Elevate your business above the 1Gb barrier

As a leading provider of network equipment, NETGEAR® Business understands the importance of providing a great choice of speed and power to support core business needs. With the growth of network speed, virtualization, and cloud-based applications like VoIP, video streaming, and IP surveillance, businesses in all sectors must keep up to ensure success. Also, the increase in speeds for WiFi 6 and WiFi 6E access points now require faster speeds in the network.

The MS324TXUP 24-Port Multi-Gigabit (2.5G) Ethernet Ultra60 PoE++ Smart

Switch with 4 SFP+ Ports joins the NETGEAR Smart Switch family, adding Multi-Gigabit/10G speed, a high PoE budget for all PoE/PoE+ devices, and Ultra60 PoE++ support. NETGEAR Pro WiFi Access Points and other PoE devices with multi-gig capabilities are perfect for use with the MS324TXUP.

NETGEAR Smart Switches offer powerful L2+/Lite L3 features, great PoE functionality, and enhanced performance and usability. They are purposely designed for modern applications and support BYOD which requires companies to have more bandwidth to ensure

smooth network connectivity with no congestion.

Furthermore, for 2.5G speeds there is no requirement to upgrade your cabling beyond Cat5E, allowing for higher speeds without additional cabling upgrade costs.

The MS324TXUP switch supports NETGEAR Insight Cloud management, allowing businesses simpler configuration and deployment from anywhere using the NETGEAR Insight app from mobile devices or the Insight Cloud portal from any device with a web browser.

Highlights

Temperature- and load-based fan-speed control combines accurate monitoring with minimized acoustic noise which is ideal for office environments. The MS324TXUP operates quietly with a maximum of 38 dBA even at full power and 25° C (77° F) ambient.

More Powerful Switch with Multi-Gigabit/10G Speed

- 24 x 1G/2.5G Multi-Gigabit Ultra60 PoE++ Ethernet ports with 720W Total PoE
- 4 x Dedicated 10G SFP+ fiber ports

Fast and flexible solution for data, voice and video converged network

- Non-blocking switching with 200Gbps bandwidth
- Flexible rack-mounting option

Highlights

Ideal companion to your NETGEAR WAX630E WiFi 6E Access Point

- Connect and power your WAX630E with MS324TXUP

- Manage all devices from a single dashboard with NETGEAR Insight

Powerful Connectivity and Security

- Advanced VLAN support for better network segmentation

- L2/L3/L4 access control lists (ACLs) for granular network access control including 802.1x port authentication

- Advanced per-port PoE controls and remote power management of PoE powered devices including operation scheduling

- Advanced QoS (Quality of Service) for traffic prioritization including port-based, 802.1p and L2/L3/L4 DSCP-based

- Auto DoS (Denial of Service) prevention

- IGMP Snooping and Querier for multicast optimization

- Egress Rate limiting and priority queuing for better bandwidth allocation

- Port mirroring for network monitoring

- Energy Efficient Ethernet (IEEE 802.3az) for maximum power savings

- IPv6 management: IPv6 QoS, IPv6 ACL, IPv6 Multicast, and static and dynamic IPv6 address assignment

- Cable test to troubleshoot connection issues

- Easy-to-use Web browser-based management GUI available in English, German and Japanese

- SNMP v1, v2c, v3 and RMON remote monitoring

Fully-integrated Cloud-manageable Device

- Optional NETGEAR Insight Remote/Cloud management. Easily activated through the local device GUI.

Smart IT, not Big IT

- Scripting and management via direct text command using Lite Command Line Interface (CLI).

- NETGEAR Switch Discovery Tool (NSDT) to discover, register and access to the local browser interface to configure the switches

NETGEAR Quality and Reliability

- 5-year hardware warranty*, 90-days technical support via phone or chat and 5-year Next Business Day (NBD) replacement.

Hardware-at-a-Glance

FRONT						REAR	SIDE
Model Name	Form-Factor	1G/2.5G 1000BASE-T RJ-45 Copper Ports	10G SFP+ Uplink	Ultra60 PoE++ (60W/port) Ports	Total PoE Budget	Power Supply (PoE Budget)	Fans
MS324TXUP	Rack mount	24	4	24	720 Watts	1 internal PSU, fixed	3 internal fans, fixed

Software-at-a-Glance

LAYER 2+ / LAYER 3 LITE FEATURES							
Management	PoE Control Features	IPv4/IPv6 ACL and QoS	IPv4/IPv6 Multicast Filtering	VLANs	IEEE (802.3az) Energy Efficient Ethernet	Convergence	Link Aggregation
Web Browser-based GUI (HTTP/HTTPS), RMON, SNMP, NETGEAR Insight Cloud management via mobile app and Insight portal	PoE on/off, Dynamic PoE budget allocation, PoE power priority setting, PoE Power Usage Metering, PoE scheduling Uninterrupted PoE	L2, L3, L4 Ingress	IGMP Snooping, Querier	Static, Dynamic, VoIP, Voice, WiFi, Camera	Yes	LLDP-MED, RADIUS, 802.1X	LACP and Manual Static LAGs (up to 8 LAGs with max 8 members in each LAG)

Performance-at-a-Glance

Model Name	Packet Buffer	CPU	ACL	MAC Address Table ARP Table VLANs	Fabric	Latency (64-Byte Packet)	Multicast IGMP Group
MS324TXUP	2 MB	1GHz dual core 1GB RAM 64MB SPI FLASH	100 shared (ingress)	32K Max MAC 256 VLANs	200Gbps line-rate	1G Copper: <5.32μsec 2.5G Copper: <8.03μsec 10G SFP+ Fiber: < 1.14μsec	512

Features and Benefits

Hardware Features	
Fully-integrated Cloud-manageable Devices	Requires no additional hardware (cloud keys, network portals, local servers, VPN or proxy appliances etc) to directly connect to the cloud and allow remote management. No additional hardware or software. Just switch to Insight Cloud Management mode through Web browser-based user interface and go.
Multi-Gigabit 2.5GBASE-T Copper Ethernet Ultra60 PoE++ connections	Support high-density VoIP, Surveillance and Wi-Fi AP deployments, scalable for future growth. Reduce the risk of running out of PoE ports.
10G 1000BASE-X SFP ports	Four dedicated 10G SFP+ ports for aggregation to the network core. Support for Fiber and Copper modules.
Low Acoustics	Temperature- and load-based fan-speed control allow for quiet operation in both desktop or rack mount configuration.
Energy Efficient Ethernet (IEEE 802.3az)	Maximum power reduction for ongoing operation cost savings.
Desktop and rack mount (kit available)	Flexible deployment on desktop and also supports rack mounting.
Ideal companion to your NETGEAR WAX630E	• Connect and power your WAX630E with MS324TXUP. • Manage all devices from a single dashboard with NETGEAR Insight.
Software Features	
Remote setup, management, and monitoring anywhere, anytime, from your mobile device, PC, Mac, or tablet	Locally or remotely setup, configure, manage, monitor and even trouble-shoot your network from anywhere, anytime.Check network status, view dashboards for network health and activity, power cycle PoE ports, update firmware remotely, and more. No need to be on-site, open up ports to your network, or VPN into it.
Auto-join and Configure (Zero-Touch Provisioning)	Additional Insight managed devices added to the network automatically inherit settings and configuration.
Multi-site, Multi-network Single Pane-of-Glass View	View and configure multiple networks across multiple sites, all from one single app; NETGEAR Insight.
Comprehensive IPv6 Support for Management, ACLs and QoS	Build current network with the future in mind. Ensure investment protection and a smooth migration to an IPv6-based network without switch replacement.
Robust security features: • 802.1x authentication (EAP) • Port-based security by locked MAC	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: • Port-based or VLAN 802.1p-based prioritization • Layer 3-based (DSCP) prioritization • Port-based iegress rate limiting	Advanced controls for optimized network performance and better delivery of mission-critical traffic such as voice and video.
Auto-VoIP, Auto-Voice VLAN	Automatic Voice over IP prioritization (Auto-VoIP) simplifies most complex multi-vendor IP telephone deployments either based 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.

Software Features (continued)	
Auto-WiFi, Auto-Camera VLAN	Auto-WiFi VLAN and Auto-Camera VLAN allows the switch to forward packets with the entered OUIs of Wireless APs and cameras in a special VLAN with priority settings of that VLAN automatically.
IGMP 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.
Link Aggregation (LACP)	Build up bigger bandwidth to support aggregated uplink/downlink traffic or to provide redundant link(s). Aggregate up to 8 ports for 8Gbps connections.
Loop Prevention and Auto-DoS Prevention	Detect and prevent accidental network loops while protecting against DoS attacks through auto port shutdown.
PoE Timer and Scheduling	Allows IT administrators to increase network security, better utilize network resources and conserve energy by scheduling or remotely controlling on/off of PoE ports.
Port Mirroring and Cable Test	Many-to-one port mirroring for better and quicker network diagnostics and troubleshooting. Cable test easily identifies bad Ethernet cables.
Dual Firmware Images	Dual firmware images for transparent firmware updates with minimum service interruption.
Firmware Updates from Cloud	Direct cloud-to-device firmware updates, initiated and/or scheduled using the Insight app, or Insight Cloud Portal, anytime, anywhere.

Simply activate NETGEAR Insight Cloud management to manage your network. Anytime. Anywhere.

Activating NETGEAR Insight Cloud management enables users to experience simpler configuration and deployment from anywhere using the NETGEAR Insight app from mobile devices or the Insight Cloud portal from any device with a web browser.

Unique advanced management features of these Insight managed devices include:
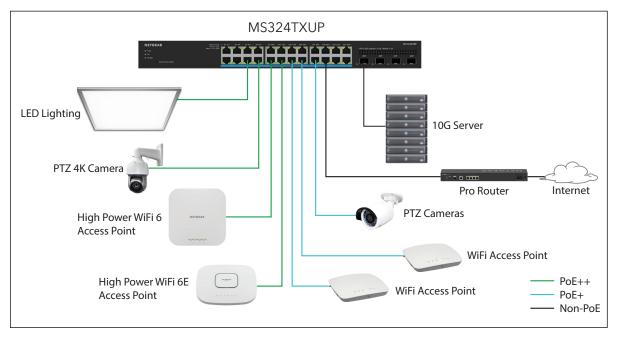
- Remote monitoring and management with performance dashboards and troubleshooting features including remote reboot, port and PoE advanced configuration including remote enable/disable/power-cycle, PoE scheduling, and firmware updates with auto-schedule mode

- Single pane-of-glass multi-device, multi-network, and multi-site remote monitoring and notifications with the NETGEAR Insight app

- Full-fledged local or remote access for configuration, management, and monitoring on a larger display using your tablet, laptop, or desktop computer through the NETGEAR Insight Cloud portal

- Configurable in-app and email alerts and notifications

- Auto-join and configure (zero-touch provisioning) for additional Insight managed devices added to the network

- Centralized network configuration (policies) across Insight managed switches, and access points for VLANs, ACLs, QoS, LAGs, etc.

- Cloud-based network administration, monitoring, and firmware management

For more information about NETGEAR Insight-manageable device settings, please see at:
https://www.netgear.com/support/product/Insight.aspx

Application Sample

Get Multi-Gigabit and 10G Speed to your business with more powerful PoE++

MS324TXUP Sample Connection Diagram

Technical Specifications

Technical Specifications	MS324TXUP
1G/2.5G Ethernet RJ-45 Copper ports (100M/1G/2.5G) - 1000BASE-T	24
PoE / PoE+ / PoE++ ports	24 (60W/port 802.3bt)
10G SFP+ (fiber) ports (1G/10G) - 1000BASE-X	4 (dedicated)
Power Supply	Internal Power Supply
LEDS	
Front (per device)	Power (with Cloud Mode Indicator), Fan, PoE Max
Front (per port)	Speed/Link/Activity/PoE Status
Unified Network Management **(Discovery, Setup, Monitoring, and Management) through NETGEAR Insight Cloud Management**	
Discovery, setup, monitoring and management	NETGEAR Insight mobile app on phone or tablet; Insight Cloud portal from PC, Mac, or tablet web browser
Remote/Cloud management	Anywhere, anytime, from the palm of your hand using Insight mobile app or from any PC, Mac, or tablet web browser using the Insight Cloud portal
Centralized network configuration (policies)	Centralized network configuration (policies) across Insight managed switches, and wireless access points for VLANs, ACLs, QoS, and LAGs
Device auto-join and configure (zero-touch provisioning)	Additional Insight managed devices added to the network automatically inherit the network configuration
Multi-site, multi-network single pane-of-glass view	Manage multiple sites, locations, and networks in a single view using the Insight mobile app or Insight Cloud portal
Multi-switch, multi-port concurrent configuration for ACLs, VLANs, QoS, PoE, etc	Apply settings and policies on multiple ports across multiple switches all at the same time using the Port Config Wizard
Performance Specifications	
CPU	1GHz Dual Core 1GB RAM 64MB SPI FLASH
Packet buffer memory (Dynamically shared across only used ports)	2MB
Forwarding modes	Store-and-forward
Bandwidth (non-blocking, full duplex)	200Gbps
Priority queues	8
Priority queuing	Weighted Round Robin (WRR) and Strict Priority
MAC Address database size (48-bit MAC addresses)	32K
Multicast groups	512
Number of VLANs	256
Number of DHCP snooping bindings	256
Access Control Lists (ACLs)	100 shared for MAC, IP and IPv6 ACLs (ingress)

Performance Specifications	MS324TXUP
Packet forwarding rate (64 byte packet size) (Mfps or Mpps)	148.8
1G Copper standard latency (µsec) (64-byte; 1518-byte; 9216-byte frames) 64-byte	64-byte: 5.32 µsec 1518-bye: 5.67 µsec 9216-byte: 5.64 µsec
2.5G Copper standard latency (µsec) (64-byte; 1518-byte; 9216-byte frames) 64-byte	64-byte: 8.03 µsec 1518-bye: 8.19 µsec 9216-byte: 8.22 µsec
10G SFP+ Fiber latency (µsec) (64-byte; 1518-byte; 9216-byte frames)	64-byte: 1.14 µsec 1518-bye: 1.228 µsec 9216-byte: 1.236 µsec
Jumbo frame support	10K
Acoustic noise level @ 25° C (dBA) (ANSI-S10.12)	38 dBA
Mean Time Between Failures (MTBF) @ 25° C	1,017,939 hrs (116.12 yrs)
POE Configuration	
Number of PoE (802.3af) / PoE+ (802.3at) / PoE++ (802.3bt) ports	24 PoE++
Total PoE power budget (watts)	720W
Advanced per-port PoE controls (enable/disable/power limit)	Yes
Uninterrupted PoE	Yes
PoE Self-healing	Yes
Advanced per-port PoE scheduling/timers	Yes
L2 Services - VLANs	
IEEE 802.1Q VLAN tagging	Yes
MAC-based VLANs	Yes
Protocol-based VLAN	Yes
Auto-VoIP VLAN / Auto-Voice VLAN	Yes, based on OUI bytes (default database and user-based OUIs) in the phone source MAC address
Auto-VoIP	Yes, based on protocols (SIP). Prioritzes 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
Auto-Video VLAN	Yes
Auto-Camera VLAN	Yes
Auto-WiFi VLAN	Yes
GARP with GVRP	Yes
Private VLAN	Yes
L2+/Lite L3 Services - Availability	
Broadcast, multicast, unknown unicast storm control	Yes
IEEE 802.3ad - LAGs (LACP)	Yes
IEEE 802.3x (full duplex and flow control)	Yes

L2+/Lite L3 Services - Availability	MS324TXUP
IEEE 802.1D Spanning Tree Protocol	Yes
IEEE 802.1w Rapid Spanning Tree Protocol	Yes
IEEE 802.1s Multiple Spanning Tree Protocol	Yes
L2+/Lite L3 Services - Multicast Filtering	
IGMP snooping (v1, v2 and v3)	Yes
MLD snooping support (v1 and v2)	Yes
IGMP snooping querier	Yes
MLD snooping querier (v1)	Yes
Multicast groups	512
Multicast VLAN Registration (MVR)	Yes
L3 Services - Routing	
DHCP client	Yes
DHCP snooping	Yes
Number of DHCP snooping bindings	256
IPv4 static routing	32
IPv6 static routing	32
VLAN routing	Yes
Host ARP table (number of entries)	1024 ARP
ICMP Router Discovery Protocol (IRDP)	Yes
Number of IP VLAN interfaces (routed VLANs)	15
DHCP Services	
DHCP client	Yes
DHCP snooping	Yes
Number of DHCP snooping bindings	256
DHCP Server	Yes
DHCP Relay	Yes
DHCP IPv6 Server	Yes
DHCP IPv6 Relay	Yes
Link Aggregation	
IEEE 802.3ad - LAGs (LACP)	Yes
Manual Static LAG	Yes
# of LACP or Static LAGs # of members in each LAG	8 LAGs with max 8 members in each LAG
Network Monitoring and Discovery Services	
802.1ab LLDP	Yes
LLDP-MED	Yes
SNMP	Yes, v1/v2c/v3
RMON group 1, 2 ,3 ,9	Yes

Network Security	MS324TXUP
IEEE 802.1x	Yes
Guest VLAN	Yes
RADIUS-based VLAN assignment via .1x	Yes
MAC-based .1x	Yes
RADIUS accounting	Yes
Access Control Lists (ACLs)	L2 / L3 / L4
IP-based ACLs (IPv4 and IPv6)	Yes
MAC-based ACLs	Yes
TCP/UPD-based ACLs	Yes
MAC lockdown	Yes
MAC lockdown by the number of MACs	Yes
Control MAC # Dynamic learned entries (per port)	4096
Control MAC # static entries	48
IEEE 802.1x RADIUS port access authentication/type	Yes
Port-based security by locked MAC addresses	Yes
Broadcast, multicast, unknown unicast storm control	Yes
DoS attacks prevention	Yes
Dynamic ARP inspection	Yes
Protected ports	Yes
Quality of Service	
Port-based rate limiting	Yes, ingress and egress
Port-based QoS	Yes
Support for IPv6 fields	Yes
DiffServ QoS	Yes, ingress
IEEE 802.1p COS	Yes
Destination MAC and IP	Yes
IPv4 and v6 DSCP	Yes
IPv4 and IPv6 ToS	Yes
TCP/UDP-based	Yes
Weighted Round Robin (WRR)	Yes
Strict priority queue technology	Yes
Auto-VoIP VLAN / Auto-Voice VLAN	Yes, manual or automatic assigment of VoIP phone traffic based on OUI bytes (default database and user-based OUIs) in the phone source MAC address to Voice VLAN associated with high priority QoS parameters

Other Features	MS324TXUP
Advanced per-port PoE controls (enable/disable/power limit)	Yes
Advanced per-port PoE scheduling	Yes
Loop detection & prevention	Yes
DNS Client	Yes
Option to enable/disable BPDU flooding when STP is disabled	Yes
Option to enable/disable the flooding of EAPOL when 802.1x is disabled	Yes
Management, Monitoring & Troubleshooting	
Cloud/Remote management	Yes
Insight mobile app & Insight Cloud Portal management	Yes
uPnP Discovery	Yes, activated by default
Networking monitoring	Yes
Data/performance logs	Yes
Centralized network configuration/policies (network-centric management)	Yes
Device auto-join and configure (zero-touch provisioning)	Yes
Multi-site, multi-network single pane-of-glass view	Yes
Multi-switch, multi-port concurrent configuration	Yes
Network/global password (for all Insight Managed devices on a network)	Yes (per network/subnet via NETGEAR Insight mobile app and Insight Cloud portal)
Password management	Yes
IP Access List	Yes
Configurable management VLAN	Yes
Admin access control via RADIUS and TACACS+	Yes
IPv6 management	Yes
SNTP client over UDP port 123	Yes
Firmware upgrade direct from Cloud (via mobile device or Insight Cloud Portal)	Yes
SNMP v1/v2c	Yes
SNMP v3 with multiple IP addresses	Yes
RMON group 1, 2, 3, 9	Yes
Port mirroring	Yes
Many-to-one port mirroring	Yes
Cable test utility	Yes
Ping and tracerout client	Yes

Management, Monitoring & Troubleshooting	MS324TXUP
Web browser-based graphical user interface (GUI)	Yes
HTTPS/TLS Web-based access (version)	Yes (v1.2)
HTTP firmware upload/download	Yes
File transfers (uploads, downloads)	TFTP / HTTP
Dual software (firmware) image	Yes
Memory and flash log	Yes
Syslog (Server)	Yes
Power Consumption	
Max power (worst case, all ports used, full PoE, line-rate traffic) (Watts)	765W
Min power (link-down standby) (Watts)	22W
Heat Dissipation (min w/o PoE and max with full PoE) (BTU/hr)	Max: 2610.2886 BTU/hr Min: 75.067 BTU/hr
Energy Efficient Ethernet (EEE) IEEE 802.3az	Yes (deactivated by default)
Auto power down	Yes
Fan(s) (temperature- and load-based speed control)	3
Physical Specifications	
Dimensions (W x D x H)	440 x 310 x 43mm (17.3 x 12.2 x 1.7in)
Weight	9.78lb (4.44kg)
Mounting options	Desktop, rack mount
Environmental Specifications	
Operating	
Operating Temperature	0° to 50°C (32° to 122°F)
Humidity	95% 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 (RH), non-condensing
Altitude	10,000 ft (3,000 m) maximum
Warranty and Support	
Hardware Limited Warranty	5 Years
Next-Business-Day (NBD) Replacement	5 Years
Technical support via phone	90 days free from date of purchase*

Warranty and Support	MS324TXUP
ProSUPPORT OnCall 24x7 Service Packs**	Category 3 PMB0313-10000S PMB0333-10000S PMB0353-10000S
Insight	1-year Insight subscription included
Package Content	
Smart switch	✓
Power cord (localized to region of sale)	✓
Mounting kit	Rack mount
Rubber footpads for tabletop installation	✓
Installation guide	✓
Ordering Information	
MS324TXUP	
MS324TXUP-100NAS	North America
MS324TXUP-100EUS	Europe, including United Kingdom
MS324TXUP-100AUS	Australia & New Zealand
MS324TXUP-100JPS	Japan
MS324TXUP-100KOS	Korea
MS324TXUP-100PES	Other APAC
MS324TXUP-100UKS	Hong Kong and Singapore
Optional Modules, Software Licenses and Accessories	
AGM731F	SFP Transceiver 1000BASE-SX (Short range, multimode)
AGM732F	SFP Transceiver 1000BASE-LX (Long range, single mode)
AGM734-10000S	SFP Transceiver 1000BASE-T Copper RJ45 GBIC
AXM761	SFP+ Transceiver 10GBASE-SR (Short range, multimode)
AXM762	SFP+ Transceiver 10GBASE-LR (Long range, single mode)
AXM763	SFP+ Transceiver 10GBASE-LRM (Long range, multimode)
AXM764	SFP+ Transceiver 10GBASE-LR Lite (Long range lite, single mode)
AXM765v2	10GBASE-T SFP+ RJ45 Transceiver (80m)
AXC761	SFP+ DAC CABLE (1m)
AXC763	SFP+ DAC CABLE (3m)

*This product is backed by a 5-year Hardware Limited Warranty, 5-year Next Business Day Hardware Replacement 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, chat and email technical support for your networking product.

The use of the proper type of cable is required for optimum performance. Please consult this Knowledge Base article for more information: www.netgear.com/cables

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