NETGEAR® BUSINESS

Insight Managed Gigabit Ethernet Smart Cloud Switches

Experience the most versatile and easy to manage switches in the market

As a leading provider of network equipment for SMBs, NETGEAR® understands the importance of reliable and high performance networks. With the growth of virtualization, cloud-based services and applications like VoIP, video streaming and IP surveillance, SMB networks need to extend beyond simple reliability to simpler management and remote monitoring to ensure your network is "always up".

NETGEAR also understands that small business owners shouldn't have to understand networking and IT; they need a network that's easy-to-setup and is reliable, so they can focus on their business, not their network. To that end, NETGEAR is introducing our most versatile and easy-to-manage switches ever, NETGEAR Insight Managed Smart Cloud switches.

The Insight Managed Smart Cloud Gigabit Ethernet Switches are the first switches from NETGEAR with anywhere configuration and management. Using either the NETGEAR Insight app on your mobile device or tablet, or the Insight Cloud Portal from your PC, Mac, or tablet, you can quickly discover, setup, monitor and manage your Smart Cloud Switches from anywhere in the world! With their remote cloud manageability, sleek design silent or whisper-quiet operation, they are the most versatile switches in the market for any environment.

Whether at home, out of the office or on a business trip, you can still manage and monitor your network as if you were right there.

More innovative features for the most versatile and easy-to-manage switches in the market

Your network. Anytime. Anywhere.

The NETGEAR Insight Managed Smart Cloud Switches fundamentally change the way you think of networks and IT. Using the NETGEAR Insight app with Insight Managed Smart Cloud Switches and Wireless Access Points provides:

- Instant in-app discovery & set-up
- Local or remote configuration and monitoring from your mobile device, PC, Mac or tablet

- Centralized network configuration polices with auto-join and configure (zero-touch provisioning)
- Multi-site/remote network management and monitoring with single pane-of-glass view
- Multi-switch/multi-port concurrent configuration using the Port Config Wizard

Remote monitoring and management from the palm of your hand!

With the NETGEAR Insight app, you can setup, manage, and monitor your networks from anywhere, anytime, from the palm of your hand on your phone or tablet! Or, for a larger screen experience, you can use the Insight Cloud Portal from your PC, Mac, or tablet web browser.

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Network-centric configuration and management

NETGEAR Insight Managed Switches and Wireless Access Points using the NETGEAR Insight app allow for cross-device automated configuration of VLANs, QoS, ACLs, and LAGs. Auto-join and configure (zero-touch privisioning) allows for additional devices added seamlessly.

Fully-integrated cloud-manageable devices

NETGEAR Insight Managed switches are fully-integrated, cloud-manageable, plug-and-play devices. Just connect to your network and without any setup, they're passing traffic. For configuration setup, management, and monitoring, you can use the Insight mobile app on your mobile device or the Insight Cloud Portal from your PC, Mac, or tablet web browser. No additional cloud controller, appliance, network manager, or on-premise cloud server necessary.

Clean, sleek silent (or whisper-quiet) designs

Insight Managed switches have a modern, clean design, with simple power and cloud connection LEDs on the front. On the back (port side), there are also at-a-glance cloud, power, fan, and PoE max[1] LEDs for quick status monitoring, and on-port LEDs for link/activity and PoE power[1] allow for port-specific connectivity monitoring. GC110, GC110P, and GC510P models are all fanless and silent, while GC510PP has a whisper-quiet fan.

Great choice of non-PoE, PoE and PoE+ options

All models have 8 copper Gigabit Ethernet ports and two 1G SFP fiber ports for uplinks. On PoE/PoE+ models, all 8 gigabit copper ports support PoE or PoE+, with varying PoE power budgets to suit every need.

Build a future-proof network with NETGEAR Insight Managed Switches

- Extensive L2+/L3 Lite switching features including static routing
- Comprehensive IPv6 management, QoS and ACL support, ensuring investment protection and a smooth migration to IPv6-based networking
- Advanced QoS with IPv4/IPv6 ingress traffic filtering (ACLs) and prioritization (QoS)
- Dynamic VLAN assignment for easy user authentication and location independent access to network
- Up to 195W PoE power, with the flexibility to add power-hungry devices such as 11ac Wireless APs, VoIP voice and video phones, security/surveillance cameras including PTZ, and other IoT devices
- Advanced per-port PoE controls (set specific power budget per port in addition to automatic class-defined) and PoE scheduling on PoE models

NETGEAR quality and reliability

- Industry-leading 5-year Limited Hardware Warranty*
- Minimal down-time with Next-Business-Day Replacement Warranty
- Get deployment assistance with 90-days Free Advanced Technical Support**

[1] On PoE models only (GC110P, GC510P, and GC510PP).

Insight Managed Gigabit Ethernet Smart Cloud Switches

Hardware at a Glance

	FRONT	REAR						SIDE
Model Name	Form-Factor	LEDs (System)	100M/1G Copper (RJ-45) Ports	1G SFP Fiber Ports	PoE/PoE+ Ports (Budget)	LEDs (Per Port)	Power Supply	Fans
GC110	Desktop, Wall mount	Cloud, Power	8	2 (dedicated)	N/A	Speed/Link/ Activity	External adapter	Fanless
GC110P	Desktop, Wall mount	Cloud, Power, PoE Max	8	2 (dedicated)	8 PoE (62W)	Speed/Link/ Activity, PoE	External adapter	Fanless
GC510P	Desktop, Wall mount, Rackmount (kit)	Cloud, Power, PoE Max	8	2 (dedicated)	8 PoE+ (134W)	Speed/Link/ Activity, PoE	1 internal PSU, fixed	Fanless
GC510PP	Desktop, Wall mount, Rackmount (kit)	Cloud, Power, PoE Max, Fan	8	2 (dedicated)	8 PoE+ (195W)	Speed/Link/ Activity, PoE	1 internal PSU, fixed	1 internal fan, fixed

GC110: 8-Port Gigabit Ethernet Insight Managed Smart Cloud Switch w/2 SFP Fiber Ports

- 8 x 1000BASE-T Copper ports supporting 1G/100M speeds
- 2 x 1000BASE-X Dedicated SFP Fiber ports
- Fanless (0dB)

GC110P: 8-Port Gigabit Ethernet PoE Insight Managed Smart Cloud Switch w/2 SFP Fiber Ports

- 8 x 1000BASE-T Copper PoE ports supporting 1G/100M speeds
- 2 x 1000BASE-X Dedicated SFP Fiber ports
- 62W PoE budget (fanless, 0dB)

GC510P: 8-Port Gigabit Ethernet PoE+ Insight Managed Smart Cloud Switch w/2 SFP Fiber Ports

- 8 x 1000BASE-T Copper PoE+ ports supporting 1G/100M speeds
- 2 x 1000BASE-X Dedicated SFP Fiber ports
- 134W PoE budget (fanless, 0dB)

GC510PP: 8-Port Gigabit Ethernet PoE+ High-Power Insight Managed Smart Cloud Switch w/2 SFP Fiber Ports

- 8 x 1000BASE-T Copper PoE+ ports supporting 1G/100M speeds
- 2 x 1000BASE-X Dedicated SFP Fiber ports
- 195W PoE budget (max 28dB @ 25°C / 77°F ambient)

Software at a Glance

MANAGEMENT		LAYER 2+ / LAYER 3 LITE FEATURES							
Device Management	Network-wide Management	IPv4/IPv6 ACL and QoS	IPv4/IPv6 Multicast Filtering	VLANs	Auto-VoIP, Auto-Video	Convergence	Link Aggregation/ Port Trunking	Jumbo Frame Support	IPv4 & IPv6 Static Routing
NETGEAR Insight mobile app or Insight Cloud Portal for local/ remote/anywhere management from your mobile device, PC, Mac, or tablet Local web browser- based management GUI IPv4 & IPv6 management	Centralized network configuration (policies) Auto-join & configure (zero-touch provisioning) Multi-site, multi-network single pane- of-glass view Multi-switch/ multi-port concurrent configuration	L2, L3, L4 Ingress	IGMP and MLD Snooping	Static, Dynam- ic, Voice, Video, MAC, Protocol- based, and Private	Yes	LLDP-MED, RADIUS, 802.1X	LACP and Manual Static LAGs (up to 5 LAGs with max 8 members)	Yes (up to 9,216 packet size)	Yes

Performance at a Glance

Model Name	CPU & Memory	Fabric (Full- duplex)	Latency (64-byte Packet)	Packet Buffer	Packet Forwarding Rate (64-byte)	ACLs	MAC Address Table ARP/NDP Table VLANs	Static Routes (IPv4 & IPv6)	Priority Qeues	Mul- ticast IGMP Groups
GC110 GC110P GC510P GC510PP	400 MHz Cortex- A9 Single Core, 256MB RAM 8MB SPI + 256 NAND FLASH	20Gbps line-rate	1G Copper: 3.000 µs 1G SFP: 2.000 µs	1.5 MB	14.9 Mfps	100 (shared)	16K MAC (dynamic) 384 ARP/128 NDP 256 VLANs	IPv4: 32 IPv6: 31	8 (WRR)	512

Features and Benefits

Hardware Features	
Fully-integrated Cloud-manageable Devices	Require no additional hardware (cloud keys, network portals, local servers, VPN or proxy appliances etc) to directly connect to the cloud and allow remote management. No additional hardware, no software or server to setup; nothing. Just connect and go.
1000BASE-T Copper Ethernet PoE (GC110P)/ PoE+ (GC510P/GC510PP) connections	Support high-density VoIP, Surveillance and Wi-Fi AP deployments, scalable for future growth. Never face the risk of running out of PoE ports or PoE power budget.
1000BASE-X SFP ports	Two dedicated Gigabit SFP ports Dedicated SFP ports provide fiber uplinks without sacrificing any downlink copper Gigabit Ethernet port, and across long distances. Support for Fiber and Copper modules.
Front Cloud & Power LEDs	Quickly confirm switch has power and is connected to the cloud/internet.
Silent or Low (GC510PP) Acoustics	Fanless design (all except GC510PP) allows for silent operation; temperature- and load-based fan-speed control (GC510PP) provides whisper-quiet operation; great for deployment in noise-sensitive environments.
Energy Efficient Ethernet (IEEE 802.3az)	Maximum power reduction for ongoing operation cost savings.
Desktop, Wall mount, or Rackmount (GC510P, GC510PP)	Flexible deployment on desktop, wall or other location using 75mm VESA-compliant mounts, or rackmount using the included rackmount kit (GC510P, GC510PP only).
Kensington Lock Slot	Prevent theft, removal, or tampering when used for desktop deployment.
Software Features	
Remote setup, management, and monitoring anywhere, anytime, from your mobile device, PC, Mac, or tablet	Locally or remotely setup, configure, manage, monitor or even trouble-shoot your network from anywhere, anytime. Check network status, view dashboards for network health and activity, power cycle PoE ports, etc, and update firmware remotely. No need to be on-site, open up ports to your network, or VPN into it.
Auto-join and Configure (Zero-Touch Provisioning)	Additional Insight Managed devices added to the network automatically inherit settings and configuration.
Multi-site, Multi-network Single Pane-of-Glass View	View and configure multiple networks across multiple sites, all from one single app; NETGEAR Insight.
Comprehensive IPv6 Support for Management, ACLs and QoS	Build current network with future in mind. Ensure investment protection and a smooth migration to an IPv6-based network without switch replacement.
IPv4 & IPv6 Static Routing	A simple way to provide segmentation of the network with internal routing through the switch – reserving the router for external traffic routing only, making the entire network more efficient.
Robust security features: • 802.1x authentication (EAP) • Port-based security by locked MAC • ACL filtering to permit or deny traffic based on MAC and IP addresses	Build a secured, converged network with all types of traffic by preventing external attacks and blocking malware while allowing secure access for authorized users.
Comprehensive QoS features: • Port-based or VLAN 802.1p-based prioritization • Layer 3-based (DSCP) prioritization • Port-based egress rate limiting	Advanced controls for optimized network performance and better delivery of mission-critical traffic such as voice and video.

Software Features (continued)	
Auto-VoIP, Auto-Voice VLAN, and Auto-Video VLAN	Automatic Voice over IP prioritization (Auto-VoIP) simplifies most complex multi-vendor IP telephone deployments either based on protocols (SIP, H.323 and SCCP) or on OUI bytes (default database and user-based OUIs) in the phone source MAC address, providing the best class of service to VoIP streams (both data and signaling) over other ordinary traffic by classifying traffic, and enabling correct egress queue configuration. Similarly, Auto-Video VLAN enables IGMP snooping to minimize broadcast streams.
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.
Protected Ports	Ensure no exchange of unicast, broadcast, or multicast traffic between the protected ports on the switch, thereby improving the security of your converged network. This allows your sensitive phone phone conversations to stay private and your surveillance video clips can be forwarded to their designated storage device without leakage or alteration.
DHCP Snooping	Ensure IP address allocation integrity by only allowing DHCP messages from trusted DHCP servers and dropping malformed DHCP messages with a port or MAC address mismatch.
Dynamic VLAN Assignment (RADIUS)	IP phones and PCs can authenticate on the same port but under different VLAN assignment policies. Users are free to move around and enjoy the same level of network access regardless of their physical location on the network.
Private VLAN	Private VLANs help reduce broadcast with added security.
Port Trunking/Link Aggregation (LACP)	Build up bigger bandwidth to support aggregated uplink/downlink traffic or to provide redundant link(s). Aggregate up to 8 ports for 8Gbps connections.
Loop Prevention and Auto-DoS Prevention	Detect and prevent (auto port shutdown) accidental network loops and protect against DoS attacks.
PoE Timer and Scheduling (except GC110)	Allows IT administrators to increase network security, better utilize network resources and conserve energy by scheduling or remotely controlling on/off of PoE ports.
Port Mirroring and Cable Test	Many-to-one port mirroring for better and quicker network diagnostics and troubleshooting. Cable test easily identifies bad Ethernet cables.
Firmware Updates from Cloud	Direct cloud-to-device firmware updates, initiated and/or scheduled using the Insight app, all from the palm of your hand, anytime, anywhere!
Multiple Language Local GUI	Product documentation and local-only web user interfaces are translated, giving you the ability to select your preferred language[2].

[2] English, German, and Japanese are the current supported languages in the local-only web GUI. The Insight mobile app and Insight Cloud Portal support local languages per the device used (phone or computer browser).
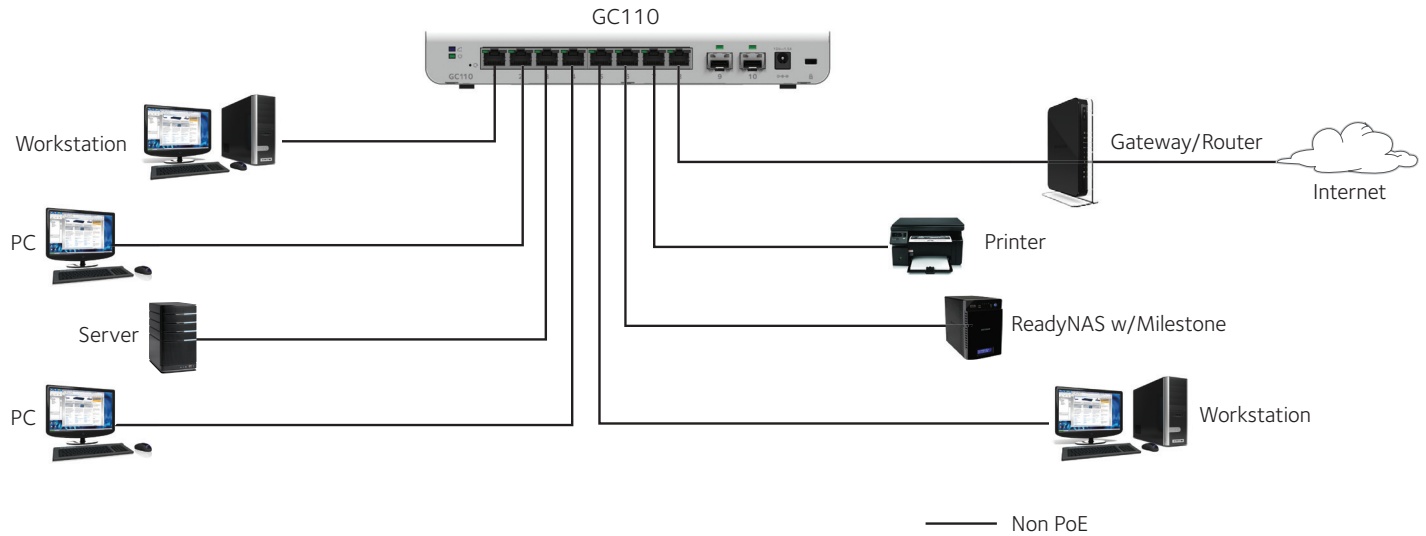
Why Insight Managed Smart Cloud Services

NETGEAR is revolutionizing unified, centralized network management with it's new line of Insight Managed Smart Cloud Switches and Wireless Access Points, all managed from the palm of your hand, anytime, anywhere, on your phone or tablet using the NETGEAR Insight mobile app. Or, for a larger screen experience, from your PC, Mac, or tablet web browser using the Insight Cloud Portal.

- Ideal for SMBs, offices, retail stores, education, healthcare, owner-operated businesses, etc.

- IT expert or no networking experience at all: Insight Managed Smart Cloud Switches let you focus on your business, not maintaining your network.

- Know immediately if and when your network is not running perfectly; not after you've already lost business or suffered significant down-time.

- Advanced L2+/L3 Lite network features such as IPv4/IPv6 management, VLANs, DiffServ QoS, LACP Link Aggregation, Spanning Tree, Static Routing, advanced per-port PoE controls and PoE scheduling will satisfy even the most advanced small business networks.

- Fundamentally change and simplify network usability for easier and smoother deployment of voice, video, and WLAN on the same converged platform.

- Industry-leading 5-year warranty on switches, 5-year Next-Business-Day (NBD) replacement, and 90-days free technical support** for peace-of-mind.
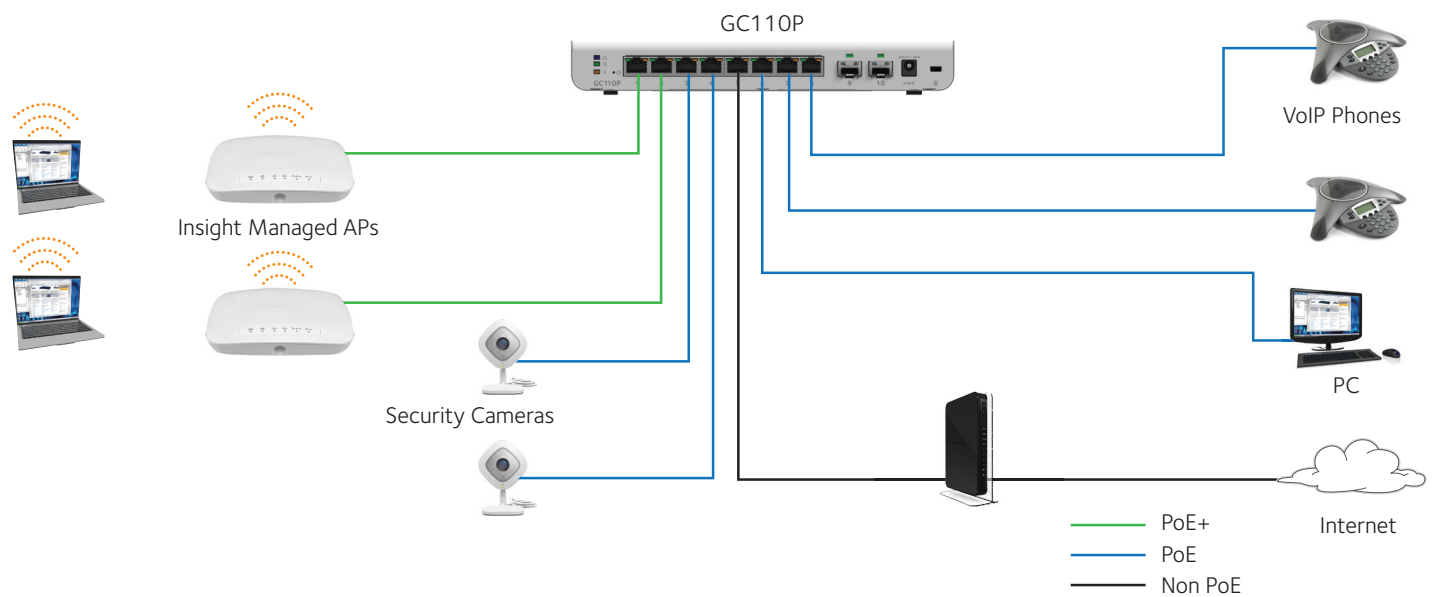
Within small and medium-sized organizations, there is growing adoption of PoE devices such as VoIP phones, IP security cameras, wireless access points, proximity sensors, LED lighting, door locks, and other IoT devices that require network switches capable of supporting dense PoE installations. Wireless access points and pan-tilt-zoom HD cameras using Wave 2 802.11ac Wi-Fi also require PoE+ power (802.3at), increasing the power demands on PoE switches. Therefore, PoE-capable versions (GC110P, GC510P, GC510PP) are designed with PoE power budgets to meet the current and future needs of wireless converged networks.

Example Application

In A Business/ Retail Environment

GC110

Workstation

PC

Server

PC

Gateway/Router

Internet

Printer

ReadyNAS w/Milestone

Workstation

—— Non PoE

In A Small Office/ Workgroup Environment

GC110P

Insight Managed APs

Security Cameras

VoIP Phones

PC

Internet

—— PoE+
—— PoE
—— Non PoE

Example Application

In A Security and Surveillance Environment

GC510PP

ReadyNAS w/Milestone

Security Cameras

Internet

—— PoE+
—— PoE
—— Non PoE
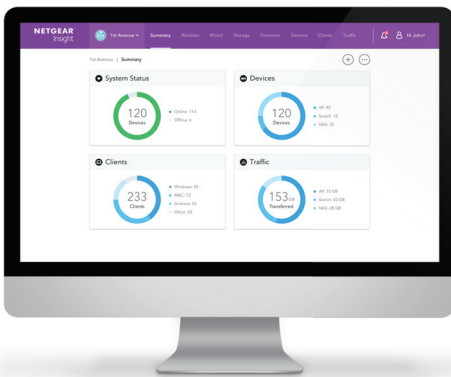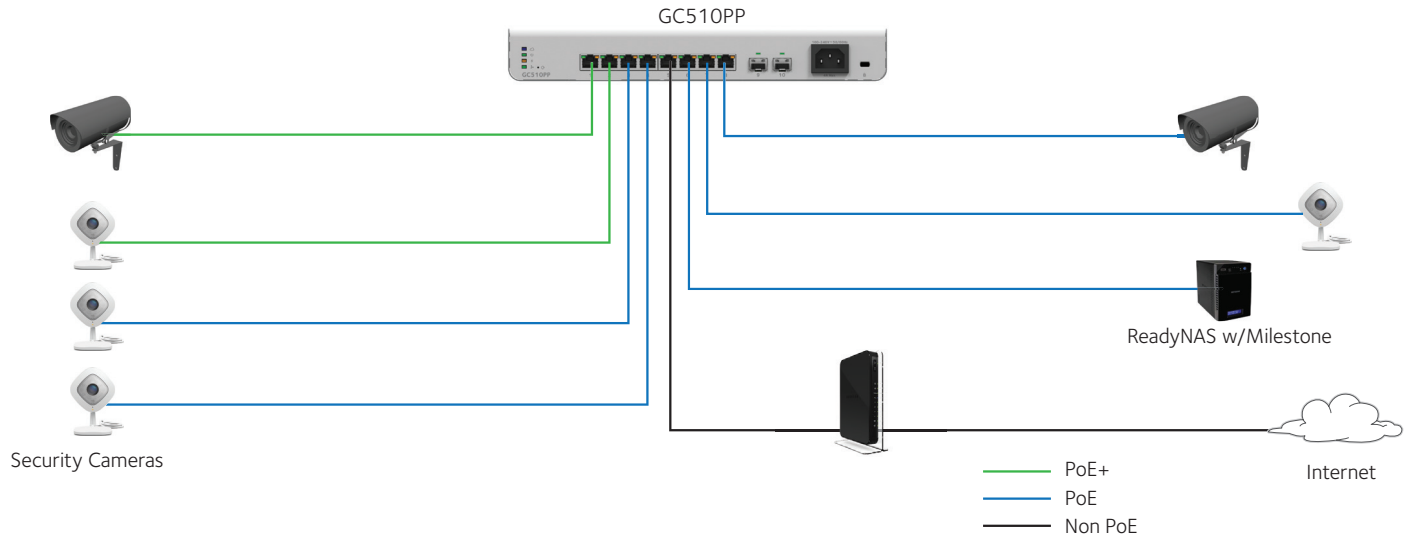
Large screen access via Insight Cloud Portal

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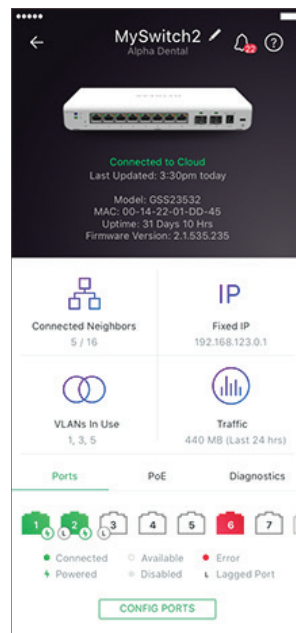
Port configuration and monitoring

Network dashboard

Single pane-of-glass view of multiple networks/locations

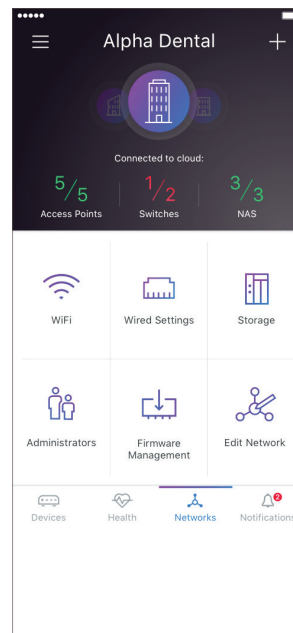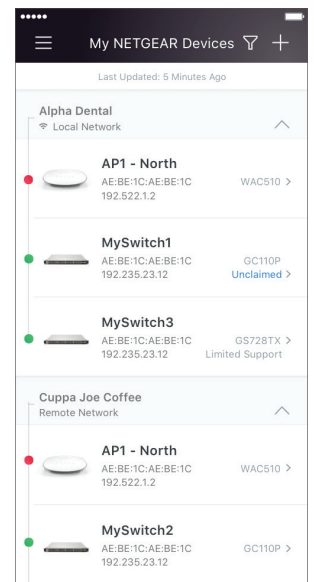| Technical Specifications	GC110	GC110P	GC510P	GC510PP
Gigabit Ethernet RJ-45 Copper ports (10M/100M/1G) - 1000BASE-T	8	8	8	8
PoE/PoE+ ports	N/A	8 PoE (62W PoE budget)	8 PoE+ (134W PoE budget)	8 PoE+ (195W PoE budget)
Gigabit SFP (fiber) ports (100M/1G) - 1000BASE-X	2 (dedicated)	2 (dedicated)	2 (dedicated)	2 (dedicated)
Power Supply	External Input: 12V/1.5A	External Input: 48V/1.67A	Internal 100-240VAC ~ 50-60Hz, 2A Max	Internal 100-240VAC ~ 50-60Hz, 4A Max
Kensington Lock	Yes (rear)	Yes (rear)	Yes (rear)	Yes (rear)
LEDs				
Front (per device)	Cloud/Internet Connection, Power			
Rear (per device)	Cloud/Internet Connection, Power	Cloud/Internet Connection, Power, PoE Max	Cloud/Internet Connection, Power, PoE Max	Cloud/Internet Connection, Power, PoE Max, Fan Status
Rear (per port)	Speed/Link/ Activity	Speed/Link/ Activity	Speed/Link/ Activity (left), PoE Power (right)	Speed/Link/ Activity (left), PoE Power (right)
Unified Network Management (Discovery, Setup, Monitoring, And Management)				
Discovery, setup, monitoring and management	NETGEAR Insight mobile app on phone or tablet; Insight Cloud Portal from PC, Mac, or tablet web browser			
Remote/Cloud management	Anywhere, anytime, from the palm of your hand using Insight mobile app or from any PC, Mac, or tablet web browser using the Insight Cloud Portal			
Centralized network configuration (policies)	Centralized network configuration (policies) across Insight Managed Switches, Wireless Access Points, and Business-class ReadyNAS Storage for VLANs, ACLs, QoS, and LAGs			
Device auto-join and configure (zero-touch provisioning)	Additional Insight Managed devices added to the network automatically inherit the network configuration			
Multi-site, multi-network single pane-of-glass view	Manage multiple sites, locations, and networks in a single view using the Insight mobile app or Insight Cloud Portal			
Multi-switch, multi-port concurrent configuration for ACLs, VLANs, QoS, PoE, etc	Apply settings and policies on multiple ports across multiple switches all at the same time using the Port Config Wizard			
Performance Specification				
CPU	400 MHz Cortex-A9 Single Core, 256MB RAM, 8MB SPI + 256MB NAND FLASH			
Packet buffer memory (Dynamically shared across only used ports)	1.5 MB			
Forwarding modes	Store-and-forward			
Bandwidth (non-blocking, full duplex)	20Gbps			
Priority queues	8			
Priority queuing	Weighted Round Robin (WRR) and Strict Priority			
MAC Address database size (48-bit MAC addresses)	16K (dynamic)			

Insight Managed Gigabit Ethernet Smart Cloud Switches

Performance Specification	GC110	GC110P	GC510P	GC510PP
Multicast Groups		512		
Number of IPv4 static routes		32		
Number of IPv6 static routes		31		
Number of ARP/NDP cache entries		384 ARP / 128 NDP		
Number of VLANs		256		
Number of DHCP snooping bindings		8K		
Access Control Lists (ACLs)		100 shared for MAC, IP and IPv6 ACLs		
Packet forwarding rate (64 byte packet size) (Mfps or Mpps)		14.9		
1G Copper latency (µsec) (64-byte; 1518-byte; 9216-byte frames)		64-byte: 3.000 µsec 1518-bye: 3.040 µsec 9216-byte: 3.100 µsec		
1G SFP Fiber latency (µsec) (64-byte; 1518-byte; 9216-byte frames)		64-byte: 2.000 µsec 1518-bye: 2.140 µsec 9216-byte: 2.180 µsec		
Jumbo frame support		Up to 9,216 packet size		
Acoustic noise level @ 25° C (dBA) (ANSI-S10.12)	0 dBA (fanless)	0 dBA (fanless)	0 dBA (fanless)	28 dBA
Mean Time Between Failures (MTBF) @ 25° C	4,013,311 hrs (458 yrs)	2,976,994 hrs (340 yrs)	692,457 hrs (79 yrs)	381,503 hrs (44 yrs)
POE Configuration				
Number of PoE (802.3af) / PoE+ (802.3at) ports	N/A	8 PoE	8 PoE+	8 PoE+
Total PoE power budget (watts)	N/A	62 W	134 W	195 W
Advanced per-port PoE controls (enable/disable/power limit)	N/A	Yes	Yes	Yes
Advanced per-port PoE scheduling/timers	N/A	Yes	Yes	Yes
L2 Services - VLANS				
IEEE 802.1Q VLAN Tagging		Yes		
MAC-based VLANs		Yes		
Auto-VoIP VLAN / Auto-Voice VLAN		Yes, based on OUI bytes (default database and user-based OUIs) in the phone source MAC address		
Auto-VoIP		Yes, based on protocols (SIP, H.323 and SCCP). Prioritzes traffic to a higher queue.		
Voice VLAN		Yes, based on either VLAN ID or 802.1p priority, packets are passed onto the connecting VoIP phone using LLDP-MED.		
Auto-Video VLAN		Yes		
Private VLAN		Yes		
L2 Services - Availability				
Broadcast, multicast, unknown unicast storm control		Yes		
IEEE 802.3ad - LAGs (LACP)		Yes		

L2 Services - Availability	GC110	GC110P	GC510P	GC510PP
IEEE 802.3x (full duplex and flow control)		Yes		
IEEE 802.1D Spanning Tree Protocol		Yes		
IEEE 802.1w Rapid Spanning Tree Protocol		Yes		
IEEE 802.1s Multiple Spanning Tree Protocol		Yes		
Layer 2 DHCP Relay		Yes		
L2 Services - Multicast Filtering				
IGMP snooping (v1, v2 and v3)		Yes		
MLD snooping support (v1 and v2)		Yes		
IGMP snooping queries		Yes		
Block unknown multicast		Yes		
Multicast VLAN Registration (MVR)		No		
Multicast groups		512		
L3 Services - DHCP				
DHCP client		Yes		
DHCP snooping		Yes		
Number of DHCP snooping bindings		8K		
L3 Services - Routing				
IPv4 static routes		32		
IPv6 static routes		31		
VLAN routing		Yes		
Host ARP table / NDP cache (number of entries)		384 ARP / 128 NDP		
ICMP Router Discovery Protocol (IRDP)		Yes		
Number of IP VLAN interfaces (routed VLANs)		15		
Link Aggregation				
IEEE 802.3ad - LAGs (LACP)		Yes		
Manual Static LAG		Yes		
# of Static or LACP LAGs # of members in each LAG		5 LAGs with max 8 members in each LAG		
Network Monitoring and Discovery Services				
802.1ab LLDP		Yes		
LLDP-MED		Yes		
Network Security				
IEEE 802.1x		Yes		
Guest VLAN		Yes		
RADIUS-based VLAN assignment via .1x		Yes		
MAC-based .1x		Yes		

Network Security	GC110	GC110P	GC510P	GC510PP
RADIUS accounting		Yes		
Access Control Lists (ACLs)		L2 / L3 / L4		
IP-based ACLs (IPv4 and IPv6)		Yes		
MAC-based ACLs		Yes		
TCP/UPD-based ACLs		Yes		
MAC lockdown		Yes		
MAC lockdown by the number of MACs		Yes		
Control MAC # Dynamic learned entries (per port)		4096		
Control MAC # static entries (per port)		48		
IEEE 802.1x RADIUS port access authentication/type		Yes (MD5, EAP, PEAP)		
Port-based security by locked MAC addresses		Yes		
Dynamic ARP inspection		No		
Broadcast, multicast, unknown unicast storm control		Yes		
DoS attacks prevention		Yes		
Protected ports		Yes		
Quality of Service (QoS)				
Port-based rate limiting		Yes, egress		
Port-based QoS		Yes		
Support for IPv6 fields		Yes		
DiffServ QoS		Yes, ingress		
IEEE 802.1p COS		Yes		
Destination MAC and IP		Yes		
IPv4 and v6 DSCP		Yes		
IPv4 and IPv6 ToS		Yes		
TCP/UDP-based		Yes		
Weighted Round Robin (WRR)		Yes		
Strict priority queue technology		Yes		
Auto-VoIP VLAN / Auto-Voice VLAN		Yes, based on OUI bytes (default database and user-based OUIs) in the phone source MAC address		
Auto-VoIP		Yes, based on protocols (SIP, H.323 and SCCP). Prioritzes traffic to a higher queue.		
Voice VLAN		Yes, based on either VLAN ID or 802.1p priority, packets are passed onto the connecting VoIP phone using LLDP-MED.		
Auto-Video VLAN		Yes		
Other Features				
Advanced per-port PoE controls (enable/disable/power limit)	N/A	N/A	Yes	Yes
Advanced per-port PoE scheduling	N/A	N/A	Yes	Yes

Technical Specification	GC110	GC110P	GC510P	GC510PP
Loop detection & prevention	Yes (both)	Yes (both)	Yes (both)	Yes (both)
DNS Client	Yes	Yes	Yes	Yes
Option to enable/disable BPDU flooding when STP is disabled	Yes	Yes	Yes	Yes
Option to enable/disable the flooding of EAPOL when 802.1x is disabled	Yes	Yes	Yes	Yes
IEEE Network Protocols				

• IEEE 802.3 Ethernet
• IEEE 802.3u 100BASE-T
• IEEE 802.3ab 1000BASE-T
• IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX
• IEEE 802.3af PoE
• IEEE 802.3at PoE+ (GC510P, GC510PP only)
• IEEE 802.3ad Trunking (LACP)
• IEEE 802.3az Energy Efficient Ethernet (EEE)

• IEEE 802.3x Full-Duplex Flow Control
• IEEE 802.1Q VLAN Tagging
• IEEE 802.1AB LLDP with ANSI/TIA-1057 (LLDP-MED)
• IEEE 802.1p Class of Service
• IEEE 802.1D Spanning Tree (STP)
• IEEE 802.1s Multiple Spanning Tree (MSTP)
• IEEE 802.1w Rapid Spanning Tree (RSTP)
• IEEE 802.1x RADIUS Network Access Control

Management, Monitoring & Troubleshooting	
Cloud/Remote management	Yes
Insight mobile app & Insight Cloud Portal management	Yes
uPnP Discovery	Yes
Bonjour Discovery	Yes
Networking monitoring	Yes
Data/performance logs	Yes
Centralized network configuration/policies (network-centric management)	Yes
Device auto-join and configure (zero-touch provisioning)	Yes
Multi-site, multi-network single pane-of-glass view	Yes
Multi-switch, multi-port concurrent configuration	Yes
Network/global password (for all Insight Managed devices on a network)	Yes (per network/subnet via NETGEAR Insight mobile app and Insight Cloud Portal)
Network/global password (for all Insight Managed devices on a network)	Yes (per network/subnet via NETGEAR Insight app)
Password management	Yes
IP Access List	Yes
Configurable management VLAN	Yes
Admin access control via RADIUS and TACACS+	Yes
IPv6 management	Yes
SNTP client over UDP port 123	Yes
Firmware upgrade direct from Cloud (via mobile device or Insight Cloud portal)	Yes
Port mirroring	Yes
Many-to-one port mirroring	Yes

Technical Specifications	GC110	GC110P	GC510P	GC510PP
Cable test utility		Yes		
Ping and tracerout client		Yes		
Local-only web browser-based management GUI		Yes		
SSL/HTTPS Web-based access (version)		Yes (v3)		
TLS Web-based access (version)		Yes (v1.0)		
TFTP/HTTP firmware upload/download		Yes		
Dual software (firmware) image		Yes		
Memory and flash log		Yes		
Syslog (RFC 3164)		Yes		
Power Consumption				
Max power (worst case, all ports used, full PoE, line-rate traffic) (Watts)	10.1 W	10.3 W	10.3 W	10.3 W
Max power (worst case, all ports used, full PoE, line-rate traffic) (Watts)	N/A	74.4 W	146.9 W	200.0 W
Min power (link-down standby) (Watts)	7.9 W	8.1 W	8.1 W	8.1 W
Heat Dissipation (min w/o PoE and max with full PoE) (BTU/hr)	Min: 30.03 BTU/hr Max: 38.22 BTU/hr	Min: 30.71 BTU/hr Max: 282.07 BTU/hr	Min: 30.71 BTU/hr Max: 556.94 BTU/hr	Min: 30.71 BTU/hr Max: 758.25 BTU/hr
Energy Efficient Ethernet (EEE) IEEE 802.3az		All models - Yes, deactivated by default		
Auto power down		All models - Yes, deactivated by default		
Fan(s) (temperature- and load-based speed control)	Fanless	Fanless	Fanless	1
Physical Specifications				
Dimensions (W x D x H)	245 x 123 x 33 mm (9.6 x 4.8 x 1.3 in)	245 x 123 x 33 mm (9.6 x 4.8 x 1.3 in)	314 x 188 x 44 mm (12.4 x 7.4 x 1.7 in)	314 x 188 x 44 mm (12.4 x 7.4 x 1.7 in)
Weight	0.73 kg (1.61 lb)	0.77 kg (1.70 lb)	2.01 kg (4.43 lb)	2.23 kg (4.92 lb)
Mounting options		All models: Desktop, wall mount, VESA-standard (75mm) GC510P/GC510PP: +Rackmount (kit included)		
Environmental Specifications				
Operating				
Operating Temperature (Switch)	0° to 45°C (32° to 113°F)	0° to 45°C (32° to 113°F)	0° to 45°C (32° to 113°F)	0° to 45°C (32° to 113°F)
Operating Temperature (External Power Adapter)	0° to 40°C (32° to 104°F)	0° to 40°C (32° to 104°F)	NA	NA
Humidity		90% maximum relative humidity (RH), non-condensing		
Altitude		10,000 ft (3,000 m) maximum		
Storage				
Storage Temperature		–20° C to 70° C (– 4° F to 158° F)		
Humidity (relative)		95% maximum relative humidity (RH), non-condensing		
Altitude		10,000 ft (3,000 m) maximum		

Electromagnetic Emissions and Immunity Certifications	GC110	GC110P	GC510P	GC510PP
Certifications	CE Mark, Commercial EN55032:2012+AC:2013, Class A EN55024:2010+A1:2015 EN61000-3-2:2014, Class A EN61000-3-3:2013 VCCI-CISPR 32:2016, Class A RCM, AS/NZS CISPR 32:2015 CLASS A 47 CFR FCC Part 15, Subpart B, Class A ICES-003:2016 Issue 6, Class A BSMI CNS13438, Class A KCC KN32 / KN35 GB/T 9254-2008[3]			

Safety Certifications

Certifications	CB Mark, Commercial EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 UL 60950-1, 2nd, 2014 and CAN/CSA C22.2 No. 60950-1-07, 2nd, 2014 IEC 60950-1:2005 (ed.2) + Am 1:2009 + Am 2:2013 RCM, AS/NZS 60950.1:2015 BSMI CNS14336-1 KCC K60950-1[4] CCC GB4943.1-2011[3]			

Warranty and Support

	GC110	GC110P	GC510P	GC510PP
Hardware Limited Warranty (Switch)	5 years	5 years	5 years	5 years
External Power Adapter Warranty	2 years	2 years	N/A	N/A
Next-Business-Day (NBD) Replacement	5 years			
Technical support (online, phone)	90 days free from date of purchase*			
ProSUPPORT OnCall 24x7 Service Packs**	PMB0S12 (1 yr) PMB0S32 (3 yrs) PMB0S52 (5 yrs)			

Package Contents

All models	NETGEAR Insight Managed 8-Port Gigabit Ethernet Smart Cloud Switch with 2 SFP Fiber Ports Rubber footpads for tabletop installation Wall mount kit (with 75mm VESA standard pattern) Quick Install Guide
GC110, GC110P Only	DC power adapter (localized to country of sale)
GC510P, GC510PP Only	AC power cord (localized to country of sale) Rack mounting kit

[2] English, German, and Japanese are the current supported languages in the local-only web GUI. The Insight mobile app and Insight Cloud Portal support local languages per the device used (phone or computer browser).

[3] GC110, GC110P Only

[4] GC510P, GC510PP Only

* This product comes with a limited warranty that is valid only if purchased from a NETGEAR authorized reseller, and covers unmodified hardware, fans and internal power supplies – not software or external power supplies, and requires product registration using the Insight mobile app or Insight Cloud portal within 90 days of purchase; see https://www.netgear.com/ about/warranty for details. Intended for indoor use only.

Ordering Information	
GC110-100NAS	North America and Latin America
GC110-100PES	Europe
GC110-100UKS	United Kingdom
GC110-100AUS	Australia
GC110-100JPS	Japan and Asia Pacific
GC110-100KOS	Korea
GC110-100PRS	China
GC110P-100NAS	North America and Latin America
GC110P-100PES	Europe
GC110P-100UKS	United Kingdom
GC110P-100AUS	Australia
GC110P-100JPS	Japan and Asia Pacific
GC110P-100PRS	China
GC510P-100NAS	North America and Latin America
GC510P-100EUS	Europe and United Kingdom
GC510P-100AJS	Japan, Asia Pacific, and Australia
GC510PP-100NAS	North America and Latin America
GC510PP-100EUS	Europe and United Kingdom
GC510PP-100AJS	Japan, Asia Pacific, and Australia
Optional Modules and Accessories	
AGM731F-10000S	SFP Transceiver 1000BASE-SX (Short range, multimode)
AGM732F-10000S	SFP Transceiver 1000BASE-LX (Long range, single mode)
AGM734-10000S	SFP Transceiver 1000BASE-T Copper RJ45 GBIC
Extended Support Contracts	
PMB0S12-10000S	1-Year OnCall 24x7 Service Pack**
PMB0S32-10000S	3-Year OnCall 24x7 Service Pack**
PMB0S52-10000S	5-Year OnCall 24x7 Service Pack**

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**The NETGEAR OnCall 24x7 contract provides unlimited phone, chat and email technical support for your networking product.

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

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