

## 10-Gigabit/Multi-Gigabit Ethernet Easy Smart Managed Switches



### Scale Beyond Gigabit with Adaptive Multi-Speed Networking

Engineered for modern multi-speed enterprise networks, NETGEAR's 5-Speed Multi-Gigabit switches intelligently adapt from 100Mbps to 10Gbps per port, delivering exact bandwidth each device needs.

With the demands of hybrid work, cloud services, AI-enhanced productivity tools, and high-definition video conferencing, modern networks need to extend beyond the 1-Gigabit barrier. The 10-Gigabit/

Multi-Gigabit Easy Smart Managed series from NETGEAR delivers on these evolving requirements, providing reliable 10-Gigabit/Multi-Gigabit bandwidth at an affordable cost.

Each port automatically detects which speed is needed by the connected device and provides the optimal performance. Unlike standard 10-Gigabit switches that only provide 1-Gigabit connectivity to devices requiring less than 10-Gigabit, the

XS512EM and XS724EM deliver the exact speed required with no downgrades. Additionally, these NETGEAR Multi-Gigabit switch ports support a range of existing cable types—Cat5e cables for speeds up to 5 Gbps and Cat6/Cat6A for full 10-Gigabit performance maximizing your current infrastructure investment while providing flexible upgrade paths.

## Highlights

### Hardware Highlights

- 5-speed Networking :
  - XS512EMv2: 10-port Multi-Gigabit + 2 dedicated SFP+
  - XS724EMv2: 24-port Multi-Gigabit + 4 dedicated SFP+
- Dedicated Fiber Uplinks: Pure SFP+ ports for high-speed backbone connections
- Rackmount or Desktop
- Active fans for whisper-quiet operation
- 0°C to 50°C tested performance

### Software Highlights

- VLAN support for traffic segmentation
- Quality of Service (QoS) for traffic prioritization
- Auto "denial-of-service" (DoS) prevention
- Link Aggregation to add redundancy and increase your network speed (Static LAC and LACP supported)
- Loop prevention and broadcast storm controls
- IGMP snooping v1, v2 and v3 support for multicast optimization
- Rate limiting for better bandwidth allocation

- Port mirroring for network monitoring
- Jumbo frame support
- Energy Efficient Ethernet (IEEE802.3az) support for maximum power savings
- Troubleshoot connection issues via cable test

### Industry leading warranty

- Limited Lifetime warranty. See terms and conditions for details.
- Optional support tiers to match your operational needs.

### Hardware at a Glance

Model Name	Form-Factor	10-Gig/Multi-Gig Copper Ports	Internal Power Supply	10G SFP+ Ports	LED's	Case Material	Fans
XS512EMv2	Rackmount/Desktop	10	Yes	2 (Dedicated)	Power, Port Link/Speed/Activity/ Fan	Metal	Active Fan
XS724EMv2	Rackmount/Desktop	24	Yes	4 (Dedicated)	Power, Port Link/Speed/Activity	Metal	Active Fan



XS512EM: front

- 10 x 10-Gig/Multi-Gig Copper Ports
- 2 x dedicated 10G SFP+ Ports (Supports copper modules)
- 19-inch Rackmountable
- Small Form Factor



XS512EM back

- Internal PSU



XS724EM: front

- 24 x 10-Gig/Multi-Gig Copper Ports
- 4 x dedicated 10G SFP+ Ports (Supports maximum of 2 copper modules)
- 19-inch Rackmountable



XS724EM back

- Internal PSU

### Software at a Glance

LAYER 2 FEATURES							
Management	VLANs	QoS	Port Trunking	IP Multicast Filtering	Rate Limiting & Priority Queueing	Jumbo Frame Support	IEEE (802.3az) Energy Efficient Ethernet
User friendly Web based GUI	Auto-Voice, Auto-Video, Auto-WiFi, Auto-Camera, Management VLAN	Port-based, IEEE 802.1p/DSCP-based	Static LAG and LACP	IGMP Snooping	Yes	Yes	Yes

### Performance at a Glance

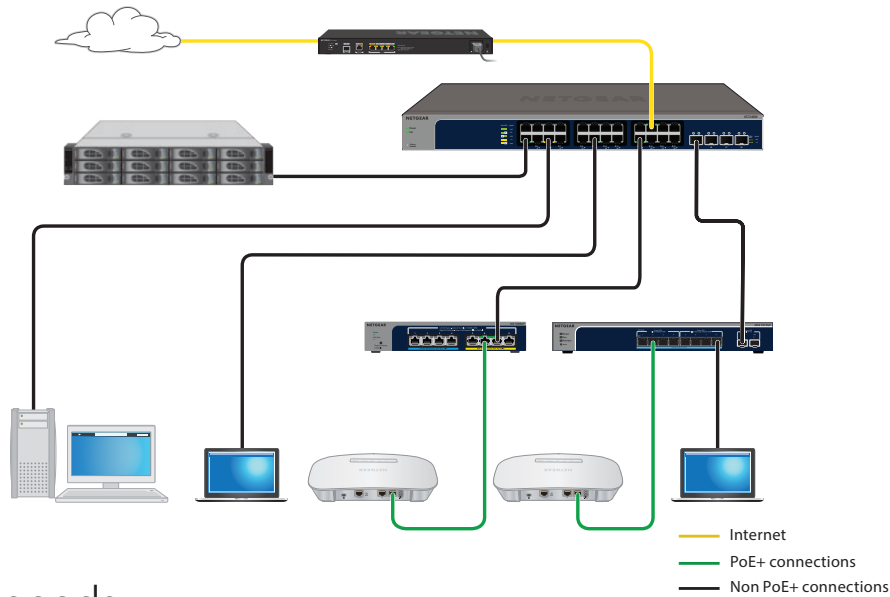
Model Name	Fabric	Packet Buffer	Latency (Max Connection Speed)	VLANs	MAC Address Table	Priority Queues	Multicast IGMP Group	Packet Forwarding Rate (64 byte)	Jumbo Frames (bytes)
XS512EMv2	240Gbps	2MB	100Mbps: <29.427µs 1Gbps: <4.714µs 2.5Gbps: <7.629µs 5Gbps: <5.215µs 10Gbps: <3.919µs	64	32K Entries (dynamic)	8 (WRR)	256	178.6 Mfps	up to 12K
XS724EMv2	560Gbps	8MB	100Mbps: <27.958µs 1000Mbps: <3.891µs 2.5Gbps: <7.154µs 5Gbps: <4.759µs 10Gbps: <3.712µs	64	32K Entries (dynamic)	8 (WRR)	256	416.7 Mfps	up to 12K

## Features and Benefits

Hardware Features	Benefits
10-Gigabit/Multi-Gigabit support	Each copper interface supports 100M/1G/2.5G/5G/10G delivering the exact speed required to any device regardless of the cable that's been used.
Active Fans	Active fans engineered for modern open offices and collaborative workspaces, operating well below ambient background noise levels to maintain productivity.
10GBASE-X SFP+ ports	Providing flexibility to uplink to 10G-capable core or aggregation switches that support fiber links. Backward compatible to Gigabit fiber. Support copper or fiber modules.
Rackmount or desktop	Flexible deployment for either rackmount or desktop placement.
Software Features	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: <ul style="list-style-type: none"> <li>• Port-based or 802.1p-based prioritization</li> <li>• Layer 3-based (DSCP) prioritization</li> <li>• Port-based ingress and egress rate limiting</li> </ul>	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.
Link Aggregation ( Static LAG and LACP)	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 automatic assignment of voice traffic (based on OUI) to a special VLAN (AKA Voice VLAN), allowing the assignment of special QoS parameters to that traffic for high priority services. Ports must be MANUALLY configured as members of the Voice VLAN before the automatic OUI-based voice traffic assignment.
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.

## Example Application

### XS512EM/XS724EM in a Business Environment



## 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

## Why the NETGEAR 10-Gig/Multi-Gig Switches are ideal for SMB?

1. 5-speed Networking Expand your network instantly and give your devices either 100Mb, 1, 2.5, 5 or 10-Gigabit automatically.
2. Security to protect the SMB networks for possible threats thanks to Auto DoS and Storm Control.
3. Visibility to identify any possible cable issues or abnormal traffic behavior with cable health test and port statistics.
4. Enhanced Control to improve your network performance with VLAN, QoS and Multicast Support.
5. Reliability to assure that the SMB networks are up and running we introduced Link Aggregation and Loop Prevention to minimize possible downtimes.
6. Future-Proofing to prepare your network for growth with dedicated SFP+ uplinks for high-speed backbone connections.

## Technical Specifications

Technical Specifications	XS512EMv2	XS724EMv2
100M/1G/2.5G/5G/10G RJ-45 copper ports	10	24
10G SFP+ ports	2 (dedicated)	4 (dedicated)
Form Factor	Desktop/Rackmount	Desktop/Rackmount
<b>Performance Specification</b>		
Packet buffer memory (Dynamically shared across only used ports)	2MB	8MB
Forwarding modes	Store-and-forward	
Bandwidth	240 Gbps	560 Gbps
MAC Address database size (48-bit MAC addresses)	32K	
Packet forwarding rate (64 byte packet size) (Mfps or Mpps)	178.6	416.7
Speed / Latency	100Mbps: <29.427µs 1Gbps: <4.714µs 2.5Gbps: <7.629µs 5Gbps: <5.215µs 10Gbps: <3.919µs	100Mbps: <27.958µs 1000Mbps: <3.891µs 2.5Gbps: <7.154us 5Gbps: <4.759us 10Gbps: <3.712µs
Jumbo frame support	Up to 12K packet size	
Acoustic noise level @ 25° C (dBA) (ANSI-S10.12)	Full load: 28.2dBA @ 25 degree C	Full load: 35.3dBA @ 25 degree C
Mean Time Between Failures (MTBF) @ 25° C	420,709 hrs	161,283 hrs
<b>L2 Services - VLANs</b>		
VLAN (# Supported)	64	
Port-based VLANs (physical)	Yes	
IEEE 802.1Q VLAN Tagging	Yes	
Auto-Voice VLAN	Yes	
Auto-Video VLAN	Yes	
Auto-WiFi VLAN	Yes	
Auto-Camera VLAN	Yes	
Management VLAN	Yes	
<b>L2 Services - Availability</b>		
Broadcast, multicast, unknown unicast storm control	Yes	
Static Manual LAGs (Port Trunking)	Yes	
LACP	Yes	
IEEE 802.3x (full duplex and flow control)	Yes	

## Technical Specifications

L2 Services - Multicast Filtering	XS512EMv2	XS724EMv2
IGMP snooping (v1, v2, and v3)		Yes
IGMP snooping querier		Yes
Block unknown multicast		Yes
Static multicast router port		Yes
L3 Services - DHCP		
DHCP client		Yes
Link Aggregation		
Static Manual LAGs (Port Trunking)		Yes
LACP		Yes
# of Static LAGs / # of members in each LAG	6 LAGs with max 8 members in each LAG	12 LAGS with max 8 member in each LAG
Quality of Service		
Port-based rate limiting		Ingress and egress
Port-based QoS		Yes
IEEE 802.1p COS		Yes
IPv4 DSCP		Yes
IPv4 ToS		Yes
TCP/UDP-based		No
Weighted Round Robin (WRR)		Yes
Strict priority queue technology		No
IEEE Standards Supported		
<ul style="list-style-type: none"> <li>• IEEE 802.3 Ethernet</li> <li>• IEEE 802.3u 100BASE-TX</li> <li>• IEEE 802.3ab 1000BASE-T</li> <li>• IEEE 802.1Q VLAN Tagging</li> <li>• IEEE 802.3x Full-Duplex Flow Control</li> <li>• IEEE 802.1p Class of Service</li> <li>• IEEE 802.3az Energy Efficient Ethernet (EEE)</li> </ul>	<ul style="list-style-type: none"> <li>• IEEE 802.3an 10GBASE-T</li> <li>• IEEE 802.3bz 5Gbps and 2.5Gbps Ethernet Over Copper Twisted Pair Cable</li> <li>• IEEE 802.3ae 10-Gigabit Ethernet Over Fiber</li> <li>• IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX</li> </ul>	
Management		
Password management		Yes
Web browser-based graphical user interface (GUI)		Yes
Firmware upgrade through web GUI (HTTP) and online		Yes
Config download (to switch) through web GUI (HTTP)		Yes
Config upload (to server) through web GUI (HTTP)		Yes
Cable test utility		Yes

## Technical Specifications

LEDs	XS512EMv2	XS724EMv2
Per port	Speed, Link, Activity	
Per device	Power, Fan	
Physical Specifications		
Dimensions (W x D x H)	330 x 208 x 43 (12.9 x 8.2 x 1.7 in)	440 x 204 x 43 mm (17.3 x 8.0 x 1.7 in)
Weight	2.5kg (5.5 lb)	3.9kg (8.6 lb)
Power Consumption		
Power Supply	Fixed internal PSU, 100-240VAC, 50-60Hz, 1.5A max Power cord localized to country of sale	Fixed internal PSU, 100-240VAC, 50-60Hz, 3A max Power cord localized to country of sale
Max power (worst case, all ports used, line-rate traffic) (Watts)	60W	139W
Min power (link-down standby) (Watts)	21W	36W
Heat Dissipation (max and min) (BTU/hr)	Max: 181.744 BTU/hr Min: 72.672 BTU/hr	Max: 429.39 BTU/hr Min: 94.59 BTU/hr
Energy Efficient Ethernet (EEE) IEEE 802.3az	Yes	Yes
Auto power-down	Yes	Yes
Fan(s)	2	3
Environmental Specifications		
Operating		
Operating temperature	0° to 50°C (32° to 122°F)	
Humidity (relative)	95% maximum relative humidity (RH), non-condensing	
Storage		
Storage temperature	-20° to 70°C (-4° to 158°F)	
Humidity (relative)	95% maximum relative humidity, non-condensing	
Electromagnetic Emissions and Immunity		
Certifications	FCC, CAN ICES, CE, RCM, VCCI, KC, BSMI	
Electromagnetic Compliance (Class A or B)	Class A	
Safety Certifications		
Certifications	CB, CE LVD, CSA, RCM, BSMI	

## Technical Specifications

Warranty and Support	XS512EMv2	XS724EMv2
Hardware Limited Warranty	NETGEAR Enterprise Limited Lifetime* Warranty	
Technical Support	<p><b>Sprint support</b> option with 24/5 Technical Support (phone, online) and Advance RMA Replacement</p> <p><b>Overdrive support</b> option with 24/7 Technical Support (phone, online, 2h SLA) and Next Business Day RMA Replacement</p> <p>Visit <a href="https://www.netgear.com/enterprise-support">https://www.netgear.com/enterprise-support</a> for more information</p>	
Premium Support Service Packs	<p><b>Sprint</b></p> <p>SPR-XS512EM-12 SPR-XS512EM-36 SPR-XS512EM-60</p> <p><b>Drive</b></p> <p>DRV-XS512EM-12 DRV-XS512EM-36 DRV-XS512EM-60</p>	<p><b>Sprint</b></p> <p>SPR-XS724EM-12 SPR-XS724EM-36 SPR-XS724EM-60</p> <p><b>Drive</b></p> <p>DRV-XS724EM-12 DRV-XS724EM-36 DRV-XS724EM-60</p>
Package Content		
All models	<p>10-Gigabit/ Multi-Gigabit Ethernet Easy Smart Managed Switch</p> <p>Power cord (localized to country of sale)</p> <p>Rackmount kit</p> <p>Documentation Download Flyer</p>	

## Ordering Information

Ordering Information	
XS512EM-200NAS	North America and Latin America
XS512EM-200EUS	Europe and United Kingdom
XS512EM-20000S	Asia Pacific and Australia
XS724EM-200NAS	North America and Latin America
XS724EM-200EUS	Europe and United Kingdom
XS724EM-20000S	Asia Pacific and Australia
Optional Modules and Accessories	
AGM731	SFP Transceiver 1000BASE-SX (Short range, multimode)
AGM732F	SFP Transceiver 1000BASE-LX (Long range, single mode)
AGM734	SFP Transceiver 1000BASE-T Copper RJ45 GBIC
AXC761	10GSFP+ Cu (passive) SFP+ to SFP+ Direct Attach Cable 1m
AXC763	10GSFP+ Cu (passive) SFP+ to SFP+ Direct Attach Cable 3m
AXM761	10GBASE-SR SFP+ GBIC (OM3/OM4 Multimode)
AXM762	10GBASE-LR SFP+ GBIC (Single mode)
AXM763	10GBASE-LRM SFP+ GBIC (Long Reach Multimode for OM1/OM2, also compatible with OM3/OM4)
AXM764	10GBASE-LR LITE SFP+ GBIC (Single mode)

\* This product comes with a limited warranty that is valid only if purchased from a NETGEAR authorized reseller, and modifications to product may void the warranty; see <http://www.NETGEAR.com/about/warranty/> for details. 24/7 basic technical support provided for 90 days from purchase date when purchased from a NETGEAR authorized reseller.

\*\*The NETGEAR OnCall 24x7 contract provides unlimited phone and email technical support for your networking product.

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