

NETGEAR®
BUSINESS

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Go wire-free and
grow your office
network fast

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Mesh WiFi is the modern way to give businesses flexible, fast WiFi at a consistent high-quality everywhere in a location: from the WiFi base station right to the farthest user or device. Also, it is a cost-effective, easy and rapid way to expand office or site networks, without the hassle and investment of installing cables.

The latest evolution in mesh WiFi is Instant Mesh, developed by NETGEAR to give both end user organizations and installers an effortless, affordable and simple way to take office WiFi up to the next level. Instant Mesh is ideal for buildings where installing new cables is hard or impossible, or for temporary locations, or just to provide a fast answer to network overload. A rapid way for businesses to extend or improve networks fast, Instant Mesh also provides long-term flexibility to cost-effectively grow those networks even more.

**NEXT LEVEL
OFFICE WIFI**

The challenge

Organizations of all kinds have very simple expectations from their internal networks. They want them to support all their users and devices, be reliable and fast; and universally consistent across every part of a site. It does not sound much to ask, but in many cases, installing - let alone extending or improving - a network can be difficult, even impossible, especially when it needs to happen quickly. More on that shortly, but here are a couple of examples of the type of network challenges businesses face today:



A college has quickly built a separate classroom block to accommodate an influx in students arriving next month. The problem is that there are no cables running anywhere in the vicinity and the college needs to find a solution fast.



A construction firm has rapidly expanded its current project site and needs to be able to satisfy the demands of its growing number of employees and contractors. Teams, who roam all over the huge site, need seamless connectivity everywhere.



A rapidly-growing creative agency has rented a brand-new warehouse conversion downtown. It needs superior network connectivity at every corner of the building and has to get that sorted within a couple of hours, otherwise there are going to be 50 frustrated employees unable to get on with their work, such as sending image files or video presentations to clients.



Why traditional answers don't always work

Businesses have a couple of ways to improve their internal networks. First, they could install Ethernet cables, but that is often not viable. The business may not own the building, so does not have permission to access ceiling voids or install permanent equipment. Plus, installing cables can be prohibitively time-consuming, disruptive and expensive, and making future changes is hard.

The alternative is to extend the range of the root WiFi base station with extenders and depending on the layout, number of users and devices, that can work. The downside is that across a large area, and supporting lots of users and devices, the quality of the WiFi will drop off - or even disappear - the farther away from the root base station. This is because the signal is essentially weakened with every additional hop, because it is simply being repeated. Furthermore, those dead-spot problems are still not solved.

ELEGANTLY
SIMPLE
SOLUTION



Mesh – zero cable network expansion

There is another way: use the latest in mesh wireless networking, which solves all the problems described in an elegantly simple and effective way. Mesh has been around for a couple of years, but it has evolved a great deal in recent times, plus not all definitions and types of mesh products are the same, so it is important to understand what it really is and also some of the variable factors that make the difference between an average and a great mesh network. More on that later, but first, here is a quick definition of what mesh is and why it is so beneficial.

A mesh network act as single, seamless WiFi system, with all nodes forwarding all the data from one to another and users able to have the same WiFi experience wherever they roam on the site. The WiFi strength can be uniformly strong for every user and device, right to the outer limits of the coverage area, even when multiple hops from the root base station have taken place. VLANs can also be propagated across the mesh network.

Plus, all this is achieved without lots of extra wires. Mesh has the potential to give businesses access to industrial-grade network technology, without the hassle and cost of installing cables. That's the theory: the key is choosing the right mesh solution. Not all mesh products are equal.

Seven things to look for when choosing a mesh system

1. Number of users and devices that need supporting
2. Simplicity and speed of set-up - does it work 'out of the box'?
3. Simple, centralized management - is that provided and how intuitive is it?
4. Option of ethernet or PoE ports - for extra flexibility, as well as wireless?
5. Bandwidth innovation - are the latest enhancements that boost speed included?
6. Topography - star or daisy-chain design? For power-business users, star is best.
7. Security - features such as segregated guest and employee networks.



Introducing Insight Instant Mesh by NETGEAR

NETGEAR Insight Instant Mesh is designed specifically for today's medium-sized businesses, who need more than the simplicity of consumer or prosumer mesh products, but do not want the complexity and cost of solutions designed for large enterprises. Able to support up to 600 people across a large surface area, Instant Mesh also supports at least double the throughput and number of apps compared to the nearest competitive product.

NETGEAR Insight Instant Mesh combines two industry leading and innovative technologies: patented tri-band mesh WiFi and the Insight remote management platform. Instant Mesh supports NETGEAR's commercial-grade, high-performance wireless access point, the WAC540, and the newly released mesh WiFi multi-mode access point WAC564.

This is thanks to a blend of patented innovations, including: NETGEAR's unique tri-band WiFi technology, dedicated backhaul (so that WiFi bandwidth is maximized for users and not taken up by the system's own communications); advanced antennae design; and a star design that ensures consistent and uniform network performance, right to the outer limits of the area covered.

WAC540 and WAC564 can be used in a mix-and-match fashion, giving businesses the ultimate flexibility in network design and deployment. The WAC540 is ideal for businesses that run on WiFi networks. Its PoE feature and industrial design make it ideal for either ceiling mounting or wall-mounted placement. The WAC564, with its integrated 4-port gigabit Ethernet switch, designed for either desktop or wall mounting, is perfect for businesses that run on a mix of both WiFi and Ethernet networks.

REMOTE
MANAGED
MESH WIFI

Management made simple

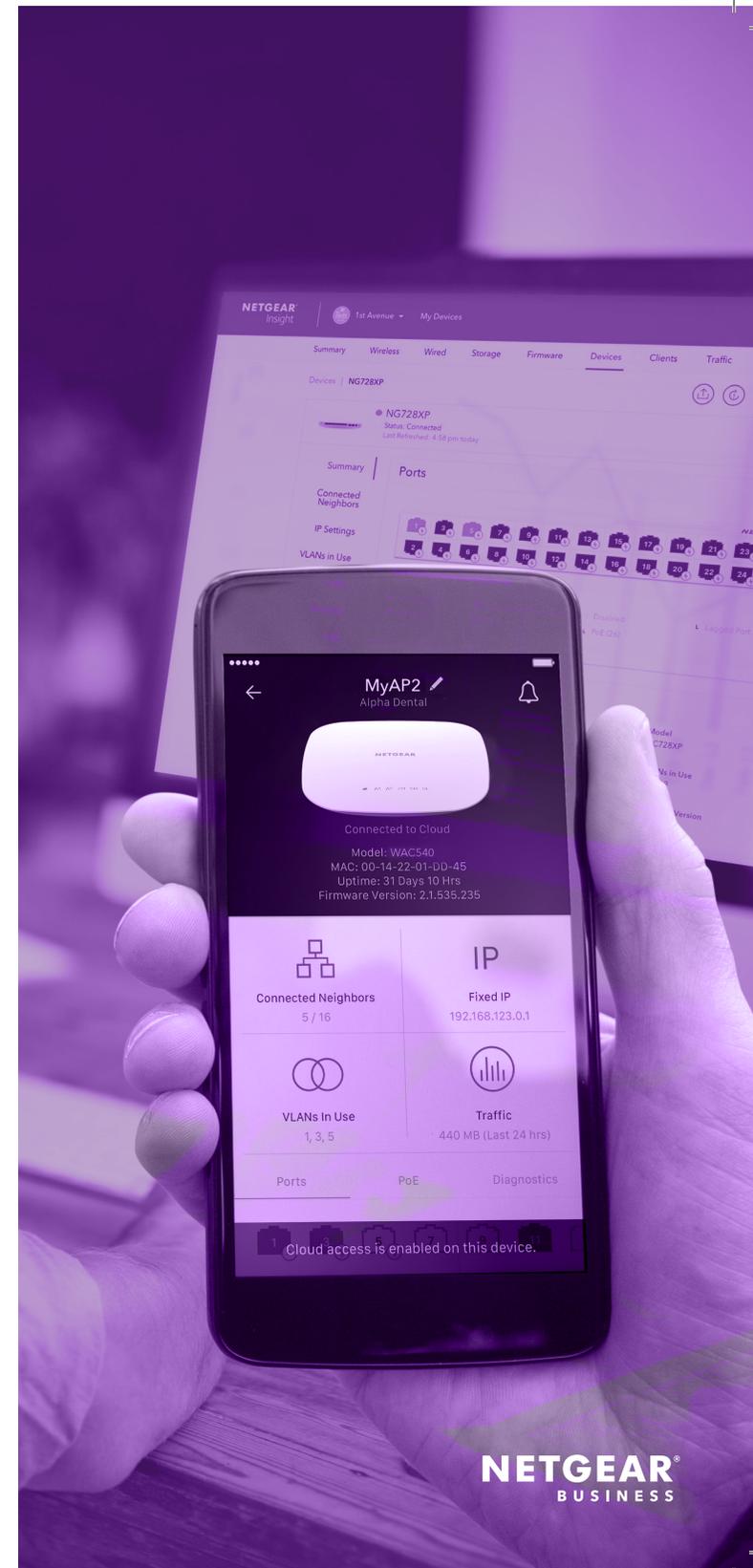
The second key ingredient within Instant Mesh is Insight, NETGEAR's cloud-based remote network management platform. Already found in other parts of the NETGEAR product portfolio, Insight is popular with both end user organizations and managed service providers (MSPs). It makes deployment of networks fast and simple, without requiring specialist skills. However, when help is needed, it is backed by NETGEAR technical support.



Insight will automatically discover all the mesh access points in the vicinity, claim them, and then guide the user through how to configure the network. This process can take just minutes: compare that to the old-world approach of digging holes in ceilings or walls, then dragging cables through them.

With the use of the Insight web portal or mobile app and a few clicks or taps of the screen, a network can be easily expanded to increase the coverage area by adding up to 5 WAC540 or WAC564 units. One of the five units will need to be designated as the root, which connects the WiFi network to the internet. The other four units are named as extenders to expand the reach of the WiFi coverage. Either WAC540 or the WAC564 can be the root or the extender, configured by the user, or configured and optimized by Insight automatically.

Once set-up, Insight then monitors the network's performance, makes it easy to change configurations, tweak performance through traffic management features, as well as providing analytics on network usage. Separate WiFi networks (SSIDs) can be set up for different user groups, such as employees or guests.





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ON-GOING
REVENUE
STREAM

User scenarios

No two customer requirements or scenarios are exactly the same, but here are a few examples of situations for which mesh - and Instant Mesh - are ideal:

A firm expanding across two floors - needs to provide WiFi to 500 staff

Temporary office - support 200 on-site construction workers

Schools and colleges - quickly accommodate new student levels

No access to cables - in landlord-owned and heritage buildings

Airport terminal - separate WiFi networks for staff and travellers

Museums and art galleries - for visitors and staff, in every corner

Virtual office spaces - provide members with consistent WiFi everywhere

Benefits to MSPs and VARs

As well as being good news for business users, Instant Mesh opens up new business potential for resellers, MSPs and other channel firms. First, it hugely reduces the cost of deployment, so that site visits are an option, not a necessity. The minimal disruption and cost make it an attractive proposition to sell to customers, and can be integrated into value-added service bundles, taking the customer relationship beyond one-time box-selling, to one that is on-going. Using the Insight portal, MSPs can even manage customers' networks for them. Networks are fully segregated on the Insight platform, while giving MSPs a single pane of glass to monitor, configure and trouble-shoot hundreds of customer networks.

5 things to consider when setting up a mesh network

1. Number of users and devices
2. Applications to support - e.g., just WiFi, or storage networks etc?
3. Physical area to cover - surface area
4. Any location challenges - for instance, awkward layout
5. Quality of the broadband coming into the location



Devices | NG728XP

NG728XP
Status: Connected
Last Refreshed: 4:58 pm today

Summary

Connected Neighbors

IP Settings

VLANs in Use

Traffic

Statistics

PoE

Port Mirroring

Cable Test

Ports



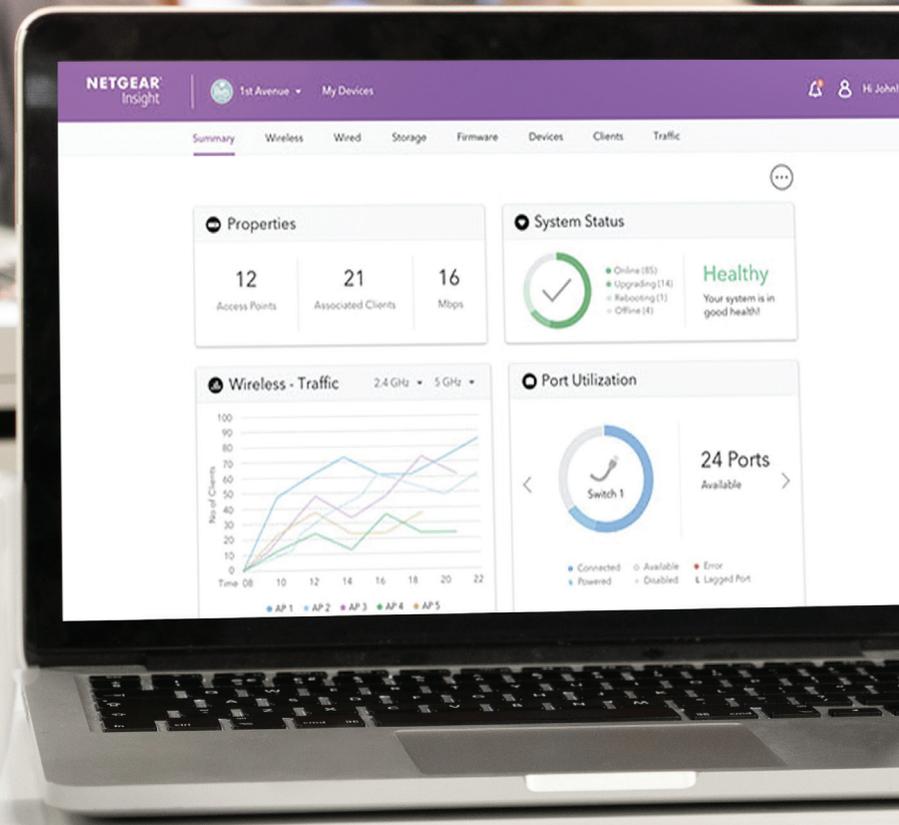
Connected (1)
Connected & Powered (1)
Disabled
Available
Error
PoE (26)

Device Details

Name NG728XP	Serial Number S13174N00026	Model G728XP
MAC 10-DA-43-D8-A2-95	Uptime 02 Days 18 Hrs 26 Mins	VLANs in Use 3, 4089
Traffic 440 MB	IP Address 192.168.0.15	Firmware Version 10.13.0.1

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WAC564 and WAC540 in more detail

These are two separately but entirely complementary products that, together with Insight, enable businesses to build customized and powerful networks fast. A variety of combinations are possible: the WAC564 is a multi-mode access point that can be used in multiple ways: as a mesh extender, as a standalone access point, or as a full mesh network node. WAC564 can connect with up to 4 other WAC564s, or with an existing WAC540 configuration to create a full mesh network.

Both use Tri-band Mesh WiFi, VLAN management and can be set-up, configured and controlled using the Insight Cloud managed portal. They both have their own individual features: WAC540 has integral Power over Ethernet (PoE), while the WAC564 can act as Integrated Ethernet Switch. WAC540 is designed for wall or ceiling mounting, while the WAC564 is suitable for walls and desktop installation.

	Tri-band Mesh WiFi	PoE	Integrated Ethernet Switch	Insight Cloud Managed	VLAN management	Mounting
 <p>WAC564</p>	Yes	No	Yes	Yes	Yes	Desktop/Wall
 <p>WAC540</p>	Yes	Yes	No	Yes	Yes	Wall/Ceiling

