



Enterprise Layer 2+ Managed Network Switch

GWN7806(P)

The GWN7806(P) is a Layer 2+ stackable managed network switch that allows small-to-medium enterprises to build scalable, secure, high-performance, and smart business networks that are fully manageable. It supports advanced VLANs for flexible and sophisticated traffic segmentation, advanced QoS for prioritization of network traffic, IGMP/MLD Snooping for network performance optimization, and comprehensive security capabilities against potential attacks. The GWN7806P provides smart dynamic PoE output to power IP phones, IP cameras, Wi-Fi access points, and other PoE endpoints. The GWN7806(P) is easy to deploy and manage via its local Web UI or CLI. The switch is also supported by GWN Series Routers, GDMS Networking, and GWN Manager—Grandstream's cloud and on-premise network management platforms. The GWN7806(P) is the best value enterprise-grade managed switch for small-to-medium businesses.



Gigabit

48 Gigabit Ethernet ports
and 6 10G SFP+ ports



PoE

Smart power control to
support dynamic PoE/PoE+
power allocation per port for
the PoE models



Supports deployment in IPv6
and IPv4 networks



Reliability features including
fault detection, device
protection, dual boot, dual
system file redundancy, link
aggregation, storm control,
and more



ARP Inspection, IP Source
Guard, DoS protection, port
security & DHCP snooping



Flexible management
options include the controller
embedded in their web UI,
GDMS Networking (cloud),
GWN Manager (software), and
GWN Series Routers



QoS

Built-in QoS allows for
prioritization of network
traffic



Supports stacking for easy
management of up to 4
switches in a single interface,
while creating redundant
backups between multiple
devices

	GWN7806	GWN7806P
Network Protocols	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 802.3ax, IEEE 802.3x, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1D, IEEE 802.1s, IEEE 802.1w, IEEE 802.1x	
PoE Standards	/	IEEE 802.3af/at
Gigabit Ports	48	
10G SFP+ Ports	6	
	Note: Supports DAC cables up to 5 m	
Maximum Number of Supported Modules	SM-10G: 6 MM-10G: 6 RJ45-10G: 3	
	Note: RJ45-1G modules must be inserted into alternating slots	
Console	1	
PoE Ports	/	48
Integrated Power Supply	60 W	470 W
Maximum Output Power Per PoE Port	/	30 W
Max Total PoE Output Power	/	400 W
PoE Standards	/	IEEE 802.3af/at
Surge Protection	±6 kV CM and DM for power ±4 kV CM for network ports	
ESD	±12 kV for contact discharge	
Other Ports	1 × Reset Pinhole	
Forwarding Mode	Store-and-forward	
Total Non-Blocking Throughput	108 Gbps	
Switching Capability	216 Gbps	
Forwarding Rate	160.704 Mpps	
Packet Buffer	16 Mb	
Network Latency	<4 μs	
Switching	• 32K MAC addresses, including static, dynamic, filtering and sticky MAC address • 4K VLANs, port-based VLAN, IEEE 802.1Q VLAN tagging, MAC-based VLAN, protocol-based VLAN, QinQ • Voice VLAN including auto voice VLAN, tagged OUI and untagged OUI • 32 VLAN virtual interface with 9216 MTU • 1K ARP/NDP • 32 link aggregation • Spanning tree, 64 instances for STP/RTSP/MSTP/PVST(+)/RPVST(+)	
Routing	32(IPv4)/32(IPv6) static routing, which support user-defined static routing entries	
Multicast	• IGMP Snooping with IGMPv2 and IGMPv3, 512 IGMP Snooping groups • MLD Snooping with MLDv1 and MLDv2, 512 MLD Snooping groups • MVR	
QoS/ACL	• Port priority • Priority mapping • Queue scheduling, including SP, WRR, WFQ, SP-WRR and SP-WFQ • Traffic shaping • Rate limit • 256 ACL for Ethernet, IPv4 and IPv6 with 4K total ACEs	
DHCP	DHCP server, DHCP relay, DHCP Option 82, 60, 160 and 43	
Maintenance	• CPU and memory monitoring • Fault detection and alarm for fan • SNMP including SNMPv1, SNMPv2c, SNMPv3 • RMON • LLDP & LLDP-MED • Backup and restore • Syslog • Alert • Diagnostics include Ping, Ping Watchdog, Traceroute, Port Mirroring (SPAN and RSPAN), UDLD (TBD), copper testing, fiber module monitoring, and one-click debugging • Upgrade via FTPS / TFTP / HTTP / HTTPS or local upload, mass provisioning using DHCP Option / TR-069 (pending) / GDMS Networking / GWN Manager / GWN Series Routers	
Security	• User hierarchical management and password protection, HTTPS, SSH, Telnet • Identity authentication including 802.1X and MAC authentication • AAA authentication including RADIUS, TACACS+ • Storm control • Port isolation, port security, sticky MAC • Filtering MAC address • IP/IPv6 source guard, DoS attack prevention, ARP inspection • DHCP/DHCPv6 Snooping • Loop protection including BPDU protection, root protection and loopback protection • Kensington Security Slot (Kensington Lock) support • Firmware signature	
Mounting	Desktop, Rack Mount (rack mounting kits included)	
LEDs	1 × tri-color LED for device tracking and status indication 54 × green LEDs for data transferring 48 × yellow LEDs for PoE powered (GWN7806P)	
Fan	3	
Environmental	Operating Temperature: 0 °C to 45 °C (32 °F to 113 °F); Operating Humidity: 10%-90% (RH), non-condensing Storage Temperature: -10 °C to 60 °C (14 °F to 140 °F), Storage Humidity: 10%-90%, non-condensing	
Dimensions	440 mm × 301 mm × 44 mm (17.32" × 11.85" × 1.73") (L × W × H)	
Unit Weight	4.0 kg (8.82 lb)	5.1 kg (11.24 lb)
Package Content	1 × Switch, 1 × Power Adapter, 1 × 1.2 m (3.94 ft) AC Cable of 10 A, 1 × 25 cm (9.84") Ground Cable, 1 × Power Cable Clamp, 1 × Simplified Quick Installation Guide, 1 × Regulatory Information, 2 × Rack-Mounting Kits, 8 × Flat Head Machine Screws (M3 × 6 mm), 4 × Rubber Footpads	
Compliance	FCC, CE, RCM, IC, UKCA	

Features & Benefits

Powerful Processing Capabilities

- Static routing for easy, efficient, and reliable data communication routing between different network segments.
- Built-in DHCP Server and Relay to assign IP addresses to hosts in the network.
- Built-in QoS, including Port Priority, Priority Mapping, Queue Scheduling, Traffic Shaping and Rate Limit.
- Access Control List (ACL) recognizes and filters data packets based on matching rules, processing operations, and time schedules, providing flexible security access control policies.
- IGMP Snooping and MLD Snooping to optimize multi-terminal HD video surveillance, video conferencing traffic, and more.
- Supports IPv6 and IPv4 to coordinate network transition from IPv4 to IPv6.
- Stacking provides powerful network expansion capabilities and easy management. By adding member devices, users can easily expand the number of ports, bandwidth and processing capacity of the stacking system.

Multi-Layer Security Protection

- Static and dynamic MAC tables, and MAC table filtering support data transmission and prevent network attacks.
- Packet filtering based on binding IP addresses, MAC addresses, VLANs, and ports.
- 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 unauthorized address spoofing, including IP(v6)/MAC/ VLAN spoofing and IP(v6)/VLAN spoofing.
- DoS Attack Defense, including Land Attacks, Smurf Attacks, TCP SYN Attacks, and Ping Flooding.
- 802.1X, MAC, RADIUS, AAA, and TACACS+ authentication provide security verification for LAN devices.
- With port security, when the number of MAC addresses learned by a port reaches the maximum number, it will be set to error-down status automatically to stop learning and prevent MAC address attacks while controlling the network traffic of the port.
- With DHCP/DHCPv6 Snooping, only DHCP/DHCPv6 packets from trusted ports are allowed to keep the enterprise DHCP/DHCPv6 environment safe.

IPv4/IPv6 Dual Protocol Stack

- Policy-based routing adjusts paths based on specific criteria to meet network requirements, dynamically selecting routes according to network load to achieve load balancing.
- Supports IPv4 and IPv6 routing protocols, including unicast routing, to satisfy all networking requirements.
- Supports IPv4, IPv6, or IPv4/IPv6 hybrid environments.

Power & Green Energy Efficiency

- All Ethernet ports support EEE (Energy Efficient Ethernet), providing fast transitions between normal operation and low-power states to reduce power consumption during low traffic.
- Intelligent control of fan speed based on environmental temperature for precise temperature regulation, energy savings, and noise reduction.

Enterprise Grade Reliability

- Supports fault detection and alarms for the power supply and fan, automatically adjusting fan speed based on temperature changes.
- Provides device-level hardware protection, including overcurrent protection, overvoltage protection, over-temperature protection, 6 kV surge protection for the power supply, and 4 kV surge protection for network interfaces.
- Dual-boot hardware level: the GWN7806 uses two FLASH chips to store boot software (the system boot program), achieving hardware-level boot redundancy and preventing switching failures caused by FLASH chip errors.
- Dual system file redundant backup ensures normal startup and operation of the system while improving device stability.
- STP/RSTP/MSTP guarantees fast convergence, improves fault tolerance, and ensures network stability and redundancy.
- Compatible with PVST(+) and RPVST(+) for faster convergence, optimizing network performance through VLAN-based network load balancing.
- Link aggregation increases bandwidth, improving reliability and load balancing.
- Storm control prevents traffic interruption caused by broadcast, multicast, or unknown unicast storms.
- Stacking supports the virtualization of up to 4 switches into one. This improves device-level reliability through redundant backups between multiple member devices and improves link-level reliability through cross-device link aggregation.

Smart PoE Capabilities

- Smart power control for dynamic PoE/PoE+ power allocation per port.
- IEEE 802.3af/at support meets the PoE power requirements of security monitoring, audio/video conferencing, and Wi-Fi networks.
- Supports user-defined time schedules via the Web UI to control power supply to the PoE ports.
- Supports PoE port prioritization: when the remaining power budget is insufficient, power is allocated to ports based on their priority.
- Users can configure the maximum power allowed per port up to a limit of 30 W.
- Dynamic power negotiation via LLDP-MED.

Easy Management and Maintenance

- Managed by GDMS Networking and GWN Manager, and can also be managed by GWN routers.
- Managed via Web GUI, CLI (Console, Telnet), and SNMP (v1/v2c/v3).
- Provides monitoring of CPU and memory usage for network analysis by supporting common networking tools, including Ping, Traceroute, UDLD (pending), and Copper Test.
- RMON, Syslog, and traffic statistics to optimize the network.
- LLDP and LLDP-MED provide automatic discovery, provisioning, and management of endpoint devices.
- Stacking simplifies configuration and management: after a stacking group is formed, multiple physical devices become one virtual device. Users can log in to the stacking system through any member device to uniformly configure and manage all member devices within the system.