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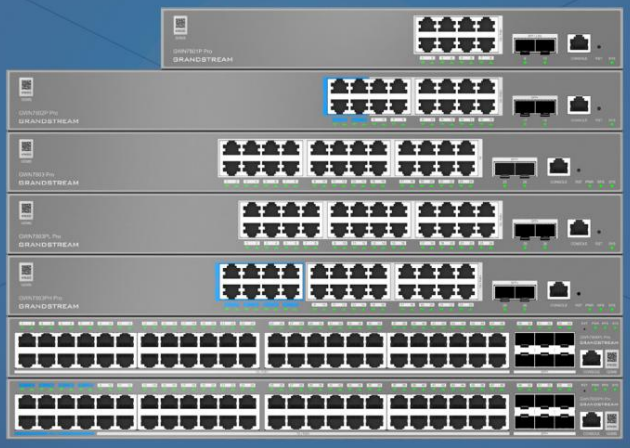

Managed Layer 2++ Enterprise Network Switches

GWN7800 Pro Series

The GWN7800 Pro series includes Layer 2++ managed network switches that enable small and medium-sized businesses to create scalable, secure, and high-performance networks. This series provides high-speed SFP or SFP+ ports and Gigabit Ethernet ports on all models to support demanding enterprise networks and deliver switching capabilities of up to 216 Gbps. The GWN7800 Pro series includes advanced VLAN configuration for flexible and sophisticated network traffic segmentation, advanced QoS for prioritizing network traffic, IGMP/MLD Snooping for optimizing network performance, and comprehensive security capabilities against potential attacks. PoE-compatible models provide intelligent dynamic PoE output to power IP phones, IP cameras, Wi-Fi access points, and other PoE end devices. The GWN7800 Pro series offers a variety of flexible and free management options, including cloud management with GDMS Networking, local software management with GWN Manager, the integrated controller in its web user interface, GWN series routers, and the command-line interface (CLI). Providing high-speed SFP and SFP+ ports, advanced network traffic control and segmentation, robust security protection, and flexible management options, the GWN7800 Pro series is ideal for small and medium-sized businesses.

Gigabit

8/16/24/48 gigabit ethernet ports with 2 SFP, 2 SFP+ or 6 SFP+ ports

PoE

Intelligent power control to enable dynamic PoE power allocation/

PoE+/PoE++ (on selected models) per port for PoE-enabled models

It allows implementation in IPv6 and IPv4 networks.

ARP inspection, IP source protection, DoS protection, port security, and DHCP snooping

Flexible management options include the integrated web controller, GDMS Networking (cloud), GWN Manager (software), GWN series routers, and CLI.

QoS

Pro AV uses built-in QoS which allows prioritizing network traffic

Hardware specifications

	GWN7801P Pro	GWN7802P Pro	GWN7803 Pro	GWN7803PL Pro	GWN7803PH Pro	GWN7806PL Pro	GWN7806PH Pro
Interfaces							
Gigabit Ports Ethernet	8	16	24			48	
SFP/SFP+ ports	2x 2.5G SFP	2x SFP+				6x SFP+	
Maximum number of modules allowed	SM-10G: 2 MM-10G: 2 RJ45-10G: 2					SM-10G: 6 MM-10G: 6 RJ45-10G: 3 *Note: RJ45-10G modules must be inserted at intervals*	
MGMT Ports	1 console port						
Auxiliary ports	1 reset hole						
LEDs							
LED system	1 Tri-color LED for device tracking and status indication						
Power supply LED	/		2 green LEDs for each power supply PWR&RPS	/	2 green LEDs for each PWR&RPS power supply		
Data transfer LED	10x Green LEDs	18x Green LEDs	26x green LEDs			54x green LEDs	
LED supply PoE	8x Green LEDs	16x yellow LEDs	/	24x yellow LEDs		48x yellow LEDs	
System							
Flash	32MB Nor Flash					8MB Nor Flash, 128MB Nand Flash	
RAM	128MB RAM	256MB RAM				512MB RAM	
CPU	Single core, MIPS interAptiveTM 1GHz					Dual core, MIPS interAptiveTM 1GHz	
Forwarding mode	Store and forward						
Total non-blocking throughput	13Gbps	36Gbps	44Gbps			108Gbps	
Switching capacity	26Gbps	72Gbps	88Gbps			216Gbps	
Forwarding rate	19.344Mpps	53.568Mpps	65.472Mpps			160.704Mpps	
Packet buffer	8.4Mb						
Network latency	<4μs	<4μs	<4μs	<4μs	<4μs	<4μs	<4μs
Power supply							
Power supply	100-240V~ 50/60Hz						
Redundant power supply	/		1+1 external RPS, One by default	/	1+1 external RPS, One by default		
External redundant power supply (RPS)	/		30W	/	460W	460W	800W
Maximum energy consumption	9.5W 145.5W (PoE 120W)	21.8W 294.4W (PoE 250W)	21.4W	27.5W 299.2W (PoE 250W)	30.5W 471.4W (PoE 400W)	65.4W 509.3W (PoE 400W)	68.0W 870.9W (PoE 720W)
Maximum output power	145.5W	294.4W	21.4W	299.2W	471.4W	509.3W	870.9W
PoE							
PoE Standards	IEEE 802.3af/at	IEEE 802.3af/at/bt	/	IEEE 802.3af/at	IEEE 802.3af/at/bt	IEEE 802.3af/at	IEEE 802.3af/at/bt
# of PoE ports	8	16	/	24		48	
Maximum output power per port	30W	60W	/	30W	60W	30W	60W
PoE Total maximum PoE output power	120W	250W	/	250W	400W	400W	720W

	GWN7801P	Pro	GWN7802P	Pro	GWN7803	Pro	GWN7803PL	Pro	GWN7803PH	Pro	GWN7806PL	Pro	GWN7806PH	Pro
Physical														
Unit dimensions	330mm(L) × 175mm(W) × 44mm(H)		440mm(L) × 200mm(W) × 44mm(H)								440mm(L) × 300mm(W) × 44mm(H)			
Unit weight	1.77kg		2.9kg		2.5kg		3.06kg				4.15kg		5.05kg	5.3kg
Mounting	Desktop, wall mount, or rack mount (rack mount kits included)													
Content of package	1 switch, 1 25cm ground cable. 4 rubber pads 1x anti-trip power cable 8 screws (KM3*6) 1 x 1.2 m (10 A) AC cable 1 Simplified Quick Installation Guide 1 regulatory role													
	1 mounting kit extended racks		2x rack mounting kits											
Environmental														
Temperature	Operating temperature: 0°C to 45°C Storage: -10°C to 60°C													
Humidity	Operating conditions: 10% to 90% RH (Non-condensing) Storage: 5% to 95% RH (Non-condensing)													
MTBF	70,000H													
Fan	/		2		/		2				3		4	
CPU monitoring	CPU usage monitoring, CPU overuse alarm													
Use of memory	Memory usage monitoring, memory overage alarm													
Power supply monitoring	Monitoring of the model and status of the power supply. Power supply failure alarm													
Ventilator monitoring	Automatic speed adjustment Fan failure alarm													
Monitoring of temperature	Temperature monitoring, overheat alarm													
Surge protection	± 6KV CM for power ± 4KV CM for network ports													
ESD	±12KV for contact discharge													
Compliance														
Compliance	FCC, CE, RCM, IC													

Software specifications

	GWN7801P	Pro	GWN7802P	Pro	GWN7803	Pro	GWN7803PL	Pro	GWN7803PH	Pro	GWN7806PL	Pro	GWN7806PH	Pro
Network protocol	IPv4, IPv6, IEEE 802.3, IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3ae, IEEE 802.3az, IEEE 802.3ad, IEEE 802.3x, IEEE 802.3af/at/bt, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1d, IEEE 802.1w, IEEE 802.1s, IEEE 802.1x													
Stacking	/												Yes, up to 8 devices	
Switching	• Jumbo frame (maximum length: 12288) • 4K VLAN, port-based VLAN, IEEE 802.1Q VLAN tagging • Qin Q • MAC-based VLAN • Protocol-based VLAN • VLAN translation, including VLAN mapping and VLAN stacking. • Voice VLAN including Auto Voice VLAN, Tagged OUI and Untagged OUI • GVRP (pending) • ERPS (pending)													
	Spanning tree, supports STP/RSTP/MSTP/PVST(+)/RPVST(+), 16 instances for MSTP/PVST(+)/RPVST(+)												Spanning tree, supports STP/RSTP/MSTP/ PVST(+)/RPVST(+), 64 instances for MSTP/ PVST(+)/RPVST(+)	
	/												Private VLAN	
	16,000 MAC addresses (static/dynamic/filtered) with migration logs												32,000 MAC addresses (static/ dynamic/filtered) with migration records.	
	Link aggregation, including static and LACP												Link aggregation, including static and LACP	
	Up to a maximum of 8 LAG groups and up to 8 members per LAG group												Up to a maximum of 32 LAG groups and up to 8 members per LAG group	
IP Service	• DHCP client, DHCP server, DHCP relay, and DHCP snooping • DHCPv6 client and DHCPv6 snooping • ND snooping • DNS													
	64 ARP/NDPs, including static and dynamic ARP/NDPs												1K ARP/NDP, including static and dynamic ARP/NDP	
	16 virtual VLAN interfaces with 9216 MTU												32 virtual VLAN interfaces with 9216 MTU	

	GWN7801P Pro	GWN7802P Pro	GWN7803 Pro	GWN7803PL Pro	GWN7803PH Pro	GWN7806PL Pro	GWN7806PH Pro
IP Routing	Routing policy						
	Static routes 32(IPv4)/32(IPv6)					Static routes 1K(IPv4)/1K(IPv6)	
Multicast	IGMP Snooping with IGMPv2 and IGMPv3, 256 IGMP groups of Snooping	IGMP Snooping with IGMPv2 and IGMPv3, 384 IGMP Snooping Groups				IGMP Snooping with IGMPv2 and IGMPv3, 640 IGMP Snooping groups	
	MLD Snooping with MLDv1 and MLDv2, 256 MLD groups of Snooping	MLD Snooping with MLDv1 and MLDv2, 384 MLD Snooping groups				MLD Snooping with MLDv1 and MLDv2, 640 MLD and Snooping groups	
AV Control	/					Integrated SDVoE controller	
	Pro AV						
QoS	• Port priority • Priority mapping, including 802.1p mapping, DSCP mapping, and IP precedence mapping • Queue scheduling, including SP, WRR, WFQ, SP-WRR, and SP-WFQ • Traffic shaping • Rate limit						
ACL	128 ACLs for Ethernet, IPv4 and IPv6 with 1.5K ACE					256 ACLs for Ethernet, IPv4 and IPv6 with 4K ACE	
	• MAC ACL (Hardware ACLs based on source MAC address, destination MAC address, optional Ethernet type, and time range) • IPv4 ACLs (Hardware ACLs based on source IP address, destination IP address, and optional protocol type and time range) • IPv6 ACLs (Hardware ACLs based on the source IPv6 address, destination IPv6 address, and optional protocol type and range of time) • Expert ACLs (Hardware ACLs based on flexible combinations of VLAN ID, Ethernet type, MAC address, IP address, protocol type) and time range) (TBD) • Custom ACLs (ACL80) (TBD) • ACL redirection • Advanced ACL settings, including statistics, mirroring, priority mapping, and rate limiting • ACL link, including port and VLAN						
Security	• Hierarchical user management and password protection, HTTPS, SSH, Telnet • Identity authentication, including 802.1X and MAC authentication • AAA authentication, including RADIUS, TACACS • Speed control • Port isolation • Port security, static MAC address, filtering of invalid MAC addresses • IP/IPv6 source protection, DoS attack prevention, ARP inspection, CPU protection • Loop protection, including port return loop detection, BPDU protection, root protection, and return loop protection • Compatibility with Kensington security slot (Kensington lock) • Firmware signature						
Reliability	• Power supply modules in 1+1 redundancy mode • Smart stacking update						
Maintenance	• NTP • 1588v2 TC for precise timing (slope) • CPU and memory monitoring • Fault detection and alarm for power supply and fan. • SNMP, including SNMPv1, SNMPv2c, SNMPv3 • RMON which includes history groups, event groups, alarm groups, and statistics groups • LLDP and LLDP-MED • Backup and restore • System log • Diagnostics including Ping, traceroute, Ping monitoring, mirror including SPAN and RSPAN, Capture, UDLD (TBD), copper test, fiber module and one-click debugging. • sFlow • Update via FTPS/TFTP/HTTP/HTTPS or local upload, bulk provisioning using DHCP/TR-069 (pending)/GDMS option Networking/GWN Manager/GWN series routers						
Management of Platform	• Local web GUI: integrated controller • GDMS Networking: Free cloud management platform for unlimited GWN7800 Pro series switches • GWN Manager: local software driver • GWN APP: Integrated GDMS Networking and GWN Manager to manage GWN7800 Pro series switches via the APP • Management protocol: SNMP, RMON, TR-069 (pending)						

Features and benefits

Powerful enterprise processing capabilities

- Static routing routes data communication between different network segments. Simpler, more efficient, and more reliable.
- DHCP Server and Relay assigns IP addresses to hosts on the network.
- GVRP (pending) provides dynamic VLAN distribution, logging, and attribute propagation, reducing manual configuration and ensuring configuration accuracy.
- QoS, including port priority, priority assignment, queue scheduling, traffic modeling and speed limit.
- ACL filters data packets by configuring matching rules, processing operations and schedules, and providing flexible security access control policies.
- IGMP Snooping and MLD Snooping to enable videoconferencing and HD video surveillance multiterminal.
- IPv6 allows network transitions from IPv4 to IPv6.
- 1588v2 TC provides high-precision time synchronization between network devices, improving security and reducing costs compared to GPS time synchronization.
- Stacking provides powerful network expansion capabilities. By adding member devices, you can easily increase the number of ports, bandwidth, and processing power of the stacking system.
- The built-in SDVoE controller integrates monitoring, control, and configuration to achieve high-fidelity, low-latency audio and video signal transmission.
- SDVoE technology allows the transmission of high-definition audio and video signals over Ethernet, ideal for professional audio and video applications. SDVoE provides low-latency, high-bandwidth transmissions.
- By combining SDVoE encoders, decoders and controllers, the GWN7800 series enables multi-TV and multi-view system configurations.
- Pro AV Solutions: The GWN7800 series offers processing, transmission, and High-quality, low-latency audio and video visualization for businesses, education, entertainment, media, branch offices, and more. This ensures reliable, flexible, and engaging audiovisual experiences.

Advanced security protection

- Static MAC tables and dynamic MAC tables enable data transmission, and MAC table filtering protects against network attacks.
- Packet filtering based on IP address, MAC address, VLAN and linking port
- Dynamic ARP inspection protects against ARP spoofing and ARP flooding attacks, including gateway spoofing and man-in-the-middle attacks that are common in LAN environments.
- IP/IPv6 Source Guard prevents illegal address spoofing, including IP(v6)/MAC/VLAN spoofing and IP(v6)/VLAN spoofing.
- Defense against DoS attacks prevents ground attacks, smurf attacks, and other attacks TCP SYN, ping flooding, and more.
- 802.1X, MAC, RADIUS, AAA, and TACACS+ authentications provide LAN device authentication.
- With port security, when the number of MAC addresses learned by a port reaches the maximum number, it will automatically be set to an inactive error state to stop learning and prevent MAC address attacks while monitoring the port's network traffic.
- With DHCP/DHCPv6 Snooping, only DHCP/DHCPv6 packets from trusted ports are allowed to maintain a secure enterprise DHCP/DHCPv6 environment.

Improved reliability

- Redundant power supplies (RPS) and power modules External redundants (optional) ensure stable and reliable continuous use.
- It allows for fault detection and includes alarms for the power supply and fan. The GWN7800 series can automatically adjust the fan speed based on temperature changes to better suit the environment.
- Provides multiple levels of device protection, including overcurrent protection, overvoltage protection, overheating protection, and surge protection.
- Hardware-level dual booting uses two FLASH chips to store the boot software (system boot program), providing hardware-level boot redundancy and backup while preventing FLASH chip failures. (GWN7806PL/GWN7806PH Pro only)
- Dual system redundancy and file backup ensure fast system startup and high-performance operation while improving device stability.
- STP/RSTP/MSTP ensures rapid convergence and improves fault tolerance, It guarantees network stability and provides redundancy and link load balancing.
- Compatible with PVST(+) / RPVST(+) for faster convergence, optimizing network performance through VLAN-based network load balancing.
- ERPS (pending) and loopback detection identifies and eliminates loops in the network.
- Link aggregation increases bandwidth while improving reliability and load balancing.
- Storm control prevents traffic disruptions caused by transmission, the multicast and certain unicast packets.
- Stacking allows the logical virtualization of up to eight switches into one (GWN7806 Pro models). This improves device-level reliability through redundant backups across multiple member devices and link-level reliability through link aggregation between devices.
- AI diagnostics (pending) to automatically analyze network traffic and device status through intelligent, real-time network health monitoring. This quickly locates and alerts administrators to potential failures, improving operational efficiency.

PoE capability

- Compliant with IEEE 802.3af/at/bt standards to meet PoE power delivery requirements for security monitoring, audio and video conferencing, wireless signal coverage and more.
- User-defined time periods allow you to control the power supply of PoE ports in WebUI.
- The PoE port priority configuration allows the GWN7800 series to power ports according to priority when power is insufficient.
- The maximum power allowed per port configuration provides control of additional port.
- Dynamic energy negotiation via LLDP-MED

Easy management and tracking

- Management options include GDMS Networking (cloud), GWN Manager (local software), WebUI (embedded controller), GWN series routers, CLI (console, Telnet, SSH) and SNMP (v1/v2c/v3).
- Monitor CPU and memory usage to analyze network problems with tools such as Ping, Traceroute, UDLD (TBD) and copper testing.
- RMON, Syslog, traffic statistics and sFlow (pending) provide optimization of the network.
- LLDP and LLDP-MED provide automatic discovery, provisioning, and management of end devices.
- Stacking (GWN7806 Pro models only) simplifies setup and management by allowing multiple physical devices to become a single virtual device. Users can log into the stacking system from any member device to centrally configure and manage all devices within the stacked system.
- Scan the QR code on the device to quickly get device information and add it to the GWN app for remote management
- AI CLI (pending) provides intelligent guidance and corrections through natural language command inputs, reducing configuration difficulty, simplifying network management operations, and improving configuration efficiency.

Green energy and energy efficiency

- Includes a high-efficiency power supply module.
- All Ethernet ports support EEE (Energy Efficient Ethernet), providing fast transitions between normal operation and low-power states with low traffic and low energy consumption.
- Intelligent fan speed control based on ambient temperature provides precise temperature control, energy savings, and noise reduction.

Dual IPv4/IPv6 protocol

- IPv4 routing protocol, including IPv4 unicast routing
- IPv6 routing protocols, including IPv6 unicast routing • Allows a hybrid IPv4, IPv6, or IPv4/IPv6 environment
- The routing policy (GWN7806 Pro models only) adjusts routing routes according to actual needs to meet network requirements and dynamically selects routing routes based on network load, thus achieving load balancing.