

Data Sheet

#### FS526T, FS726T, FS728TLP, FS728TP and FS750T2



The NETGEAR\* Fast Ethernet Smart Switches offers comprehensive L2 feature set and enhanced performance and usability. They are purposely designed for small and medium-sized networks where reliability and performance are key, and operational cost savings and ease of management are must-haves.

There are four products in this series: 26- and 50- port Fast Ethernet Smart Switch, 28-port Fast Ethernet with 12 PoE ports and 28-port high powered with 24 PoE/PoE+ ports. All switches come with dedicated Gigabit SFP ports for either Gigabit and/or fiber uplinks. These ProSAFE Fast Ethernet Smart Switches from NETGEAR are the optimized solutions providing the best value at an affordable SMB price point.

#### Highlights

#### Preserve the Efficiency of current Network and support seamless integration with the high-speed Core

- Fast Ethernet holds the best value for the majority of small network traffic need
- All models come with Gigabit copper and Fiber uplink ports, supporting easy connection to Gigabit backbone or servers
- Essential L2 network features ensure consistency in network setup and policy across the network, regardless of network speed.
- IGMP and MLD snooping, providing advanced multicast filtering and efficient use of network bandwidth

#### Build Eco-friendly network with NETGEAR

- Fanless Design on non-PoE models for quiet operation and non-intruding for any environment
- Variable Speed Fan on PoE models enables the fan to turn on at a certain temperature in order to minimize the noise level
- PoE Timer for scheduling on/off time of your PoE powered devices for better control and optimized use of your devices.
- Energy Efficient Ethernet (IEEE802.3az) for energy saving and OPEX reduction

#### Network Development Made Easy

- Auto Voice VLAN for easy development of VoIP
- Auto Video for simple deployment of IP Surveillance
- ACL Wizard for a guided tour to set up your network access control
- Smart Control Center, a powerful tool for multi-switch discovery, deployment, monitoring and firmware upgrade
- NMS300, the NETGEAR Network Management System, consolidates the deployment and management of these switches along with all NETGEAR business products.

#### Small IT, not Big IT

- Easy to manage via web-Based Management GUI or Smart Control Center for multi-switch deployment
- Standard-based technology, ensuring interoperability with any standard-based devices in the existing network
- Worry-free with NETGEAR ProSAFE Lifetime Hardware Warranty
- Assist with customer deployment with 1-year Free 24x7 Advanced Technical Support\*

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### ProSAFE<sup>®</sup> Fast Ethernet Smart Switches

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#### Hardware at a Glance

|            |             |                             | FRONT  | REAR                        |              |            |
|------------|-------------|-----------------------------|--|-----------------------------|--------------|------------|
| Model name | Form-Factor | 10/100 Base-T<br>RJ45 ports | Gigabit copper or<br>Gigabit Fiber SFP ports | PoE 802.3af<br>PoE+ 802.3at | Power Supply | PoE budget |
| FS526T     | Rackmount   | 24                          | 2 Gigabit copper (Dedicated)                 | N/A                         | Internal     | N/A        |
| FS726T     | Rackmount   | 24                          | 1 Gigabit Copper and 1 SFP combo             | N/A                         | Internal     | N/A        |
| FS728TLP   | Rackmount   | 24                          | 2 copper and 2 SFP (Dedicated)               | 12 PoE 802.3af              | Internal     | 100W       |
| FS728TP    | Rackmount   | 24                          | 4 Dedicated Copperand 2 combo                | 24 PoE 802.3af              | Internal     | 192W       |
| FS750T2    | Rackmount   | 48                          | 2 (Dedicated)                                | N/A                         | Internal     |            |



FS526T: 24-port 10/100Base-T Fast Ethernet Smart Switch

• 2 dedicated Gigabit copper ports



- FS728TP: 24-port 10/100base-T Fast Ethernet high powered PoE Smart Switch
- 4 Gigabit copper ports and 2 combo copper/SFP ports
- 24 PoE Ports
- 192W total PoE budget

Software at a Glance

#### 

FS726T: 24-port 10/100Base-T Fast Ethernet Smart Switch

• 1 Gigabit copper and 1 SFP combo



FS728TLP: 24-port 10/100base-T Fast Ethernet PoE Smart Switch

- 2 dedicated Gigabit copper ports and 2 dedicated copper/SFP ports
- 12 PoE Ports
- 100W total PoE budget

# 

FS750T2:: 48-port 10/100Base-T Fast Ethernet Smart Switch

• 2 dedicated Gigabit copper ports

| Management            | IPv4 / IPv6<br>Multicast filtering | Auto-Voice and<br>Auto Video | EEE (802.3az)<br>Auto-EEE | VLANs   | Convergence   |
|-----------------------|------------------------------------|------------------------------|---------------------------|---|---|
| Web GUI, RMON<br>SNMP | IGMP Snooping<br>and querier       | Yes (except FS750T2)         | Yes (except FS750T2)      | Static, Voice Video, MAC,<br>Protocol-based<br>(except FS750T2) | LLDP-MED, RADIUS,<br>802.1X,PoE timer<br>(except FS750T2) |

### Performance at a Glance

| Model Name | Packet buffer | MAC address table | # of VLAN | Multicast Group | Number of Priority Queues |
|------------|---------------|-------------------|-----------|-----------------|---------------------------|
| FS526T     | 4Mb           | 8K                | 128       | 128             | 8                         |
| FS726T     | 4Mb           | 8K                | 128       | 128             | 8                         |
| FS728TLP   | 4Mb           | 8K                | 128       | 128             | 8                         |
| FS728TP    | 1Mb           | 4K                | 128       | 512             | 8                         |
| FS750T2    | 2Mb           | 8K                | 64        | N/A             | 4                         |



### **ProSAFE<sup>®</sup> Fast Ethernet Smart Switches**

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### **Features and Benefits**

| Features   | Benefits   |
|--|--|
| Dedicated SFP Fiber uplinks  | • Dedicated SFP ports provides Gigabit copper and fiber uplinks without sacrificing any downlink<br>port. 4 SFP ports provide not only redundant uplinks, but can also build dual redundancy by a<br>trunked uplink with link aggregation and failover, the dual-redundancy, a powerful design for<br>the network virtualization   |
| Comprehensive QoS features:<br>• Port-based or 802.1p-based prioritization<br>• Layer 3-based (DSCP) prioritization<br>• Port-based ingress and egress rate limiting   | Advanced controls for optimized network performance and better delivery of mission-critical traffics such as voice and video   |
| <ul> <li>Robust security features:</li> <li>802.1x authentication</li> <li>DHCP Filtering</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<br>blocking malware while allowing secure access for authorized users  |
| NETGEAR Network Management System<br>(NMS300)  | • Extensive visibility, granular control and seamless automation across the network for a range of NETGEAR products  |
| 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.   |
| Auto Voice and Auto Video  | • Automatic Voice over IP prioritization with Auto-VoIP simplifies most complex multi-vendor<br>IP telephones deployments either based on protocols (SIP, H323 and SCCP) or on OUI bytes<br>(default database and user-based OUIs) in the phone source MAC address; providing the best<br>class of service to VoIP streams (both data and signaling) over other ordinary traffic by clas-<br>sifying traffic, and enabling correct egress queue configuration. When deployed IP phones are<br>LLDP-MED compliant, the Voice VLAN will use LLDP-MED to pass on the VLAN ID, 802.1P<br>priority and DSCP values to the IP phones, accelerating convergent deployments. |
| DHCP Snooping  | • Ensure IP address allocation integrity by allowing only clients with specific IP/MAC addresses to have access to the network.  |
| Dual firmware Images and configuration files   | • Dual firmware image and dual configuration file for transparent firmware updates/configuration changes with minimum service interruption   |
| PoE Timer  | Allows IT administrators to increase network security, better utilize network resources and conserve energy by scheduling or remotely controlling on/off of PoE ports.   |
| Protected Ports  | • Ensure no exchange of unicast, broadcast, or multicast traffic between the protected ports on the switch, therefore, improve the security of your converged network where your sensitive phone conversation can stay private and your surveillance video clips can be forwarded to their designated storage device without leakage or alteration.  |

# **NETGEAR**<sup>®</sup>

### **ProSAFE®** Fast Ethernet Smart Switches

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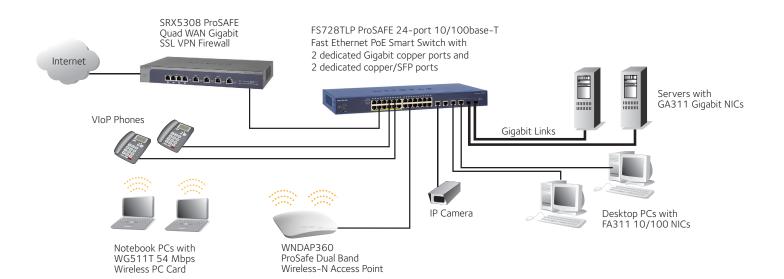
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#### **Target Application**

#### Converged Network Application

The NETGEAR Fast Ethernet Smart Switch provides the best value for the right-sized networks

- Fast Ethernet for cost-efficiency
- Gigabit uplink for uncompromised bandwidth into network backbone or servers
- · Cost-effectively bring intelligence to the edge of the network with traffic management features from the Smart Switches
- Improved usability for easier and smoother deployment of voice and video on the same converged platform
- · Lifetime warranty and 1-year free advanced tech support for peace-of-mind





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| Model  | FS526Tv2   | FS726T      | FS728TLP    | FS728TP     | FS750T2    |
|--|--|-------------|-------------|-------------|------------|
| 10/100Mbps ports                                 | 24   | 24          | 24          | 24          | 48         |
| Gigabit ports                                    | 2  | 1           | 4           | 4           | 2          |
| SFP ports  |  | 1           | 2 (combo)   | 2 (combo)   |            |
| # of PoE ports                                   |  |             | 12          | 24          |            |
| Total PoE Power budget (Watts)                   |  |             | 100         | 192         |            |
| Max MAC entries                                  | 8K   | 8K          | 8K          | 4K          | 8K         |
| Buffer size                                      | 4Mb  | 4Mb         | 4Mb         | 1 Mb        | 2Mb        |
| EEE  | Yes  | Yes         | Yes         | Yes         |            |
| FAN  | 0  | 0           | 1           | 1           | 0          |
| Acoustic Noise Level @25C (dBA)                  | 0  | 0           | 30.7        | 38.1        | 0          |
| MTBF   | 334,168 hrs  | 856,198 hrs | 755,725 hrs | 237,497 hrs | 59,800 hrs |
| L2 SERVICES - VLANS                              |  |             |             |             |            |
| VLAN (# Supported)                               | 128  | 128         | 128         | 128         | 64         |
| IEEE 802.1Q VLAN Tagging                         |  |             | Yes         |             |            |
| IP based VLANs                                   |  | No          |             |             |            |
| MAC based VLANs                                  |  | No          |             |             |            |
| Port- based VLAN                                 | No   |             |             |             | Yes        |
| Voice VLAN                                       | Based on phones OUI bytes (internal database, or user-maintained)<br>or protocols (SIP, H323 and SCCP) |             |             |             | No         |
| NETWORK SECURITY                                 |  |             |             |             |            |
| IEEE 802.1x Radius Port Access<br>Authentication | Yes  |             |             |             | No         |
| Guest VLAN                                       |  | Y           | ′es         |             | No         |
| RADIUS Accounting                                |  | Y           | ′es         |             | No         |
| MAC lockdown by the number of MACs               |  | Y           | ′es         |             | No         |
| Dynamic learned entries per port                 | 600  | 600         | 600         | 128         |            |
| Static entiries per port                         | 20   | 20          | 20          | 20          |            |
| Network Storm Protection, DoS                    |  | Y           | ′es         |             | No         |
| Broadcast, Unicast, Multicast DoS Protection     |  |             | No          |             |            |
| DoS attacks                                      |  |             | No          |             |            |
| IP-based ACLs                                    | Yes  |             |             |             |            |
| MAC (Trusted MAC)                                |  | Y           | ′es         |             | No         |
| L4 ACL   |  | Y           | ′es         |             | No         |
| Protected Port                                   |  | Y           | ′es         |             | No         |



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| Model                                      | FS526Tv2 | FS726T   | FS728TLP | FS728TP     | FS750T2  |
|--|----------|--|----------|-------------|--|
| L2 SERVICES - AVAILABILITY                 |          |  |          |             |  |
| IEEE 802.3ad - LAGs                        |          | Y  | ′es      |             | No   |
| LACP                                       | Yes ( (  | Yes ( (8 LAGS with max. of 8 members in each LAG)) |          |             | 6 LAGs with max<br>of 8 members in<br>each LAG |
| Broadcast Storm Control                    |          | Y  | ′es      |             | No   |
| IEEE 802.3x (Full Duplex and flow control) |          |  | Yes      |             |  |
| IEEE 802.1D Spanning Tree Protocol         |          |  | Yes      |             |  |
| IEEE 802.1 w Rapid Spanning Tree           |          |  | Yes      |             |  |
| IEEE 802.1s Multiple Spanning Tree         | No       | No   | No       | Yes         | No   |
| BPDU Guard                                 |          | Y  | ′es      |             | No   |
| DoS Prevention                             |          | Y  | ′es      |             | No   |
| PoE Timer                                  |          |  | Yes      | Yes         |  |
| L2 SERVICES - MULTICAST FILTERING          |          |  |          |             |  |
| IGMP Snooping (v1, v2 and v3)              |          | Y  | ′es      |             | No   |
| Max. Multicast Group                       | 128      | 128  | 128      | 512         |  |
| IGMP Snooping queries                      |          | Y  | ′es      |             | No   |
| Block unknown Multicast                    |          | Yes  |          |             | No   |
| L3 SERVICES - DHCP                         |          |  |          |             |  |
| DHCP Filter                                | No       | No   | No       | Yes         | No   |
| DHCP Client                                |          | Y  | ′es      |             | Yes  |
| NETWORK MONITORING AND DISCOVERY SE        | RVICES   |  |          |             |  |
| 802.1ab LLDP and LLDP-MED                  |          | Y  | ′es      |             | No   |
| SNMP                                       |          | V1, \  | /2, V3   |             | v1 and v2                                      |
| RMON 1,2,3,9                               |          | Y  | ′es      |             | No   |
| ifTable                                    |          |  | Yes      |             |  |
| QUALITY OF SERVICE (QOS)                   |          |  |          |             |  |
| Number of Priority Queues                  | 8        | 8  | 8        | 8           | 4  |
| TCP/UDP-baesd QoS                          | No       | No   | No       | Yes         | No   |
| Rate limiting                              | Yes      | Yes  | Yes      | Egress only | No   |
| DiffServ QoS                               | No       | No   | No       | Yes         | No   |
| IEEE 802.1p COS                            |          |  | Yes      |             |  |
| Dst MAC and IP                             |          | Y  | ′es      |             | No   |
| IPv4 DSCP                                  |          | Y  | ′es      |             | No   |
| IPv4 TOS                                   | Yes      | Yes  | Yes      | No          | No   |



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| Model   | FS526Tv2                         | FS726T   | FS728TLP           | FS728TP                 | FS750T2                                      |  |
|---|----------------------------------|--|--------------------|-------------------------|--|--|
| Strick, or WRED<br>(Weighted Deficit Round Robin)         |                                  | Both   |                    |                         | WRR  |  |
| Auto-VolP   | Yes, based on prot<br>base and u | Yes, based on protocols (SIP, H323 and SCCP) or on OUI bytes (default data-<br>base and user-based OUIs) in the phone source MAC address |                    |                         |  |  |
| Auto Video  |                                  | Y  | és                 |                         | No   |  |
| Port Mirroring (ingress and egress)                       |                                  |  | Yes                |                         |  |  |
| IEEE NETWORK PROTOCOLS                                    |                                  |  |                    |                         |  |  |
| IEEE 802.3 Ethernet                                       | IEEE                             | 802.3z Gigabit Eth<br>1000BASE-SX/LX   |                    | IEEE 802.1D Spa         | anning Tree (STP)                            |  |
| IEEE 802.3i 10BASE-T                                      | IEEE                             | 802.3ad Trunking (L  | _ACP)              | IEEE 802.1s Mult<br>(MS | iple Spanning Tree<br>STP)                   |  |
| IEEE 802.3u 100BASE-T                                     | IEEE 802.7                       | AB LLDP with ANSI<br>(LLDP-MED)  | /TIA-1057          |                         | oid Spanning Tree<br>STP)                    |  |
| IEEE 802.3ab 1000BASE-T                                   | IEEE                             | 802.1p Class of Se   | rvice              |                         | IEEE 802.1X Radius network access<br>control |  |
| IEEE 802.1Q VLAN Tagging                                  |                                  | IEEE 802.3 af (PoE)  | )                  |                         |  |  |
| IEEE 802.3x full-duplex flow control                      |                                  |  | Yes                |                         |  |  |
| MANAGEMENT  |                                  |  |                    |                         |  |  |
| Password management                                       |                                  | Yes  |                    |                         |  |  |
| Configurable Management VLAN                              |                                  | Y  | és                 |                         | No   |  |
| Admin access control via Radius and TACACS+               | No                               | No   | No                 | Yes                     | No   |  |
| Web-based graphical user interface (GUI)                  |                                  |  | Yes                |                         |  |  |
| Smart Control Center (SCC) for<br>multi-switch management |                                  |  | Yes                |                         |  |  |
| Dual Software (firmware) image                            |                                  | Y  | és                 |                         | No   |  |
| Dual Configuration file                                   |                                  | Y  | és                 |                         | No   |  |
| Cable Test utility  |                                  | Y  | és                 |                         | No   |  |
| File transfers (uploads, downloads)                       |                                  | TFTP   | / HTTP             |                         | No   |  |
| HTTP Download (firmware)                                  |                                  | Y  | és                 |                         | No   |  |
| LEDs  |                                  |  |                    |                         |  |  |
| Per port  | Speed, Link, Activity            |  |                    |                         |  |  |
| Per device  |                                  | Power, Fan and   | PoE Power Status ( | PoE model only)         |  |  |
| PHYSICAL SPECIFICATIONS                                   |                                  |  |                    |                         |  |  |
| Weight (kg)   | 1.35                             | 2.5  | 2.92               | 3.57                    | 3.2  |  |
| Dimensions (WxDxH) mm                                     | 326x168x43                       | 440x204x43   | 440x204x43         | 440x257x43              | 440x205x43                                   |  |
| POWER CONSUMPTION (WHEN ALL PORTS U                       | JSED, LINE-RATE TI               | RAFFIC AND MAX P   | OE IF APPLICABLE   | )                       |  |  |
| Worst case, all ports used, line-rate traffic,<br>max PoE | 12w                              | 24w  | 124w               | 256w                    | 19.65w                                       |  |
|   |                                  |  |                    |                         |  |  |



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FS526T, FS726T, FS728TLP, FS728TP and FS750T2

| Model   | FS526Tv2                                 | FS726T  | FS728TLP               | FS728TP        | FS750T2 |  |  |
|---|--|---|------------------------|----------------|---------|--|--|
| ENVIRONMENTAL SPECIFICATIONS                            | · · · · · ·                              |   |                        |                |         |  |  |
| Operating   |  |   |                        |                |         |  |  |
| Operating Temperature                                   |  | 32° to 122°F (0° to 50°C)                     |                        |                |         |  |  |
| Humidity  |  | 90% maximum relative humidity, non-condensing |                        |                |         |  |  |
| Altitude  |  | 10,0  | 00 ft (3,000 m) ma     | ximum          |         |  |  |
| Storage   | <u> </u>                                 |   |                        |                |         |  |  |
| Storage Temperature                                     |  | - 4°  | to 158°F (–20° to      | 70°C)          |         |  |  |
| Humidity  |  | 95% maximur                                   | n relative humidity, r | non-condensing |         |  |  |
| Altitude  |  | 10,0  | 00 ft (3,000 m) ma     | ximum          |         |  |  |
| ELECTROMAGNETIC EMISSIONS AND IN                        | MUNITY                                   |   |                        |                |         |  |  |
| 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 50082-1                               |   |                        |                |         |  |  |
|   | EN 55024                                 |   |                        |                |         |  |  |
|   | CCC                                      |   |                        |                |         |  |  |
| SAFETY  |  |   |                        |                |         |  |  |
| Certifications  | CE mark, commercial                      |   |                        |                |         |  |  |
|   | CSA certified (CSA 22.2 #950)            |   |                        |                |         |  |  |
|   | UL listed (UL 1950)/cUL IEC 950/EN 60950 |   |                        |                |         |  |  |
| WARRANTY AND SUPPORT                                    |  |   |                        |                |         |  |  |
| ProSAFE Lifetime Warranty†                              |  | Included, lifetime                            |                        |                |         |  |  |
| ProSUPPORT Lifetime 24x7 Advanced<br>Technical Support* |  | Included, 1 year                              |                        |                |         |  |  |



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#### FS526T, FS726T, FS728TLP, FS728TP and FS750T2

#### **Ordering Information**

| PACKAGE CONTENT              |  |
|------------------------------|--|
| All models                   | ProSAFE® Fast Ethernet Smart Switch  |
|                              | Power cord   |
|                              | Rack-mounting kit  |
|                              | Resource CD with links to online documentation, installation guides, Web-management user manual, Smart Control Center (SCC) software and user guide. |
| ORDERING INFORMATION         |  |
| FS526T-200NAS                | for North America and Latin America  |
| FS526T-200EUS                | for Europe   |
| FS526T-200AJS                | for Asia   |
| FS726T-200PRS                | for China  |
| FS728TLP-100NAS              | for North America and Latin America  |
| FS728TLP-100EUS              | for Europe   |
| FS728TLP-100AJS              | for Asia   |
| FS728TLP-100PRS              | for China  |
| FS728TP-200NAS               | for North America and Latin America  |
| FS728TP-200EUS               | for Europe   |
| FS728TP-200AJS               | for Asia   |
| FS728TP-200PRS               | for China  |
| FS750T2NA                    | for North America and Latin America  |
| FS750T2EU                    | for Europe   |
| FS750T2AU                    | for Asia   |
| OPTIONAL MODULES AND ACCESSO | RIES   |
| AFM735                       | 100Base-FX SFP GBIC (Multimode)  |
| AGM731F                      | 1000Base-SX SFP GBIC (Multimode)   |
| AGM732F                      | 1000Base-LX SFP GBIC (Single mode)   |
| SUPPORT PACKAGE              |  |
| PRR0331                      | The NETGEAR XPressHW providing basic hardware support and next-business-day hardware replacement   |
| PMB0331                      | The NETGEAR OnCall 24x7 contract provides unlimited phone and email technical support for your networking and storage products                       |

\* 1-year 24x7 Advanced Technical Support includes Remote Diagnostics performed by our technical experts for prompt resolution of technical issues.

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NETGEAR, Inc. 350 E. Plumeria Drive, San Jose, CA 95134-1911 USA, 1-888-NETGEAR (638-4327), E-mail: info@NETGEAR.com, www.NETGEAR.com