



### Designed for SMB with Cost-Effective 10GBASE-T Connectivity and Advanced L2+/Layer 3 Lite Features

As a leading provider of network equipment for SMBs, NETGEAR® understands the importance of reliable and high performance networks. With the growth of virtualization, cloud-based services and applications like VoIP, video streaming and IP surveillance, SMB networks need to extend beyond simple reliability to higher speed and performance. The 10-Gigabit Smart switch series from NETGEAR presents the right solution for this requirement; delivering unprecedented non-blocking 10-Gigabit bandwidth at an affordable cost.

The NETGEAR XS708T, XS712T, XS716T, XS728T, and XS748T are powerful Smart switches that come with 8, 12, 16, 24, or 44 10-Gigabit Copper ports and either 2 shared (Combo) Copper/SFP+ ports (XS708T/XS712Tv2/XS716T) or 4 additional dedicated SFP+ ports (XS728T/XS748T) for 10G fiber links. The NETGEAR 10-Gigabit Smart switches are purposely designed as a cost-effective way to provide 10G connections to 10G-capable servers.

They can be used at the “center of a small business network” or as an aggregation/access switch in a larger organization including workgroup access, connecting to a 10-Gigabit NETGEAR fully managed switch on one end and extending the 10G connections to the edge. The XS708T, XS712T and XS716T are also ideal for smaller workgroups that need high bandwidth for sharing, collaborating, editing, and publishing high-density content like video or animation.

## Highlights

The 10G Smart switches provide comprehensive L2+/Layer 3 Lite features in order to meet current and future needs on virtualization, converged networking and mobility. Some of the main features include:

- Advanced VLAN features such as Protocol-based VLAN, MAC-based (Media Access Control) VLAN and 802.1x Guest VLAN
- Advanced QoS (Quality of Service) with L2/L3/L4 awareness and 8 priority queues
- IPv4 and IPv6 static routing
- Private VLAN
- Dynamic VLAN assignment
- IGMP and MLD snooping
- Advanced Security
- IPv6 for management, QoS and ACL
- It is backward compatible, auto-negotiating between higher and lower speeds - thereby not forcing an all-at-once network equipment upgrade
- Cat5/Cat5e are supported for Gigabit speeds up to 100 meters
- Cat6 twisted pair copper cabling supports 10-Gigabit speeds up to 45 meters
- Cat6a or newer Cat7 cabling will allow for up to 100 meter 10GBASE-T connections

### 10-Gigabit Transition with BASE-T

- 10GBASE-T, like other BASE-T technologies, uses the standard RJ45 Ethernet jack

## Highlights

### Designed as Core Switch for SMB Network

- 10G connection to 10G-capable servers and network storage
- Powerful L2+/Layer 3 Lite features make them the most cost-effective core switches for SMB and virtualization environment
- Future-proof your network with 10G bandwidth, advanced traffic management and comprehensive IPv6 support
- Static routing helps to route internal traffic for more efficient use of network resources
- IGMP and MLD snooping provide advanced multicast filtering

### Act as Aggregation Switch for Medium Sized Networks

- 10-Gigabit switches help to resolve the congestion issue between network edge and core, which is caused by the broader adoption of Gigabit-to-the-desktop
- 10-Gigabit Ethernet provides greater scalability than multiple Gigabit Ethernet links, resulting in a simplified and highly efficient network infrastructure
- Up to eight 10-Gigabit Ethernet links can be aggregated into a virtual 80-Gbps connection
- 10-Gigabit Ethernet reduces cabling complexity and uses existing cabling efficiently

### Smart IT, not Big IT

- Easy-to-use Web browser-based management GUI makes setup and management simple
- Standards-based technology ensures interoperability with any standards-based devices in the existing network
- Dual firmware images improve reliability and uptime to your network
- Worry-free with NETGEAR limited lifetime\* hardware warranty
- Minimal down-time with NETGEAR limited lifetime\* Next-Business-Day replacement warranty
- Get deployment assistance with 90-days Free 24x7 advanced Technical phone support\*\*
- Limited lifetime\* online chat Technical support



### Hardware-at-a-Glance

Model Name	Form Factor	FRONT				REAR	
		100M/1G/10G Copper Ports	1G/10G Copper Ports	1G/10G SFP+ Ports	Firmware/ Config Access	Power Supply	Fans
XS708T	Rack mount	8		2 shared (combo)	1 x USB	1 internal PSU, fixed	1 internal, fixed fan
XS712T	Rack mount	12		2 shared (combo)	1 x USB	1 internal PSU, fixed	2 internal, fixed fans
XS716T	Rack mount	16		2 shared (combo)	1 x USB	1 internal PSU, fixed	2 internal, fixed fans
XS728T	Rack mount		24	4 dedicated	1 x USB	1 internal PSU, fixed	4 internal, fixed fans
XS748T	Rack mount		44	4 dedicated	1 x USB	1 internal PSU, fixed	4 internal, fixed fans



**XS708T: 8-port 10-Gigabit Smart Switch**

- 8 x 10GBASE-T copper ports supporting 10G/1G/100M speeds
- 2 x Shared (combo) 10GBASE-T copper/10GBASE-X SFP+ ports supporting 10G/1G speeds



**XS728T: 28-port 10-Gigabit Smart Switch**

- 24 x Dedicated 10GBASE-T copper ports supporting 10G/1G speeds
- 4 x Dedicated 10GBASE-X SFP+ 10G ports supporting 10G/1G speeds



**XS712T: 12-port 10-Gigabit Smart Switch**

- 12 x 10GBASE-T copper ports supporting 10G/1G/100M speeds
- 2 x Shared (combo) 10GBASE-T copper/10GBASE-X SFP+ ports supporting 10G/1G speeds



**XS716T: 16-port 10-Gigabit Smart Switch**

- 16 x 10GBASE-T copper ports supporting 10G/1G/100M speeds
- 2 x Shared (combo) 10GBASE-T copper/10GBASE-X SFP+ ports supporting 10G/1G speeds



**XS748T: 48-port 10-Gigabit Smart Switch**

- 44 x Dedicated 10GBASE-T copper ports supporting 10G/1G speeds
- 4 x Dedicated 10GBASE-X SFP+ 10G ports supporting 10G/1G speeds

## Software-at-a-Glance

LAYER 2+ / LAYER 3 LITE FEATURES							
Management	IPv4/IPv6 ACL and QoS	IPv4/IPv6 Multicast filtering	Auto-VoIP, Auto-Video	IEEE (802.3az) Energy Efficient Ethernet	VLANs	Convergence	IPv4 & IPv6 Static Routing
Web Browser-based GUI (HTTP/HTTPS), RMON, SNMP	L2, L3, L4 Ingress	IGMP and MLD Snooping	Yes	Yes	Static, Dynamic, Voice, MAC, Protocol-based, and Private	LLDP-MED, RADIUS, 802.1X	Yes

## Performance-at-a-Glance

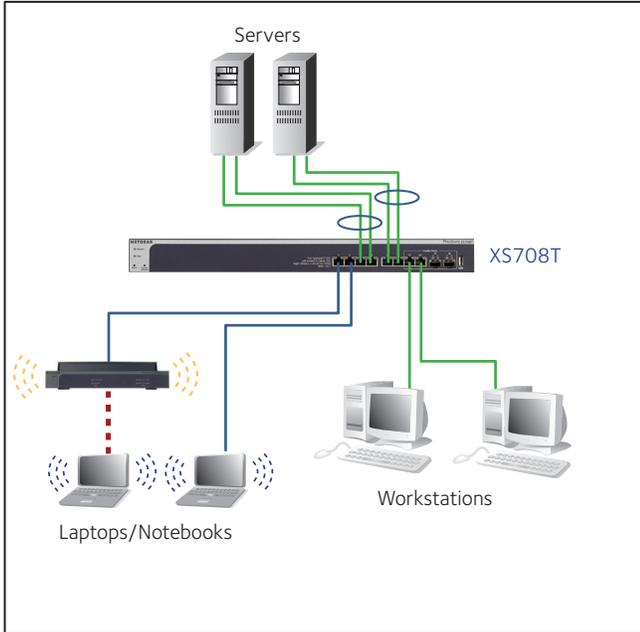
Model Name	Packet Buffer	CPU	ACLs	MAC Address Table ARP/NDP Table VLANs	Fabric	Latency (Max Connection Speed)	Static Routes (IPv4 & IPv6)	Multicast IGMP Group
XS708T	2 MB	600 MHz Cortex-A9 Single Core, 512MB RAM 8MB SPI + 256MB NAND FLASH	100 shared	16K MAC 738 ARP/NDP 256 VLANs	160Gbps line-rate	10GBASE-T: <3.012 μs 10GBASE-X SFP+: <2.466 μs	IPv4: 32 IPv6: 32	512
XS712T	2 MB	600 MHz Cortex-A9 Single Core, 512MB RAM 8MB SPI + 256MB NAND FLASH	100 shared	16K MAC 738 ARP/NDP 256 VLANs	240Gbps line-rate	10GBASE-T: <2.624 μs 10GBASE-X SFP+: <2.128 μs	IPv4: 32 IPv6: 32	512
XS716T	2 MB	600 MHz Cortex-A9 Single Core, 512MB RAM 8MB SPI + 256MB NAND FLASH	100 shared	16K MAC 738 ARP/NDP 256 VLANs	320Gbps line-rate	10GBASE-T: <2.624 μs 10GBASE-X SFP+: <2.128 μs	IPv4: 32 IPv6: 32	512
XS728T	3 MB	800 MHz Dual Core, 512MB RAM 8MB SPI + 256MB NAND Flash	164 shared	16K MAC 1K ARP/NDP 512 VLANs	560Gbps line-rate	10GBASE-T: <2.488 μs 10GBASE-X SFP+: <2.619 μs	IPv4: 64 IPv6: 64	512
XS748T	3 MB	800 MHz Dual Core, 512MB RAM 8MB SPI + 256MB NAND Flash	164 shared	16K MAC 1K ARP/NDP 512 VLANs	960Gbps line-rate	10GBASE-T: <3.674 μs 10GBASE-X SFP+: <3.693 μs	IPv4: 64 IPv6: 64	512

## Features and Benefits

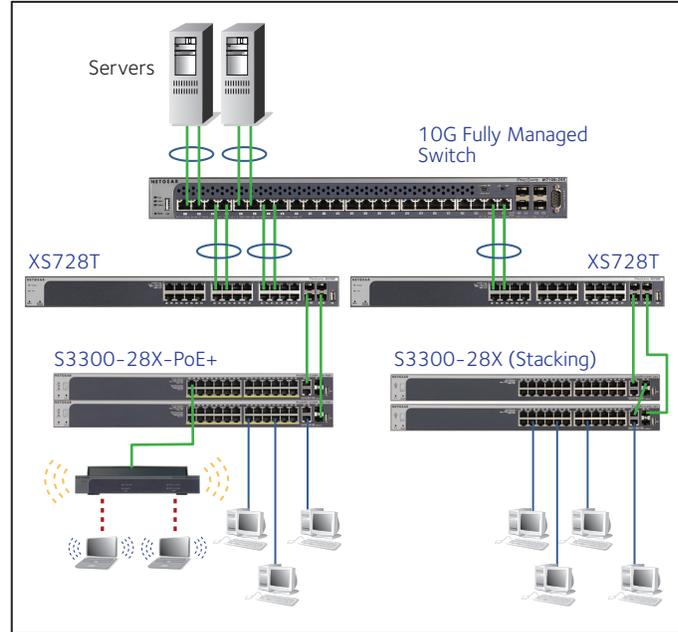
Hardware Features	Benefits
10GBASE-T Copper Ethernet connections	Support low-latency, line-rate 10G Copper "BASE-T" technology with backward compatibility to Fast Ethernet and Gigabit Ethernet. Cost-effectively migrate current network to 10G capacity by utilizing the existing Cat6 RJ45 short connections (up to 30m) and Cat6a/Cat7 connections up to 100m.
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.
USB Configuration Port	Quickly and conveniently upgrade or restore firmware, load or backup configuration files, or download system log files for troubleshooting.
Energy Efficient Ethernet (IEEE 802.3az)	Maximum power reduction for ongoing operation cost savings.
Software Features	Benefits
Comprehensive IPv6 Support for Management, ACL and QoS	Build current network with future in mind. Ensure investment protection and a smooth migration to an IPv6-based network without switch replacement.
IPv4 & IPv6 Static Routing	A simple way to provide segmentation of the network with internal routing through the switch - reserving the router for external traffic routing only, making the entire network more efficient.
Robust security features: <ul style="list-style-type: none"> <li>• 802.1x authentication (EAP)</li> <li>• Port-based security by locked MAC</li> <li>• ACL filtering to permit or deny traffic based on MAC and IP addresses</li> </ul>	Build a secured, converged network with all types of traffic by preventing external attacks and blocking malware while allowing secure access for authorized users.
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.
Auto-VoIP, Auto-Voice VLAN, and Auto-Video VLAN	Automatic Voice over IP prioritization (Auto-VoIP) simplifies most complex multi-vendor IP telephone deployments either based on protocols (SIP, H.323 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. Similarly, Auto-Video VLAN enables IGMP snooping to minimize broadcast streams.
IGMP Snooping and MLD Snooping	Facilitate fast receiver joins and leaves for multicast streams. Save cost and improve network efficiency by ensuring multicast traffic only reaches designated receivers without the need of an extra multicast router.
Protected Ports	Ensure no exchange of unicast, broadcast, or multicast traffic between the protected ports on the switch, thereby improving the security of your converged network. This allows your sensitive phone conversations to stay private and your surveillance video clips can be forwarded to their designated storage device without leakage or alteration.
DHCP Snooping	Ensure IP address allocation integrity by only allowing DHCP messages from trusted DHCP servers and dropping malformed DHCP messages with a port or MAC address mismatch.
Dynamic VLAN Assignment (RADIUS)	IP phones and PCs can authenticate on the same port but under different VLAN assignment policies. Users are free to move around and enjoy the same level of network access regardless of their physical location on the network.
Private VLAN	Private VLANs help reduce broadcast with added security.
Dual Firmware Images and Configuration Files	Dual firmware images and dual configuration files for transparent firmware updates/ configuration changes with minimum service interruption.
Multiple Language Local GUI (XS708T, XS712Tv2, XS716T only)	Product documentation and local-only web user interfaces are translated, giving you the ability to select your preferred language. English, German and Japanese are currently supported in local-only Web GUI.

## Target Application

XS708T in SMB Network



XS728T in Medium-sized Network



— 10GE link    — GE link    - - - Wireless link

## Why 10-Gigabit Switches and Why from NETGEAR?

NETGEAR introduced the industry's first cost-effective 10-Gigabit switches for SMBs in 2013 and is the leading provider for 10G solutions at affordable price points:

- Ideal for SMBs to use as the core switch, connecting to 10G-capable servers and network storage.
- Expand network capacity, remove performance bottlenecks and/or support premise expansion needs.
- Cost-effectively expand 10G bandwidth from core switch in medium-sized networks to access switches which are equipped with 10G uplinks.
- Powerful feature sets with advanced L2+/Layer 3 Lite functions, enhanced security measures, static routing, dynamic VLAN assignment and IPv6 management and support.
- Improved usability for easier and smoother deployment of voice, video, and WLAN on the same converged platform.
- Limited lifetime\* warranty on hardware, limited lifetime\* Next-Business-Day (NBD) replacement, limited lifetime\* tech support online chat, and 90-days free advanced Tech phone support\*\* for peace-of-mind.

## 10-Gigabit Ethernet Smart Switches

Technical Specifications	XS708T	XS712Tv2	XS716T	XS728T	XS748T
100M/1G/10G RJ-45 copper ports	8	12	16	n/a	n/a
1G/10G copper ports	n/a	n/a	n/a	24	44
1G/10G SFP+ (fiber) ports	2 shared (combo)	2 shared (combo)	2 shared (combo)	4 (dedicated)	4 (dedicated)
USB port (for config file upload/backup & firmware updates)	Yes	Yes	Yes	Yes	Yes
Performance Specification					
Packet buffer memory (Dynamically shared across only used ports)	2MB	2MB	2MB	3MB	3MB
Forwarding modes	Store-and-forward				
Bandwidth	160Gbps	240Gbps	320Gbps	560Gbps	960Gbps
Priority queues	8	8	8	8	8
Priority queuing	Weighted Round Robin (WRR) and Strict Priority				
MAC Address database size (48-bit MAC addresses)	16K	16K	16K	16K	16K
Multicast groups	512	512	512	512	512
Number of IPv4 static routes	32	32	32	64	64
Number of IPv6 static routes	32	32	32	64	64
Number of VLANs	256	256	256	512	512
Number of ARP cache entries	738	738	738	1024	1024
Number of DHCP snooping bindings	8K	8K	8K	1K	1K
Access Control Lists (ACLs)	100 shared for MAC, IP and IPv6 ACLs			164 shared for MAC, IP and IPv6 ACLs	
Packet forwarding rate (64 byte packet size) (Mfps or Mpps)	119.0	178.5	238.0	416.6	714.2
Jumbo frame support	Up to 9K packet size	Up to 9K packet size	Up to 9K packet size	Up to 10K packet size	Up to 10K packet size
Acoustic noise level @ 25°C (dBA)(ANSI-S10.12)	27.4 dBA	29.1 dBA	29.1 dBA	41.6 dBA	47.8 dBA
Mean Time Between Failures (MTBF)@ 25°C	276,197 hours	938,178 hours	276,832 hours	514,977 hours	483,808 hours
L2 Services - VLANs					
IEEE 802.1Q VLAN tagging	Yes	Yes	Yes	Yes	Yes
IP-based VLANs	Yes	Yes	Yes	Yes	Yes
MAC-based VLANs	Yes	Yes	Yes	Yes	Yes
Auto-VoIP VLAN / Auto-Voice VLAN	Yes, based on OUI bytes (default database and user-based OUIs) in the phone source MAC address			Yes, based on OUI bytes (default database and user-based OUIs) in the phone source MAC address, voice packets must have 802.1Q VLAN tag	
Auto-VoIP	Yes, based on protocols (SIP, H.323 and SCCP). Prioritizes traffic to a higher queue				
Voice VLAN	Yes, based on either VLAN ID or 802.1p priority, packets are passed onto the connecting VoIP phone using LLDP-MED.			No	No
Auto-Video VLAN	Yes	Yes	Yes	Yes	Yes
Private VLAN	Yes	Yes	Yes	Yes	Yes

L2 Services - Availability	XS708T	XS712Tv2	XS716T	XS728T	XS748T
Broadcast, multicast, unknown unicast storm control	Yes	Yes	Yes	Yes	Yes
IEEE 802.3ad - LAGs (LACP)	Yes	Yes	Yes	Yes	Yes
IEEE 802.3x (full duplex and flow control)	Yes	Yes	Yes	Yes	Yes
IEEE 802.1D Spanning Tree Protocol	Yes	Yes	Yes	Yes	Yes
IEEE 802.1w Rapid Spanning Tree Protocol	Yes	Yes	Yes	Yes	Yes
IEEE 802.1s Multiple Spanning Tree Protocol	Yes	Yes	Yes	Yes	Yes
L2 Services - Multicast Filtering					
IGMP snooping (v1, v2 and v3)	Yes	Yes	Yes	Yes	Yes
MLD snooping support (v1 and v2)	Yes	Yes	Yes	Yes	Yes
IGMP snooping queries	Yes	Yes	Yes	Yes	Yes
Block unknown multicast	Yes	Yes	Yes	Yes	Yes
Multicast VLAN Registration (MVR)	Yes	Yes	Yes	No	No
L3 Services - DHCP					
DHCP client	Yes	Yes	Yes	Yes	Yes
DHCP snooping	Yes	Yes	Yes	Yes	Yes
L3 Services - Routing					
IPv4 static routing	32	32	32	64	64
IPv6 static routing	32	32	32	64	64
VLAN routing	Yes	Yes	Yes	Yes	Yes
Host ARP table (number of entries)	738	738	738	1024	1024
ICMP Router Discovery Protocol (IRDP)	Yes	Yes	Yes	No	No
Number of IP VLAN interfaces (routed VLANs)	15	15	15	32	32
Link Aggregation					
IEEE 802.3ad - LAGs (LACP)	Yes	Yes	Yes	Yes	Yes
Manual Static LAG	Yes	Yes	Yes	Yes	Yes
# of Static or LACP LAGs	8 LAGs with max 8 members in each LAG	8 LAGs with max 8 members in each LAG	8 LAGs with max 8 members in each LAG	12 LAGs with max 8 members in each LAG	24 LAGs with max 8 members in each LAG
# of members in each LAG					
Network Monitoring and Discovery Services					
802.1ab LLDP	Yes	Yes	Yes	Yes	Yes
SNMP	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3
RMON group 1,2,3,9	Yes	Yes	Yes	Yes	Yes
Network Security					
IEEE 802.1x	Yes	Yes	Yes	Yes	Yes
Guest VLAN	Yes	Yes	Yes	Yes	Yes
RADIUS-based VLAN assignment via .1x	Yes	Yes	Yes	Yes	Yes
MAC-based .1x	Yes	Yes	Yes	Yes	Yes

## 10-Gigabit Ethernet Smart Switches

Network Security	XS708T	XS712Tv2	XS716T	XS728T	XS748T
RADIUS accounting	Yes	Yes	Yes	Yes	Yes
Access Control Lists (ACLs)	L2 / L3 / L4	L2 / L3 / L4	L2 / L3 / L4	L2 / L3 / L4	L2 / L3 / L4
IP-based ACLs (IPv4 and IPv6)	Yes	Yes	Yes	Yes	Yes
MAC-based ACLs	Yes	Yes	Yes	Yes	Yes
TCP/UDP-based ACLs	Yes	Yes	Yes	Yes	Yes
MAC lockdown	Yes	Yes	Yes	Yes	Yes
MAC lockdown by the number of MACs	Yes	Yes	Yes	Yes	Yes
Control MAC # Dynamic learned entries	600	600	600	600	600
Control MAC # static entries	20	20	20	600	600
IEEE 802.1x RADIUS port access authentication	Yes	Yes	Yes	Yes	Yes
Port-based security by locked MAC addresses	Yes	Yes	Yes	Yes	Yes
Dynamic ARP inspection	Yes	Yes	Yes	No	No
Broadcast, multicast, unknown unicast storm control	Yes	Yes	Yes	Yes	Yes
DoS attacks prevention	Yes	Yes	Yes	No	No
<b>Quality of Service (QoS)</b>					
Port-based rate limiting	Egress only	Egress only	Egress only	Ingress and egress	Ingress and egress
Port-based QoS	Yes	Yes	Yes	Yes	Yes
Support for IPv6 fields	Yes	Yes	Yes	Yes	Yes
DiffServ QoS	Yes	Yes	Yes	Yes	Yes
IEEE 802.1p COS	Yes	Yes	Yes	Yes	Yes
Destination MAC and IP	Yes	Yes	Yes	Yes	Yes
IPv4 and v6 DSCP	Yes	Yes	Yes	Yes	Yes
IPv4 and IPv6 ToS	Yes	Yes	Yes	Yes	Yes
TCP/UDP-based	Yes	Yes	Yes	Yes	Yes
Weighted Round Robin (WRR)	Yes	Yes	Yes	Yes	Yes
Strict priority queue technology	Yes	Yes	Yes	Yes	Yes
Auto-VoIP VLAN / Auto-Voice VLAN	Yes, based on OUI bytes (default database and user-based OUIs) in the phone source MAC address			Yes, based on OUI bytes (default database and user-based OUIs) in the phone source MAC address, voice packets must have 802.1Q VLAN tag	
Auto-VoIP	Yes, based on protocols (SIP, H.323 and SCCP). Prioritizes traffic to a higher queue				
Voice VLAN	Yes, based on either VLAN ID or 802.1p priority, packets are passed onto the connecting VoIP phone using LLDP-MED			No	No
Auto-Video VLAN	Yes	Yes	Yes	Yes	Yes

## 10-Gigabit Ethernet Smart Switches

IEEE Network Protocols	XS708T	XS712Tv2	XS716T	XS728T	XS748T
<ul style="list-style-type: none"> <li>• IEEE 802.3 Ethernet</li> <li>• IEEE 802.3u 100BASE-T (XS708T/XS716T only)</li> <li>• IEEE 802.3ab 1000BASE-T</li> <li>• IEEE 802.3an 10GBASE-T 10Gbps Ethernet Over Copper Twisted Pair Cable</li> <li>• IEEE 802.3ae 10-Gigabit Ethernet Over Fiber (10GBASE-LRM) - XS708T, XS712Tv2, XS716T only</li> <li>• IEEE 802.3ae 10-Gigabit Ethernet Over Fiber (10GBASE-SR, 10GBASE-LR, 10GBASE-ER, 10GBASE-LX4)</li> <li>• IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX</li> <li>• IEEE 802.3x Full-Duplex Flow Control</li> </ul>					
<b>Management</b>					
Password management	Yes	Yes	Yes	Yes	Yes
Configurable management VLAN	Yes	Yes	Yes	Yes	Yes
Admin access control via RADIUS and TACACS+	Yes	Yes	Yes	Yes	Yes
IPv6 management	Yes	Yes	Yes	Yes	Yes
SNTP client over UDP port 123	Yes	Yes	Yes	Yes	Yes
SNMP v1/v2c	Yes	Yes	Yes	Yes	Yes
SNMP v3 with multiple IP addresses	Yes	Yes	Yes	Yes	Yes
RMON group 1,2,3,9	Yes	Yes	Yes	Yes	Yes
Port mirroring	Yes	Yes	Yes	Yes	Yes
Many-to-one port mirroring	8	12	16	8	8
Web browser-based graphical user interface (GUI)	Yes	Yes	Yes	Yes	Yes
Dual software (firmware) image	Yes	Yes	Yes	Yes	Yes
Dual configuration file	Yes	Yes	Yes	Yes	Yes
Cable test utility	Yes	Yes	Yes	Yes	Yes
SSL/HTTPS Web-based access (version)	Yes (v3)	Yes (v3)	Yes (v3)	Yes (v2)	Yes (v2)
TLS Web-based access (version)	Yes (v1.0)	Yes (v1.0)	Yes (v1.0)	Yes (v1.0 ~ v1.2)	Yes (v1.0 ~ v1.2)
File transfers (uploads, downloads)	TFTP/HTTP	TFTP/HTTP	TFTP/HTTP	TFTP/HTTP	TFTP/HTTP
HTTP upload/download (firmware)	Yes	Yes	Yes	Yes	Yes
Syslog (RFC 3164)	Yes	Yes	Yes	Yes	Yes
USB port for firmware and config upload /download	Yes	Yes	Yes	Yes	Yes
<b>LEDs</b>					
Per port	Speed, Link, Activity				
Per device	Power and Fan				
<b>Physical Specifications</b>					
Dimensions (W x D x H)	440x204x43 mm 17.3x8x1.7 in	440x204x43 mm 17.3x8x1.7 in	440x204x43 mm 17.3x8x1.7 in	440x310x43 mm 17.3x12.2x1.7 in	440x347x43 mm 17.3x13.7x1.7 in
Weight	2.61 kg 5.76 lb	2.87 kg 6.33 lb	2.98 kg 6.57 lb	5.04 kg 11.11 lb	6.25 kg 13.78 lb

## 10-Gigabit Ethernet Smart Switches

Power Consumption	XS708T	XS712Tv2	XS716T	XS728T	XS748T
Max power (worst case, all ports used, line-rate traffic) (Watts)	49.5 W	75.3 W	96.0 W	134.9 W	262.8 W
Min power (link-down standby) (Watts)	26.3 W	38.3 W	45.3 W	67.8 W	97.6 W
Heat Dissipation (Max and Min) (BTU/hr)	Max: 169.00 Min: 89.79	Max: 285.29 Min: 145.21	Max: 327.74 Min: 154.65	Max: 460.55 Min: 231.57	Max: 897.17 Min: 333.14
Energy Efficient Ethernet (EEE) IEEE 802.3az	Yes (deactivated by default)				
Power back-off	No	No	No	Drops power consumption by 15% to 20% when short copper cables are detected	
Fan	1	2	2	4	4

### Environmental Specifications

#### Operating

Operating Temperature

0° to 50°C (32° to 122°F)

Humidity

90% maximum relative humidity (RH), non-condensing

Altitude

10,000ft (3,000m) maximum

#### Storage

Storage Temperature

-10° to 70°C (- 14° to 158°F)

-20° to 70°C (- 4° to 158°F)

Humidity (relative)

95% maximum relative humidity, non-condensing

Altitude

10,000ft (3,000m) maximum

### Electromagnetic Emissions and Immunity Certifications

Certifications

CE mark, commercial

FCC Part 15 Class A, VCCI Class A

Class A EN 55022 (CISPR 22) Class A

Class A C-Tick

EN 55024

CCC

47 CFR FCC Part 15, SubpartB, Class A

ICES-003: 2016 Issue 6, Class A

ANSI C63.4:2014

IEC 60950-1:2005 (ed.2)+A1:2009+A2:2013

AN/NZS CISPR 22:2009+A1:2010 CLASS A

### Safety Certifications

Certifications

CB mark, commercial

CSA certified (CSA 22.2 #950)

UL listed (UL 1950)/cUL IEC 950/EN 60950

EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

IEC 60950-1:2005 (ed.2)+A1:2009+A2:2013

AN/NZS 60950.1:2015

CCC (China Compulsory Certificate)

## 10-Gigabit Ethernet Smart Switches

Warranty and Support	XS708T	XS712Tv2	XS716T	XS728T	XS748T
Hardware Limited Warranty			Limited Lifetime*		
24x7 Online Technical Support*			Limited Lifetime*		
Next-Business-Day (NBD) Replacement			Limited Lifetime*		
ProSUPPORT OnCall 24x7, Category 2** Service Packs	Category 1 PMB0311 (1 yr) PMB0331 (3 yr) PMB0351 (5 yr)	Category 2 PMB0312 (1 yr) PMB0332 (3 yr) PMB0352 (5 yr)	Category 2 PMB0312 (1 yr) PMB0332 (3 yr) PMB0352 (5 yr)	Category 3 PMB0313 (1 yr) PMB0333 (3 yr) PMB0353 (5 yr)	Category 4 PMB0314 (1 yr) PMB0334 (3 yr) PMB0354 (5 yr)

Package Contents	
All Models	10-Gigabit Ethernet Smart switch
	Power cord (localized to country of sale)
	Rack mount kit
	Rubber footpads for tabletop installation
	Installation guide

Ordering Information	
<b>XS708T</b>	
XS708T-100AJS	Asia Pacific and Australia
XS708T-100INS	India
XS708T-100NES	North America, Latin America and Europe
XS708T-100PRS	China
<b>XS712T</b>	
XS712T-200AJS	Asia Pacific and Australia
XS712T-200NES	North America, Latin America and Europe
XS712T-200PRS	China
<b>XS716T</b>	
XS716T-100AJS	Asia Pacific and Australia
XS716T-100INS	India
XS716T-100NES	North America, Latin America and Europe
XS716T-100PRS	China
<b>XS728T</b>	
XS728T-100AJS	Asia Pacific and Australia
XS728T-100INS	India
XS728T-100NES	North America, Latin America and Europe
XS728T-100PRS	China
<b>XS748T</b>	
XS748T-100AJS	Asia Pacific and Australia
XS748T-100NES	North America, Latin America and Europe

**Optional Modules and Accessories**

AXM761-10000S	SFP+ Transceiver 10GBASE-SR (Short range, multimode)
AXM762-10000S	SFP+ Transceiver 10GBASE-LR (Long range, single mode)
AXM763-10000S	SFP+ Transceiver 10GBASE-LRM (Long range, multimode) - XS708T/XS712Tv2/XS716T only
AXM764-10000S	SFP+ Transceiver 10GBASE-LR Lite (Long range lite, single mode)
AGM731F-10000S	SFP Transceiver 1000BASE-SX (Short range, multimode)
AGM732F-10000S	SFP Transceiver 1000BASE-LX (Long range, single mode)
AGM734-10000S	SFP Transceiver 1000BASE-T Copper RJ45 GBIC
AXC761-10000S	SFP+ DAC CABLE (1m)
AXC763-10000S	SFP+ DAC CABLE (3m)

\*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.

\*\* The NETGEAR OnCall 24x7 contract provides unlimited phone and email technical support for your networking product. For ProSAFE products purchased prior to 06/2014, also includes next business-day hardware replacement.

† NETGEAR #1 in US Market Share according to NPD data for Unmanaged and Smart Switches, September 2019. NETGEAR #1 in Europe Market Share according to Context data for Unmanaged and Smart Switches, September 2019.

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