/125µm
10 Gigabit SFP+	AXM763	AXM763	AXM762
	10GBase-LRM long reach multimode 802.3aq - LC duplex connector	10GBase-LRM long reach multimode 802.3aq - LC duplex connector	10GBase-LR long reach single mode LC duplex connector
	up to 100m (328 ft)	up to 165m (541 ft)	up to 10km (6.2 miles)
	AXM763-10000S (1 unit)	AXM763-10000S (1 unit)	AXM762-10000S (1 unit) AXM762P10-10000S (pack of 10 units)
Fits into M4250 SFP+ interfaces		AXM761	AXM764
Interraces		10GBase-SR short reach multimode LC duplex connector	10GBase-LR LITE single mode LC duplex connector
		up to 300m (984 ft)	up to 2km (1.2 mile)
		AXM761-10000S (1 unit) AXM761P10-10000S (pack of 10 units)	AXM764-10000S (1 unit)
• Fits into M4250 SFP+ and SFP interfaces • M4250-16XF (XSM4216F) supports 1G modules on	AGM731F 1000Base-SX short range multimode LC duplex connector up to 275m (902 ft) AGM731F (1 unit)	AGM731F 1000Base-SX short range multimode LC duplex connector OM3: up to 550m (1,804 ft) OM4: up to 1,000m (3,280 ft) AGM731F (1 unit)	AGM732F 1000Base-LX long range single mode LC duplex connector up to 10km (6.2 miles) AGM732F (1 unit)
ports 1-12 only			

AGM734 1000BASE-T RJ45 SFP (Gigabit)

Ordering information

• Worldwide: AGM734-10000S

• Warranty: 5 years



- Fits into M4250 SFP+ and SFP interfaces
- 1 port Gigabit RJ45
- Supports only 1000Mbps full-duplex mode
- Up to 100m (328 ft) with Cat5 RJ45 or better
- Conveniently adds 1G copper connectivity to M4250 fiber interfaces
- M4250-16XF (XSM4216F) supports AGM734 on its ports 1 to 12 only

AXM765 10GBASE-T RJ45 SFP+ (10 Gigabit)

Ordering information

- Worldwide: AXM765-20000S
- Warranty: 5 years



- Fits into M4250 SFP+ interfaces
- 1 port 10GBASE-T RJ45
- Copper connectivity up to 80m (262 ft) distance
- CAT6a or better wiring required for 10GBASE-T up to 80 meters
- Conveniently adds 10G copper connectivity to M4250 fiber interfaces



AV Line

Direct Attach Cables for M4250 series

Ordering information		SFP+ to SFP+	
Worldwide: see table belowWarranty: 5 years	1 meter (3.3 ft)	3 meters (9.8 ft)	5 meters (16.4 ft)
10 Gigabit DAC	AXC761 10GSFP+ Cu (passive) SFP+ connectors	AXC763 10GSFP+ Cu (passive) SFP+ connectors	AXC765 10GSFP+ Cu (active) SFP+ connectors
	AXC761-10000S (1 unit)	AXC763-10000S (1 unit)	AXC765-10000S (1 unit)
	7 meters (23.0 ft)	10 meters (32.8 ft)	15 meters (49.2 ft)
	AXC767	AXC7610	AXC7615
	10GSFP+ Cu (active) SFP+ connectors	10GSFP+ Cu (active) SFP+ connectors	10GSFP+ (duplex fiber optic) SFP+ connectors
	AXC767-10000S (1 unit)	AXC7610-10000S (1 unit)	AXC7615-10000S (1 unit)
	20 meters (65.6 ft)		
	AXC7620 10GSFP+ (duplex fiber optic) SFP+ connectors AXC7620-10000S (1 unit)		
• Fits into M4250 SFP+ interfaces			

NETGEAR°

AV Line

AV Line Managed Switches

Technical Specifications

Requirements based on 13.0.4 software release



Model Name	Description	Model number
M4250-9G1F-PoE+	AV Line Desktop 8x1G PoE+ 110W 1x1G and 1xSFP Managed Switch	GSM4210PD
M4250-8G2XF-PoE+	AV Line Desktop 8x1G PoE+ 220W and 2xSFP+ Managed Switch	GSM4210PX
M4250-10G2F-PoE+	AV Line 8x1G PoE+ 125W 2x1G and 2xSFP Managed Switch	GSM4212P
M4250-10G2XF-PoE+	AV Line 8x1G PoE+ 240W 2x1G and 2xSFP+ Managed Switch	GSM4212PX
M4250-10G2XF-PoE++	AV Line 8x1G Ultra90 PoE++ 720W 2x1G and 2xSFP+ Managed Switch	GSM4212UX
M4250-26G4F-PoE+	AV Line 24x1G PoE+ 300W 2x1G and 4xSFP Managed Switch	GSM4230P
M4250-26G4F-PoE++	AV Line $24x1G$ Ultra 90 PoE++ $1,440W$ $2x1G$ and $4xSFP$ Managed Switch	GSM4230UP
M4250-26G4XF-PoE+	AV Line 24x1G PoE+ 480W 2x1G and 4xSFP+ Managed Switch	GSM4230PX
M4250-40G8F-PoE+	AV Line 40x1G PoE+ 480W and 8xSFP Managed Switch	GSM4248P
M4250-40G8XF-PoE+	AV Line 40x1G PoE+ 960W and 8xSFP+ Managed Switch	GSM4248PX
M4250-40G8XF-PoE++	AV Line 40x1G Ultra90 PoE++ 2,880W and 8xSFP+ Managed Switch	GSM4248UX
M4250-12M2XF	AV Line 12x2.5G and 2xSFP+ Managed Switch	MSM4214X
M4250-16XF	AV Line 12x1G/10G SFP+ and 4x10G SFP+ Managed Switch	XSM4216F

Physical Interfaces					
Gigabit and 10 Gigabit Ethernet Ports	Auto-sensing RJ45 PoE 10/100/1000BASE-T	Auto-sensing RJ45 10/100/1000BASE-T	Auto-sensing RJ45 100/1000/2.5GBASE-T	Auto-sensing SFP 1000BASE-X	Auto-sensing SFP+ 1000/10GBASE-X
M4250-9G1F-PoE+	8 ports PoE+ (110W)	1	-	1	=
M4250-8G2XF-PoE+	8 ports PoE+ (220W)	-	-	-	2
M4250-10G2F-PoE+	8 ports PoE+ (125W)	2	-	2	-
M4250-10G2XF-PoE+	8 ports PoE+ (240W)	2	-	-	2
M4250-10G2XF-PoE++	8 ports Ultra90 PoE++ (720W)	2	=	-	2
M4250-26G4F-PoE+	24 ports PoE+ (300W)	2	-	4	-
M4250-26G4F-PoE++	24 ports Ultra90 PoE++ (1,440W)	2	-	4	-
M4250-26G4XF-PoE+	24 ports PoE+ (480W)	2	-	-	4
M4250-40G8F-PoE+	40 ports PoE+ (480W)	-	-	8	-
M4250-40G8XF-PoE+	40 ports PoE+ (960W)	-	-	-	8
M4250-40G8XF-PoE++	40 ports Ultra90 PoE++ (2,880W)	=	=	-	8
M4250-12M2XF	-	-	12	-	2
M4250-16XF	-	-	-	-	16 (only Ports 1-12 support 1G)

Total Usable Port Count	1G Ports	2.5G Ports	10G Ports
M4250-9G1F-PoE+	10	=	=
M4250-8G2XF-PoE+	8	-	2
M4250-10G2F-PoE+	12	=	=
M4250-10G2XF-PoE+	10	-	2
M4250-10G2XF-PoE++	10	=	2
M4250-26G4F-PoE+	30	-	-
M4250-26G4F-PoE++	30	=	-
M4250-26G4XF-PoE+	26	-	4
M4250-40G8F-PoE+	48	=	-
M4250-40G8XF-PoE+	40	-	8
M4250-40G8XF-PoE++	40	=	8
M4250-12M2XF	-	12	2
M4250-16XF	-	=	16

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/// AV Line

AV Line Managed Switches

Management Ports	Console ports	Service port (Out-of-ba	and Ethernet)	Storage port
M4250-9G1F-PoE+, M4250-8G2XF-PoE+ desktop models	USB-C (front)	1 x RJ45 10/100/1000E	BASE-T (rear)	1 x USB-A (rear)
All rackmount other models	Serial RS232 RJ45 (rear); USB-C (rear)	1 x RJ45 10/100/1000E	BASE-T (rear)	1 x USB-A (front)
Fixed Power Supplies				
M4250-9G1F-PoE+, M4250-8G2XF-PoE+ desktop models	1 external power adapter with C14 inlet for	standard AC power cord (C13)		
M4250-26G4F-PoE++	2 internal PSU (C14 inlets) with 1 on/off swi	tch		
M4250-40G8XF-PoE++	3 internal PSU (C14 inlets) with 1 on/off swin	tch		
All rackmount other models	1 internal PSU (C14 inlet) with 1 on/off swite	ch		
Fixed fans M4250-9G1F-PoE+	Fanless			
All other models	Side-to-side airflow			
Power over Ethernet				
PSE Capacity	PoE+ Ports (802.3at)	Ultra90 PoE++ Ports (802.3bt)		
M4250-9G1F-PoE+	8	-		
M4250-8G2XF-PoE+	8	-		
M4250-10G2F-PoE+	8	-		
M4250-10G2XF-PoE+	8	-		
M4250-10G2XF-PoE++	-	8	Ultra90 PoE++ 802.3bt is	compatible with:
M4250-26G4F-PoE+	24	-	802.3af PoE (15.4W), 802	
M4250-26G4F-PoE++	-	24	and 802.3bt (60W, 75W	and 90W).
M4250-26G4XF-PoE+	24	-		
M4250-40G8F-PoE+	40	-		
M4250-40G8XF-PoE+	40	-		
M4250-40G8XF-PoE++	-	40		
PoE Budget	PoE E	Budget @ 110V AC in		
M4250-9G1F-PoE+		110 Watts		
M4250-8G2XF-PoE+		220 Watts		
M4250-10G2F-PoE+		125 Watts		
M4250-10G2XF-PoE+		240 Watts		
M4250-10G2XF-PoE++		720 Watts		
M4250-26G4F-PoE+		300 Watts		
M4250-26G4F-PoE++	1 used PSU: 720	Watts / 2 used PSU: 1,440 Watts		
M4250-26G4XF-PoE+		480 Watts		
M4250-40G8F-PoE+		480 Watts		
M4250-40G8XF-PoE+		960 Watts		
M4250-40G8XF-PoE++		d PSU: 1,650 Watts / 3 used PSU: 2,880 Wat		

AV Line Managed Switches

AV Line

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eatures Support	M4250-9G1F-PoE+ / M4250-8G2XF-PoE+ M4250-10G2F-PoE+ / M4250-10G2XF-PoE+ M4250-26G4XF-PoE+ / M4250-26G4XF-PoE+ M4250-40G8F-PoE+ / M4250-40G8XF-PoE+	M4250-10G2XF-PoE++/M4250-26G4F-PoE++ M4250-40G8XF-PoE++		
EEE 802.3af (up to 15.4W per port)	Yes	Yes		
EE 802.3at (up to 30W per port)	Yes	Yes		
EE 802.3bt (up to 90W per port)	No	Yes		
802.3at Layer 2 (LLDP) method	Yes	Yes		
802.3at 2-event classification	Yes	Yes		
302.3bt Layer 2 (LLDP) method	No	Yes		
802.3bt auto-classification method	No	Yes		
02.3bt standard method	No	Yes		
imer / schedule (week, days, hours)	Yes	Yes		
ssor/Memory				
I				
1250-26G4F-PoE+, M4250-26G4F-PoE++, G4XF-PoE+, M4250-40G8F-PoE+, M4250- E+, M4250-40G8XF-PoE++		A57 ARMv8 1.8Ghz CPU (64-bit)		
other models	Integrated ARM A9 1.25Ghz CF	PU in switching silicon (32-bit)		
em memory (RAM) - all models	2 GB			
e storage (flash) - all models	256 MB	Dual firmware image		
ket Buffer Memory				
50-40G8F-PoE+, M4250-40G8XF-PoE+, XF-PoE++	M4250- 32 Mb	Dynamically shared across only use		
other models	16 Mb			
rmance Summary				
tching fabric				
250-9G1F-PoE+	20 Gbps			
50-8G2XF-PoE+	56 Gbps			
250-10G2F-PoE+	24 Gbps			
250-10G2XF-PoE+, M4250-10G2XF-PoE+	+ 60 Gbps			
250-26G4F-PoE+, M4250-26G4F-PoE++	60 Gbps			
50-40G8F-PoE+	96 Gbps	Line-rate (non blocking fabric		
50-12M2XF	100 Gbps			
250-26G4XF-PoE+	132 Gbps			
250-40G8XF-PoE+, M4250-40G8XF-PoE+	·			
250-16XF	320 Gbps			

Datasheet | M4250 series

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AV Line Managed Switches

Throughput (64-byte frames)				
M4250-9G1F-PoE+	14.80 Mpps			
M4250-8G2XF-PoE+	41.67 Mpps			
M4250-10G2F-PoE+	17.86 Mpps			
M4250-10G2XF-PoE+, M4250-10G2XF-PoE++	44.64 Mpps			
M4250-26G4F-PoE+, M4250-26G4F-PoE++	44.64 Mpps			
M4250-40G8F-PoE+	71.42 Mpps			
M4250-12M2XF	74.40 Mpps			
M4250-26G4XF-PoE+	98.21 Mpps			
M4250-40G8XF-PoE+, M4250-40G8XF-PoE++	178.56 Mpps			
M4250-16XF	238.08 Mpps			
Latency - 10G Fiber	64-byte frames	512-byte frames	1024-byte frames	1518-byte frames
M4250-9G1F-PoE+	-	=	-	-
M4250-8G2XF-PoE+	0.838µs	0.821µs	0.820µs	0.819µs
M4250-10G2F-PoE+	-	-	-	-
M4250-10G2XF-PoE+	0.838µs	0.821µs	0.820µs	0.819µs
M4250-10G2XF-PoE++	0.807µs	0.791µs	0.790µs	0.789µs
M4250-26G4F-PoE+	-	-	-	-
M4250-26G4F-PoE++	-	-	-	-
M4250-26G4XF-PoE+	0.834µs	0.818µs	0.817µs	0.816µs
M4250-40G8F-PoE+	-	· -	- -	· -
M4250-40G8XF-PoE+	0.709µs	0.717µs	0.730µs	0.714µs
M4250-40G8XF-PoE++	0.708µs	0.716µs	0.728µs	0.713µs
M4250-12M2XF	0.807µs	0.791µs	0.790µs	0.789µs
M4250-16XF	0.811µs	0.834µs	0.860µs	0.831µs
Latency - 1G Fiber	64-byte frames	512-byte frames	1024-byte frames	1518-byte frames
M4250-9G1F-PoE+	2.271µs	2.257µs	2.267µs	2.266µs
M4250-8G2XF-PoE+	1.169µs	1.174µs	1.159µs	1.154µs
M4250-10G2F-PoE+	2.271µs	2.257µs	2.267µs	2.266µs
M4250-10G2XF-PoE+	1.169µs	1.174µs	1.159µs	1.154µs
M4250-10G2XF-PoE++	1.148µs	1.174µs	1.137µs	1.154µs
M4250-26G4F-PoE+	1.146µs 1.164µs	1.141µs	1.124µs	1.156µs 1.146µs
	·		1.124μs 1.119μs	
M4250-26G4F-PoE++	1.141µs	1.126μs	·	1.140µs
M4250-26G4XF-PoE+	1.130µs	1.123µs	1.119µs	1.120µs
	·	1 100	1 10/	1 100
M4250-40G8F-PoE+	1.074µs	1.109µs	1.106µs	1.102µs
M4250-40G8F-PoE+ M4250-40G8XF-PoE+	1.074µs 1.106µs	1.120µs	1.107µs	1.128µs
M4250-40G8F-PoE+	1.074µs			

Energy Efficient Ethernet (EEE)

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Datasheet | **M4250 series**AV Line Managed Switches

Latency - 1G Copper	64-byte frames	512-byte frames	1024-byte frames	1518-byte frames
M4250-9G1F-PoE+	2.133µs	2.136μs	2.131µs	2.142µs
M4250-8G2XF-PoE+	2.140µs	2.140μs	2.137μs	2.144µs
M4250-10G2F-PoE+	2.133µs	2.136μs	2.131µs	2.142µs
M4250-10G2XF-PoE+	2.140µs	2.140µs	2.137µs	2.144µs
M4250-10G2XF-PoE++	1.837µs	1.829µs	1.828µs	1.826µs
M4250-26G4F-PoE+	2.146µs	2.148µs	2.140μs	2.150µs
M4250-26G4F-PoE++	2.139µs	2.140µs	2.133µs	2.146µs
M4250-26G4XF-PoE+	2.280µs	2.282µs	2.270μs	2.288µs
M4250-40G8F-PoE+	2.027µs	2.343µs	2.462µs	2.358µs
M4250-40G8XF-PoE+	2.220µs	2.595µs	2.744µs	2.613µs
M4250-40G8XF-PoE++	2.251µs	2.625µs	2.775µs	2.641µs
M4250-12M2XF	2.843µs	2.836µs	2.834µs	2.836µs
M4250-16XF	-	-	-	-
Latency - 2.5G Copper	64-byte frames	512-byte frames	1024-byte frames	1518-byte frames
M4250-9G1F-PoE+	-	-	-	-
M4250-8G2XF-PoE+	-	-	-	-
M4250-10G2F-PoE+	=	-	-	-
M4250-10G2XF-PoE+	-	-	-	-
M4250-10G2XF-PoE++	-	-	-	-
M4250-26G4F-PoE+	-	-	-	-
M4250-26G4F-PoE++	-	-	-	-
M4250-26G4XF-PoE+	-	-	-	-
M4250-40G8F-PoE+	-	-	-	-
M4250-40G8XF-PoE+	-	-	-	-
M4250-40G8XF-PoE++	-	-	-	-
M4250-12M2XF	6.013µs	6.014µs	6.012µs	6.016µs
M4250-16XF	-	-	-	-
Green Ethernet				

Compliant with IEEE 802.3az Energy Efficient Ethernet Task Force

Deactivated by default

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Other Metrics					
Forwarding mode		Store-and-forward			
Addressing		48-bit MAC address			
Address database size		16K MAC addresses			
Number of VLANs		4,093 VLANs (802.1Q) simulta	aneously		
Number of multicast groups filte	ered (IGMP)	4K total (2,048 IPv4 and 2,048	3 IPv6)		
Number of Link Aggregation Gro	oups (LAGs)	8 LAGs with up to 8 ports per	group 802.3ad / 80	2.1AX-2008	
Number of hardware queues fo	r QoS	8 queues			
Number of routes IPv4 IPv6		894 IPv4 Unicast Routes in Defau 126 IPv6 Unicast Routes in Defau	· ·	SDM (System Data Mar database) templates al resources distribution IPv6 applications	llow for granular system
Number of static routes IPv4 IPv6		64 64			
RIP application route scaling IPv4		32 in Default IPv4 Basic SDM	Template		
Number of IP interfaces (port or	VLAN)	128			
Jumbo frame support		up to 12KB packet size			
Acoustic noise	(@ 25°C ambient (77°F)			
Testing method		Following the ISO-7779 stand otherwise. Full, 100%, Data an		nber Temp 25°C during te	sting unless noted
SPL (Sound Pressure Level)		dBA values are SPL (Sound Pre		9	
Fan management		Three modes are configurable mode	e using the AV GUI or the Cl	l: Fan Off mode, Quiet m	ode (default), and Cool
Fan Off mode @ 25° C ambient (77° F) Maximum Conditions:	PoE Power Load	Internal Sensors	Case Temperature (Top)	Fan Duty	Acoustic Noise
M4250-9G1F-PoE+	110W (fanless)	50°C	35.3°C	N/A	0dBA
M4250-8G2XF-PoE+	180W (RJ45 only, no SFP+)	0dBA / 37.4°C Case Temp	S1&2 <= 60°C S3 <= 58°C	0	0dBA
M4250-10G2F-PoE+	80W (all ports can be used)	<= 42°C	41.8°C	0	0dBA
M4250-10G2XF-PoE+	90W (all ports can be used)	<= 44°C	39.6°C	0	0dBA
M4250-10G2XF-PoE++	used)	<= 67°C	44.6°C	0	0dBA
M4250-26G4F-PoE+	45W (no SFP)	S1<= 43°C S2<= 47°C	40.5°C	0	0dBA
M4250-26G4F-PoE++	Not Supported	Not Supported	Not Supported	Not Supported	Not Supported
M4250-26G4XF-PoE+	45W(8 ports PoE+, no SFP+)	S1<= 41°C S2<= 46°C	43.4°C	0	0dBA
M4250-40G8F-PoE+	30W (8 ports PoE+, no SFP)	S1<= 37°C S2<= 50°C	45.2°C	0	0dBA
M4250-40G8XF-PoE+	Not Supported	Not Supported	Not Supported	Not Supported	Not Supported
M4250-40G8XF-PoE++	rtot supported	Not Supported	Not Supported	Not Supported	Not Supported
M4250-12M2XF	(4 ports 2.5G used in block 1-6 and 4 ports 2.5G used in block 7-12, no SFP+)	<= 64°C	56°C	0	0dBA
M4250-16XF	(8 ports SFP+)	<= 78°C	41.3°C	0	0dBA

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Quiet mode @ 25° C ambient 77° F)	Conditions:	PoE Power Load	Internal Sensors	Case Temperature (Top)	Fan Duty	Acoustic Noise
M4250-9G1F-PoE+		N/A	N/A	N/A	N/A	N/A
M4250-8G2XF-PoE+	-	0-220W	<= 60°C	33.6°C	10	19.3dBA
M4250-10G2F-PoE+		0-125W	<= 36°C	35.9°C	25	27.38dBA
M4250-10G2XF-PoE	+	0-240W	<= 37°C	40.6°C	25	27.4dBA
M4250-10G2XF-PoE	++	0-250W	<= 49°C	42.9°C	25	34.57dBA
		250-380W	<= 49°C	43.3°C	30	40dBA
		380-500W	<= 49°C	44.9°C	35	44.22dBA
		500-720W	<= 49°C	52.1°C	40	47.19dBA
M4250-26G4F-PoE+		0-200W	S1<= 43°C S2<=47°C	43.5°C	25	28dBA
		200W-300W	S1<= 44°C S2<=48°C	51.3°C	30	34dBA
M4250-26G4F-PoE+	++	0-280W	S1<= 37°C S2<=39°C	52.9°C	20	28dBA
		280W-360W	S1<= 38°C S2<=40°C	57.4°C	25	36dBA
		360W-420W	S1<= 39°C S2<=41°C	54.4°C	30	41dBA
		420W-480W	S1<= 40°C S2<=42°C	53.3°C	35	47dBA
		480W-540W	S1<= 41°C S2<=43°C	52.3°C	40	50dBA
		540W-600W	S1<= 42°C S2<=44°C	54.4°C	45	54dBA
		600W-660W	S1<= 43°C S2<=45°C	53.6°C	50	57dBA
		660W-1,440W	S1<= 44°C S2<=46°C	55.7°C	55	60dBA
14250-26G4XF-PoE	+	0-350W	S1<= 41°C S2<=46°C	39.3°C	20	25dBA
		350W-480W	S1<= 42°C S2<=47°C	36.8°C	30	42dBA
14250-40G8F-PoE+		0-150W	S1<= 37°C S2<=50°C	43.1°C	20	30dBA
		150W-200W	S1<= 38°C	42.1°C	25	36dBA
		200W-340W	S1<= 39°C S2<=51°C	44°C	30	40dBA
		340W-480W	S1<= 40°C	47.6°C	35	47dBA
14250-40G8XF-PoE	+	0-400W	S1<= 33°C S2<=46°C	54.2°C	20	29dBA
		400W-480W	S1<= 34°C S2<=47°C	42.8°C	25	35dBA
		480W-560W	S1<= 35°C S2<=48°C	41.9°C	30	41dBA
		560W-640W	S1<= 36°C S2<=49°C	42.1°C	35	48dBA
		640W-720W	S1<= 37°C S2<=50°C	40.9°C	40	51dBA
		720W-800W	S1<= 38°C S2<=51°C	40.7°C	45	54dBA
		800W-880W	S1<= 39°C S2<=52°C	40.4°C	50	57dBA
		880W-960W	S1<= 40°C S2<=53°C	40.5°C	55	59dBA
14250-40G8XF-PoE	++	0-160W	S1<= 37°C S2<=49°C	41.3°C	20	30dBA
		160W-240W	S1<= 38°C	38.8°C	25	36dBA
		240W-320W	S1<= 39°C S2<=50°C	36.4°C	30	42dBA
		320W-400W	S1<= 40°C	35.3°C	35	49dBA
		400W-480W	S1<= 41°C S2<=51°C	34.4°C	40	51dBA
		480W-560W	S1<= 42°C	34.3°C	45	55dBA
		560W-640W	S1<= 43°C S2<=52°C	35.1°C	50	57dBA
		660W-2,880W	S1<= 44°C	36.5°C	55	60dBA
л4250-12M2XF		-	<= 58°C	53.5°C	25	28.5dBA
л4250-16XF		-	<= 67°C	41.6°C	25	27.44dBA

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Cool mode @ 25 °C ambient (77 °F)	Case Temperature (Top)		Fan Duty	Acoustic Noise
M4250-9G1F-PoE+	N/A		N/A	N/A
M4250-8G2XF-PoE+	28.8°C		100	35.3dBA
M4250-10G2F-PoE+	27.2°C		100	55dBA
M4250-10G2XF-PoE+	30.9℃		100	56dBA
M4250-10G2XF-PoE++	41.8°C		100	66.23dBA
M4250-26G4F-PoE+	36.7°C		100	57dBA
M4250-26G4F-PoE++	(720W PoE) 36.7°C (1,440W PoE)	46°C	100	69dBA
M4250-26G4XF-PoE+	32.3°C		100	67dBA
M4250-40G8F-PoE+	35.4°C		100	68dBA
M4250-40G8XF-PoE+	36.1°C		100	69dBA
M4250-40G8XF-PoE++	(720W PoE) 31.4°C (1,650W PoE) 3 (2,880W PoE) 35.4°C	33.5°C	100	71dBA
M4250-12M2XF	33.2°C		100	55dBA
M4250-16XF	30.3℃		100	57dBA
Heat Dissipation (BTU)	Without PoE, all ports	With Max PoE, all ports		Standby without any port connection
M4250-9G1F-PoE+	9.88W - 33.73 BTU/hr	132.25W - 451.5 BTU/hr		6.4W - 22.02 BTU/hr
M4250-8G2XF-PoE+	18.14W - 61.93 BTU/hr	257.9W - 880.47 BTU/hr		9.51W - 32.47 BTU/hr
M4250-10G2F-PoE+	17.32W - 59.13 BTU/hr	163.9W - 559.55 BTU/hr		8.53W - 29.12BTU/hr
M4250-10G2XF-PoE+	25W - 85.35 BTU/hr	306.4W - 1046.05 BTU/hr		12.96W - 44.24BTU/hr
M4250-10G2XF-PoE++	26.3W - 89.79 BTU/hr	837.7W - 2859.91 BTU/hr		18W - 61.45BTU/hr
M4250-26G4F-PoE+	35.8W - 122.22 BTU/hr	401W - 1369.01 BTU/hr		23.4W - 79.89 BTU/hr
M4250-26G4F-PoE++	48.8W - 166.6 BTU/hr	1 PSU: 889W - 3035.05 BTU/hi	-	36.9W - 125.98 BTU/hr
		2 PSU: 1734W - 5919.88 BTU/h	r	
M4250-26G4XF-PoE+	46.8W - 159.78 BTU/hr	614W - 2096.2 BTU/hr		33.9W - 115.73 BTU/hr
M4250-40G8F-PoE+	59.5W - 203.13 BTU/hr	624.8W - 2133.07 BTU/hr		46.4W - 158.41 BTU/hr
M4250-40G8XF-PoE+	89.2W - 304.53 BTU/hr	1197W - 4086.56 BTU/hr		74.5W - 254.34 BTU/hr
M4250-40G8XF-PoE++	82.6W - 282 BTU/hr	1 PSU: 912W - 3113.57 BTU/hi		68.5W - 233.86 BTU/hr
		2 PSU: 1998W - 6821.17 BTU/h		
		3 PSU: 3523W - 12027.52 BTU/	nr	
M4250-12M2XF	37.9W - 129.39 BTU/hr	-		14.1W - 48.14BTU/hr
M4250-16XF	47.84W - 163.33 BTU/hr	-		19.27W - 65.78BTU/hr

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Datasheet | **M4250 series**AV Line Managed Switches

Mean Time Between Failures (MTBF)	@ 25 °C ambient (77 °F)	@ 45 °C ambient (113 °F)	@ 50 °C ambient (122 °F)
M4250-9G1F-PoE+	1020,808 hours (~116.5 years)	501,447 hours (~57.2 years)	-
M4250-8G2XF-PoE+	1484,652 hours (~169.5 years)	725,337 hours (~82.8 years)	-
M4250-10G2F-PoE+	778,769 hours (~88.9 years)	530,659 hours (~60.6 years)	-
M4250-10G2XF-PoE+	576,889 hours (~65.9 years)	562,708 hours (~64.2 years)	-
M4250-10G2XF-PoE++	947,871 hours (~108.2 years)	493,860 hours (~56.4 years)	-
M4250-26G4F-PoE+	511,054 hours (~58.3 years)	342,368 hours (~39.1 years)	-
M4250-26G4F-PoE++	491,282 hours (~56.1 years)	262,204 hours (~29.9 years)	-
M4250-26G4XF-PoE+	509,057 hours (~58.1 years)	285,719 hours (~32.6 years)	-
M4250-40G8F-PoE+	341,680 hours (~39 years)	342,368 hours (~39.1 years)	-
M4250-40G8XF-PoE+	487,900 hours (~55.7 years)	285,719 hours (~32.6 years)	-
M4250-40G8XF-PoE++	304,916 hours (~34.8 years)	262,204 hours (~29.9 years)	-
M4250-12M2XF	720,892 hours (~82.3 years)	-	416,021 hours (~47.5 years)
M4250-16XF	844,633 hours (~96.4 years)	-	490,265 hours (~56 years)

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.2 Services - VLANs		
IEEE 802.1Q VLAN Tagging	Yes	802.1Q-1998 Up to 4,093 VLANs - 802.1Q Tagging
Auto-Trunk	Yes	Dynamic VLAN trunking as soon as a M4250 switch gets connected to anothe M4250 switch
Protocol Based VLANs	Yes	
IP subnet	Yes	
ARP IPX	Yes	
	Yes	
Subnet based VLANs	Yes	
MAC based VLANs	Yes	
Voice VLAN	Yes	Based on phones OUI bytes (internal database, or user-maintained) or protocols (SIP, H323 and SCCP)
Private Edge VLAN	Yes	
Private VLAN	Yes	
IEEE 802.1x	Yes	802.1x-2004
Guest VLAN	Yes	
RADIUS based VLAN assignment via .1x RADIUS based Filter ID assignment via .1x	Yes Yes	IP phones and PCs can authenticate on the same port but under different VLAN assignment policies
MAC-based .1x	Yes	
Unauthenticated VLAN	Yes	
Double VLAN Tagging	Yes	
Enabling dvlan-tunnel makes interface	Yes	
Global ethertype (TPID)	Yes	
Interface ethertype (TPID)	Yes	
Customer ID using PVID	Yes	
GARP with GVRP/GMRP	Yes	Automatic registration for membership in VLANs or in multicast groups
Multiple Registration Protocol (MRP)	Yes	Can replace GARP functionality
Multicast VLAN Registration Protocol (MVRP)	Yes	Can replace GARP functionality
MVR (Multicast VLAN registration)	Yes	
2 Services - Availability		
IEEE 802.3ad - LAGs	Yes	Up to 8 LAGs and up to 8 ports per group
LACP	Yes	
LACP automatically reverts to and from Static LAG Static LAGs	Yes Yes	
LAG Hashing	Yes	
LAG Member Port Flaps Tracking	Yes	
Auto-LAG	Yes	If more than one link between two M4250 switches, a Link Aggregation Group is created, dynamically
Storm Control	Yes	
IEEE 802.3x (Full Duplex and flow control) Per port Flow Control	Yes Yes	Asymmetric and Symmetric Flow Control
UDLD Support (Unidirectional Link Detection)	Yes	Limitation : Enabling, changing, or disabling flow control on a port, a service interruption is observed on that port during 4 to 6 seconds before the traffic
Normal-Mode	Yes	resumes.
Aggressive-Mode	Yes	
Link Dependency	Yes	Allow the link status of specified ports to be dependent on the link status of other ports
IEEE 802.1D Spanning Tree Protocol	Yes	
IEEE 802.1w Rapid Spanning Tree	Yes	
IEEE 802.1s Multiple Spanning Tree	Yes	
Per VLAN STP (PVSTP) with FastUplink and		DVOT I I I I I I
FastBackbone	Yes	PVST+ interoperability

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Per VLAN Rapid STP (PVRSTP)	Yes	RPVST+ interoperability
STP Loop Guard	Yes	
STP Root Guard	Yes	
STP BPDU Guard	Yes	
STP BPDU Filtering	Yes	
STP BPDU Flooding	Yes	
L2 Services - Multicast Filtering		
IGMPv2 Snooping Support	Yes	
IGMPv3 Snooping Support	Yes	
NETGEAR IGMP Plus™ Enhanced Implementation	Yes	For automatic multicast across M4250 / M4300 / M4500 (Spine and Leaf) at Layer 2, removing the need for L3 PIM routing
MLDv1 Snooping Support	Yes	
MLDv2 Snooping Support	Yes	
Expedited Leave function	Yes	
Static L2 Multicast Filtering	Yes	
Enable IGMP / MLD Snooping per VLAN	Yes	
IGMPv1/v2 Snooping Querier, compatible v3 queries	Yes	
MLDv1 Snooping Querier	Yes	
MGMD Snooping Control Packet Flooding Flooding to mRouter Ports Remove Flood-All-Unregistered Option	Yes Yes Yes	
Multicast VLAN registration (MVR)	Yes	
L3 Services - Multicast Routing		
IGMP Proxy	Yes	
MLD Proxy	Yes	
Any Source Multicast (ASM)	Yes	
Source Specific Multicast (SSM)	Yes	
Multicast streams routing between subnets, VLANs	Yes	
Multicast static routes (IPv4, IPv6)	Yes	
Neighbor discovery	Yes	
PIM-DM (Multicast Routing - dense mode)	Yes	
PIM-DM (IPv6)	Yes	
PIM-SM (Multicast Routing - sparse mode)	Yes	
PIM-SM (IPv6)	Yes	
PIM multi-hop RP support	Yes	
PIM Timer Accuracy	Yes	
PIM-SM Unhandled Events	Yes	
IPMC replication (hardware support)	Yes	
L3 Services - DHCP		
DHCP IPv4 / DHCP IPv6 Client	Yes	
DHCP IPv4 / DHCP IPv6 Server (Stateless, Stateful)	Yes	
DHCP Snooping IPv4 / IPv6	Yes	
BootP Relay IPv4 / IPv6	Yes	
DHCP Relay IPv4 / IPv6	Yes	



AV Line

DHCP Relay Option 82 circuit-id and remote-id for VLANs	Yes	
Multiple Helper IPs	Yes	
Auto Install (DHCP options 66, 67, 150 and 55, 125)	Yes	
L3 Services - Routing		
Static Routing / ECMP Static Routing Multiple next hops to a given destination Load sharing, Redundancy Default routes Static Reject routes	IPv4/IPv6 Yes Yes Yes Yes	
Port Based Routing	Yes	
VLAN Routing 802.3ad (LAG) for router ports	Yes Yes	
Loopback Interfaces	Yes	
RIP RIPv1/RIPv2	IPv4 Yes	
IP Multinetting	Yes	
ICMP throttling	Yes	
Router Discovery Protocol	Yes	
DNS Client	IPv4/IPv6	
IP Helper Max IP Helper entries	Yes 512	
IP Event Dampening	IPv4/IPv6	
Proxy ARP	IPv4/IPv6	
ICMP ICMP redirect detection in hardware	IPv4/IPv6 Yes	
Policy Based Routing (PBR) Based on the size of the packet Based on the Protocol of the payload (Protocol ID field) Based on Source MAC address Based on Source or Destination IP address Based on VLAN tag Based on Priority(802.1P priority)	IPv4/IPv6 Yes Yes Yes Yes Yes Yes Yes	
Network Monitoring and Discovery Services		
ISDP (Industry Standard Discovery Protocol)	Yes	Can interoperate with devices running CDP
802.1ab LLDP	Yes	
802.1ab LLDP - MED	Yes	
SNMP	V1, V2, V3	
RMON 1,2,3,9	Yes	
sFlow	Yes (IPv4 and IPv6 headers)	
Security		
Network Storm Protection, DoS		
Broadcast, Unicast, Multicast DoS Protection Denial of Service Protection (control plane) Denial of Service Protection (data plane)	Yes Yes Yes	Switch CPU protection Switch Traffic protection

AV Line

DoS Attacks Protection		SIPDIP SMACDMAC FIRSTFRAG TCPFRAG TCPFLAG TCPPORT	UDPPORT TCPFLAGSEQ TCPOFFSET TCPSYN TCPSYNFIN TCPFINURGPSH	L4PORT ICMP ICMPV4 ICMPV6 ICMPFRAG PINGFLOOD	SYNACK
CPU Rate Limiting	Yes		ınd IPv6 multicast packets with u		n IP routing/
ICMP throttling	Yes		- NG traffic for ICMP-based DoS at	ttacks	
Management		,			
Management ACL (MACAL)	Yes	Protects manage	ment CPU access through the LA	\ NI	
Max Rules	64	i Totects manage	ment of o access through the D	414	
Out of band Management	Yes	In-band manager	ment can be shut down entirely	when out-of-band manage	ment network
Radius accounting	Yes	RFC 2565 and RF	FC 2866		
TACACS+	Yes				
Malicious Code Detection	Yes	Software image f	iles and Configuration files with	digital signatures	
Network Traffic					
Access Control Lists (ACLs)	L2 / L3	3 / L4 MA	C, IPv4, IPv6, TCP, UDP		
Time-based ACLs	Yes				
Protocol-based ACLs	Yes				
ACL over VLANs	Yes				
Dynamic ACLs	Yes				
IEEE 802.1x Radius Port Access Authentication	Yes	Up to 48 clients (802.1x) per port are supported,	including the authentication	on of the users domai
802.1x MAC Address Authentication Bypass (MAB)	Yes	Supplemental aut	thentication mechanism for non-	302.1x devices, based on th	neir MAC address only
Network Authentication Successive Tiering	Yes	Dot1x-> MAP ->	Captive Portal successive auther	ntication methods based o	n configured time-ou
Port Security	Yes				
IP Source Guard	Yes			IPv4 / IPv6	
DHCP Snooping	Yes			IPv4 / IPv6	
Dynamic ARP Inspection	Yes			IPv4 / IPv6	
IPv6 RA Guard Stateless Mode	Yes				
MAC Filtering	Yes				
Port MAC Locking	Yes				
Private Edge VLAN	Yes		doesn't forward any traffic (unic	ast, multicast, or broadcast) to any other
Private VLANs	Yes	Scales Private Ed Layer 2 network	ge VLANs by providing Layer 2 i	solation between ports ac	ross switches in same
Quality of Service (QoS) - Summary		Layer 2 Hetwork			
Access Lists	Yes				
L2 MAC, L3 IP and L4 Port ACLs	Yes				
Ingress	Yes				
Egress	Yes				
Time-based	Yes				
802.3ad (LAG) for ACL assignment	Yes				
Binding ACLs to VLANs	Yes				
ACL Logging	Yes				

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Edge Node applicability Yes Interior Node applicability Yes Interior Node applicability Yes Interior Node applicability Yes Support for IPv6 fields Yes Yes Support for IPv6 fields Yes		
Strict Priority queue technology Single Rate Policing Committed Information Rate Committed Burst Size Excessive Burst Size DiffSer Yeature applied to class maps Auto-VolP Auto-VolP Auto-VolP Auto-VolP Auto-VolP ACL Support (general, includes IP ACLs) Palie March Fields: Destination IP Destination IP Destination IP Destination IP Inbound/Outbound Destination IA Port IP Posc IP Precedence IP TOS IP Precedence IP TOS Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Ip TOS Inbound/Outbound Ip TOS Inbound/Outbound Inbound/Outbound Inbound/Outbound Ip TOS Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Source IP (for Mask support see below) Inbound/Outbound Source IP (for Mask support see below) Inbound/Outbound Inbound/O	Edge Node applicability Interior Node applicability 802.3ad (LAG) for service interface Support for IPv6 fields Ingress/Egress IEEE 802.1p COS 802.3ad (LAG) for COS configuration	Yes Yes Yes Yes Yes Yes Yes Yes Yes
Committed Information Rate Committed Burst Size Excessive Burst Size DiffServ feature applied to class maps Auto-VolP A	~	
CoS - ACL Feature Support ACL Support (general, includes IP ACLs) MAC ACL Support (general, includes IP ACLs) Pestination IP Destination IP Destination IP Destination IP Inbound/Outbound Every Packet Inbound/Outbound IP DSCP Inbound/Outbound IP PSCP Inbound/Outbound IP TOS Inbound/Outbound Protocol Protocol Source IP (for Mask support see below) Inbound/Outbound Source IP 4 Fort Inbound/Outbound Source IP 4 Fort Inbound/Outbound TCP Flag (ack, est, fin) Supports Masking Inbound/Outbound MAC Rule Match Fields COS Inbound/Outbound Destination MAC Destination MAC Inbound/Outbound Inbound/Outbound Destination MAC Destination MAC Inbound/Outbound Inbound/Outbound Inbound/Outbound Destination MAC Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Destination MAC Inbound/Outbound	Committed Information Rate Committed Burst Size Excessive Burst Size	Yes Yes Yes
ACL Support (general, includes IP ACLs) MAC ACL Support IP Rule Match Fields: Destination IP Destination IPP Inbound/Outbound Destination IPP Inbound/Outbound Destination L4 Port Inbound/Outbound IP DSCP Inbound/Outbound IP DSCP Inbound/Outbound IP TOS Inbound/Outbound Source IP (for Mask support see below) Inbound/Outbound Source IP (for Mask support see below) Inbound/Outbound Source L4 Port Inbound/Outbound Supports Masking Inbound/Outbound MAC Rule Match Fields COS Inbound/Outbound Destination MAC Inbound/Outbound Inbound/Outbound Destination MAC Inbound/Outbound	Auto-VoIP	Yes, based on protocols (SIP, H323 and SCCP) or on OUI bytes (default database and user-based OUIs) in the phone source MAC address
MAC ACL Support IP Rule Match Fields: Destination IP Inbound/Outbound Destination IPP6 IP Inbound/Outbound Destination L4 Port Inbound/Outbound Every Packet Inbound/Outbound IP DSCP Inbound/Outbound IP DSCP Inbound/Outbound IP TOS Inbound/Outbound IP TOS Inbound/Outbound IP TOS Inbound/Outbound IP TOS Inbound/Outbound Protocol Source IP (for Mask support see below) Source IP (for Mask support see below) Inbound/Outbound Source IP (For Mask support see below) Inbound/Outbound Source IP (For Mask support see Inbound Inbound/Outbound Source IP (For Mask support see Inbound Inbound/Outbound Inbound/Ou	QoS - ACL Feature Support	
Source IP (for Mask support see below) Source IPv6 IP Inbound/Outbound L3 IPv6 Flow Label Source L4 Port Inbound/Outbound TCP Flag (ack, est, fin) Supports Masking Inbound/Outbound MAC Rule Match Fields COS Inbound/Outbound Destination MAC Destination MAC Destination MAC Source MAC Source MAC Source MAC Source MAC Source MAC Source MAC Inbound/Outbound	MAC ACL Support IP Rule Match Fields: Destination IP Destination IPv6 IP Destination L4 Port Every Packet IP DSCP IP Precedence	Yes Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound
COS Inbound/Outbound Destination MAC Inbound/Outbound Destination MAC Mask Inbound/Outbound Ethertype Inbound/Outbound Source MAC Inbound/Outbound Source MAC Inbound/Outbound	Source IP (for Mask support see below) Source IPv6 IP L3 IPv6 Flow Label Source L4 Port TCP Flag (ack, est, fin)	Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound
	COS Destination MAC Destination MAC Mask Ethertype Source MAC Source MAC Mask	Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound Inbound/Outbound
Rules attributes Assign Queue Inbound Logging deny rules Inbound Mirror (to supported interface types only) Inbound Redirect (to supported interface types only) Inbound Rate Limiting permit rules Inbound/Outbound	Assign Queue Logging deny rules Mirror (to supported interface types only) Redirect (to supported interface types only)	Inbound/Outbound Inbound Inbound

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Interface	
Inbound direction	Yes
Outbound direction	Yes
Supports LAG interfaces	Yes
Supports Control-plane interface	Yes
Multiple ACLs per interface, dir	Yes
Mixed-type ACLs per interface, dir	Yes
Mixed L2/IPv4 ACLs per interface, diff	Yes
	Yes
Mixed IPv4/IPv6 ACLs per interface, inbound	Yes
Mixed IPv4/IPv6 ACLs per interface, outbound	tes
QoS - DiffServ Feature Support	
DiffServ Supported	Yes
Class Type	
All	Yes
Class Match Criteria	
COS	Inbound/Outbound
COS2 (Secondary COS)	Inbound
Destination IP (for Mask support see below)	Inbound/Outbound
Destination IPv6 IP	Inbound/Outbound
Destination L4 Port	Inbound/Outbound
Destination MAC (for Mask support see below)	Inbound/Outbound
Ethertype	Inbound/Outbound
Every Packet	Inbound/Outbound
IP DSCP	Inbound/Outbound
IP Precedence	Inbound/Outbound
IP TOS (for Mask support see below)	Inbound/Outbound
Protocol	Inbound/Outbound
Reference Class	Inbound/Outbound
Source IP (for Mask support see below)	Inbound/Outbound
Source IPv6 IP	Inbound/Outbound
L3 IPv6 Flow Label	Inbound
Source L4 Port	Inbound/Outbound
Source MAC (for Mask support see below)	Inbound/Outbound
VLAN ID (Source VID)	Inbound/Outbound
VLAN ID2 (Secondary VLAN) (Source VID)	Inbound/Outbound
Supports Masking	Inbound/Outbound
**	inbound/ Outbound
Policy Out Class Unrestricted	Yes
Policy Attributes Inbound	
Assign Queue	Yes
Drop	Yes
Mark COS	Yes
Mark COS-AS-COS2	Yes
Mark COS2 (Secondary COS) Mark IP DSCP	Yes
	Yes
Mark IP Precedence	Yes
Mirror (to supported interface types only)	Yes
Police Simple	Yes
Police Single-Rate	Yes
Police Two-Rate	Yes
Police Color Aware Mode	Yes
Redirect (to supported interface types only)	Yes

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Policy Attributes Outbound	Yes Yes
Drop Mark COS	Yes
Mark IP DSCP	Yes
Mark IP Precedence	Yes
Mirror (to supported interface types only)	Yes
Police Simple	Yes
Police Single-Rate	Yes
Police Two-Rate	Yes
Police Color Aware Mode	Yes Yes
Redirect (to supported interface types only)	ies
Service Interface Inbound Slot.Port configurable	Yes
Inbound 'All' Ports configurable	Yes
Outbound Slot.Port configurable	Yes
Outbound 'All' Ports configurable	Yes
Supports LAG interfaces	Yes
Mixed L2/IPv4 match criteria, inbound	Yes
Mixed IPv4/IPv6 match criteria, inbound	Yes
Mixed IPv4/IPv6 match criteria, outbound	Yes
PHB Support	
EF	Yes
AF4x	Yes
AF3x	Yes
AF2x	Yes
AF1x	Yes
CS	Yes
Statistics Policy Instance	
Offered	packets
Discarded	packets
Oos COS Footuro Support	
QoS - COS Feature Support	
COS Support	Yes
· · ·	Yes Yes
COS Support Supports LAG interfaces COS Mapping Config	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface	Yes Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config	Yes Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface	Yes Yes Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface	Yes Yes Yes Yes Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface)	Yes Yes Yes Yes Yes Yes Yes Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support Maximum Queue Weight	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support Maximum Queue Weight WRED Support	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support Maximum Queue Weight WRED Support	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support Maximum Queue Weight WRED Support PTP - PTPv2 Feature Support	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support Maximum Queue Weight WRED Support	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support Maximum Queue Weight WRED Support PTP - PTPv2 Feature Support	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support Maximum Queue Weight WRED Support PTP - PTPv2 Feature Support PTPv2 IEEE 1588 PTPv2 Section 10 and 11.5	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support Maximum Queue Weight WRED Support PTP - PTPv2 Feature Support PTPv2 IEEE 1588 PTPv2 Section 10 and 11.5 Implementation	Yes
COS Support Supports LAG interfaces COS Mapping Config Configurable per-interface IP DSCP Mapping COS Queue Config Queue Parms configurable per-interface Drop Parms configurable per-interface Interface Traffic Shaping (for whole egress interface) Minimum Bandwidth Weighted Deficit Round Robin (WDRR) Support Maximum Queue Weight WRED Support PTP - PTPv2 Feature Support PTPv2 IEEE 1588 PTPv2 Section 10 and 11.5 Implementation Limitations	Yes

TSN - Time Sensitive Networking AVB Feature Support		
AVB		
IEEE 802.1BA-2011 Audio Video Bridging (AVB)	Yes, when an AVB license is properly installed in the tion at the end of the Tech Spec section)	ne switch (license sold separately, see Ordering Informa-
IEEE 802.1AS-2011 gPTP	Yes, with an AVB license	
IEEE 802.1Qav-2009 FQTSS	Yes, with an AVB license	
IEEE 802.1Qat-2010 MSRP	Yes, with an AVB license	
IEEE 802.1ak MMRP	Yes, with an AVB license	
IEEE 802.1ak MVRP	Yes, with an AVB license	
Max number of AVB streams	256 streams per switch	
Limitations	AVB isn't supported on a LAG (link aggregation g	roup, or port channel)
Functional Summary - IETF RFC Standards and IEEE Netw	ork Protocols	
Core Management		
RFC 854 – Telnet	RFC 3414 – User-Based Security Model	
RFC 855 – Telnet option specifications	RFC 3415 – View-based Access Control Model	
RFC 1155 – SMI v1	RFC 3416 – Version 2 of SNMP Protocol Operation	ns
RFC 1157 – SNMP	RFC 3417 – Transport Mappings	
RFC 1212 – Concise MIB definitions	•	for the Simple Network Management Protocol (SNMP)
RFC 1867 – HTML/2.0 forms with file upload extensions	Configurable Management VLAN	
RFC 1901 – Community-based SNMP v2		SSL 3.0 and TLS 1.2
RFC 1908 – Coexistence between SNMP v1 and SNMP v2		- RFC 2246 – The TLS protocol, version 1.0
RFC 2068 – HTTP/1.1 protocol as updated by draft-ietf-http-v11-spec-rev-03		- RFC 2346 – AES cipher suites for Transport layer security
RFC 2271 – SNMP framework MIB		- RFC 2818 – HTTP over TLS SSH 2.0
RFC 2295 – Transparent content negotiation		SSH 2.0
RFC 2296 – Remote variant selection; RSVA/1.0 state ma	nagement cookies – draft-ietf-http-state-mgmt-05	- RFC 4253 – SSH transport layer protocol
RFC 2576 – Coexistence between SNMP v1, v2, and v3		- RFC 4252 – SSH authentication protocol
RFC 2578 – SMI v2		- RFC 4254 – SSH connection protocol
RFC 2579 – Textual conventions for SMI v2		- RFC 4251 – SSH protocol architecture
RFC 2580 – Conformance statements for SMI v2		- RFC 4716 – SECSH public key file format
RFC 3410 – Introduction and Applicability Statements for Internet Standard Management Framework		 RFC 4419 – Diffie-Hellman group exchange for the SSH transport layer protocol
RFC 3411 – An Architecture for Describing SNMP Management Frameworks		HTML 4.0 specification, December 1997
RFC 3412 – Message Processing & Dispatching		L C : TM 4.2
RFC 3413 – SNMP Applications		Java Script™ 1.3

Advanced Management

Industry-standard CLI with the following features:

Scripting capability
 Command completion
 Context-sensitive help
 Optional user password encryption
 Multisession Telnet server
 Auto Image Upgrade

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Core Switching	
Core switching	IEEE 802.1BA-2011, 802.1AS-2011 gPTP, 802.1Qav-2009 FQTSS, 802.1Qat-2010 MSRP, 802.1ak MMRP,
IEEE 802.1AB – Link level discovery protocol	MVRP with AVB license
IEEE 802.1D – Spanning tree	IEEE 802.3ac – VLAN tagging
IEEE 802.1p – Ethernet priority with user provisioning and mapping	IEEE 802.3ad – Link aggregation
IEEE 802.1Q – Virtual LANs w/ port-based VLANs	IEEE 802.3ae – 10 GbE
IEEE 802.1S – Multiple spanning tree compatibility	IEEE 802.3af – Power over Ethernet
IEEE 802.1v – Protocol-based VLANs	IEEE 802.3at – Power over Ethernet Plus
IEEE 802.1W – Rapid spanning tree	IEEE 802.3x – Flow control
iEEE 802.1AB – LLDP	ANSI/TIA-1057 – LLDP-MED
IEEE 802.1X – Port-based authentication	GARP – Generic Attribute Registration Protocol: clause 12, 802.1D-2004
IEEE 802.3 – 10Base-T	GMRP – Dynamic L2 multicast registration: clause 10, 802.1D-2004
IEEE 802.3u – 100Base-T	GVRP – Dynamic VLAN registration: clause 11.2, 802.1Q-2003
IEEE 802.3ab – 1000Base-T	RFC 4541 – IGMP snooping and MLD snooping
IEEE 802.3bz-2016 – 2.5GBASE-T	RFC 5171 – UniDirectional Link Detection (UDLD) Protocol
Additional Layer 2 Functionality	
Broadcast storm recovery	IGMP and MLD snooping querier
Double VLAN/VMAN tagging	Port MAC locking
DHCP Snooping	MAC-based VLANs
Dynamic ARP inspection	IP source guard
Independent VLAN Learning (IVL) support	IP subnet-based VLANs
IPv6 classification APIs	Voice VLANs
Jumbo Ethernet frames	Protected ports
Port mirroring	IGMP snooping
Static MAC filtering	Green Ethernet power savings mode
System Facilities	
Event and error logging facility	RFC 2030 – Simple Network Time Protocol (SNTP) V4 for IPv4, IPv6, and OSI
Runtime and configuration download capability	RFC 2131 – DHCP Client/Server
PING utility	RFC 2132 – DHCP options and BOOTP vendor extensions
XMODEM	RFC 2865 – RADIUS client
RFC 768 – UDP	RFC 2866 – RADIUS accounting
RFC 783 – TFTP	RFC 2868 – RADIUS attributes for tunnel protocol support
RFC 791 – IP	RFC 2869 – RADIUS extensions
RFC 792 – ICMP	RFC 28869bis – RADIUS support for Extensible Authentication Protocol (EAP)
RFC 793 – TCP	RFC 5176 – RADIUS Change of Auth

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RFC 826 - ARP	RFC 3164 – The BSD syslog protocol with RFC 5424 update
RFC 951 – BOOTP	RFC 3580 – 802.1X RADIUS usage guidelines
RFC 1321 – Message digest algorithm	Power Source Equipment (PSE) IEEE 802.af Powered Ethernet (DTE Power via MDI) standard
RFC 1534 – Interoperability between BOOTP and DHCP	
Core Routing	
RFC 826 – Ethernet ARP	RFC 1812 – Requirements for IPv4 routers
RFC 894 – Transmission of IP datagrams over Ethernet networks	RFC 2082 – RIP-2 MD5 authentication
RFC 896 – Congestion control in IP/TCP networks	RFC 2131 – DHCP relay
RFC 1027 – Using ARP to implement transparent subnet gateways (Proxy ARP)	RFC 2385–Protection of BGP Sessions via the TCP MD5 Signature Option
RFC 1256 – ICMP router discovery messages	RFC 2453 – RIP v2
RFC 1321 – Message digest algorithm	RFC 3021 – Using 31-Bit Prefixes on Point-to-Point Links
RFC 1519 – CIDR	RFC 3046 – DHCP/BOOTP relay
Quality of Service - DiffServ	
RFC 2474 – Definition of the differentiated services field (DS Field) in IPv4/IPv6 headers	RFC 2697 – A Single Rate Three Color Marker
RFC 2475 – An architecture for differentiated services	RFC 3246 – An expedited forwarding PHB (Per-Hop Behavior)
RFC 2597 – Assured forwarding PHB group	RFC 3260 – New terminology and clarifications for DiffServ
Quality of Service - Access Control Lists (ACLs)	
Permit/deny actions for inbound or outbound IP traffic classification based on: Type of service (ToS) or differentiated services (DS) DSCP field Source IP address Destination IP address TCP/UDP source port TCP/UDP destination port IPv6 flow label IP protocol number	Permit/deny actions for inbound or outbound Layer 2 traffic classification based on: - Source MAC address - Destination MAC address - EtherType - VLAN identifier value or range (outer and/or inner VLAN tag) - 802.1p user priority (outer and/or inner VLAN tag) Optional rule attributes: - Assign matching traffic flow to a specific queue - Redirect or mirror (flow-based mirroring) matching traffic flow to a specific port - Generate trap log entries containing rule hit counts
Quality of Service - Class of Service (CoS)	
Direct user configuration of the following: - IP DSCP to traffic class mapping - IP precedence to traffic class mapping - Interface trust mode: 802.1p, IP Precedence, IP DSCP, or untrusted - Interface traffic shaping rate - Minimum and maximum bandwidth per queue - Strict priority versus weighted (WRR/WDRR/WFQ) scheduling per queue - Tail drop versus Weighted Random Early Detection (WRED) queue depth management	Auto VoIP
Core Multicast	
RFC 1112 – Host extensions for IP multicasting	RFC3973 – PIM-DM
RFC 2236 – IGMP v2	RFC4601 – PIM-SM
RFC 2710 – MLDv1	Draft-ietf-magma-igmp-proxy-06.txt – IGMP/MLD-based multicast forwarding (IGMP/MLD proxying)

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RFC 2365 – Administratively scoped boundaries	$Draft-ietf-magma-igmpv3-and-routing-05.txt-IGMPv3\ and\ multicast\ routing\ protocol\ interaction$
RFC 3376 – IGMPv3	Static RP configuration
RFC3810 – MLDv2	Static RP configuration
Core IPv6 Routing	
RFC 1981 – Path MTU for IPv6	RFC 3493 – Basic socket interface for IPv6
RFC 2373 – IPv6 addressing	RFC 3513 – Addressing architecture for IPv6
RFC 2460 – IPv6 protocol specification	RFC 3542 – Advanced sockets API for IPv6
RFC 2461 – Neighbor discovery	RFC 3587 – IPv6 global unicast address format
RFC 2462 – Stateless autoconfiguration	RFC 3736 – Stateless DHCPv6
RFC 2464 – IPv6 over Ethernet	RFC 4213 – Basic transition mechanisms for IPv6
RFC 2711 – IPv6 router alert	RFC 4291 – Addressing architecture for IPv6
RFC 3056–Connection of IPv6 Domains via IPv4 Clouds	RFC 4443 – Internet Control Message Protocol (ICMPv6) for the IPv6 Specification
RFC 3315 – Dynamic Host Configuration Protocol for IPv6 (DHCPv6)	RFC 6164 – Using 127-Bit IPv6 Prefixes on Inter-Router Links
RFC 3484 – Default address selection for IPv6	RFC 6583 – Operational Neighbor Discovery Problems
Supported MIBs	
Base Package MIBs	
ANSI/TIA-1057 – LLDP-EXT-MED-MIB	RFC 2674 – Q-BRIDGE-MIB
DIFFSERV DSCP TC (Draft – no RFC)	RFC 2677 – IANA Address Family Numbers MIB
DNS-RESOLVER-MIB (IETF DNS Working Group)	RFC 2819 – RMON MIB
DNS-SERVER-MIB (IETF DNS Working Group)	RFC 2925 – DISMAN-PING-MIB and DISMAN-TRACEROUTE-MIB
GreenEthernet Private MIB	RFC 3273 – RMON MIB for High Capacity Networks
IANA-ADDRESS-FAMILY-NUMBERS-MIB (IANA (3/2002)	RFC 3411 – SNMP Management Frameworks MIB
IEEE 802.1AB-2004 – LLDP MIB	RFC 3411 – SNMP-FRAMEWORK-MIB
IEEE 802.1AB-2005 – LLDP-EXT-DOT3-MIB	RFC 3412 – SNMP-MPD-MIB
POWER ETHERNET MIB (Draft – no RFC)	RFC 3413 – SNMP-NOTIFICATION-MIB
RFC 1155 – SMI-MIB	RFC 3413 – SNMP-PROXY-MIB (initial revision published as RFC 2273)
RFC 1450 – SNMPV2-MIB	RFC 3413 – SNMP-TARGET-MIB (initial revision published as RFC 2273)
RFC 2273 – SNMP Notification MIB, SNMP Target MIB	RFC 3414 – User-based Security Model for SNMPv3 MIB
RFC 2392 – IANA RTPROTO-MIB	RFC 3415 – View-based Access Control Model for SNMP MIB
RFC 2572 – SNMP Message Processing and Dispatching MIB	RFC 3417 – SNMPV2-TM
RFC 2574 – User-based Security Model for SNMPv3 MIB	RFC 3418 – SNMPv2 MIB
RFC 2575 – View-based Access Control Model for SNMP MIB	RFC 3434 – RMON MIB Extensions for High Capacity Alarms
RFC 2576 – SNMP Community MIB	RFC 3584 – SNMP Community MIB
RFC 2578 – SNMPV2-SMI	RFC 3621 – POWER-ETHERNET-MIB

AV Line

RFC 2579 – SNMPV2-TC	SNMP-RESEARCH-MIB— SNMP research MIB definitions	
RFC 2580– SNMPV2-CONF	SR-AGENT-INFO-MIB— SNMP research MIB definitions	
RFC 2613 – SMON-MIB	USM-TARGET-TAG-MIB – SNMP research MIB definitions	
Switching Package MIBs		
RFC 1213 – MIB-II	RFC 2011 – SNMPv2 Management Information Base	
ANSI/TIA 1057 – LLDP-MED MIB	RFC 2213 – Integrated Services MIB	
FASTPATH Enterprise MIBs supporting switching features	RFC 2233 – IF-MIB	
FASTPATH-MMRP-MIB – MMRP private MIB for IEEE 802.1Q devices	RFC 2233 – The Interfaces Group MIB using SMI v2	
FASTPATH-MSRP-MIB – MSRP private MIB for IEEE 802.1Q devices	RFC 2674 – VLAN and Ethernet Priority MIB (P-Bridge MIB)	
FASTPATH-MVRP-MIB – MVRP private MIB for IEEE 802.1Q devices	RFC 2737 – Entity MIB (Version 2)	
IANAifType-MIB – IANAifType Textual Convention	RFC 2819 – RMON Groups 1,2,3, & 9	
IEEE 802.1AB – LLDP MIB	RFC 2863 – Interfaces Group MIB	
IEEE 802.3AD MIB (IEEE8021-AD-MIB)	RFC 3291 – INET Address MIB	
IEEE Draft P802.1AS/D7.0 (IEEE8021-AS-MIB)	RFC 3291 – Textual Conventions for Internet Network Addresses	
IEEE LAG-MIB – Link Aggregation module for managing IEEE 802.3ad	RFC 3621 – Power Ethernet MIB	
LLDP-EXT-DOT3-MIB (part of IEEE Std 802.1AB)	RFC 3635 – Etherlike MIB	
LLDP-MIB (part of IEEE Std 802.1AB)	RFC 3636 – IEEE 802.3 Medium Attachment Units (MAUs) MIB	
Private MIB for 802.1Qat, 802.1Qav Configuration	RFC 4022 – Management Information Base for the Transmission Control Protocol (TCP)	
RFC 1493 – Bridge MIB	RFC 4113 – Management Information Base for the User Datagram Protocol (UDP)	
RFC 1643 – Definitions of managed objects for the Ethernet-like interface types	RFC 4444 – IS-IS MIB	
Routing Package MIBs		
FASTPATH Enterprise MIBs supporting routing features	RFC 2096 – IP Forwarding Table MIB	
IANA-Address-Family-Numbers-MIB	RFC 2668 – IEEE 802.3 Medium Attachment Units (MAUs) MIB	
IPv6 Management MIBs		
RFC 3419 – TRANSPORT-ADDRESS-MIB	IPVA MIR (draft)	
IPv6-ICMP-MIB (draft)	IPv6-MIB (draft)	
IPv6 Routing MIBs		
RFC 2465 – IPv6 MIB	RFC 2466 – ICMPv6 MIB	
QoS Package MIB		
RFC 3289 – DIFFSERV-MIB & DIFFSERV-DCSP-TC MIBs	Private MIBs for full configuration of DiffServ, ACL, and CoS functionality	
Security MIB		
RFC 2618 – RADIUS Authentication Client MIB	IEEE8021-PAE-MIB – The Port Access Entity module for managing IEEE 802.1X	
RFC 2620 – RADIUS Accounting MIB	IEEE 802.1X MIB (IEEE 8021-PAE-MIB 2004 Revision)	

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Multicast Package MIBs				
RFC 2932 – IPv4 Multicast Routing MIB for PIMDMv4	draft-ietf-magma-mgmd-mib-05.txt –Multicast Gro	oup Membership Discovery MIB (both IGMP and MLD)		
RFC 5060 – PIM-SM and PIM-DM MIB for IPv4 and IPv6	FASTPATH Enterprise MIBs supporting multicast features			
RFC 5240 – BSR Protocol MIB				
NETGEAR-BOXSERVICES-PRIVATE-MIB for SFP/SFP+ MIB	Support			
box Services Fiber Ports Optics Table	box Services Fiber Port Optics Power Out			
BoxServicesFiberPortsOpticsEntry	box Services Fiber Port Optics Power In	boxServicesFiberPortOpticsPowerIn		
boxServicesFiberPortIndex	boxServicesFiberPortOpticsTxFault			
boxServicesFiberPortOpticsTemperature	boxServicesFiberPortOpticsLos			
boxServicesFiberPortOpticsVoltage	boxServicesFiberPortOpticsFaultStatus			
boxServicesFiberPortOpticsCurrent	box der vicesi ibeli orto paesi dalettatus			
Management				
Password management	Yes			
Configurable Management VLAN	Yes			
Out-of-band Management	Yes	In-band management can be shut down using Management ACLs when separate management network		
Auto Install (BOOTP and DHCP options 66, 67, 150 and 55, 125)	Yes	Scalable deployment process (firmware, config)		
Admin access control via Radius and TACACS+	Yes	Policies, Enable		
Industry standard CLI (IS-CLI)	Yes	Command Line interface		
CLI commands logged to a Syslog server	Yes			
Web-based graphical user interface (GUI)	Yes	Fully functional GUI (exceptions are noted below:)		
Features without Web GUI support Authorization List Control Plane ACL UDLD Policy Based Routing LLPF QoS Policy for Single Rate DHCPv6 Snooping IPv6 DHCP Relay eMail Alerting MMRP	CLI only			
Telnet	Yes			
IPv6 management	Yes			
Dual Software (firmware) image	Yes	Allows non disruptive firmware upgrade process		
Editable Configuration file	Yes	Text-based (CLI commands) configuration file		
Non disruptive Config Management	Yes	With new startup configuration file, the switch gracefully resolves any differences with the running config		
IS-CLI Scripting	Yes			
Port descriptions	Yes			

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SNTP client over UDP port 123	Yes	Provides synchronized network timestamp either in broadcast or unicast mode
XMODEM	Yes	
SNMP v1/v2	Yes	
SNMP v3 with multiple IP addresses	Yes	
RMON 1,2,3,9 Max Ether Stats entries Max History entries Max buckets per History entry Max Alarm entries Max Event entries Max Log entries per Event entry	Yes 34 102 10 102 102 10	
Port Mirroring Number of monitor sessions Tx/Rx Many to One Port Mirroring LAG supported as source ports Max source ports in a session Remote Port Mirroring (RSPAN)	Yes 1 (multiple sessions are configurable) Yes Yes Yes Total switch port count Yes When a particular session is enabled, any traffic en	
Flow based mirroring	copied (mirrored) onto a Remote Switched Port An Yes	alyzer (RSPAN) VLAN
Cable Test utility	Yes	CLI, Web GUI
Outbound Telnet	Yes	
SSHv2 SSH Session Configuration	Yes Yes	Secure Shell version 2 (OpenSSH 7.5p1)
SSL v3 and TLS v1.2 for HTTPS web-based access	Yes	Open SSL 1.0.2o)
2048-bit RSA key pairs	Yes For SSLv3 and SSHv2	
SHA2-256 and SHA2-512 cryptographic hash functions	Yes For SSLv3 and SSHv2	
File transfers (uploads, downloads)	TFTP / HTTP	
Secured protocols for file transfers	SCP / SFTP / HTTPS	
HTTP Max Sessions	16	
SSL/HTTPS Max Sessions	16	
HTTP Download (firmware)	Yes	
Email Alerting	Yes (CLI only)	
Syslog (RFC 3164) (RFC 5424)	Yes, forwarding messages via UDP using the Syslo	g protocol to one or more collectors or relays
Persistent log supported	Yes	
User Admin Management		
User ID configuration Max number of configured users Support multiple READWRITE Users Max number of IAS users (internal user database)	Yes 6 Yes 100	
Authentication login lists	Yes	
Authentication Enable lists	Yes	

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Authentication HTTP lists	Yes
Authentication HTTPS lists	Yes
Authentication Dot1x lists	Yes
Accounting Exec lists	Yes
Accounting Commands lists	Yes
Login History	50
M4250 series - Platform Constants	
Maximum number of remote Telnet connections	5
Maximum number of remote SSH connections	5
Number of MAC Addresses	16K
Number of VLANs	4,093 VLANs (802.1Q) simultaneously
VLAN ID Range	1 - 4093
Number of 802.1p Traffic Classes	8 classes
IEEE 802.1x Number of .1x clients per port	48
Number of LAGs	8 LAGs with up to 8 ports per group
Maximum multiple spanning tree instances (MSTP)	16
Maximum per VLAN spanning tree instances (PVST)	32
MAC based VLANS Number supported	Yes 256
Number of network buffers	182
Number of log messages buffered	200
Static filter entries Unicast MAC and source port Multicast MAC and source port Multicast MAC and destination port (only)	20 20 1024
Subnet based VLANs Number supported	Yes 128
Protocol Based VLANs Max number of groups Max protocols	Yes 128 16
Maximum Multicast MAC Addresses entries	1K
Jumbo Frame Support Max Size Supported	Yes 12k
Number of IP Source Guard stations	379
Number of DHCP snooping bindings	32K
Number of DHCPv6 snooping bindings	32K
Number of DHCP snooping static entries	1024
LLDP-MED number of remote nodes LLDP Remote Management address buffers LLDP Unknown TLV address buffers LLDP Organisationally Defined Large TLV buffers LLDP Organisationally Defined Small TLV buffers	32 32 100 16 100

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Port MAC Locking Dynamic addresses per port Static addresses per port	Yes 600 20	
sFlow Number of samplers Number of pollers Number of receivers	16 16 8	
Radius Max Authentication servers Max Accounting servers	32 32	
Number of Routes (v4/v6) IPv4 Unicast Routes in Default IPv4 Basic SDM Template IPv6 Unicast Routes in Default IPv4 Basic SDM Template	894 126	SDM (System Data Management, or switch database)
RIP application route scaling (IPv4 only)	32	
Number of routing interfaces (including port/vlan)	128	
Number of static routes (v4/v6)	64/64	
DHCP Server Max number of pools Total max leases	256 2K	
DNS Client Concurrent requests Name server entries Seach list entries Static host entries Cache entries Domain search list entries	16 8 6 64 128 32	
DHCPv6 Server Max number of pools DNS domain names within a pool DNS server addresses within a pool Delegated prefix definitions within a pool	16 5 8 10	
Number of Host Entries (ARP/NDP) IPv4 only SDM build IPv4/IPv6 SDM build (v4/v6) Static v4 ARP Entries	4K 512 128	SDM (System Data Management, or switch database)
Number of ECMP Next Hops per Route	16	
Number of ECMP groups	128	
Total ECMP nexthops in Hardware	2048	
Maximum MFDB entries	1K	
IGMPv3 / MLDv2 Snooping Limits IGMPv3/MLDv2 HW entries when IP Multicast present	128/64	
IP Multicast IGMP Group Memberships per system Multicast Routes PIM-DM Neighbors PIM-SM Neighbors PIM-SM Static RP Entries PIM-SM Candidate RP Group Range Entries PIM-SM SSM Range Entries IGMP Sources processed per group per message		and 2K (IPv6)) and 128 (IPv6)

ACL Limits

M4250-26G4F-PoE+

M4250-26G4F-PoE++

M4250-26G4XF-PoE+

M4250-40G8F-PoE+

M4250-40G8XF-PoE+

M4250-12M2XF

M4250-16XF

M4250-40G8XF-PoE++

AV Line Managed Switches

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Maximum Number of ACLs (any type) Maximum Number Configurable Rules per List Maximum ACL Rules per Interface and Direction Maximum ACL Rules per Interface and Direction (IPv6) Maximum ACL Rules (system-wide) Maximum ACL Logging Rules (system-wide) Maximum ACL per VLAN (system-wide)	100 1,023 1,023 ingress / 511 ingress 893 ingress / 253 egress 16K 128 64
COS Device Characteristics Configurable Queues per Port Configurable Drop Precedence Levels	8 queues (standalone) 7 queues (stack) 3
DiffServ Device Limits Number of Queues Requires TLV to contain all policy instances combined Max Rules per Class Max Instances per Policy Max Attributes per Instance Max Service Interfaces Max Table Entries Class Table Class Rule Table Policy Instance Table Policy Instance Table Policy Attribute Table Max Nested Class Chain Rule Count	8 queues (standalone) 7 queues (stack) Yes 13 28 3 116 32 192 64 768 2304 26
AutoVoIP number of voice calls	16
Voice VLAN number of devices LEDs	16
	Consed Link Astricts De C. Australia heath in front and in the area
Per port	Speed, Link, Activity, PoE - Available both in front and in the rear
Per device	Power, Fan - Available both in front and in the rear
Physical Specifications	
Dimensions M4250-9G1F-PoE+ (desktop switch) M4250-9G1F-PoE+ (power adapter) M4250-8G2XF-PoE+ (desktop switch) M4250-8G2XF-PoE+ (power adapter) M4250-10G2F-PoE+ M4250-10G2XF-PoE+	Width: 8.27 inches (210 mm); Height: 1.57 inches (40 mm); Depth: 5.51 inches (140 mm) Width: 6.65 inches (169 mm); Height: 1.40 inches (35.5 mm); Depth: 2.83 inches (72 mm) Width: 8.27 inches (210 mm); Height: 1.57 inches (40 mm); Depth: 5.51 inches (140 mm) Width: 7.76 inches (197 mm); Height: 1.54 inches (39 mm); Depth: 3.51 inches (89 mm) Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 7.87 inches (200 mm) Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 7.87 inches (200 mm)
M4250-10G2XF-PoE++	Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 10.12 inches (257 mm)

Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 10.12 inches (257 mm)

Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 15.75 inches (400 mm)

Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 15.75 inches (400 mm)

Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 15.75 inches (400 mm)

Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 15.75 inches (400 mm)

Width: 17.32 inches (440 mm); Height: 2U - 3.40 inches (86.4 mm); Depth: 13.78 inches (350 mm)

Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 3.94 inches (100 mm)

Width: 17.32 inches (440 mm); Height: 1U - 1.70 inches (43.2 mm); Depth: 7.87 inches (200 mm)

//// AV Line

Weight	2.13 lb (0.965 kg)
M4250-9G1F-PoE+ (desktop switch)	· · · · · · · · · · · · · · · · · · ·
M4250-9G1F-PoE+ (power adapter)	1.21 lb (0.550 kg)
M4250-8G2XF-PoE+ (desktop switch)	2.13 lb (0.967 kg)
M4250-8G2XF-PoE+ (power adapter)	2.11 lb (0.955 kg)
M4250-10G2F-PoE+	6.28 lb (2.850 kg)
M4250-10G2XF-PoE+	6.39 lb (2.900 kg)
	8.44 lb (3.830 kg)
M4250-10G2XF-PoE++	9.47 lb (4.300 kg)
M4250-26G4F-PoE+	14.87 lb (6.746 kg)
M4250-26G4F-PoE++	12.02 lb (5.453 kg)
M4250-26G4XF-PoE+	12.90 lb (5.852 kg)
M4250-40G8F-PoE+	·
M4250-40G8XF-PoE+	13.91 lb (6.312 kg)
M4250-40G8XF-PoE++	22.72 lb (10.280 kg)
M4250-12M2XF	3.85 lb (1.745 kg)
M4250-16XF	6.17 lb (2.800 kg)
Power Consumption	

All ports used, max PoE load, line-rate traffic, maximum

M4250-9G1F-PoE+	132.25W - 451.5 BTU/hr
M4250-8G2XF-PoE+	257.9W - 880.47 BTU/hr
M4250-10G2F-PoE+	163.9W - 559.55 BTU/hr
M4250-10G2XF-PoE+	306.4W - 1046.05 BTU/hr
M4250-10G2XF-PoE++	837.7W - 2859.91 BTU/hr
M4250-26G4F-PoE+	401W - 1369.01 BTU/hr

M4250-26G4F-PoE++ 1 PSU: 889W - 3035.05 BTU/hr 2 PSU: 1734W - 5919.88 BTU/hr

 M4250-26G4XF-PoE+
 614W - 2096.2 BTU/hr

 M4250-40G8F-PoE+
 624.8W - 2133.07 BTU/hr

 M4250-40G8XF-PoE+
 1197W - 4086.56 BTU/hr

M4250-40G8XF-PoE++ 1 PSU: 912W - 3113.57 BTU/hr 2 PSU: 1998W - 6821.17 BTU/hr 3 PSU: 3523W - 12027.52 BTU/hr

M4250-12M2XF - M4250-16XF -

All ports used, no PoE, line-rate traffic, maximum

M4250-9G1F-PoE+	9.88W - 33.73 BTU/hr
M4250-8G2XF-PoE+	18.14W - 61.93 BTU/hr
M4250-10G2F-PoE+	17.32W - 59.13 BTU/hr
M4250-10G2XF-PoE+	25W - 85.35 BTU/hr
M4250-10G2XF-PoE++	26.3W - 89.79 BTU/hr
M4250-26G4F-PoE+	35.8W - 122.22 BTU/hr
M4250-26G4F-PoE++	48.8W - 166.6 BTU/hr
M4250-26G4XF-PoE+	46.8W - 159.78 BTU/hr
M4250-40G8F-PoE+	59.5W - 203.13 BTU/hr
M4250-40G8XF-PoE+	89.2W - 304.53 BTU/hr
M4250-40G8XF-PoE++	82.6W - 282 BTU/hr
M4250-12M2XF	37.9W - 129.39 BTU/hr
M4250-16XF	47.84W - 163.33 BTU/hr

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AV Line

AV Line Managed Switches

M4250-9G1F-PoE+ 6.4W - 22.02 BTU/hr M4250-8G2XF-PoE+ 9.51W - 32.47 BTU/hr M4250-10G2F-PoE+ 8.53W - 29.12BTU/hr M4250-10G2XF-PoE+ 12.96W - 44.24BTU/hr M4250-10G2XF-PoE++ 18W - 61.45BTU/hr M4250-26G4F-PoE+ 23.4W - 79.89 BTU/hr M4250-26G4F-PoE++ 36.9W - 125.98 BTU/hr M4250-26G4XF-PoE+ 33.9W - 115.73 BTU/hr M4250-40G8F-PoE+ 46.4W - 158.41 BTU/hr M4250-40G8XF-PoE+ 74.5W - 254.34 BTU/hr M4250-40G8XF-PoE++ 68.5W - 233.86 BTU/hr 14.1W - 48.14BTU/hr M4250-12M2XF M4250-16XF 19.27W - 65.78BTU/hr

Environmental Specifications

Operating:

Temperature (non-PoE models: 32° to 122°F (0° to 50°C) M4250-12M2XF, M4250-16XF)

Temperature (all other models) 32° to 113°F (0° to 45°C)

Humidity 90% maximum relative humidity, non-condensing

Altitude 10,000 ft (3,000 m) maximum

Storage:

Temperature -4° to 158° F (-20° to 70° C)

Humidity 95% maximum relative humidity, non-condensing

Altitude 10,000 ft (3,000 m) maximum

Electromagnetic Emissions and Immunity

Certifications FCC: 47 CFR FCC Part 15, Class A; ANSI C63.4:2014

ISED: ICES-003:2016 Issue 7, Class A

CE: EN 55032:2015, Class A; EN61000-3-2:2014, Class A; EN 61000-3-3-:2013; EN 55024:2010; EN

55035:2017

RCM: AS/NZS CISPR 32:2015, Class A

CCC (China Compulsory Certificate): GB/T9254-2008, Class A

VCCI: VCCI-CISPR 32:2016, Class A

KC: KN32; KN 35, Class A

EAC: GOST IEC 62311-2013; GOST30804.3.2-2013; GOST30804.3.3-2013; GOST 30805.22-2013;

GOST CISPR 24-2013 BSMI: CNS 13438, Class A

Safety

Certifications CB report/Certificate: IEC 62368-1 Ed.2; IEC 60950-1 Ed.2 Am2

CSA: UL/ANSI 62368-1 ed.2; CAN/CSA C22.2 No. 62368-1-14

CE: EN 62368-1:2014 RCM: AZ/NZS 62368.1:2018

BSMI: CNS 14336-1

CCC (China Compulsory Certificate): GB4943.1-2011

KC: K 60950-1 (2011-12) EAC: GOST IEC 62368-1-2014

AV Line

MacSing Sep En Pe En , Mar 250 - Sep 23XF - Po En I dealtong Switch models	Package Content				
External power adapter (standard C13 rilest) Power cont(s) USB Type-C to USB-A 2.0 console cable Rubber copts for the SPPSFP+ sockets Rubber footpads for tabletop installation Installation guide Two brackets and screws for flanges, allowing for mounting on the wall, under a table or behind a screwn All rackmount other models Switch Power cont(s) Rubber copts for tabletop installation Installation guide Rubber copts for the SPPSFP+ sockets Rubber caps for the SPPSFP+ sockets Rubber caps for the SPPSFP+ so behavior against the service of Rubber caps for the SPPSFP+ sockets Rubber footpads for tabletop installation Installation guide Rubber footpads for tabletop installation Installation guide Two regular (short) brackets and screws for two-post rack mount (for front posts) allowing for mounting with ports on the back, or ports on the foot of fiber sick Two longer brackets for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling Diptional Modules and Accessories ACM731F 1000BASE-EX SPP LC Transceiver (multimode, 550m OM4/OM3 50/125µm, 275m OM2/OM1 62.5/125µm) AGM731F 1000BASE-EX SPP LC Transceiver (multimode, 550m OM4/OM3 50/125µm, 275m OM2/OM1 62.5/125µm) AGM734F 1000BASE-EX SPP LC Transceiver (multimode, 550m OM4/OM3 50/125µm, 275m OM2/OM1 62.5/125µm) AGM734F 1000BASE-EX SPP LC Transceiver (multimode, 550m OM4/OM3 50/125µm, 275m OM2/OM1 62.5/125µm) AGM734F 1000BASE-EX SPP LC Transceiver (multimode, 550m OM4/OM3 50/125µm, 275m OM2/OM1 62.5/125µm) AGM734F 1000BASE-EX SPP LC Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) ACC763 100 Direct Attach SPP+ to SPP+ 1 Meter Resive DAC Cable ACC7610 100 Direct Attach SPP+ to SPP+ 2 Meter Resive DAC Cable ACC7610 100 Direct Attach SPP+ to SPP+ 3 Meter Advise DAC Cable ACC7610 100 Direct Attach SPP+ to SPP+ 3 Meter Advise DAC Cable ACC7610 100 Direct Attach SPP+ to SPP+ 1 Meter Resive DAC Cable ACC7610 100 Direct Attach SPP+ to SPP+ 3 Meter Advise DAC Cable ACC7610 100 Direct Attach SPP+ to SPP		50-8G2XF-PoE+ desktop	Switch		
SBT Type-C to USB-A 2.0 console cable Rubber caps for the SFP/SFP sockets Rubber for pade for tabletop installation Installation guide Toward of the stabletop installation Installation guide Toward of the stabletop installation Toward of the stabletop installation guide Toward of the stabletop installation guide Toward of the stabletop installation Toward of the stabletop Toward of	models		External power adapter (standard C13 inlet)		
Rubber caps for the SFP/SFP+ sockers Rubber footpads for tabletop installation Installation guide Two brackets and screws for flanges, allowing for mounting on the wall, under a table or behind a screws All rackmount other models Rubber agas for the SPP/SFP sockers Rubber agas for the SPP/SFP sockers Rubber agas for the SPP/SFP sockers Rubber footpads for tabletop installation Installation guide Rubber agas for the SPP/SFP sockers Rubber footpads for tabletop installation Installation guide Rubber agas for the SPP/SFP sockers Rubber footpads for tabletop installation Installation guide Two regular flohent) brackets and screws for two-post rack mount (for front posts) allowing for mounting with ports on the back, or ports on the front of the rack Two regular flohent) brackets and screws for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling Rubber agas for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling Rubber agas for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling Rubber agas for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling Rubber agas for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling Rubber agas for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling Rubber agas and screws for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling Rubber agas and screws for two-post rack mount (for front posts) recessing the switch by 2 inches in order Rubber agas and screws for two-post rack mount (fo			Power cord(s)		
Rubber footpads for tabletop installation Installation guide Installation guide Switch Power cord(s) Rubber copts and screws for flanges, allowing for mounting on the wall, under a table or behind a screw Rubber copt of the SPF) SPF Switch Rubber caps for the SPF) SPF Sockets Rubber footpads for tabletop installation Installation guide Installation guide Installation guide Installation guide Installation guide Installation guide Installation guide Rubber SPF SP			USB Type-C to USB-A 2.0 console cable		
Installation guide No brackets and screws for flanges, allowing for mounting on the wall, under a table or behind a screws for flanges, allowing for mounting on the wall, under a table or behind a screws for flanges, allowing for mounting on the wall, under a table or behind a screws for flanges, allowing for mounting with grace and screws for two post cable to DB9 USB Type C to USB A 2.0 console cable to DB9 USB Type C to USB A 2.0 console cable to DB9 USB Type C to USB A 2.0 console cable to DB9 Rubber caps for the SEP/SEP+ sockets Rubber caps for the SEP/SEP+ sockets Rubber footpads for tabletop installation Installation guide Two regular (short) brackets and screws for two post rack mount (for front posts) allowing for mounting with ports on the back, or ports on the front of the rack Two longer brackets for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling AGM733F 1000BASE LX SEP LC Transceiver (multimode, \$50m OM4/OM3 \$0/125µm, 275m OM2/OM1 62.5/125µm) AGM734 1000BASE LX SEP LC Transceiver (single mode, 10km 9/175µm) AGM734 1000BASE LX SEP LC Transceiver (single mode, 10km 9/175µm) AGM734 1000 Direct Attach SEP+ to SEP+ 5 Meter Passive DAC Cable AXC763 100 Direct Attach SEP+ to SEP+ 5 Meter Passive DAC Cable AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Passive DAC Cable AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Active DAC Cable AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Active DAC Cable AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Active DAC Cable AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Active DAC Cable AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Active DAC Cable AXC761 AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Active DAC Cable AXC761 AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Active DAC Cable AXC761 AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Active DAC Cable AXC761 AXC761 100 Direct Attach SEP+ to SEP+ 5 Meter Active DAC Cable AXC762 100 Direct Attach SEP+ to SEP+ 5 Meter Act			Rubber caps for the SFP/SFP+ sockets		
All rackmount other models			Rubber footpads for tabletop installation		
All rackmount other models			Installation guide		
Power cord(s) R.145 straight-through wiring serial console cable to DB9 USB Type-C to USB-A 2.0 console cable Rubber caps for the SFP/SFP+ sockets Rubber footpads for tabletop installation Installation guide Two oregular (short) brackets and screws for two-post rack mount (for front posts) allowing for mounting with ports on the back, or ports on the front of the rack Two longare brackets for two-post rack mount (for front posts) recessing the switch by 2 inches in order to make room for the cabling Diptional Modules and Accessories AGM731F 1000BASE-SX SFP LC Transceiver (multimode, 550m OM4/OM3 50/125µm, 275m OM2/OM1 62.5/125µm) AGM732F 1000BASE-LX SFP LC Transceiver (single mode, 10km 9/125µm) AGM733F 1000BASE-SX SFP LC Transceiver (single mode, 10km 9/125µm) AGM734 1000BASE-T SFP R.145 Transceiver (single mode, 10km 9/125µm) ACC761 10G Direct Attach SFP+ to SFP+3 Moter Passive DAC Cable AXC763 10G Direct Attach SFP+ to SFP+3 Moter Passive DAC Cable AXC763 10G Direct Attach SFP+ to SFP+3 Moter Active DAC Cable AXC764 10G Direct Attach SFP+ to SFP+5 Meter Active DAC Cable AXC765 10G Direct Attach SFP+ to SFP+5 Meter Active DAC Cable AXC7661 10G Direct Attach SFP+ to SFP+5 Meter Active DAC Cable AXC7661 10G Direct Attach SFP+ to SFP+5 Meter Active DAC Cable AXC7661 10G Direct Attach SFP+ to SFP+5 Meter Active DAC Cable AXC7661 10G Direct Attach SFP+ to SFP+5 Meter Active DAC Cable AXC7661 10G Direct Attach SFP+ to SFP+5 Meter Active DAC Cable AXC7661 10G Direct Attach SFP+6 SFP+5 Meter Active DAC Cable AXC7661 10G Direct Attach SFP+6 SFP+5 Meter Active DAC Cable AXC7661 10G Direct Attach SFP+6 SFP+6 Meter Active DAC Cable AXC7661 10G Direct Attach SFP+6 SFP+6 Meter Active DAC Cable AXC7662 10G Direct Attach SFP+6 SFP+6 Meter Active DAC Cable AXC7663 10G Direct Attach SFP+6 SFP+6 Meter Active DAC Cable AXC7663 10G Direct Attach SFP+6 SFP+6 Meter Active DAC Cable AXC7663 10G Direct Attach SFP+6 SFP+6 Meter Active DAC Cable AXC7663 10G Direct Attach SFP+6 SFP+6 Meter Active DAC Cable AXC7663 10G Direct Attach SF			Two brackets and screws for flanges, allowing for mounting on the wall, under	a table or behind a screen	
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AXC761 10G Direct Attach SFP+ to SFP+ 1 Meter Passive DAC Cable AXC763 10G Direct Attach SFP+ to SFP+ 3 Meter Passive DAC Cable AXC763 10000S AXC765 10G Direct Attach SFP+ to SFP+ 5 Meter Active DAC Cable AXC765 10G Direct Attach SFP+ to SFP+ 7 Meter Active DAC Cable AXC767 10G Direct Attach SFP+ to SFP+ 7 Meter Active DAC Cable AXC767 10000S AXC7610 10G Direct Attach SFP+ to SFP+ 10 Meter Active DAC Cable AXC7610-10000S AXC7615 10G Direct Attach SFP+ to SFP+ 15 Meter Fiber DAC Cable AXC7615 10G Direct Attach SFP+ to SFP+ 15 Meter Fiber DAC Cable AXC7615 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G DACM761 10G BASE-SR SFP+ LC Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM76110000S AXM761 10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125µm) AXM762 (pack of 10) Pack of 10 AXM762 Transceiver (single mode, 10km 9/125µm) AXM762 (pack of 10) Pack of 10 AXM762 Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM763 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM763 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/12	AGM732F	1000BASE-LX SFP LC Transceiver (single mode, 10km 9/125µm) AGM732F		AGM732F	
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AXC765 10G Direct Attach SFP+ to SFP+ 5 Meter Active DAC Cable AXC767 10G Direct Attach SFP+ to SFP+ 7 Meter Active DAC Cable AXC7610 10G Direct Attach SFP+ to SFP+ 10 Meter Active DAC Cable AXC7615 10G Direct Attach SFP+ to SFP+ 15 Meter Fiber DAC Cable AXC7615 10G Direct Attach SFP+ to SFP+ 15 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXM761 10GBASE-SR SFP+ LC Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM761 (pack of 10) Pack of 10 AXM761 Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM762 10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125µm) AXM762 (pack of 10) Pack of 10 AXM762 Transceiver (single mode, 10km 9/125µm) AXM763 10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125µm) AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm)	AXC761	10G Direct Attach SFP+ to Sf	FP+ 1 Meter Passive DAC Cable	AXC761-10000S	
AXC767 10G Direct Attach SFP+ to SFP+ 7 Meter Active DAC Cable AXC7610 10G Direct Attach SFP+ to SFP+ 10 Meter Active DAC Cable AXC7615 10G Direct Attach SFP+ to SFP+ 15 Meter Fiber DAC Cable AXC7615 10G Direct Attach SFP+ to SFP+ 15 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10000S AXM761 10GBASE-SR SFP+ LC Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM761-10000S AXM761 (pack of 10) Pack of 10 AXM761 Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM761P10-10000S AXM762 (pack of 10) Pack of 10 AXM762 Transceiver (single mode, 10km 9/125µm) AXM762-10000S AXM763 10GBASE-LR MFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM763-10000S AXM764 10GBASE-LR LITE SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM764-10000S AXM765 10GBASE-LR MFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (single mode, 2km 9/125µm) AXM765-20000S ProSAFE Warranty and Support via phone and email* Included, 90 days after purchase Lifetime Technical Support via phone and email* Included, 91 days after purchase	AXC763	10G Direct Attach SFP+ to SFP+ 3 Meter Passive DAC Cable AXC763 -10000S		AXC763 -10000S	
AXC7610 10G Direct Attach SFP+ to SFP+ 10 Meter Active DAC Cable AXC7615 10G Direct Attach SFP+ to SFP+ 15 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10GBASE-SR SFP+ LC Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM761-10000S AXM761 (pack of 10) Pack of 10 AXM761 Transceivers (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM762-10000S AXM762 10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125µm) AXM762-10000S AXM763 10GBASE-LRM SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM763-10000S AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765-20000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765 10GBASE-	AXC765	10G Direct Attach SFP+ to SFP+ 5 Meter Active DAC Cable AXC765-10000S		AXC765-10000S	
AXC7615 10G Direct Attach SFP+ to SFP+ 15 Meter Fiber DAC Cable AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 10GBASE-SR SFP+ LC Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM761-10000S AXM761 (pack of 10) Pack of 10 AXM761 Transceivers (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM761P10-10000S AXM762 10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125µm) AXM762-10000S AXM762 (pack of 10) Pack of 10 AXM762 Transceivers (single mode, 10km 9/125µm) AXM763 10GBASE-LRM SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM763-10000S AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765 AXM765 AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765 AXM765 AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765 AXM76	AXC767	10G Direct Attach SFP+ to SFP+ 7 Meter Active DAC Cable AXC767 -10000S		AXC767 -10000S	
AXC7620 10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXM761 10GBASE-SR SFP+ LC Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM761-10000S AXM761 (pack of 10) Pack of 10 AXM761 Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM762-10000S AXM762 10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125µm) AXM762-10000S AXM762 (pack of 10) Pack of 10 AXM762 Transceivers (single mode, 10km 9/125µm) AXM763-10000S AXM763 10GBASE-LRM SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM763-10000S AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765-20000S ProSAFE Warranty and Support ProSAFE Limited Lifetime Hardware Warranty** Included 90 days of Technical Support via phone and email* Included, 90 days after purchase Lifetime Technical Support through online chat Included, lifetime	AXC7610	10G Direct Attach SFP+ to SFP+ 10 Meter Active DAC Cable AXC7610-10000S			
AXM761 10GBASE-SR SFP+ LC Transceiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM761-10000S AXM761 (pack of 10) Pack of 10 AXM761 Transceivers (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm) AXM761P10-10000S AXM762 10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125µm) AXM762-10000S AXM762 (pack of 10) Pack of 10 AXM762 Transceivers (single mode, 10km 9/125µm) AXM762P10-10000S AXM763 10GBASE-LRM SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM763-10000S AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765-20000S ProSAFE Warranty and Support ProSAFE Limited Lifetime Hardware Warranty** Included 90 days of Technical Support via phone and email* Included, 90 days after purchase Lifetime Technical Support through online chat Included, lifetime	AXC7615	10G Direct Attach SFP+ to SFP+ 15 Meter Fiber DAC Cable AXC7615 -10000S			
AXM761 (pack of 10) Pack of 10 AXM761 Transceivers (multimode, 300m OM4/OM3 50/125μm, 33m OM2/OM1 62.5/125μm) AXM761P10-10000S AXM762 10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125μm) AXM762-10000S AXM762 (pack of 10) Pack of 10 AXM762 Transceivers (single mode, 10km 9/125μm) AXM762P10-10000S AXM763 10GBASE-LRM SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125μm, 100m OM2/OM1 62.5/125μm) AXM763-10000S AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125μm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765 AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765-20000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765-20000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765 10GBA	AXC7620	10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 -10000S			
AXM762 10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125µm) AXM762-10000S AXM762 (pack of 10) Pack of 10 AXM762 Transceivers (single mode, 10km 9/125µm) AXM762P10-10000S AXM763 10GBASE-LRM SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM763-10000S AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765-20000S ProSAFE Warranty and Support ProSAFE Limited Lifetime Hardware Warranty** Included 90 days of Technical Support via phone and email* Included, 90 days after purchase Lifetime Technical Support through online chat Included, lifetime	AXM761	10GBASE-SR SFP+ LC Transceiver (multimode, 300m OM4/OM3 50/125μm, 33m OM2/OM1 62.5/125μm) AXM761-10000S			
AXM762 (pack of 10) Pack of 10 AXM762 Transceivers (single mode, 10km 9/125µm) AXM763 10GBASE-LRM SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM763-10000S AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765 AXM765 Limited Lifetime Hardware Warranty** Included ProSAFE Limited Lifetime Hardware Warranty** Included 90 days of Technical Support via phone and email* Included, 90 days after purchase Lifetime Technical Support through online chat Included, lifetime	AXM761 (pack of 10)	Pack of 10 AXM761 Transceivers (multimode, 300m OM4/OM3 50/125μm, 33m OM2/OM1 62.5/125μm) AXM761P10-10000S			
AXM763 10GBASE-LRM SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm) AXM763-10000S AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765-20000S ProSAFE Warranty and Support ProSAFE Limited Lifetime Hardware Warranty** Included 90 days of Technical Support via phone and email* Included, 90 days after purchase Lifetime Technical Support through online chat Included, lifetime	AXM762	10GBASE-LR SFP+ LC Transceiver (single mode, 10km 9/125μm) AXM762-10000S			
AXM764 10GBASE-LR LITE SFP+ LC Transceiver (single mode, 2km 9/125µm) AXM764-10000S AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765-20000S ProSAFE Warranty and Support ProSAFE Limited Lifetime Hardware Warranty** Included 90 days of Technical Support via phone and email* Included, 90 days after purchase Lifetime Technical Support through online chat Included, lifetime	AXM762 (pack of 10)	Pack of 10 AXM762 Transceivers (single mode, 10km 9/125µm) AXM762P10-10000S			
AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) ProSAFE Warranty and Support ProSAFE Limited Lifetime Hardware Warranty** Included 90 days of Technical Support via phone and email* Included, 90 days after purchase Lifetime Technical Support through online chat Included, lifetime	AXM763	10GBASE-LRM SFP+ LC Transceiver (multimode, 165m OM4/OM3 50/125μm, 100m OM2/OM1 62.5/125μm) AXM763-10000S			
ProSAFE Warranty and Support ProSAFE Limited Lifetime Hardware Warranty** Included 90 days of Technical Support via phone and email* Included, 90 days after purchase Lifetime Technical Support through online chat Included, lifetime	AXM764				
ProSAFE Limited Lifetime Hardware Warranty** 90 days of Technical Support via phone and email* Lifetime Technical Support through online chat Included, 90 days after purchase Included, lifetime	AXM765 10GBASE-T SFP+ RJ45 Transceiver (80m) AXM765-20000S			AXM765-20000S	
90 days of Technical Support via phone and email* Included, 90 days after purchase Lifetime Technical Support through online chat Included, lifetime	ProSAFE Warranty and Support				
Lifetime Technical Support through online chat Included, lifetime	ProSAFE Limited Lifetime Hardware Warranty** Include		Included		
	90 days of Technical Supp	port via phone and email*	Included, 90 days after purchase		
Lifetime Next Business Day hardware replacement Included, lifetime	Lifetime Technical Support through online chat		Included, lifetime		
	Lifetime Next Business D	ay hardware replacement	Included, lifetime		

/// AV Line

NETGEAR[®]

ProSupport Service Packs			
Installation contracts for:		All models	
PSB0304-10000S		Remote Installation Setup and Configuration Service Contract (2-hour planned	appointment)
Supplemental support cor	ntracts for:	M4250-9G1F-PoE+, M4250-8G2XF-PoE+, M4250-10G2F-PoE+, M4250-10G2X PoE++, M4250-12M2XF, M4250-16XF, M4250-26G4F-PoE+	(F-PoE+, M4250-10G2XF-
PMB0312-10000S		OnCall 24x7 1-year Category 2	
PMB0332-10000S		OnCall 24x7 3-year Category 2	
PMB0352-10000S		OnCall 24x7 5-year Category 2	
Supplemental support cor	ntracts for:	M4250-26G4F-PoE++, M4250-26G4XF-PoE+, M4250-40G8F-PoE+, M4250-40 40G8XF-PoE++	G8XF-PoE+, M4250-
PMB0313-10000S		OnCall 24x7 1-year Category 3	
PMB0333-10000S		OnCall 24x7 3-year Category 3	
PMB0353-10000S		OnCall 24x7 5-year Category 3	
AGM731F	1000BASE-SX SFP LC Transce	eiver (multimode, 550m OM4/OM3 50/125μm, 275m OM2/OM1 62.5/125μm)	AGM731F
AGM732F	1000BASE-LX SFP LC Transceiver (single mode, 10km 9/125μm)		AGM732F
AGM734	1000BASE-T SFP RJ45 Transceiver		AGM734-10000S
AXC761	10G Direct Attach SFP+ to SF	P+ 1 Meter Passive DAC Cable	AXC761-10000S
AXC763	10G Direct Attach SFP+ to SF	P+ 3 Meter Passive DAC Cable	AXC763 -10000S
AXC765	10G Direct Attach SFP+ to SF	P+ 5 Meter Active DAC Cable	AXC765-10000S
AXC767	10G Direct Attach SFP+ to SF	P+ 7 Meter Active DAC Cable	AXC767 -10000S
AXC7610	10G Direct Attach SFP+ to SF	P+ 10 Meter Active DAC Cable	AXC7610-10000S
AXC7615	10G Direct Attach SFP+ to SF	P+ 15 Meter Fiber DAC Cable	AXC7615 -10000S
AXC7620	10G Direct Attach SFP+ to SFP+ 20 Meter Fiber DAC Cable AXC7620 -10000S		AXC7620 -10000S
AXM761	10GBASE-SR SFP+ LC Transc	eiver (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm)	AXM761-10000S
AXM761 (pack of 10)	Pack of 10 AXM761 Transceiv	vers (multimode, 300m OM4/OM3 50/125µm, 33m OM2/OM1 62.5/125µm)	AXM761P10-10000S
AXM762	10GBASE-LR SFP+ LC Transc	eiver (single mode, 10km 9/125µm)	AXM762-10000S
AXM762 (pack of 10)	Pack of 10 AXM762 Transceiv	vers (single mode, 10km 9/125μm)	AXM762P10-10000S
AXM763	10GBASE-LRM SFP+ LC Trans	ceiver (multimode, 165m OM4/OM3 50/125µm, 100m OM2/OM1 62.5/125µm)	AXM763-10000S
AXM764	10GBASE-LR LITE SFP+ LC Tr	ransceiver (single mode, 2km 9/125μm)	AXM764-10000S
AXM765	10GBASE-T SFP+ RJ45 Trans	ceiver (80m)	AXM765-20000S

NETGEAR®

AV Line

Ordering Information

NETGEAR Desktop AV Line N	14250-9G1F-PoE+ Desktop 8x1G PoE+ 110\	W 1x1G and 1xSFP Managed Switch (GSM4210PD)
Americas	GSM4210PD-100NAS		
Europe	GSM4210PD-100EUS		
India	GSM4210PD-100INS		
Japan	GSM4210PD-100JPS		
South Korea	GSM4210PD-100KOS		
Taiwan	GSM4210PD-100TWS	Optional AVB License	AVB4210PD-10000S
Hong Kong	GSM4210PD-100UKS		
Australia	GSM4210PD-100AUS		
China	GSM4210PD-100PRS		
Other APAC	GSM4210PD-100PES		
		0W and 2xSFP+ Managed Switch (GSI	M4210PX)
NETGEAR Desktop AV Line M4250-8G2XF-PoE+ Desktop 8x1G PoE+ 220W and 2xSFP+ Managed Switch (GSM4210PX) Americas GSM4210PX-100NAS			
Europe	GSM4210PX-100EUS		
India	GSM4210PX-100INS		
Japan	GSM4210PX-100JPS		
South Korea	GSM4210PX-100KOS		
Taiwan	GSM4210PX-100TWS	Optional AVB License	AVB4210PX-10000S
Hong Kong	GSM4210PX-100UKS		
Australia	GSM4210PX-100AUS		
China	GSM4210PX-100PRS		
Other APAC	GSM4210PX-100PKS		
	IG2F-PoE+ 8x1G PoE+ 125W 2x1G and 2xS	ED Managed Switch (GSM4212D)	
Americas	GSM4212P-100NAS	Tri Managed Switch (GSM42121)	
Europe	GSM4212P-100FUS		
Asia Pacific	GSM4212P-100AJS	Optional AVB License	AVB4212P-10000S
China	GSM4212P-100PRS		
	IG2F-PoE+ 8x1G PoE+ 125W 2x1G and 2xS	EP AVR-Ready Managed Switch (GSM)	/212P)
	GSM4212P-111NAS	FF AVB-Ready Managed Switch (GSM-	+2 12F)
Americas			
Europe Asia Pacific	GSM4212P-111EUS		cense is already installed in the switch. eady applied to all ports. Plug and play for AVB.
	GSM4212P-111AJS	11107 (12 1 101110 10 411)	applied to all policin lag and play to the st
China	GSM4212P-111PRS	CED. Married C. St. L. (CCMA040DV)	
	G2XF-PoE+ 8x1G PoE+ 240W 2x1G and 2x	SFF+ Managed Switch (GSM4212FX)	
Americas	GSM4212PX-100NAS		
Europe	GSM4212PX-100EUS	Optional AVB License	AVB4212PX-10000S
Asia Pacific	GSM4212PX-100AJS		
China	GSM4212PX-100PRS	720W 2v1G on 12vCED Married Co.	CSM4242IV
	0G2XF-PoE++ 8x1G Utra90 PoE++ 802.3bt 7	720W 2x1G and 2x5FP+ Managed Swi	itch (GSM4212UX)
Americas	GSM4212UX-100NAS		AVB4212UX-10000S
Europe	GSM4212UX-100EUS	Optional AVB License	
Asia Pacific	GSM4212UX-100AJS		
China	GSM4212UX-100PRS		
	G4F-PoE+ 24x1G PoE+ 300W 2x1G and 4x	SFP Managed Switch (GSM4230P)	
Americas	GSM4230P-100NAS	Optional AVB License AVB4230P-10000S	
Europe	GSM4230P-100EUS		AVB4230P-10000S
Asia Pacific	GSM4230P-100AJS	•	
China	GSM4230P-100PRS		

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/// AV Line

NETGEAR AV Line M4250-26G4F-	NETGEAR AV Line M4250-26G4F-PoE++ 24x1G Ultra90 PoE++ 802.3bt 1,440W 2x1G and 4xSFP Managed Switch (GSM4230UP)			
Americas	GSM4230UP-100NAS			
Europe	GSM4230UP-100EUS	Optional AVB License	AVB4230UP-10000S	
Asia Pacific	GSM4230UP-100AJS	Optional AVB License	AVD423001-100003	
China	GSM4230UP-100PRS			
NETGEAR AV Line M4250-26G4XF	-PoE+ 24x1G PoE+ 480W 2x1G and 4	xSFP+ Managed Switch (GSM4230PX)		
Americas	GSM4230PX-100NAS			
Americas, TAA Compliant	GSM4230PX-TAANAS			
Europe	GSM4230PX-100EUS	Optional AVB License	AVB4230PX-10000S	
Asia Pacific	GSM4230PX-100AJS			
China	GSM4230PX-100PRS			
NETGEAR AV Line M4250-40G8F-I	PoE+ 40x1G PoE+ 480W and 8xSFP Ma	anaged Switch (GSM4248P)		
Americas	GSM4248P-100NAS			
Europe	GSM4248P-100EUS	0 1 1 1 1 1 1	N/D 40 40D 400000	
Asia Pacific	GSM4248P-100AJS	Optional AVB License	AVB4248P-10000S	
China	GSM4248P-100PRS			
NETGEAR AV Line M4250-40G8XF	NETGEAR AV Line M4250-40G8XF-PoE+ 40x1G PoE+ 960W and 8xSFP+ Managed Switch (GSM4248PX)			
Americas	GSM4248PX-100NAS			
Americas, TAA Compliant	GSM4248PX-TAANAS			
Europe	GSM4248PX-100EUS	Optional AVB License	AVB4248PX-10000S	
Asia Pacific	GSM4248PX-100AJS			
China	GSM4248PX-100PRS			
NETGEAR AV Line M4250-40G8XF	F-PoE++ 40x1G Ultra90 PoE++ 802.3bt	2,880W and 8xSFP+ Managed Switch	(GSM4248UX)	
Americas	GSM4248UX-100NAS			
Europe	GSM4248UX-100EUS			
Asia Pacific	GSM4248UX-100AJS	Optional AVB License	AVB4248UX-10000S	
China	GSM4248UX-100PRS			
NETGEAR AV Line M4250-12M2X	- - 12x2.5G and 2xSFP+ Managed Switc	h (MSM4214X)		
Americas	MSM4214X-100NAS			
Americas, TAA Compliant	MSM4214X-TAANAS		AVB4214X-10000S	
Europe	MSM4214X-100EUS	Optional AVB License		
Asia Pacific	MSM4214X-100AJS			
China	MSM4214X-100PRS			
NETGEAR AV Line M4250-16XF 16xSFP+ Managed Switch (XSM4216F)				
Americas	XSM4216F-100NAS			
Europe	XSM4216F-100EUS		AVB4216F-10000S	
Asia Pacific	XSM4216F-100AJS	Optional AVB License		
China	XSM4216F-100PRS			

^{**} 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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