



## NETGEAR Power over Ethernet Solutions

### Power over Ethernet Delivers Cost-Effective Benefits

With Power over Ethernet (PoE) embedded into Ethernet switches, your network can deliver added functionality. New network applications such as surveillance cameras, VoIP phones, and wireless networking can help businesses improve productivity. PoE offers a superior, IEEE 802.3af standard-based approach to installing these types of applications, reducing installation costs and offering improved management and control for network devices. NETGEAR offers a range of PoE-enabled devices for entry-level and growing business needs. Networks with PoE offer many benefits:

#### Lower Installation Costs

Devices such as surveillance cameras and wireless access points work best when installed high up on walls or ceilings, and phones may be installed on walls or locations other than a desktop. Typical AC outlet locations may not be nearby, requiring an electrician to install new power outlets. Or the installer may need to run both data and power wires to each network device. PoE devices use a single, standard Cat-5 Ethernet cable for both power and data, eliminating the need to install a new electrical outlet or replace existing cables, and reducing installation costs. This is especially true where network devices may be installed in harsh conditions, such as exterior walls or other wet locations - installing AC power will be an expensive requirement to avoid any safety issues. Some PoE devices use separate power supplies, sometimes as many as one per device. This can raise the overall price and increase installation complexity. Using NETGEAR products with embedded PoE are less expensive and easier to install than PoE products which have external power supplies.

#### Use Existing Cabling

Since most businesses have already run Cat 5 Ethernet cabling to every desktop, the cabling for these new network applications is typically already in place, dramatically reducing installation time and cost.

#### Flexible

Network devices can be installed and re-located where performance is optimum and not tethered to an existing AC outlet. This is especially important for devices like wireless access points, surveillance cameras, and VoIP phones, which may be installed in hard to reach places like the ceiling or in non-desktop environments like meeting rooms, corridors, or storage rooms where a power socket may not be convenient or available.

#### Centralized Management

PoE devices that are Simple Network Management Protocol (SNMP) manageable can be remotely monitored and controlled to efficiently manage or troubleshoot power consumption and/or failures. In managed network environments, existing network management tools can be used to control both the power and network traffic of PoE devices. Troublesome or malfunctioning devices can be easily located and reset from the network or security control center. This can be much more difficult for AC-powered devices. By managing a PoE-enabled LAN switch via a web browser or by SNMP, remote networking devices can be easily reset or shut down, saving the time and expense of dispatching a technician.

#### Reliable

Power over Ethernet devices can be powered by uninterruptible power supplies (UPS), guaranteeing operation even if the main power goes out. Mission critical devices such as surveillance cameras and VoIP phones continue to work when you need them the most. An SNMP manageable centralized power source enhances the protection against power overloads, outages, surges, and spikes. When PoE is implemented along with UPSs or battery backups, it allows you to distribute power even in the event of AC power failures. Conventional telephones can be replaced with feature rich VoIP phones while retaining the lifeline reliability benefits. This also means that an entire network segment can be served by a single uninterruptible power supply, since the power requirements are so minimal compared to an AC power back up system. The cost savings in back-up power systems alone could easily justify implementing such an architecture. And, embedding PoE capabilities into network switches and devices is more reliable than relying on separate power supplies for each device or link.

#### Scalable

Adding more devices - cameras, VoIP phones, wireless access points - is as easy as adding switches and plugging in the RJ-45 connector. PoE helps you grow quickly, and with less cost, than other solutions. NETGEAR provides growing facilities a complete solution by offering reliable, scalable PoE products that address the needs from small networks to larger, high-performance requirements.

#### Interpole

PoE also helps protect IT investments as it is forward and backward compatible with other Ethernet protocols. There are many PoE vendors creating innovative, low-cost products. By using standards-based PoE products, you can take advantage of the best-of-class solutions for your unique network requirements, instead of being tied into a single vendor with a proprietary system. Why commit to a separate phone or surveillance system? Leverage your network. Mixing and matching different vendors to ensure the most optimal solution for business and delivers the best value.

#### Power When You Need It

PoE technology integrates data and power on a standard Cat-5 Ethernet cable, but only delivers power when it is needed. Power delivery is automatically activated when a compatible device is identified. NETGEAR PoE switches test whether a networked device is PoE-capable, and transmit power only when an 802.3af device is connected. The PoE switch also continues to monitor the port. If the powered device does not draw a minimum current, perhaps because it has been unplugged or physically turned off, the PoE switch shuts down the power to that port.

#### Compatible

PoE technology is completely compatible with your Cat-5 Ethernet network. Using PoE does not degrade network's data communication performance or decreasing the network's reach.

# Extend Your Network With Power Over Ethernet

## NETGEAR'S ProSafe Entry Level Solutions

- FS108P ProSafe 8 Port 10/100 Desktop Switch with 4 Port PoE
- WG102 ProSafe 802.11g Wireless Access Point

## NETGEAR'S ProSafe Mid-Sized Solutions

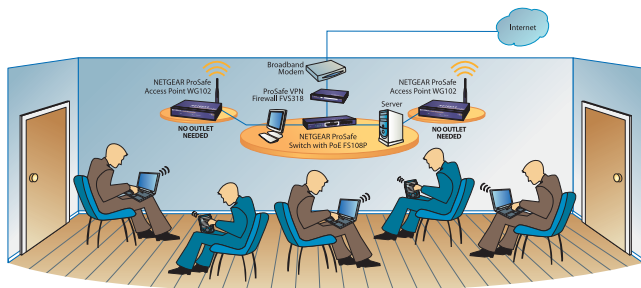
- FS726TP ProSafe 24 Port 10/100 Smart Switch with 2 Gigabit Ports and 12 Port PoE
- WG302 ProSafe 802.11g Wireless Access Point

## NETGEAR'S ProSafe High-Performance Solutions

- FSM7326P ProSafe 24 Port 10/100 L3 Managed Switch with 2 Gigabit Ports and 24 Port PoE
- WAG302 ProSafe Dual Band Wireless Access Point

### Affordable, Fast And Easy Wireless Coverage

Do you need the flexibility of a wireless network to accommodate mobile workers or to ease physical cabling constraints and you want to keep costs down, then products with PoE may be your best solution. Wireless networks require flexible placement of the access points to ensure maximum radio coverage. Often the optimal placement of these devices requires location on the ceiling or in an attic, usually where no AC power is available. To save the expense and time of having an electrician run power to these locations, NETGEAR ProSafe Switches with embedded PoE powering the ProSafe Wireless Access Points with a standard Cat-5 cable allows installation of the access points virtually anywhere.

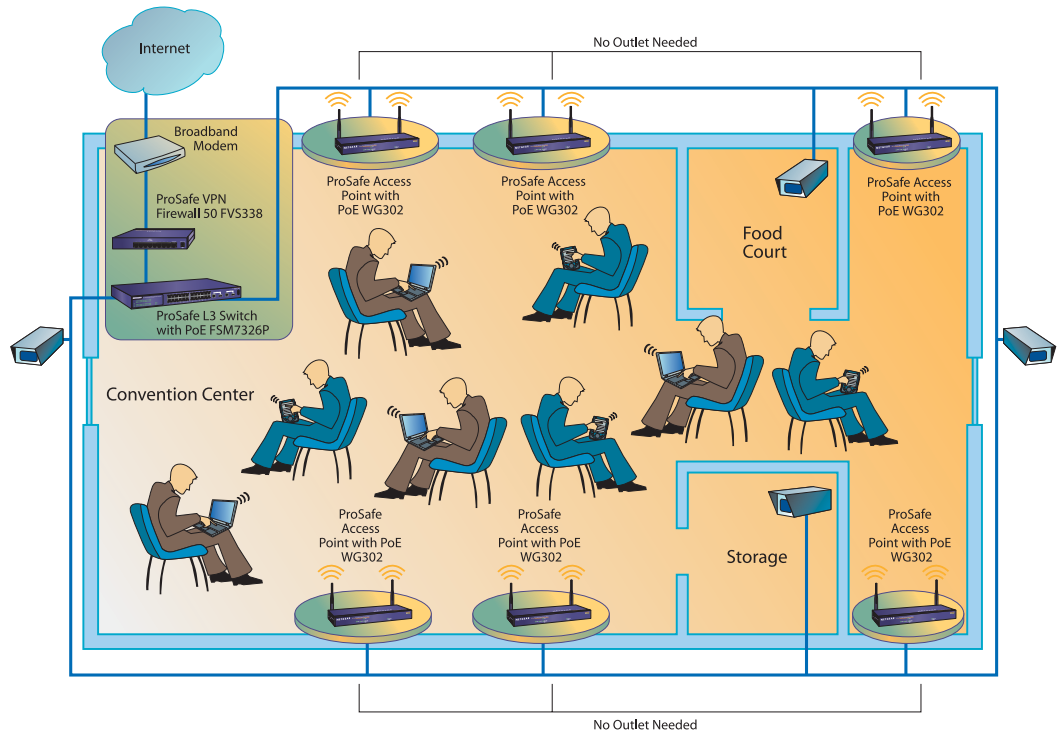


### Small Business Wireless Deployment

Wireless networking can be the ideal networking solution for small businesses with mobile workforce who constantly come and go, such as real estate and insurance agents, sales and field personnel, and others. Small need to maximize space and stay flexible - perfect for wireless networking. NETGEAR's affordable, easy to use PoE solution for small offices making it easy to deploy PoE compliant devices where AC power is difficult to access. A single Cat-5 cable runs from the switch to the each access point - it's that easy.

### Large Area Wireless Deployment

Wireless networks are perfect for creating WLANs over a wide area, such as conference centers, exhibition halls, casinos, and other open environments. With hundreds of mobile users, creating wired environments is just not practical. NETGEAR PoE wireless access points are ideal for these types of situations. They install quickly, and there's no need for AC outlets - it's practically plug and play! NETGEAR PoE allows you to quickly install or extend your network in temporary situations. NETGEAR's High-performance PoE solutions are an affordable way to maximize your network performance while offering optimum WLAN performance in high density, high interference deployments.



### NETGEAR makes PoE-embedded ProSafe solutions for small and medium sized businesses:

- Comprehensive product line up means you can buy the right product for your situation
- PoE switches simplify the installation and management by powering VoIP phones, IP surveillance devices, and wireless access points. In addition, it automatically senses and adjusts for network speed and cabling type, provides connectivity to standard 10/100 Mbps Ethernet devices such as PCs and servers and easily integrates into your existing 10/100 Ethernet Network
- Stand-alone network device that requires no configuration. Advanced auto-sensing algorithm gives power only to 802.3af end devices, so no need to worry about damaging proprietary PoE or non-PoE equipment.
- Access points with built-in PoE offers "one-touch" set-up, extensive security features, and up to 108 Mbps performance. Plenum rated enables worry free installation above drop-down ceilings and under raised floors increasing the flexibility to extend the network into hard-to-reach locations. RF management dynamically adjusts transmit power to avoid interference without compromising performance or privacy.
- Smart Wizard makes it easy to set up and use, right out of the box
- Standards-based means it works with products from many suppliers
- Migration path as the network grows
- Compact design can fit easily in small spaces

# Get Growing With Power Over Ethernet

## NETGEAR'S ProSafe Entry Level Solutions

- FS116P ProSafe 8 Port 10/100 Desktop Switch with 8 Port PoE
- WG102 ProSafe 802.11g Wireless Access Point

## NETGEAR'S ProSafe Mid-Sized Solutions

- FS726TPS ProSafe 24 Port 10/100 Stackable Smart Switch with 4 Gigabit Ports and 12 Port PoE
- WG302 ProSafe 802.11g Wireless Access Point

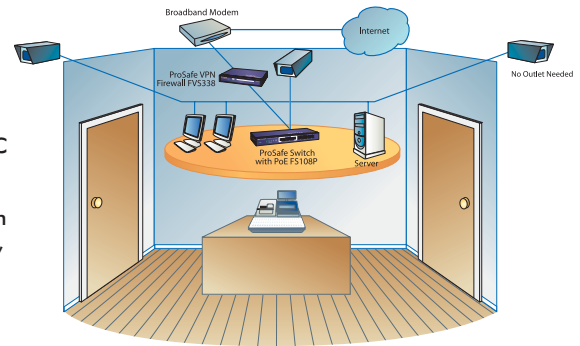
## NETGEAR'S ProSafe High-Performance Solutions

- FSM7352PS ProSafe 48 Port 10/100 L3 Managed Switch with 4 Gigabit Ports and 48 Port PoE
- WAG302 ProSafe Dual Band Wireless Access Point

## Strengthen Security With IP Surveillance

Do you want to install an IP surveillance system to protect assets, but not incur the extra expense of running AC power to ceilings or doorways? Consider using NETGEAR ProSafe switches with PoE and 802.3af-compliant IP surveillance cameras.

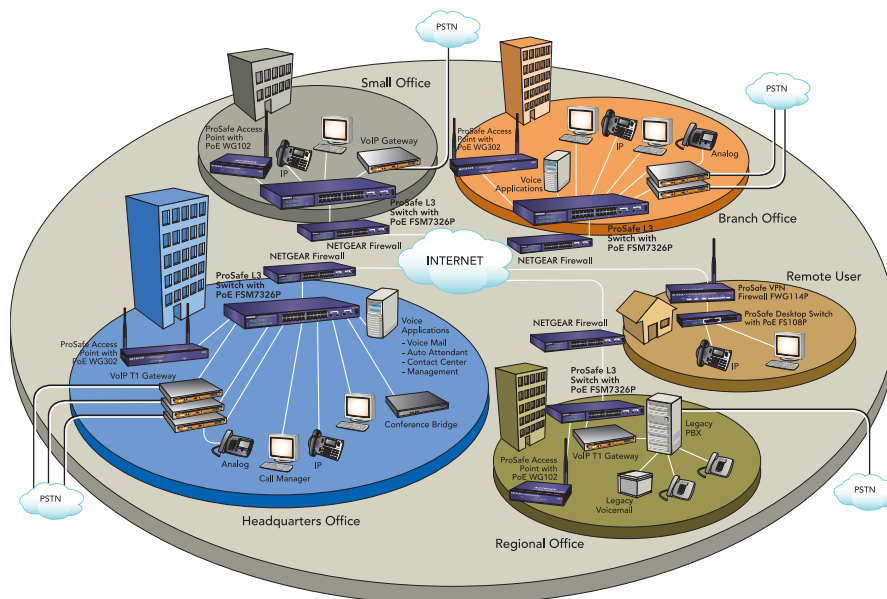
Surveillance cameras are typically mounted on ceilings, where installing an accessible AC power outlet is an additional cost. PoE devices help reduce installation costs by using a single Cat-5 wire for power and data. IP surveillance control and recording data can be stored on a standard PC, further reducing costs and saving space. With PoE embedded in the switch, you not only save costs but will find this integrated system easy to install, use, and manage. NETGEAR offers a broad family of PoE switches with standards-based IEEE 802.3af PoE from entry-level to high-performance to grow into any size network.



## VoIP Phones Deliver Employee Productivity

Would you like to take advantage of business-class PBX functionality such as automated attendant, conference calling, caller ID, four-digit internal dialing, and so on, but without deploying a traditional PBX? Consider a VoIP solution.

Lower your operational costs and total cost of ownership! With PoE, VoIP is more reliable and affordable to install, enabling small and medium-sized businesses to leverage new technology. These high-performing, reliable switches help build a feature-rich network and PoE infrastructure that will deliver the power for VoIP phone sets while also meeting the network provisioning requirements to manage voice traffic on your data backbone. For example, a VoIP phone system can tie together a business with 150 employees located over three offices, without the added cost of a dedicated voice infrastructure required for traditional PBX systems. PoE helps you build on your existing network infrastructure, lower costs, and increase productivity. Based on open standards, NETGEAR ProSafe PoE switches work with leading suppliers of VoIP equipment like Cisco, Nortel, Avaya, ShoreTel, InterTel, Mitel, and others for large and small businesses.



## NETGEAR makes PoE-embedded ProSafe solutions for large businesses and networks:

- Fast Ethernet delivers high-density wire-speed Layer 3 desktop switching to the edge at low cost
- Embedded PoE powers VoIP phones and wireless access points from the wiring closet, as well as providing advanced traffic control features
- Advanced quality of service (QoS) capabilities optimizes and ensures voice quality
- Access points with built-in PoE offers "one-touch" set-up, extensive security features, and up to 108 Mbps performance. Plenum rated enables worry free installation above drop-down ceilings and under raised floors increasing the flexibility to extend the network into hard-to-reach locations. RF management dynamically adjusts transmit power to avoid interference without compromising performance or privacy.
- SNMP management for remote, automated control
- Embedded PoE simplifies set up and on-going management of switches and remote devices
- Enhanced network security, easier administration and support
- Standards-based means it works with products from many suppliers
- Stacking feature means you can expand your network as requirements increase
- Full Layer 2 and Layer 3 management capabilities, and lightly-managed Smart Switches mean you can choose the right product for your network
- Easy to set up and configure with Smart Wizard

## About NETGEAR's Scalable Power over Ethernet Products

NETGEAR provides growing facilities a complete solution by offering reliable, scalable, and affordable PoE products that address the needs from small scale to high-end requirements. PoE offers more flexible design and lower cost installation of your wireless network by providing power and data over the same standard cable.

### NETGEAR ProSafe PoE Solutions

Entry Level Solutions - Perfect for Small Networks or Spaces for up to 50 Users:		
<p>These affordable, compact, easy to use PoE solutions for small offices make it easy to deploy PoE compliant devices where AC power is difficult to access or for hard to reach places requiring coverage.</p>		
<p><b>FS108P ProSafe 8 Port 10/100 Desktop Switch with 4 Port PoE</b></p> <ul style="list-style-type: none"> <li>8 10/100 Mbps ports</li> <li>IEEE 802.3af Power over Ethernet (PoE) on up to 4 ports</li> <li>Drives VoIP phones, access points, or IP Surveillance cameras</li> <li>Desktop or wall mount</li> <li>Fanless design for silent operation</li> </ul>	<p><b>FS116P ProSafe 16 Port 10/100 Desktop Switch with 8 Port PoE</b></p> <ul style="list-style-type: none"> <li>16 10/100 Mbps ports</li> <li>IEEE 802.3af Power over Ethernet (PoE) on up to 8 ports</li> <li>Drives VoIP phones, access points, or IP Surveillance cameras</li> <li>Desktop or wall mount</li> <li>Fanless design for silent operation</li> </ul>	<p><b>WG102 ProSafe 802.11g Wireless Access Point</b></p> <ul style="list-style-type: none"> <li>Delivers up to 108 Mbps in Super G™ mode</li> <li>RF Management and Control</li> <li>Integrated IEEE 802.3af Power over Ethernet (PoE) and Plenum rated</li> <li>WPA2 Enterprise/802.11i, VPN pass-through, RADIUS, 802.1x authentication protocols</li> <li>(1) detachable 5 dBi antenna</li> <li>SNMP Manageable and optimized for ProSafe Network Management Software (NMS100)</li> <li>Bridging or Repeater Modes</li> </ul>
<p>Customer requires an affordable, secure, and flexible network for small and growing offices/branch offices that is-</p> <ol style="list-style-type: none"> <li>Easy to set up and use</li> <li>Reliable and offers high performance connectivity for wired and wireless desktop and laptop PCs users</li> <li>A cost-effective way to share corporate resources</li> <li>Compact, with a design ideal for conference rooms, small workgroups, classrooms, or desktops</li> <li>Embedded with Power over Ethernet (PoE) capabilities for IP phones, access points, or IP surveillance cameras</li> </ol>		
Mid-Sized Solutions - Perfect for Growing Networks for up to 150 Users:		
<p>Provides a migration path from unmanaged to lightly-managed network. Growing networks can affordably extend their reach with integrated PoE.</p>		
<p><b>FS726TP ProSafe 24 Port 10/100 Smart Switch with 2 Gigabit Ports and 12 Port PoE</b></p> <ul style="list-style-type: none"> <li>24 10/100 Mbps ports</li> <li>2 10/100/1000 Mbps ports with Small Form-factor Pluggable (SFP) fiber module interfaces</li> <li>IEEE 802.3af Power over Ethernet (PoE) on 12 ports</li> <li>Drives VoIP phones, access points or IP Surveillance cameras</li> <li>Fully managed network with ProSafe Network Management Software (NMS100)</li> </ul>	<p><b>WG302 ProSafe 802.11g Wireless Access Point</b></p> <ul style="list-style-type: none"> <li>Delivers up to 108 Mbps in Super G mode</li> <li>RF Management and Control</li> <li>Integrated IEEE 802.3af Power over Ethernet (PoE) and Plenum rated</li> <li>WPA2 Enterprise/802.11i, VPN pass-through, RADIUS, 802.1x authentication protocols</li> <li>(2) detachable 5 dBi antennas</li> <li>SNMP Manageable and optimized for ProSafe Network Management Software (NMS100)</li> <li>Simultaneous bridging and repeater modes</li> </ul>	<p><b>FS728TPS ProSafe 24 Port 10/100 Stackable Smart Switch with 4 Gigabit Ports and 12 Port PoE</b></p> <ul style="list-style-type: none"> <li>24 10/100 Mbps ports</li> <li>4 10/100/1000 Mbps ports with Small Form-factor Pluggable (SFP) fiber module interfaces</li> <li>IEEE 802.3af Power over Ethernet (PoE) on 12 ports</li> <li>Stack up to six units and manage them all from a single IP address</li> <li>Drives VoIP phones, access points or IP Surveillance cameras</li> <li>Smart Switch features plus 801.x security, rate limiting and Layer 3 prioritization</li> <li>SNMP v1, v2c, v3, optimized for NMS100</li> </ul>
<p>Customer wants a broad range of enterprise-class products at an affordable price point to help build a network that provides-</p> <ol style="list-style-type: none"> <li>Network monitoring and management tools that speed network troubleshooting</li> <li>Enhanced network security</li> <li>Easier administration and support, including remote management</li> <li>Segmentation and improved performance across network subnets</li> <li>Advanced quality of service (QoS) capabilities for emerging technologies like Voice over IP (VoIP)</li> <li>Power over Ethernet (PoE), which lets users power IP phones, access points, or IP surveillance cameras from the wiring closet</li> <li>Ideal solution for large workgroups, or small to medium network backbone</li> </ol>		
High-Performance Solutions - Perfect for Challenging Applications and Environments for up to 250+ Users:		
<p>These high-performing devices are an affordable way to maximize your network performance and offer optimum WLAN performance in high density, high interference deployments.</p>		
<p><b>FSM7326P ProSafe 24 Port 10/100 L3 Managed Switch with 2 Gigabit Ports and 24 Port PoE</b></p> <ul style="list-style-type: none"> <li>24 10/100 Mbps ports</li> <li>2 10/100/1000 Mbps ports</li> <li>IEEE 802.3af Power over Ethernet (PoE) on all 24 ports</li> <li>Powers VoIP phones, access points or IP surveillance cameras</li> <li>Delivers high-density wire-speed Layer 3 desktop switching to the edge at low cost</li> <li>Fully managed network with ProSafe Network Management Software (NMS100)</li> </ul>	<p><b>FSM7352PS ProSafe 48 Port 10/100 L3 Managed Switch with 4 Gigabit Ports and 48 Port PoE</b></p> <ul style="list-style-type: none"> <li>48 10/100 Mbps ports</li> <li>4 10/100/1000 Mbps ports</li> <li>IEEE 802.3af Power over Ethernet (PoE) on all 48 ports</li> <li>Powers VoIP phones, access points or IP surveillance cameras</li> <li>Delivers high-density wire-speed Layer 3 desktop switching to the edge at low cost</li> <li>Fully managed network with ProSafe Network Management Software (NMS100)</li> </ul>	<p><b>WAG302 ProSafe Dual Band Wireless Access Point</b></p> <ul style="list-style-type: none"> <li>Delivers up to 108 Mbps in Super G mode on both bands</li> <li>RF Management and Control</li> <li>IEEE 802.3af Power over Ethernet (PoE) and Plenum rated</li> <li>WPA enterprise (802.11i), VPN pass-through, RADIUS, 802.1x authentication protocols</li> <li>(2) detachable 5 dBi antennas</li> <li>SNMP Manageable and optimized for ProSafe Network Management Software (NMS100)</li> <li>Simultaneous bridging and repeater modes</li> </ul>
<p>Customer wants a high reliability backbone and server connectivity that provides-</p> <ol style="list-style-type: none"> <li>All of the features listed for mid-sized businesses</li> <li>Fast Layer 3 routing available in the backbone to improve the performance between subnets</li> <li>Fast routing redundancy across network subnets with VRRP</li> <li>Easier administration and support with management</li> <li>Traffic prioritization for Voice over IP (VoIP) applications</li> <li>Power over Ethernet (PoE), which lets users power IP phones, access points, or IP surveillance cameras from the wiring closet</li> </ol>		



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#### About NETGEAR

NETGEAR is a leading manufacturer of affordable, easy-to-install networking solutions for both business and home users. Our reliable, high performance switches, wireless, and security products are designed for small to medium-sized environments, providing wired and wireless connectivity within homes, offices, and campuses, and for remote and branch offices, telecommuters, and the remote mobile workforce. Our complete line of award winning, value-based networking products includes everything from switches at the core of the network to routers at the edge, enabling users to share Internet access, peripherals, files, digital multimedia content, and media-rich applications among multiple computers and other Internet-enabled devices. NETGEAR products are licensed, sold, and supported by an extensive network of global sales channels, which includes industry-leading value added resellers, direct market resellers, and both traditional and online retailers.