



ProSafe™ 802.11 Wireless Access Points with IntelliFi™ RF Management Technology

Using IntelliFi to Deliver Secure and Reliable WLANs

As WLANs become more critical to core business functions, the operational and management aspects of wireless networking have become a primary IT concern. How can WLANs be deployed easily and cost-effectively? How can wireless networks for SMB be managed with limited IT resources? How can a WLAN scale without sacrificing reliability, availability, or performance? NETGEAR offers a line of business-class wireless access points and client adapters with state-of-the-art embedded IntelliFi RF management technology. The RF Management technology reduces interference by selecting the quietest channels, eases deployment of wireless networks by automatically fine tuning the WLAN network for maximum performance in any environment.

Peak Wireless Performance

IntelliFi technology embedded in NETGEAR's line of ProSafe Access Points automatically optimizes a wireless network to provide a throughput that is up to four times faster than any conventional wireless connection. NETGEAR's ProSafe Wireless Access Points and client adapters with embedded IntelliFi improve performance with the following functionality:

Feature	Description	Access Point	Client Adapter	Both Client Adapter and Access Point
Dynamic Channel Selection	Automatically chooses the channel for each access point that avoids interference from other wireless networks or devices, such as cordless telephones and microwaves, and baby monitors. No need to manually assign the channel in the access point configuration GUI.	X		
Dynamic Transmit Power	Dynamically tunes access point signal strength to prevent multiple access points from interfering with each other.	X		
Automatic Load Balancing	Proactively monitors the wireless LAN and shifts IntelliFi-enabled clients to the access point with the lightest load.			X
Automatic Failover	Fills in coverage when an access point goes off line.	X		
Rapid Roaming	Quickly detects client movement and jumps to most underused access point.		X	X
Enhanced Security	Access point only transmits to the most distant feature-enhanced wireless NIC card, minimizing signal transmission outside of the building.			X

IntelliFi integrated in NETGEAR's family of ProSafe Access Points and Client Adapters is designed to work and enhance "mixed" networks to achieve peak performance.

Lower Costs

The IntelliFi features embedded in ProSafe Access Points are completely self-organizing, and requires minimum user intervention. This reduces employee overhead associated with deployment, management, and maintenance, such as site surveys and channel maps. Other access points typically require site surveys to determine optimal placement. NETGEAR's family of ProSafe Access Points with embedded IntelliFi automatically tune themselves for best coverage by adjusting power levels, while continuously communicating with each other to monitor changes on the wireless domain.

Stronger Security

NETGEAR's broad family of business-class wireless access points offers many standards-based security features, such as Wi-Fi Protected Access 2 (WPA2 Enterprise), Virtual Private Network (VPN), and Wired Equivalent Privacy (WEP). NETGEAR's IntelliFi feature creates an additional level of privacy by providing self-organizing micro cells for enterprises. In this mode, IntelliFi shrinks the signal to the minimum required to reach clients, while also reducing the size of the beacons that announce its presence. This mode, which requires NETGEAR IntelliFi in both the client and access point, makes the wireless LAN nearly invisible to users outside an office building, as it transmits only to the most distant IntelliFi-enabled PC. NETGEAR's IntelliFi-enabled client adapters are highly recommended for enhanced RF security.

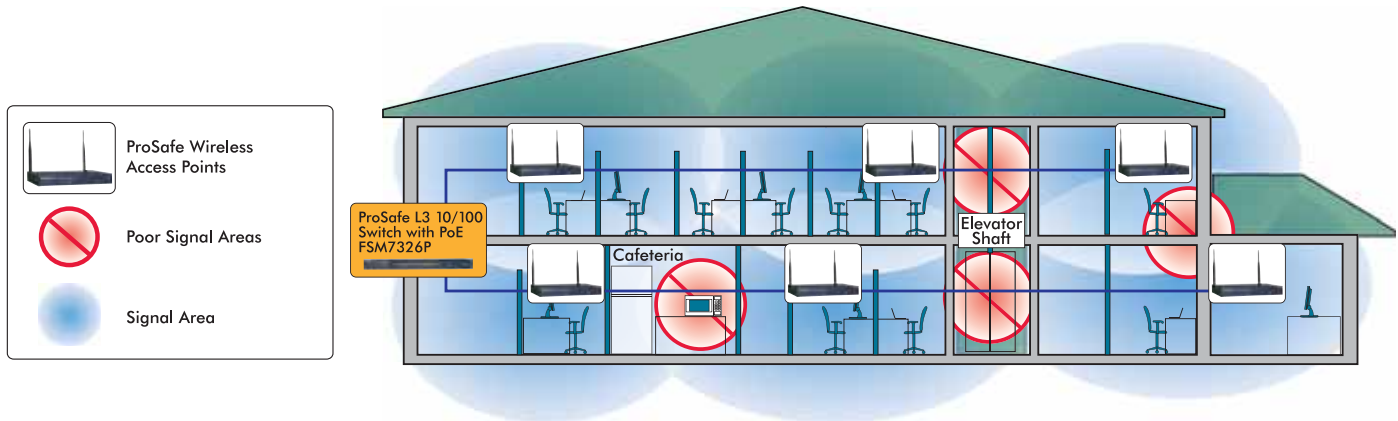
Key Benefits of NETGEAR IntelliFi

- Lower installation costs:** Planning is minimized. IntelliFi is self-organizing - less time required to configure the access point and no there is no need for channel maps or site surveys.
- Reduce support costs:** Load-balancing and failover capabilities keep the wireless network up and running, reducing calls to the help desk.
- Maximize performance:** Continuous tuning and channel selection minimize the effects of interference.
- Improve scalability:** Easily and cost-effectively add more access points for greater capacity in dense user environments.
- Enhance security:** The signal automatically adjusts to the smallest possible footprint, creating signals that are virtually undetectable outside of the building.
- Improve availability:** Load balancing and failover capabilities mean that users are connected to the best available channel.

Growing Network

NETGEAR ProSafe Wireless Access Points with IntelliFi minimize wireless installation issues in growing businesses. They self organize to provide peak coverage and performance, dynamically adjusting as conditions change. In the example below, office buildings are full of interference that creates problems for wireless users. Once NETGEAR ProSafe Wireless Access Points with IntelliFi are installed, coverage and throughput improves.

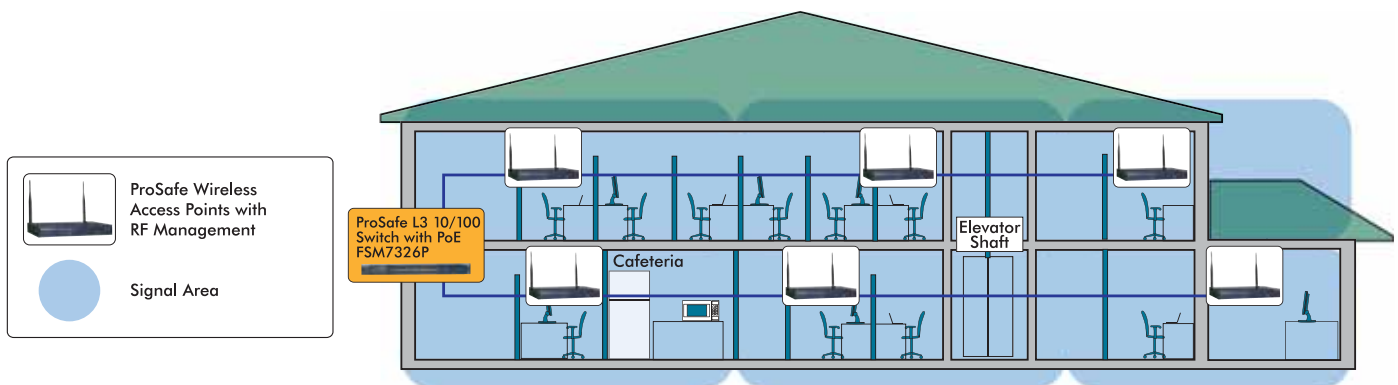
Before



Opportunity:

A growing company wants to add a wireless network with both 802.11a and 802.11g capabilities. In their office, half the space is occupied with employees, and more employees will be added in six months. The IT manager's current plan is to place access points approximately 100 feet apart from each other to ensure adequate coverage as well as provide enough channels for the expected number of users. This could have resulted in poor connections, drop offs, and interference.

After



Solution:

The IT manager deployed a mix of NETGEAR's ProSafe Dual Band and 802.11g Wireless Access Points and ProSafe Dual Band Wireless PC Cards WAG511. With embedded IntelliFi technology, the access points automatically self-organize to determine the correct mix of channels and power levels and enable roaming and load-balancing. Comprehensive coverage and minimum RF signal overlap all but eliminate gaps and drops.

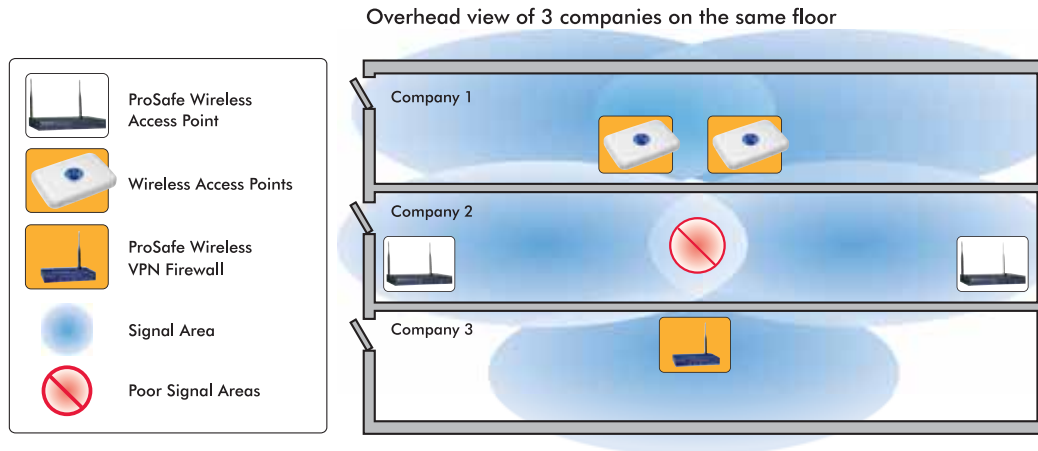
Key Benefits

- Increase productivity: NETGEAR ProSafe Access Points 802.11 with embedded IntelliFi technology provide wireless LAN users with a stable, high-performance network connection, even as they move throughout the area from one access point to the next.
- Reduce total cost of ownership: NETGEAR IntelliFi eliminates the need for expensive site surveys or channel maps. NETGEAR ProSafe Access Points with IntelliFi self-organize into optimal coverage, eliminating dead spots due to interference.
- Improve scalability: When user density increases, NETGEAR ProSafe Access Points with IntelliFi can be installed easily to provide more channels. The other access points adjust their signal, reconfiguring for optimal coverage. Users are connected to the clearest channel.

Sharing Space

NETGEAR ProSafe Wireless Access Points with IntelliFi minimizes problems when different wireless networks are located close together. Conventional wireless devices will suffer from poor performance due to interference. NETGEAR ProSafe Wireless Access Points with IntelliFi improves performance and security in crowded environments.

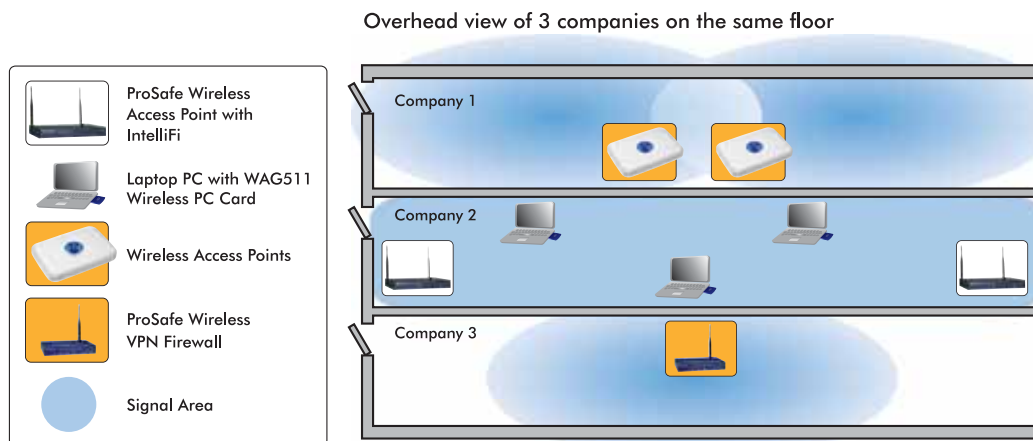
Before



Opportunity:

A 20-person company moved into a new 3,750 square-foot office space, in a building with two other companies in the same floor. The office manager wants to use wireless networking to reduce installation costs and increase workspace flexibility. Because of the close proximity to other access points, there are overlapping signals, resulting in interference and dead zones.

After



Solution:

Purchase NETGEAR ProSafe 802.11 Wireless Access Points and ProSafe Dual Band Wireless PC Cards WAG511. The IntelliFi technology monitors and tunes the wireless signal to avoid interference, connects users with the strongest, least-loaded access point, providing fewer dead zones and connection drops, while strengthening security.

Key Benefits

- Improve security: NETGEAR ProSafe 802.11 Wireless Access Points with embedded IntelliFi adjust transmit power to the minimum required to reach an IntelliFi-enabled wireless adapter-no stray signals outside the office!
- Increase productivity: Automatically selects the clearest channel, avoiding interference from other wireless access points.
- Maximum flexibility: Users equipped with IntelliFi-enabled NETGEAR ProSafe WAG511 can move freely throughout the office. The roaming feature quickly detects movement and jumps to the most underused access point. Load balancing feature proactively monitors the wireless LAN and evenly distributes the load among available access points.

	WAG302	WG302	WG102
Wireless Support	<ul style="list-style-type: none"> • IEEE 802.11a 54 Mbps - up to 108 Mbps • IEEE 802.11g 54 Mbps - up to 108 Mbps • Backward compatible to 802.11b-based networks 	<ul style="list-style-type: none"> • IEEE 802.11g 54 Mbps - up to 108 Mbps • Backward compatible to 802.11b-based networks 	<ul style="list-style-type: none"> • IEEE 802.11g 54 Mbps - up to 108 Mbps • Backward compatible to 802.11b-based network
Frequency Rate	2.4 GHz and 5.0 GHz	2.4 GHz	2.4 GHz
IntelliFi RF Management and Control	<ul style="list-style-type: none"> • Dynamic Transmit Power Control • Automatic Channel Selection • Load Balancing and RF Privacy when used with WAG511 Wireless PC Card 	<ul style="list-style-type: none"> • Dynamic Transmit Power Control • Automatic Channel Selection • Load Balancing and RF Privacy when used with WAG511 Wireless PC Card 	<ul style="list-style-type: none"> • Dynamic Transmit Power Control • Automatic Channel Selection • Load Balancing and RF Privacy when used with WAG511 Wireless PC Card
Ports	<ul style="list-style-type: none"> • LAN Port: One (1) 10/100BASE-T Ethernet (RJ-45) port with Auto Uplink™ and IEEE 802.3af Power over Ethernet (PoE) support • Console Port: One (1) with standard RS-232C interface with DB-9 male connector • Antenna Connectors: Two (2) 5 dBi reverse SMA 	<ul style="list-style-type: none"> • LAN Port: One (1) 10/100BASE-T Ethernet with IEEE 802.3af Power over Ethernet (PoE) support • Console Port: One (1) with standard RS-232C interface with DB-9 male connector • Antenna Connectors: Two (2) reverse SMA 	<ul style="list-style-type: none"> • LAN Port: One (1) 10/100BASE-T Ethernet with IEEE 802.3af Power over Ethernet (PoE) support • Antenna Connector: One (1) reverse SMA
PoE (Power Over Ethernet)	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3af PoE
PoE Power Consumption	10 Watts	9 Watts	4.3 Watts
Wireless Distribution System (WDS)	<ul style="list-style-type: none"> • Repeater • Point-to-point/multi-point • Simultaneous bridge & wireless client association 	<ul style="list-style-type: none"> • Repeater • Point-to-point/multi-point • Simultaneous bridge & wireless client association 	<ul style="list-style-type: none"> • Repeater • Point-to-point/multi-point • Separate bridge and access point
SSID	Single, upgradeable to multiple	Single, upgradeable to multiple	Single, upgradeable to multiple
VLAN support	Single, upgradeable to multiple	Single, upgradeable to multiple	Single, upgradeable to multiple
Antenna	Two (2) 5 dBi detachable (2.4 GHz and 5.0 GHz)	Two (2) 5 dBi detachable	One (1) 5 dBi detachable
User support	Up to 128 users	Up to 64 users	Up to 64 users
Security	<ul style="list-style-type: none"> • Wi-Fi Protected Access (WPA/WPA2), 802.11i • Multiple VPN pass-through support • MAC address filtering with access control lists -up to 256 users • 802.1x RADIUS support with EAP, TLS, TTLS, PEAP • Block SSID Broadcast • Secure SSH Telnet • Secure Socket Layer (SSL) remote management login • Peer-to-peer blocking so users may not access another user's PC 	<ul style="list-style-type: none"> • Wi-Fi Protected Access (WPA/WPA2), 802.11i • Multiple VPN pass-through support • MAC address filtering with access control lists -up to 256 users • 802.1x RADIUS support with EAP, TLS, TTLS, PEAP • Rogue AP detection • Block SSID Broadcast • Secure SSH Telnet • Secure Socket Layer (SSL) remote management login • Peer-to-peer blocking so users may not access another user's PC 	<ul style="list-style-type: none"> • Wi-Fi Protected Access (WPA/WPA2), 802.11i • Multiple VPN pass-through support • MAC address filtering with access control lists -up to 256 users • 802.1x RADIUS support with EAP, TLS, TTLS, PEAP • Block SSID Broadcast • Secure Socket Layer (SSL) remote • Peer-to-peer blocking so users may not access another user's PC
WPA Support	WPA/WPA2 - Enterprise, 802.11i	WPA/WPA2 - Enterprise, 802.11i	WPA/WPA2 - Enterprise, 802.11i
Network Management	SNMP v1, v2c (MIB I, MIB II, and 802.11 MIB)	SNMP v1, v2c (MIB I, MIB II, and 802.11 MIB)	SNMP v1, v2c (MIB I, MIB II, and 802.11 MIB)
User Interface	Smart Wizard Install Assistant and browser-based interface	Smart Wizard Install Assistant and browser-based interface	Smart Wizard Install Assistant and browser-based interface
Remote Configuration	Remote through Web browser, SNMP or Telnet with command line interface (CLI) Remotely configure, update and monitor multiple WAG302s simultaneously via FTP	Remote configuration and management through Web browser, SNMP or Telnet with command line interface (CLI) Remotely configure, update and monitor multiple WG302s simultaneously via FTP	Remote configuration and management through Web browser or SNMP Remotely configure, update and monitor multiple WG102s simultaneously via FTP
ProSupport Services	<ul style="list-style-type: none"> • OnCall 24x7: PMB0331 • XPressHW: PRR0331 	<ul style="list-style-type: none"> • OnCall 24x7: PMB0331 • XPressHW: PRR0331 	<ul style="list-style-type: none"> • OnCall 24x7: PMB0331 • XPressHW: PRR0331
Warranty	3 years	3 years	3 years



4500 Great America Parkway
Santa Clara, CA 95054 USA
Phone: 1-888-NETGEAR (638-4327)
E-mail: info@NETGEAR.com
www.NETGEAR.com

©2006 NETGEAR, Inc. NETGEAR, the NETGEAR logo, Connect with Innovation, Everybody's connecting, the Gear Guy logo, IntelliFi, ProSafe, RangeMax and Smart Wizard are trademarks or registered trademarks of NETGEAR, Inc. in the United States and/or other countries.

BPRFGUIDE11205

April 2006

About NETGEAR

NETGEAR is a leading manufacturer of affordable, easy-to-install end-to-end 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.