NETGEAR®

8-port Gigabit Switches with 10-Gigabit/Multi-Gigabit Uplinks

Data Sheet

#1
IN WEB/SMART SWITCHES

*In Worldwide Market Share
according to IHS Infonetics, December 2016*

Unlock the Potential of your 10G/Multi-Gig devices

The GS110EMX and GS110MX come with 8 Gigabit Ethernet ports and 2 uplink 10-Gigabit/Multi-Gigabit (5-speed) ports that provide either 100 Megabit, 1-Gigabit, 2.5-Gigabit, 5-Gigabit or 10-Gigabit connectivity.

The two uplink ports automatically detects which speed is needed by the connected device and provides the adequate speed. Moreover these two Multi-speed switch ports can be connected with regular Cat5E Ethernet cables, without the need to upgrade to Cat6 wiring, therefore reducing wiring costs and hassle[1].

The GS110MX and GS110EMX offer flexible mounting options - they can be mounted in a rack, on a wall or can be used as a desktop switch. Moreover the compact and fanless design make the GS110MX and GS110EMX ideal for any home or business environment.

Highlights

Multi-Speed Technology Support

Expand your network instantly, and give your devices either 100M, 1G, 2.5G, 5G or 10G automatically

10 Gigabit Uplinks

No Network Bottlenecks thanks to the 2 10-Gigabit/Multi-Gigabit Uplinks

Flexible Mounting

Rackmount[2] , Wall-Mount or Desktop

Small Form Factor

Compact Design to fit in any small cabinet or wiring panel

High Quality and Reliable Performance

Durable metal case and long product life(shown by MTBF numbers)

Silent Switches

Fanless Quiet Operation

Industry leading warranty

- LIFETIME 24/7 Technical Support
- LIFETIME Hardware Warranty*

LIFETIME WARRANTY
Hardware Warranty

LIFETIME WARRANTY
Next Business Day

LIFETIME
Tech Support

[1] Cat6A or higher cables required for 10Gbps speed.

[2] Accessories included for a 19-inch rack.

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Hardware at a Glance

Model Name	Form-Factor	10M/100M/1G Copper Ports	10-Gig/Multi-Gig Copper Ports	LED's	Case Material	Fans	Power Supply
GS110MX	Rackmount/Desktop/Wall-Mount	8	2	Power, Port Link/Speed/Activity	Metal	Fanless	External
GS110EMX	Rackmount/Desktop/Wall-Mount	8	2	Power, Port Link/Speed/Activity	Metal	Fanless	External

GS110MX: front

- 8 x Gigabit Copper Ports
- 2 x 10-Gig/Multi-Gig Copper Ports
- 19-inch Rackmountable

GS110MX back

- External PSU

GS110EMX: front

- 8 x Gigabit Copper Ports
- 2 x 10-Gig/Multi-Gig Copper Ports
- 19-inch Rackmountable

GS110EMX back

- External PSU

Software at a Glance

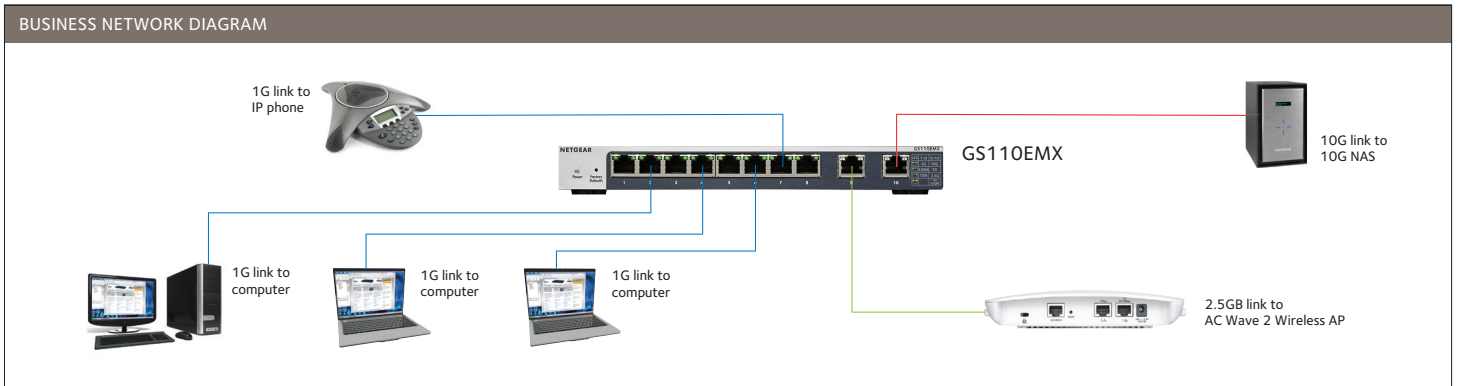| Model Name	Management	VLANs	IGMP	EEE (802.3az) Auto-EEE	QoS	Port Trunking	Jumbo Frame Support
GS110MX	Unmanaged	No	N/A	Yes	N/A	No	Yes
GS110EMX	Web Managed	Port-Based/802.1Q	IGMP Snooping	Yes	Port-Based IEEE 802.1p Based	Static LAG and LACP	Yes

Performance at a Glance

Model Name	Fabric	Packet Buffer	Latency (Max Connection Speed)	MAC Address Table	Priority Queues	Multicast IGMP Group	Packet Forwarding Rate (64 byte)	Jumbo Frames (bytes)
GS110MX	56 Gbps line-rate	128KB	10Gbps: <3µs 1000Mbps: <4µs 100Mbps: <7µs	16K Entries (dynamic)	8 (WRR)	N/A	41.664Mfps	up to 10240
GS110EMX	56 Gbps line-rate	128KB	10Gbps: <3µs 1000Mbps: <4µs 100Mbps: <7µs	16K Entries (dynamic)	8 (WRR)	128	41.664Mfps	up to 10240

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Features at a glance

HARDWARE FEATURES	BENEFITS
Compact form factor with fanless design	Adapts to your needs and configuration in any environment, even noise-sensitive (in a classroom, in a conference room, in a doctor's office…)
Flexible Mounting Options	Rack, Desktop or Wall-Mount to be used in any environment.
56 Gbps non-blocking switching architecture	Get all the connectivity you need to your devices without congestion.
5-Speed Networking	Automatically detects which speed is needed by the connected device and provides the adequate speed (100M/1G/2.5G/5G/10G) to connect all your devices with one switch.
SOFTWARE FEATURES (GS110EMX ONLY)	BENEFITS
Port-based and 802.1Q-based VLANs	Segment network into smaller groups for more secure and efficient use of network resources.
Comprehensive QoS features: • Port-based or 802.1p-based prioritization • Layer 3-based (DSCP) prioritization • Port-based ingress and egress rate limiting	Advanced controls for optimized network performance and better delivery of mission-critical traffic such as voice and video. Ingress and egress rate limiting allows for bandwidth shaping for mitigating network resources constraints or for optimizing guest access bandwidth on the network.
IGMP Snooping	For improved network efficiency on delivering multicast traffic. Save cost and improve network efficiency by ensuring multicast traffic only reaches designated receivers without the need of an extra multicast router.
Port trunking / Link Aggregation	Build up bigger bandwidth to support aggregated uplink/downlink traffic or to provide redundant link(s) using Static Manual LAGs or LACP.
Voice VLAN	The feature enables auto assignment of voice traffic (based on OUI) to a special VLAN (AKA Voice VLAN); allowing the assignment of special QoS parameters to that traffic, giving it high priority services. Port has to be MANUALLY assigned to be a member of the Voice VLAN.
Loop detection and auto DoS prevention	Detect accidental network loops and protect against DoS attacks.
Port Mirroring	For better and quicker network diagnostics and troubleshooting.
Energy Efficient Ethernet (IEEE 802.3az)	For maximum power savings and reduced energy costs.
Cable Test	Easily identify bad Ethernet cables.

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GS110MX/GS110EMX

Example Application

GS110MX/GS110EMX in a Business Environment

BUSINESS NETWORK DIAGRAM

1G link to IP phone

GS110EMX

10G link to 10G NAS

1G link to computer

1G link to computer

1G link to computer

2.5GB link to AC Wave 2 Wireless AP

Cables and Speeds

The following table describes the network cables that you can use for the switch connections and the speeds that the cables can support, up to 100 meters (328 feet).

SPEED	CABLE TYPE
100 Mbps	Category 5 (Cat 5) or higher rated
1 Gbps, 2.5 Gbps, or 5 Gbps	Category 5e (Cat 5e) or higher rated
10 Gbps	Category 6A (Cat 6A) or higher rated

Note: For speeds of 10 Gbps, if the cable length is shorter than 55 meters (180 feet), you can use a Category 6 (Cat 6) cable.

Why the NETGEAR GS110MX/GS110EMX Switches are ideal for SMB

1. Remove any Network Bottleneck with the 10-Gigabit/Multi-Gigabit Uplinks

2. 5-Speed auto-adapt intelligent Networking (100M,1G,2.5G,5G,10G)

3. Small and silent compact form factor for quiet operation – Adapts to your needs and configuration in any environment

4. ProSAFE LIFETIME Warranty, Next Business Day replacement and 24/7 chat with a NETGEAR expert

5. Energy efficient switches that automatically adjust power consumption according to Energy-Efficient Ethernet standard

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8-port Gigabit Switches with 10-Gigabit/Multi-Gigabit Uplinks

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GS110MX/GS110EMX

Technical Specifications

PRODUCT	GS110MX	GS110EMX
Gigabit ports	8	8
100M/1G/2.5G/5G/10G RJ-45 copper ports	2	2
Form Factor	Desktop/Rackmount/Wallmount	Desktop/Rackmount/Wallmount
PERFORMANCE SPECIFICATION		
Bandwidth	56 Gbps	
Priority queues	8	
Priority queuing	Weighted Round Robin (WRR)	
MAC Address database size (48-bit MAC addresses)	16K	
Multicast groups	N/A	128
Packet forwarding rate (64 byte packet size) (Mfps or Mpps)	41.664Mfps	
Speed / Latency	10Gbps: < 3µs 100Mbps: <7µs 1000Mbps: <4µs	
Jumbo frame support	Up to 10240 bytes	
Acoustic noise level @ 25° C (dBA) (ANSI-S10.12)	0 dBA	
POWER/ENERGY EFFICENCY		
Energy-Efficient Ethernet	Yes	
Max power (worst case, all ports used, line-rate traffic) (Watts)	13.2	15.6
QUALITY OF SERVICE (QOS)		
802.1p-based QoS/CoS Supported	Yes	
Port-based rate limiting	N/A	Ingress and egress
Port-based QoS	N/A	Yes
IEEE 802.1p COS	Yes	Yes
IPv4 DSCP	Yes	Yes
Pre-Defined Rate Limiting Rates	N/A	1/5/10/50/100/500 Mbit/s
Pre-Defined Port Priority Queues	8	8
Weighted Round Robin (WRR)	Yes	Yes
Strict priority queue technology	N/A	No
Voice VLAN	N/A	Yes
L2 SERVICES - VLANs		
VLAN (# Supported)	N/A	64
IEEE 802.1Q VLAN Tagging	N/A	Yes
Port-based VLAN	N/A	Yes

PRODUCT	GS110MX	GS110EMX
L2 SERVICES – AVAILABILITY		
Broadcast, multicast, unknown unicast storm control	N/A	Yes
Static Manual LAGs (Port Trunking)	N/A	Yes
LACP	N/A	Yes
IEEE 802.3x (full duplex and flow control)	Yes	Yes
L2 SERVICES – MULTICAST FILTERING		
IGMP snooping (v1, v2, and v3)	N/A	Yes
IGMP snooping querier	N/A	No
Block unknown multicast	N/A	Yes
Static multicast router port	N/A	Yes
L3 SERVICES – DHCP		
DHCP client	N/A	Yes
LINK AGGREGATION		
Static Manual LAGs (Port Trunking)	N/A	Yes
# of Static LAGs / # of members in each LAG	N/A	5 LAGs with max 9 members in each LAG
LEDS		
Per port	Speed, Link, Activity	
Per device	Power	
PHYSICAL SPECIFICATIONS		
Dimensions (W x D x H)	236 x 102 x 27 mm (9.29 x 4.02 x 1.06 in)	
Weight	0.74 kg (1.63 lbs)	0.75 kg (1.65 lbs)
POWER CONSUMPTION		
Power Supply	MX: External Power Adapter 12V 1.5A EMX: External Power Adapter12V 2.5A	
Max power (worst case, all ports used, line-rate traffic) (Watts)	13.2v	15.6
Min power (link-down standby) (Watts)	MX: 4.8 EMX: 6.6	
Heat Dissipation (max and min) (BTU/hr)	Max: 45.14 BTU/hr Min: 16.42BTU/hr	Max: 53.35 BTU/hr Min: 22.57 BTU/hr
Fan(s)	Fanless	
ENVIRONMENTAL SPECIFICATIONS		
Operating		
Operating temperature	0° to 40°C (32° to 104°F)	
Humidity (relative)	90% maximum relative humidity (RH), non-condensing	
Altitude	10,000 ft (3,000 m) maximum	
Storage		
Storage temperature	−20° to 70°C (− 4° to 158°F)	
Humidity (relative)	95% maximum relative humidity, non-condensing	
Altitude	10,000 ft (3,000 m) maximum	

PRODUCT	GS110MX	GS110EMX
ELECTROMAGNETIC EMISSIONS AND IMMUNITY		
Certifications	47 CFR FCC Part 15, SubpartB, Class B ICES-003:2016 Issue 6, Class B ANSI C63.4:2014	
	EN 55032:2012 +AC:2013 / CISPR 32:2012 / AS/NZS CISPR 32:2013, Class B EN 55032:2015 +AC:2016 / CISPR 32:2015 +COR1:2016 / AS/NZS CISPR 32:2015, Class B EN 61000-3-2:2014 EN 61000-3-3:2013 EN 55024:2010 +A1:2015	
	AS/NZS CISPR 32:2015, Class B	
	VCCI-CISPR 32:2016, Class B	
	Russia EAC mark	
	Korea KC mark	
	CNS 13438	
Electromagnetic Compliance (Class A or B)	Class B	
SAFETY		
Certifications	CB mark, commercial	
	UL/cUL Listed (UL 60950-1)/CAN/CSA C22.2 No. 60960-1-07	
	EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013	
	IEC 60950-1:2005 (ed.2)+A1:2009+A2:2013	
	AS/NZS 60950.1:2015	
	Russia EAC mark (GS110MX only)	
WARRANTY AND SUPPORT		
ProSAFE Lifetime Warranty		
Lifetime 24x7 Online Technical Support*		
Lifetime Next-Business-Day (NBD) Replacement		
ProSUPPORT OnCall 24x7, Service Packs**	Category 1: PMB0311 (1 yr.) PMB0331 (3 yrs.) PMB0351 (5 yrs.)	

Ordering Information

PACKAGE CONTENT	
All Models	GS110MX or GS110EMX 8-port Gigabit Switch with 2-port 10-Gigabit/Multi-Gigabit Uplinks
	AC power adapter (localized to country of sale)
	Rack-mounting kit
	Wall-mounting kit
	Rubber foot
	Quick install guide
ORDERING INFORMATION	
GS110MX-100NAS	North America and Latin America
GS110MX-100PES	Europe
GS110MX-100UKS	United Kingdom
GS110MX-100JPS	Japan
GS110MX-100PRS	China
GS110EMX-100NAS	North America and Latin America
GS110EMX-100PES	Europe
GS110EMX-100UKS	United Kingdom
GS110EMX-100JPS	Japan
Add GS110MX-100PRS	China

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