Data Sheet | GS110TPP



8-Port Gigabit PoE+ Ethernet Smart Managed Pro Switch with 2 Copper Ports and Cloud Management



More PoE budget, More Flexible Power Options, and Remote/Cloud Management Capability





As a leading provider of network equipment for SMBs, NETGEAR keeps providing innovative networking solutions that can adapt to the business's needs of fast connectivity, network security and cost-effectiveness.

The new NETGEAR 8-Port Gigabit Smart Managed Pro switch GS110TPP provides higher PoE budget and integrates the industry leading NETGEAR FlexPoE technology, which allows users to increase the PoE budget by simply buying a new power supply, effectively futureproofing small business networks and budgets.

NETGEAR also understands the importance of easy and centralized management for business networking.

Therefore, NETGEAR now expands Cloud Management capabilities to select models within its Smart Managed Pro switch line, including this new model GS110TPP.

The GS110TPP adds full 8 port PoE+ support for deployment of modern PoE devices with 2 additional Gigabit copper ports. Each port can provide up to 30 watts with a rich total PoE power budget of 120W, perfect for deploying Wireless APs, Pan-Tilt-Zoom and fixed IP Cameras, VoIP Phones, access-limited security door locks or any other PoE-powered devices. Fanless, the GS110TPP supports completely silent desktop operation or wall mounting. Specifically for this new Smart Managed Pro switch, additional features were added for full flexibility: Single Sign-On registration for firmware and security updates and warranty entitlement; Remote/Cloud Management capability with NETGEAR Insight[™] as optional management mode. By activating the NETGEAR Insight Cloud management, the users will enable fundamental management features allowing businesses simpler configuration and deployment from anywhere using the NETGEAR Insight app from mobile devices or the Insight Cloud Portal from any device with a web browser.

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8-Port Gigabit PoE+ Ethernet Smart Managed Pro Switch with 2 Copper Ports and Cloud Management

Highlights

Flexible and cost-effective solution for SMB data, voice and video converged network

- 8 Gigabit 10/100/1000BASE-T PoE+ (802.3at/802.3af) RJ-45 ports
- 2 dedicated Gigabit copper ports for uplinks or non-PoE device connection
- 120W total PoE budget (Upgradable to 190W with NETGEAR FlexPoE EPS200W power adapter)
- Non-blocking switching with 20Gbps bandwidth
- Fanless switches for silent operation in noise sensitative environment
- Flexible mounting options desktop and wall-mounting with VESA holes (100mm)

Powerful Connectivity and Security Features

- Layer 3 static routing with 32 routes (IPv4) for inter-VLAN local routing
- Advanced VLAN support for better network segmentation
- L2/L3/L4 access control lists (ACLs) for granular network access control including 802.1x port authentication
- Advanced per port PoE controls for remote power management of PoE connected devices including operation scheduling

- Advanced QoS (Quality of Service) for traffic prioritization including port-based, 802.1p and L2/L3/L4 DSCP-based
- Auto "denial-of-service" (DoS) prevention
- IGMP Snooping and Querier for multicast optimization
- Rate limiting and priority queuing for better bandwidth allocation
- Port mirroring for network monitoring
- Energy Efficient Ethernet (IEEE 802.3az) for maximum power savings
- Cable test to troubleshoot connection issues
- Easy-to-use Web browser-based management GUI available in English, German and Japanese
- SNMP v1, v2c, v3 and RMON remote monitoring

Fully-integrated Cloud-manageable Devices

Remote/Cloud Management capability with NETGEAR Insight. Instantly activate NETGEAR Insight Cloud management from the Web GUI, given they subscribe to Basic (on the app, free up to 2 devices), Insight Premium (app or portal), or Insight Pro (for resellers/MSP only).

Smart IT, not Big IT

- Easy to manage via web-Based Management GUI or Smart Control Center (Windows PC required) for multi-switch deployment
- NETGEAR Switch Discovery Tool (NSDT) to discover, register and access to the local browser interface to configure the switches
- Network Management System (NMS300), allowing all NETGEAR business products to be deployed and managed through this single interface

NETGEAR Quality and Reliability

• Worry-free Limited Lifetime Warranty*, online technical chat support and Next Business Day (NBD) replacement.



Hardware at a Glance

		FRONT					EAR	SIDE
Model Name	Form-Factor	100M/1G Copper (RJ-45) Ports	1G Uplinks	PoE/PoE+ Ports (Budget)	LED's	Power Supply	PSU Supported/ PoE Budget	Fans
GS110TPP	Desktop, wall-mount	8	2 Dedicated Copper	8 PoE+ (120W)	Power (Cloud), Port Link/ Speed/Activity, PoE Max, PoE Powered, PoE Fault	External DC 54V 2.4A/3.7A	PSU: 130W/200W PoE: 120W/190W	Fanless

Software at a Glance

	LAYER 2+ / LAYER 3 LITE FEATURES							
Management	IPv4/IPv6 ACL and QoS	Static Routing	IPv4/IPv6 Multicast Filtering	VLANs	Auto-VoIP, Auto- Video	IEEE (802.3az) Energy Efficient Ethernet	Convergence	Link Aggregation/ Port Trunking
Web Browser-based GUI (HTTP/HTTPS); NETGEAR Insight mobile app or Insight Cloud Portal for local or remote management from your mobile device, PC, Mac, or tablet; PC-Based Smart Control Center Utility (SCC), IPv4 and IPv6 management, SNMP, RMON	L2, L3, L4 Ingress	IPv4 32 Routes	IGMP Snooping, Querier, Fast Leave, L2 Multicast Router	Static, Dynamic, Voice, Video, 8K Max MAC (64 VLANs), Protocol based, GARP and GVRP	Yes	Yes	LLDP-MED, RADIUS, 802.1X	LACP and Manual Static LAGs (up to 8 LAGs with max 8 members)

Performance at a Glance

Model Name	Packet Buffer	CPU	ACLs	MAC Address Table ARP Table VLANs	Fabric	Latency (64-Byte Packet)	IPv4 Static Routing	Multicast IGMP Group
GS110TPP	512K	500MHz single core 128MB RAM 32MB SPI FLASH	100 shared (ingress)	8K Max MAC 64 VLANs	20 Gbps line-rate	1G Copper: < 3.60 µs; 1G Uplinks Copper: < 3.60 µs	32	256



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 or software. Just switch to Insight Cloud Management mode through Web browser-based User Interface and go.
1000BASE-T Copper Ethernet and PoE+ 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-T Copper ports for Uplinks	Two dedicated Gigabit Copper ports provide easy-to-use uplinks without transceiver, flexible to use for non-PoE device connection.
Silent Acoustics	Fanless design allows for silent operation, great for deployment in noise- sensitive environments.
NETGEAR FlexPoE	Interchangeable External Power Supply. Increase or decrease your PoE Budget as needed.
Desktop and Wallmount (VESA holes available)	Flexible deployment on desktop, wall or other location using 100mm VESA-compliant mounts.
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 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 clas- sifying 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.
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.
Energy Efficient Ethernet (IEEE 802.3az)	Maximum power reduction for ongoing operation cost savings.
PoE Timer and Scheduling	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.
Dual Firmware Images	Dual firmware images for transparent firmware updates with minimum service interruption
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!



Simply Activate NETGEAR Insight Cloud Management to manage your network. Anytime. Anywhere.

By activating the NETGEAR Insight Cloud management, the users will enable fundamental management features allowing businesses simpler configuration and deployment from anywhere using the NETGEAR Insight app from mobile devices or the Insight Cloud Portal from any device with a web browser.

Unique advanced management features of these Insight Managed devices include:.

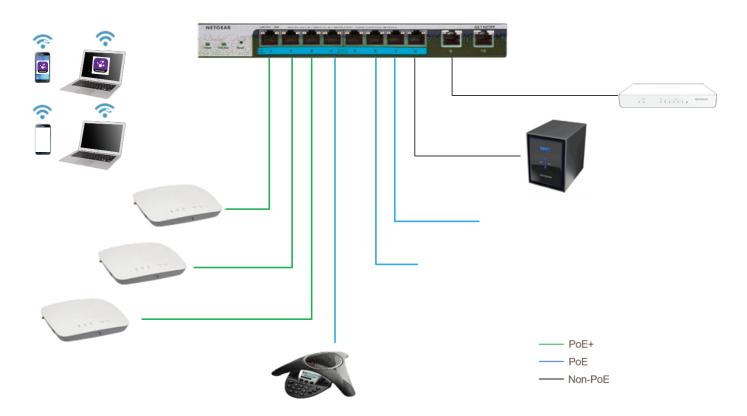
- Remote monitoring and management with performance dashboards and troubleshooting features including remote reboot, port and PoE advanced configuration including remote enable/disable/power-cycle, PoE scheduling, and firmware updates with auto-schedule mode
- Single pane-of-glass multi-device, multi-network, and multi-site remote monitoring and notifications with the NETGEAR Insight app
- Full-fledged local or remote access for configuration, management, and monitoring on a larger display using your tablet, laptop, or desktop computer through the NETGEAR Insight Cloud Portal
- Configurable in-app and email alerts and notifications
- Auto-join and configure (zero-touch provisioning) for additional Insight Managed devices added to the network
- Centralized network configuration (policies) across Insight Managed Switches, Access Points, and ReadyNAS storage for VLANs, ACLs, QoS, LAGs, etc.
- Cloud-based network administration, monitoring, and firmware management

For more information about NETGEAR Insight-manageable device settings, please see: https://www.netgear.com/support/product/Insight.aspx



Application Sample

Power The Devices in Your Business



GS110TPP in a Business Environment

The following table describes the PoE classes and switch allocations.

Device Class	Standard	Class Description	Power Reserved by the Device	Power Delivered to the Device ¹
0	PoE and PoE+	Default power (full)	15.4W	0.44W-12.95W
1	PoE and PoE+	Very low power	4.0W	0.44W-3.84W
2	PoE and PoE+	Low power	7.0W	3.84W-6.49W
3	PoE and PoE+	Mid power	15.4W	6.49W-12.95W
4	PoE+ only	High power	30.0W	12.95W-25.5W

¹ If a device receives insufficient PoE power from the switch, consider using a shorter cable.



Accessory Power Adapters

Increase your PoE budget anytime by simply upgrading your switch Power Supply, without having to purchase a new switch. Future-proof your PoE budget with GS110TPP. This industry innovative NETGEAR FlexPoE technology makes this new switch the most adaptive in the market.

The following table describes the Accessory Power Adapters which are sold separately and compatibale with GS110TPP

Switch Model	Factory Default Power Adapter Model	Alternative Power Adapter Model
GS110TPP	EPS130W (provides 120W to the switch)	EPS200W (provides 190W to the switch)

Warranty and Support for Accessory Power Adapters

Product	GS110TPP
Power Adapter Warranty	2 years
Technical Support	90 days of free technical support
ProSUPPORT Contract Option	No
Auto-applied contracts	No

Why the NETGEAR PoE/PoE+ Switches are ideal for SMB

- Upgradable PoE budget with interchangeable power supplies
- Small form factor and silent for quiet operation
- Plug-and-play, automatic connectivity to your router or modem
- Prioritize voice and video traffic
- Lifetime Warranty* plus lifetime online support and lifetime Next Business Day (NBD) replacement



Technical Specifications	GS110TPP	
Gigabit Ethernet RJ-45 Copper ports (10M/100M/1G) - 1000BASE-T	8	
PoE/PoE+ ports	8 PoE+ (120W PoE bu	idaot)
	·	iugei)
Gigabit Copper ports (100M/1G) for Uplinks	2 (dedicated)	
Power Supply	External DC 54V 2.4A	√3.7A
Kensington Lock	Yes (rear)	
LEDs		
Front (port side) (per device)	Power (Cloud), PoE I	Max
Front (port side) (per port)	Speed/Link/Activity (left), PoE	Power (right)
Unified Network Management (Discovery, Setu Through NETGEAR Insight Cloud Management		
Discovery, setup, monitoring and management	NETGEAR Insight mobile app	GEAR Ino o



Performance Specification (continued)	GS110TPP
Access Control Lists (ACLs)	100 shared for MAC, IP4 and IPv6 ACLs
Packet forwarding rate (64 byte packet size) (Mfps or Mpps)	14.8
1G Copper latency (µsec) (64-byte; 1518-byte; 9216-byte frames)	64-byte: 3.599 μsec 1518-bye: 3.797 μsec 9216-byte: 3.531 μsec
Jumbo frame support	Up to 10K packet size
Acoustic noise level @ 25° C (dBA) (ANSI-S10.12)	0 dBA (fanless)
Mean Time Between Failures (MTBF) @ 25° C	646,773 hrs (73.83 yrs)
POE Configuration	
Number of PoE (802.3af) / PoE+ (802.3at) ports	8 PoE+
Total PoE power budget (watts)	120W/190W
Advanced per-port PoE controls (enable/disable/power limit)	Yes
Advanced per-port PoE scheduling/timers	Yes
Dynamic PoE Budget Allocation	Yes
L2 Services - VLANS	
IEEE 802.1Q VLAN Tagging	Yes
Protocol-based VLANs	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-VolP	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
L2 Services - Availability	
Broadcast, multicast, unknown unicast storm control	Yes
IEEE 802.3ad - LAGs (LACP)	Yes
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
L2 Services - Multicast Filtering	
IGMP snooping (v1, v2 and v3)	Yes
MLD snooping support (v1 and v2)	v1 and v2
IGMP snooping queries	Yes
Die eine eine eine date eine	Yes
Block unknown multicast	105



L3 Services - DHCP	GS110TPP
DHCP client	Yes
DHCP snooping	Yes
Number of DHCP snooping bindings	256
L3 Services - Routing	
IPv4 static routes	32
VLAN routing	Yes
Host ARP table / NDP cache (number of entries)	512 ARP
ICMP Router Discovery Protocol (IRDP)	Yes
Link Aggregation	
IEEE 802.3ad - LAGs (LACP)	Yes
Manual Static LAG	Yes
# of Static or LACP LAGs # of members in each LAG	8 LAGs with max 8 members in each LAG
Network Monitoring and Discovery Services	
802.1ab LLDP	Yes
LLDP-MED	Yes
SNMP	Yes
RMON group 1,2,3,9	Yes
Network Security	
IEEE 802.1x	Yes
Guest VLAN	Yes
RADIUS-based VLAN assignment via .1x	Yes
MAC-based .1x	Yes
MAC Authentication Bypass (MAB)	Yes
RADIUS accounting	Yes
Access Control Lists (ACLs)	L2/L3/L4
IP-based ACLs (IPv4 and IPv6)	Yes
MAC-based ACLs	Yes
TCP/UDP-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
Port-based security by locked MAC addresses	Yes
Broadcast, multicast, unknown unicast storm control	Yes
DoS attacks prevention	Yes
Protected ports	Yes



Quality of Service (QOS)	GS110TP
Port-based rate limiting	Yes, ingress and 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 IPv6 DSCP	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-VolP	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	
Loop detection & prevention	Yes (both)
DNS Client	Yes
Option to enable/disable BPDU flooding when STP is disabled	Yes
Option to enable/disable the flooding of EAPOL when 802.1x is disabled	Yes
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	
Network/global password (for all Insight Managed devices on a network)	Yes (per network/subnet via NETGEAR Insight mobile app and Insight Cloud Portal)
Password management	Yes

Management, Monitoring & Troubleshooting (continued)	GS110TP
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
SNMP v1/v2c	No
SNMP v3 with multiple IP addresses	No
RMON group 1,2,3,9	No
Smart Control Center (SCC) for multi-switch management	N/A
Port mirroring	Yes
Many-to-one port mirroring	Yes
Cable test utility	Yes
Ping and tracerout client	Yes
Local-only web browser-based management GUI	Yes
TLS Web-based access (version)	Yes (v1.2)
TFTP/HTTP firmware upload/download	Yes
Dual software (firmware) image	Yes
Memory and flash log	Yes
Syslog (Server)	Yes
Power Consumption	
Max power (worst case, all ports used, line-rate traffic) (Watts)	11.3 W
Max power (worst case, all ports used, full PoE, line-rate traffic) (Watts)	141.3W
Min power (link-down standby) (Watts)	9W
Heat Dissipation (min w/o PoE and max with full PoE) (BTU/hr)	Max: 482.398BTU/hr Min: 30.726 BTU/hr
Energy Efficient Ethernet (EEE) IEEE 802.3az	Yes
Auto power down	Yes
Fan(s) (temperature- and load-based speed control)	Fan less
Physical Specifications	
Dimensions (W x D x H)	236 x 101 x 27 mm (9.3 x 4.0 x 1.1 in)
Weight	0.64kg (1.41 lb)
Mounting options	Desktop, wallmount, VESA-standard (100mm)



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Environmental Specifications	GS110TP
Operating	
Operating Temperature	0° to 40°C (32° to 104°F)
Humidity	95% maximum relative humidity (RH), non-condensing
Altitude	10,000 ft (3,000 m) maximum
Storage	
Storage Temperature	–20° to 70°C (– 4° to 158°F)
Humidity (relative)	95% maximum relative humidity (RH), non-condensing
Altitude	10,000 ft (3,000 m) maximum
Warranty and Support	
Hardware Limited Warranty	Limited LIFETIME (switch, except for India, China) 5-year Warranty (India, China) 2 years (power adapter)
Next-Business-Day (NBD) Replacement	Limited LIFETIME (except for India, China) 5-year NBD Replacement (India)
Technical support via phone	90 days free from date of purchase* (except for China)
24x7 Online Chat Techinical support	Limited LIFETIME (except for China)
ProSUPPORT OnCall 24x7 Service Packs**	Category 1: PMB0312-10000S PMB0332-10000S PMB0352-10000S
Ordering Information	
GS110TPP-100NAS	North America and Latin America
GS110TPP-100EUS	Europe
GS110TPP-100AJS	Asia Pacific
GS110TPP-100INS	India

*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 at https://www.netgear.com/business/registration within 90 days of purchase; see https://www.netgear.com/about/warranty for details. Intended for indoor use only.

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

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