NETGEAR®
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ProSafe® 48-port Gigabit Stackable
Smart Switch with 4 10G SFP+ slots
GS752TXS

Data Sheet

Industry's First Smart Switch with 10G Uplinks and Stacking

The NETGEAR® new generation of ProSafe® Stackable Gigabit Smart Switch GS752TXS is a powerful 48-port Gigabit Smart Switch that comes with stacking capabilities as well as 4 SFP+ ports for 10G connectivity. It is purposely designed for Mid-Enterprise customers seeking virtualization solutions to improving their server utilization, security, availability as well as application management. GS752TXS is the most cost-efficient solution for 10G connections into the servers and network storages in the networks, making it ideal for server and storage virtualization in the mid-enterprise network environment. GS752TXS comes with rich enterprise-class feature sets and advanced security measures, yet very simple and easy network management. Its stacking capability helps improve network redundancy and reliability, making it future-proof for network expansion down the road.

Enterprise-Class Features

The NETGEAR ProSafe Stackable Gigabit Smart Switch GS752TXS offers a much richer set of Layer 2 management features, superior switching performance, ease of management, yet unbelievably affordability. The static routing feature allows you to handle the internal traffic with your GS752TXS while dedicating the router only for external traffic and security, therefore, greatly improve network efficiency. The dynamic VLAN assignment helps increase security by imposing a consistent policy and user credentials across the network no matter where the users move. The support of IGMP and MLD snooping on GS752TXS enables switches to forward multicast traffic to designated hosts only so as to reduce unnecessary bandwidth consumptions and improve the network performance and efficiency.

The GS752TXS switches also provide advanced security for edge access such as MAC/IP as well as TCP/UDP-based Access Control List, Auto DoS attack prevention, DHCP snooping and protected ports.

IPv6 support on GS752TXS helps protect your network investment and makes your network future-proof for next generation of network applications and expansions.

Flexibility and Scalability

GS752TXS uses SFP+ as the stacking ports, achieving 40Gbps bandwidth for intra-stack communications. The stacking capability on the GS752TXS allows network administrators to stack up to 6 switches together to form a single logical unit with up to 40Gbps of stacking backplane. The stack can then be configured and managed as one single switch; greatly speed up the network deployment and simplifies network administration and maintenance. Furthermore, the stacked switches can span across multiple sites with the advantage of fiber SFP+ connectivity, making it perfect for businesses with multiple site deployments. Four (SFP+) 10 Gigabit interfaces provide optional fiber connectivity for longer reach, high speed links. They can all be used for network uplinks to servers and storage devices; or two for local/distant stacking and another two for uplinks and link aggregation.

Advanced Traffic Management

Priority queuing ensures high-priority traffic like network telephony and video conference gets delivered first ahead of other traffic, even during congestion from high-traffic bursts. And network segmentation through VLAN improves network performance, security as well as efficiency. The GS752TXS provides an extensive and granular set of QoS and VLAN features to ensure the secure and efficient delivery of latency-sensitive services and applications:

• 8 hardware Queues with port-based and 802.1p/DSCP-based QoS

• Ingress and egress Rate-limiting

• 802.1Q-based and Protocol/MAC-based VLAN supporting 256 VLAN groups

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Flexible Management Options

There are flexible ways to manage GS752TXS. For individual switch, you can do it through an intuitive, Web-browser interface which offers the simple Smart Switch management, making it a snap to monitor switch performance, configures ports, even set up port trunks, VLANs, and traffic prioritization. Alternatively, use SNMP-based software to manage your Smart Switch. For multiple Smart Switch deployment, NETGEAR's Smart Control Center is ideal for discovering multiple smart switches on the network, conducting mess configuration and firmware upgrades. If you have different NETGEAR business products in your network, such as switches, wireless and Storage devices, try the network management system (NMS) which will help you configure all these different devices centrally at one location.

Small Business Application
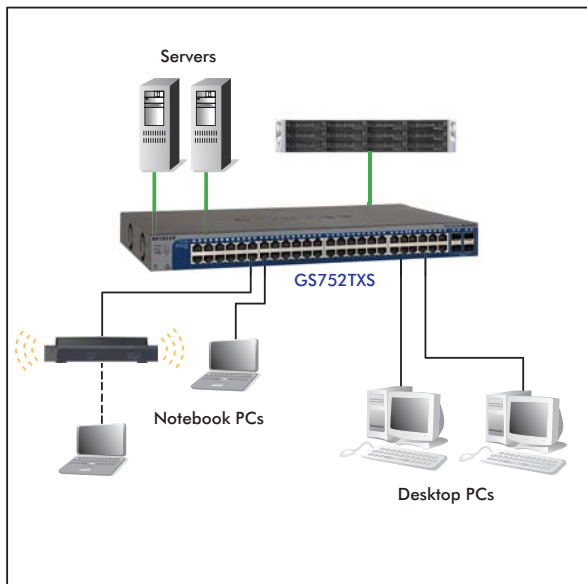
Mid-size Business Application
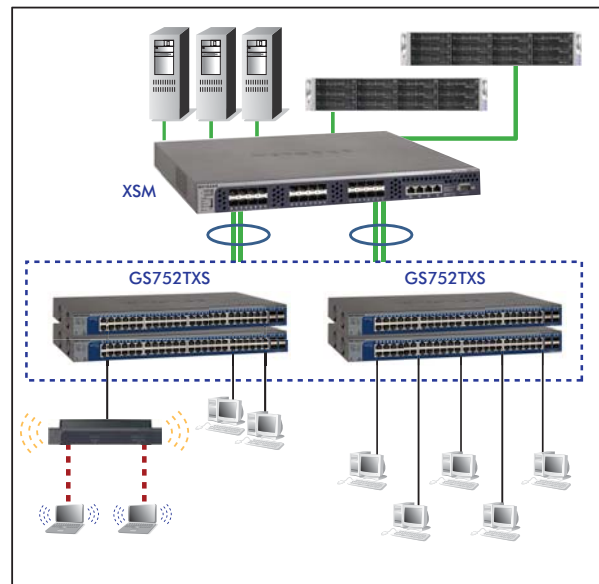
—— 10GE link   —— GE link   ···· Wireless link

Technical Specifications

• Network Protocol and Standards Compatibility
– 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
– IEEE802.3aq (10GBASE-LRM)
– IEEE802.3ae (10Gbase Ethernet)
– IEEE802.3az (EEE)

• Interfaces
– 48 10/100/1000 Mbps switching ports
– 4-10Gbps SFP+ slots (port 49~52) to support 10Gbps optical module and 1G optical module
  • Port 51 and port 52 can be used as the stacking ports or as uplink ports.
– Auto-sensing and auto-negotiating capabilities for all copper ports
– Auto Uplink™ on all ports to make the right connection

• Administrative Switch Management
– EEE 802.1Q VLAN (256 groups, Static)
– IEEE 802.1p Class of Service (CoS)
– 8 hardware queues
– Port-based QoS
– IEEE 802.3ad Static or Dynamic Link Aggregation (LACP)
– IEEE 802.1D Spanning Tree Protocol
– IEEE 802.1w Rapid Spanning Tree Protocol
– IEEE 802.1s Multiple Spanning Tree Protocol
– SNMP v1, v2c, v3
– RFC 1213 MIB II
– RFC 1643 Ethernet Interface MIB
– RFC 1493 Bridge MIB
– RFC 2131 DHCP client
– IEEE 802.1x (RADIUS)
– IEEE 802.1x Dynamic VLAN Assignment
– HTTPS/SSL: Secure HTTP GUI
– RADIUS accounting
– Layer 3 (DSCP) Quality of Service (QoS)

– TACACS+
– Port-based security by locked MAC addresses
– TCP/UDP-based priority mapping
– IGMP snooping v1, v2, v3
– MLD Snooping
– ACLs (MAC, IPv4, IPv6 and TCP/UDP based)
– Storm control for broadcast, multicast and unknown unicast packets
– Port-based ingress/egress rate limiting
– SNTP
– DNS
– DoS and Auto DoS prevention
– IPv6 management, multicast and QoS
– Static Routing
– DHCP Snooping
– Green Features: Lower power consumption during link-down or idle mode or with shorter cable length.
– Protocol and MAC based VLAN
– RMON group 1, 2, 3, 9

– Private Enterprise MIB
– Port mirroring – many-to-one
– IEEE 802.3ab LLDP
– LLDP-MED
– Protected ports
– Cable test
– Smart Control Center discovery
– Web-based configuration
– Configuration backup/restore
– Password access control
– Firmware upgradeable

• **Performance Specifications**
– Forwarding modes: Store-and-forward
– Bandwidth: 176 Gbps
– Stacking up to 6 switches or 300 ports per stack
– Stacking bandwidth: 20 Gbps
– Network latency: Less than 20 microseconds for 64-byte frames in store-and-forward mode for 1000 Mbps to 1000 Mbps transmission
– Buffer memory: 2 MB
– 128Mbytes System DDR SDRAM (32Mbx16).
– 32Mbytes Flash size.
– Address database size: 16K media access control (MAC) addresses per system
– Addressing: 48-bit MAC address
– Number of VLANs is 256; Maximum VLAN id is 4093
– Number of 802.1p traffic classes is 7
– Number of LAGs is 8
– Number of static routes is 32
– Number of routed VLANs is 15
– Number of ARP Cache entries size is 1024
– Queues used for DiffServ is 7
– Number of ACLs (IPv4/IPv6) is 100
– Number of DHCP snooping binding is 8K
– Number of DHCP static entries is 1024

– Mean time between failures (MTBF): 256,119 hours (~29.3 years) at 25 °C 90,993 hours (~10.3 years) at 55 °C

• **LEDs**
– Unit: Power, master, stack ID, FAN
– Per port: Link, speed, activity

• **Power Supply**
– Max Power consumption: 77W
– 100-240V AC/50-60 Hz universal input

• **Physical Specifications**
– Dimensions: (h x w x d): 43 x 440 x 257 mm (1.69 x 17.32 x 10.13 in)
– Weight: 4.50 kg (9.92 lb)

• **Environmental Specifications**
– Operating temperature: 32° to 104° F (0° to 50° C)
– Storage temperature: -4° to 158° F (-20° to 70° C)
– Operating humidity: 95% maximum relative humidity, non-condensing
– Storage humidity: 95% maximum relative humidity, non-condensing
– Operating altitude: 10,000 ft (3,000 m) maximum
– Storage altitude: 10,000 ft (3,000 m) maximum

• **Electromagnetic Compliance**
– CE mark, commercial
– FCC Part 15 Class A
– VCCI Class A
– EN 55022 (CISPR 22),
– EN 55024 (CISPR 24)
– C-Tick

• **Safety**
– CE mark, commercial
– CUL 60950 (Listed)/EN 60950 (Low Voltage Directive)

System Requirements
– Category 5 UTP Network cables or better
– Network card for each PC
– Network software (e.g., Windows®)

Warranty
– NETGEAR Lifetime Warranty †
– **ProSupport Service Packs Available**
– OnCall 24x7, Category 1
  • PMB0331-100 (US)
  • PMB0331 (non-US)
– XPressHW, Category 1
  • PRR0331

Package Contents
– ProSafe 52-Port Gigabit Stackable Smart Switch with 10G uplinks
– Rubber footpads
– Power cord
– Rack-mount kit
– Resource CD installation guide
– Warranty/support information card

Modules
– AXM761 ProSafe 10GBASE-SR SFP+ GBIC
– AXM762 ProSafe 10GBASE-LR SFP+ GBIC
– AXM763 ProSafe 10GBASE-LRM SFP+ GBIC
– AXC761 1m Direct Attach SFP+ Cable
– AGM731F ProSafe 1000BASE-SX SFP GBIC: Module with LC connectors for 50um or 62.5um multi-mode fiber cable
– AGM732F ProSafe 1000BASE-LX SFP GBIC: Module with LC connectors for 9um single-mode fiber cable
– AGM733 ProSafe 1000BASE-ZX SFP GBIC: Module with LC connectors for 9um single-mode fiber cable

Ordering Information
– North America: GS752TXS-100NAS
– Europe: GS752TXS -100EUS
– Asia/Japan: GS752TXS -100AJS