NETGEAR®
B U S I N E S S

2nd Generation Gigabit Stackable Smart Switches Enhance Scalability and Network Convergence for Growing Businesses

The Gigabit Stackable Smart Switch family is unique in delivering the scalability, reliability, and performance growing small and medium-sized businesses need in an affordable and easy-to manage package. The NETGEAR Second Generation of these Stackable Smart Switches consists of 4 models in 28/52-port configuration with or without PoE option. They come with more port density and a total of 6 SFP ports for fiber connectivity. Among them, 2 are shared, and the other 4 are dedicated for either stacking or uplinks. This new generation of Stackable Smart Switches offers more flexibility and scalability that will make it easier and non-interruptive for growing businesses to expand their network capacity.

Highlights

Stacking for Scalability and High Availability

The new generation of Stackable Smart Switches use 2 dedicated dual-purpose ports in the front of the switch for stacking or uplink. The stacking function offers a 10 Gbps, dual-ring, highly redundant stacking bus that carries intra-stack traffic and provide the highest level of resilience, allowing you to stack up to six switches or up to 300 10/100/1000 Mbps ports, forming a virtual chassis for easy management under a single IP address. This stacking technology also provides several high-availability features to ensure business continuity:

- Resiliency: Due to redundant stacking port connections, there is an automatic fail-over in case any switch in the stack fails, with rapid reconfiguration, thus preventing network downtime

- Hot-swappable: All switches in the stack are hot-swappable, and can be integrated or removed without disrupting the network

Comprehensive and Advanced Feature Sets

These Stackable Smart Switches come with a complete suite of advanced features for more robust security, higher quality of service and high availability. This switch is equipped with highly advanced features such as access control lists (ACL), static routing, rate limiting, IGMP snooping,and Dynamic VLAN assignment among others to provide a small and medium-sized business with a network that is geared for growth and new network applications.

Friendly to converged network with voice and video, the Stackable Smart Switches offers auto voice and auto video features that automatically configures QoS, security and VLAN settings for IP phones and IP cameras.

IPv6 Support

In order to accommodate the move by internet service providers to IPv6 addresses, the 2nd Generation of Gigabit Stackable Smart Switches expand the IPv6 support beyond management only to QoS, ACL and multicast. It means that your network will benefit from the IPv6 enhancements and is future-proofed.
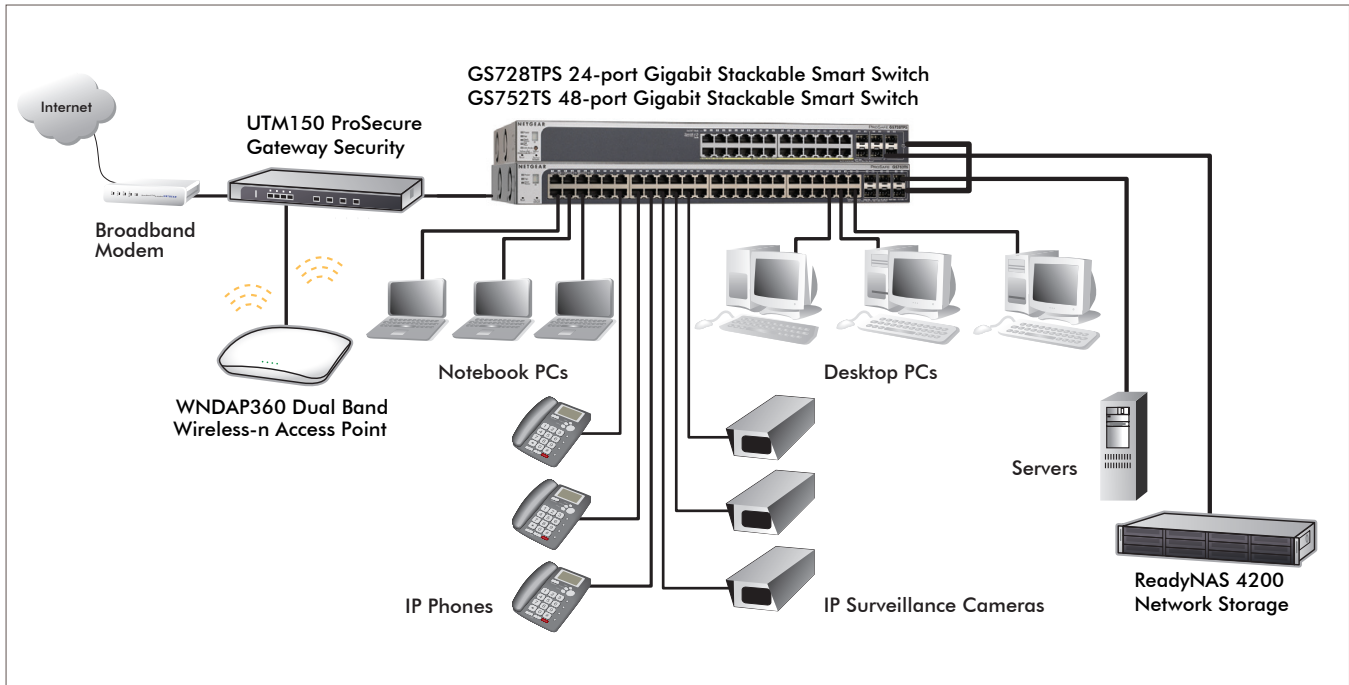
Manageability and Support

There are various easy and convenient ways to manage the Stackable Smart Switch. The new Stackable Smart Switches can be managed by the Smart Control Center software which comes free with the switch. With it, you can discover and manage all NETGEAR Smart Switches from a central location, conduct mass configuration and firmware upgrade. If you have other NETGEAR business products in your network, you can also use the NMS200, NETGEAR's management platform for discovery and configuration of all your NETGEAR products in the network. For peace of mind, these Stackable Smart Switches are backed by the NETGEAR Limited Lifetime* Hardware Warranty and 1-year 24x7 Advanced Technical Support*.

LIMITED LIFETIME Hardware Warranty

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Target Application

GS728TPS 24-port Gigabit Stackable Smart Switch
GS752TS 48-port Gigabit Stackable Smart Switch

Internet

UTM150 ProSecure
Gateway Security

Broadband
Modem

WNDAP360 Dual Band
Wireless-n Access Point

Notebook PCs

Desktop PCs

Servers

IP Phones

IP Surveillance Cameras

ReadyNAS 4200
Network Storage

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Features and Benefits

Hardware Features	
1000BASE-T Copper Ethernet PoE+ connections	Support high-density VoIP, Surveillance and Wi-Fi AP deployments, scalable for future growth. Never face the risk of running out of PoE ports.
1000BASE-X Fiber SFP ports	Four dedicated Gigabit SFP ports for aggregation to the network core. Support for Fiber and Copper modules. Can also build dual redundancy by a trunked uplink with link aggregation and failover.
Great choice of PoE port counts and PoE power budgets that can adapt to the business's needs	190W, 380W or 760W PoE budget available across 24 or 48 Gigabit PoE+ ports (802.3at) – Connect multiple power demanding devices to your network with a single wire for power and connectivity.
Low Acoustics	Temperature-based fan-speed control minimizes system acoustic noise in any environment starting at 27.08dB at 25°C (77°F) ambient.
Energy Efficient Ethernet (IEEE 802.3az)	Maximum power reduction for onging operational cost savings.
Software Features	
Fully-integrated Cloud-manageable Devices	Require 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.
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: • 802.1x authentication (EAP) • Port-based security by locked MAC • ACL filtering to permit or deny traffic based on MAC and IP addresses	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 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.
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) 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 (IPv4) and MLD (IPv6) Snooping and Querier modes with Fast Leave	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.

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24- and 48-port Gigabit Stackable Smart Switches

Network Protocol & Standards Compatibility	GS728TS	GS728TPS	GS752TS	GS752TPS
• IEEE® 802.3 10BASE-T • IEEE 802.3u 100BASE-TX • IEEE 802.3ab 1000BASE-T • IEEE 802.3z 1000BASE-X • IEEE 802.3x full-duplex flow control • IEEE 802.3az (EEE) • IEEE 802.3af (DTE Power via MDI) • IEEE 802.3at (DTE Power via MDI Enhancements)				
Interfaces				
	24/48 x 10/100/1000 Mbps copper ports		24/48 PoE-capable 10/100/1000 Mbps copper ports (8 PoE+ capable)	
	2 x Combo ports to support 10/100/1000 Mbps copper ports or 1 G/100 M optical module		2 x Combo ports to support 10/100/1000 Mbps copper ports or 1 G/100 M optical module	
	2 x SFP slots (port 25 and 26) to support 1 G optical module		2 x SFP slots (port 49 and 50) to support 1 G optical module	
	2 x SFP slots (port 27 and 28) to support 1 G optical module (uplink) and 2.5 G stacking (via stacking cable AGC761)		2 x SFP slots (port 51 and 52) to support 1 G optical module (uplink) and 2.5 G stacking	
Auto-sensing and auto-negotiating capabilities for all copper ports	Yes			
Auto Uplink™ on all ports to make the right connection	Yes			
Administrative Switch Management				
IEEE 8021.Q VLAN	256 groups, Static			
IEEE 802.1p Class of Service (CoS)	Yes			
Hardware Queues	8 hardware queues (1 is reserved for CPU; 7 queues are user configurable)			
Port-based QoS	Yes			
IEEE 802.3ad Static or Dynamic Link Aggregation (LACP)	Yes			
IEEE 802.1D Spanning Tree Protocol	Yes			
IEEE 802.1w Rapid Spanning Tree Protocol	Yes			
IEEE 802.1s Multiple Spanning Tree Protocol	Yes			
SNMP v1, v2c, v3	Yes			
RFC 1213 MIB II	Yes			
RFC 1643 Ethernet Interface MIB	Yes			
RFC 1493 Bridge MIB	Yes			
RFC 2131 DHCP client	Yes			
IEEE 802.1x (RADIUS)	Yes			
RADIUS accounting	Yes			
IEEE 802.1x Dynamic VLAN Assignment	Yes			
HTTPS/SSL: Secure HTTP GUI	Yes			
Layer 3 (DSCP) Quality of Service (QoS)	Yes			

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Administrative Switch Management	GS728TS	GS728TPS	GS752TS	GS752TPS
TACACS+			Yes	
Port-based security by locked MAC addresses			Yes	
TCP/UDP-based priority mapping			Yes	
IGMP snooping v1, v2, v3			Yes	
MLD snooping			Yes	
ACLs (MAC, IPv4, IPv6 and TCP/UDP based)			Yes	
Storm control for broadcast, multicast and unknown unicast packets			Yes	
Port-based ingress/egress rate limiting			Yes	
SNTP			Yes	
DNS			Yes	
DoS and Auto DoS prevention			Yes	
IPv6 management, multicast and QoS			Yes	
Static Routing			Yes	
DHCP snooping			Yes	
Green Features		EEE (Energy Efficient Ethernet) compliance Lower power consumption during link-down or idle mode or with shorter cable length		
Protocol and MAC-based VLAN			Yes	
RMON group 1, 2, 3, 9			Yes	
Private Enterprise MIB			Yes	
Port mirroring			many-to-one	
IEEE 802.3ab LLDP			Yes	
LLDP-MED			Yes	
Protected ports			Yes	
Cable test			Yes	
Smart Control Center discovery			Yes	
Web-based configuration			Yes	
Configuration backup/restore			Yes	
Password access control			Yes	
Firmware upgradeable			Yes	
Performance Specification				
Forwarding modes			Store-and-forward	
Bandwidth (per unit)	56 Gbps	56 Gbps	104 Gbps	104 Gbps
Stacking			Up to 6 switches or 300 ports per stack	
Mix and match stacking supported on the GS7xxTS/GS7xxTPS family			Yes	
Stacking bandwidth			5 Gbps (bidirectional)	

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Performance Specification	GS728TS	GS728TPS	GS752TS	GS752TPS
Network latency	Less than 20 microseconds for 64-byte frames in store-and-forward mode for 1000			
Mbps to 1000 Mbps transmission	Yes			
Buffer memory	2 MB			
128 Mbytes System DDR SDRAM	32Mbx16			
Flash size	32 Mbytes			
Address database size	16 K media access control (MAC) addresses per system			
Addressing	48-bit MAC address			
Number of VLANs	256; Maximum VLAN ID: 4093			
Number of 802.1p traffic classes	7			
Number of LAGs	8			
Number of static routes	32			
Number of routed VLANs	15			
Number of ARP Cache entries size	1024			
Queues used for DiffServ	7			
Number of ACLs (IPv4/IPv6)	100			
Number of DHCP snooping binding	8K			
Number of DHCP static entries	1024			
Mean time between failures (MTBF)	595,423 hours (~68.9 years) at 25°C 174,070 hours (~20.1 years) at 55°C	530,911 hours (~62.3 years) at 25°C 153,809 hours (~17.8 years) at 55°C	303,220 hours (~35.1 years) at 25°C 102,616 hours (~11.8 years) at 55°C	206,539 hours (~23.9 years) at 25°C 67,929 hours (~7.8 years) at 55°C
LEDs				
Per RJ-45 port	Speed/Link/Activity			
Per SFP port	Speed/Link/Activity			
Per device	Power, Fan, Stack Master, Stack ID			
Per device		LED mode and PoE Max		LED mode and PoE Max
Power Supply				
AC Voltage	100-240 V	100-240 V	100-240 V	100-240 V
Frequency	50-60 Hz	47-63 Hz	50-60 Hz	50-60 Hz
Amperage (max)	1.4A	4A	1.4A	8A
Max Power consumption	29.7W	236W	77W	526.8W
PoE budget		192W		384W
Physical Specifications				
Dimensions	440 x 257 x 43 mm	440 x 257 x 43 mm	440 x 257 x 43 mm	440 x 310 x 43 mm
Weight	3.34 kg	3.88 kg	4.31 kg	5.48 kg

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Environmental Specifications	GS728TS	GS728TPS	GS752TS	GS752TPS
Operating				
Operating Temperature	32° to 104° F (0° to 50° C)			
Humidity	10% to 90% maximum relative humidity, non-condensing			
Storage				
Storage Temperature	4° to 158° F (-20° to 70° C)			
Humidity (relative)	5% to 95% maximum relative humidity, non-condensing			
Electromagnetic Compliance				
Certifications	CE mark, commercial FCC Part 15 Class A VCCI Class A EN 55022 (CISPR 22) EN 55024 (CISPR 24) C-Tick CCC			
Safety				
Certifications	CE mark, commercial CUL 60950 (Listed)/EN 60950 (Low Voltage Directive) CB CCC			
System Requirements				
Dimensions	Category 5 UTP Network cables or better Network card for each PC Network software (e.g., Windows XP®, IE7+, Firefox® 3+)			
Warranty and Support				
Warranty	Limited Lifetime* Warranty			
ProSUPPORT Service Packs Available	XPress HW, Category 2: PMB0332 (3-year next-business day hardware replacement contract) OnCall 24x7, Category 2: PMB0332 (3-year Advanced Technical Support contract, including Remote Diagnostics performed by our technical experts for prompt resolution of technical issues, and next-business day hardware replacement)			
Package Contents				
	Gigabit Stackable Smart Switch GS728TPS, GS728TPS, GS752TS or GS752TPS 2.5 G SFP Direct Attach cable for stacking Rubber footpads Power cord Rackmount kit Installation guide Warranty/support information card			

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Ordering Information	
GS728TSB-100NAS	North America
GS728TSB-100EUS	Europe
GS728TSB-100AJS	Asia/Japan
GS728TPSB-100NAS	North America
GS728TPSB-100EUS	Europe
GS728TPSB-100AJS	Asia/Japan
GS752TSB-100NAS	North America, Latin America
GS752TSB-100EUS	Europe
GS752TSB-100AJS	Asia/Japan
GS752TPSB-100NAS	North America, Latin America
GS752TPSB-100EUS	Europe
GS752TPSB-100AJS	Asia/Japan
Supported Modules	
AGC761	1m 1G/2.5G Direct Attach SFP Cable
AGM731F	1000BASE-SX SFP GBIC
AGM732F	1000BASE-LX SFP GBIC
AFM735	100Base-FX SFP LC GBIC

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