GRANDSTREAM
CONNECTING THE WORLD



Enterprise Layer 3 Managed Network Switch

GWN7811(P) - GWN7812P - GWN7813(P)

The GWN7810 series are Layer 3 managed network switches that allow medium-to-large enterprises to build scalable, secure, high performance and smart business networks that are fully manageable. It supports advanced VLAN 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 PoE models provide smart dynamic PoE output to power IP phones, IP cameras, Wi-Fi access points and other PoE endpoints. GWN7810 series can be managed in a number of ways, including the local Web user interface of the GWN7810 series switch and CLI, the command-line interface. The series is also supported by GWN series routers, GDMS Networking and GWN Manager, Grandstream's cloud and on-premise network management platform. The GWN7810 series are the best value enterprise-grade managed network switches for medium-to-large businesses.

Gigabit

8/16/24 Gigabit Ethernet ports and 2/4 10Gigabit SFP+ ports

PoE

Smart power control to support dynamic PoE/PoE+ power allocation per port for the PoE models, Ports 1-8 on the GWN7813P supports PoE++

Supports deployment in IPv6 and IPv4 networks

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

Embedded controller to manage switch, GWN series Routers, GDMS Networking and GWN Manager, Grandstream's cloud and on-premise network management platform

QoS

Built-in QoS allows for prioritization of network traffic

Supports stacking for easy management on one interface while creating redundant backup between multiple devices

	GWN7811	GWN7811P	GWN7812P	GWN7813	GWN7813P
Network Protocols	IPv4, IPv6, IEEE 802.3, IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3ae, IEEE 802.3x, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1w, IEEE 802.1d, IEEE 802.1s, IEEE 802.3az, IEEE 802.3ad, IEEE 802.3AB, IEEE 802.1p, IEEE 802.1D, IEEE 802.1x				
Memory	256MB RAM 128MB Nand Flash, 8MB Nor Flash				
Jumbo Frame(Bytes)	12288				
PoE Standards	/	IEEE 802.3af/at	IEEE 802.3af/at	/	IEEE 802.3af/at/bt
Gigabit Ethernet Ports	8		16	24	
10G SFP+ Ports	2		4		
	Note: Supports DAC cable, and must be ≤ 5m				
Maximum no. of Supported Modules	SM-10G: 2 MM-10G: 2 RJ45-10G: 2		SM-10G: 4 MM-10G: 4 RJ45-10G: 2		
Console	1				
# of PoE Ports	/	8	16	/	24
Link Aggregation	32				
External Redundant Power Supply(RPS)	/	/	/	12V/5A(60W)	54V(300W)
Max Output Power per PoE Port	/	30W	30W	/	60W(1-8,PoE++) 30W(9-24)
Max Total PoE Output Power	/	120W	240W	/	370W
PoE Standards	/	IEEE 802.3af/at	IEEE 802.3af/at	/	IEEE 802.3af/at/bt
Surge Protection	± 6KV CM and DM for power ± 4KV CM for network ports				
ESD	± 12KV for contact discharge				
Auxiliary Ports	1x Reset Pinhole				
Forwarding Mode	Store-and-forward				
Total non-blocking throughput	28Gbps		56Gbps	64Gbps	
Switching Capability	56Gbps		112Gbps	128Gbps	
Forwarding Rate	41.644Mpps		83.328Mpps	95.232Mpps	
Packet Buffer	12MB				
Network Latency	<4µs				
Stacking	Yes, Up to 4 devices				
Switching	• 16K MAC addresses, including static, dynamic, filtering and sticky MAC address • 4K VLANs, port-based VLAN, IEEE 802.1Q VLAN tagging, MAC-based VLAN, protocol-base VLAN, QinQ • Private VLAN • Voice VLAN including auto voice VLAN, tagged OUI and untagged OUI • 16 VLAN virtual interface with 9216 MTU • GVRP • Spanning tree, 32 instances for STP/RTSP/MSTP/PVST(+)/RPVST(+) • 1K ARP/NDP				
Routing	• 512 (IPv4)/128 (IPv6) routes • 32 (IPv4)/32 (IPv6) static routing • Dynamic routing, including RIP, RIPng, OSPFv2, OSPFv3 and BGP • Routing Policy				
Multicast	• IGMP Snooping (IGMPv1/v2/v3), 256 IGMP Snooping groups • MLD Snooping with MLDv1 and MLDv2, 256 MLD Snooping groups • MVR				
QoS/ACL	• Port priority • Priority mapping, Supports DSCP and IP Precedence-based classification and priority mapping • Queue scheduling, including SP, WRR, WFQ, SP-WRR and SP-WFQ; Supports 8 hardware priority queues per port • Traffic shaping • Rate limit • 2K ACL for Ethernet (Standard ACL, Extended ACL), IPv4 and IPv6				
DHCP	DHCP server, DHCP relay, DHCP Client, DHCP Option 82, 60, 160 and 43				
Maintenance	• Fan and PWR/RPS monitoring, Environmental temperature monitoring and over-temperature alert notification • CPU and memory monitoring • SNMP inckuding SNMPv1, SNMPv2c, SNMPv3 • RMON, sFlow • LLDP&LLDP-MED • Backup & Restore • Syslog • Diagnostics including Ping, Traceroute, Mirroring including SPAN and RSPAN, UDLD (TBD) and copper test • 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 (SSHv1, SSHv2), Telnet • IEEE 802.1X port-based authentication and MAC-based authentication • MAC authentication • AAA authentication including RADIUS, TACACS+; Supports Web-based Authentication for network access control • Storm control • Port isolation, port security, sticky MAC • Filtering MAC address • IP/IPv6 source guard, DoS attack prevention, ARP inspection, CPU Protection to prevent excessive control-plane traffic and protect device processing resources • DHCP/DHCPv6 Snooping • Loop protection including BPDU protection, root protection and loopback protection • Kensington Security Slot (Kensington Lock) support				
Mounting	Desktop, Wall-Mount, or Rack-Mount(rack-mounting kits included)				
System LEDs	1x tri-color LED for device tracking and status indication				
Power Supply LEDs	/	/	/	2x bi-color LEDs for per power supply PWR&RPS	
Data Transferring LEDs	10x green-color LEDs		20x green-color LEDs	28x green-color LEDs	
PoE Powered LEDs	/	8x yellow-color LEDs	16x yellow-color LEDs	/	24x yellow-color LEDs
Fan	/	/	2	/	3
Environmental	Operation: 0°C to 45°C, humidity 10-90% RH(Non-condensing) Storage: -10°C to 60°C, humidity: 5% to 95% RH(Non-condensing)				
Dimensions	330mm(L)x176mm(W)x44mm(H)		440mm(L)x200mm(W)x44mm(H)		440mm(L)x300mm(W)x44mm(H)
Unit Weight	1.45Kg	2.17Kg	3.03Kg	2.94Kg	4.69Kg
Package Content	1x Switch				
	1x 1.2m(10A) AC Cable				
	1x 25cm Ground Cable				
	4x Rubber Footpads				
	1x Power Cord Anti-Trip				
	8x Screws (KM 3*6)				
	1x Quick Installation Guide				
	1x Console Cable(Optional)				
	2x Extended Rack-Mounting Kits		2x Rack-Mounting Kits		
	/		1x RPS, External Redundant Power Supply (Optional)		
Compliance	FCC, CE, RCM, IC, UKCA				

Features & Benefits

Powerful Business Processing Capabilities

- Routing including static routing, dynamic routing and routing policy to realize routing data communication between different network segments. Simpler, more efficient and more reliable.
- DHCP Server and Relay to assign IP address to hosts in the network.
- GVRP to realize VLAN dynamic distribution, registration and attribute propagation, reduce the amount of manual configuration, and ensure the correctness of configuration.
- VLAN optimization with automatic VLAN discovery and configuration correction simplifies deployment and reduces configuration errors.
- QoS, including Port Priority, Priority Mapping, Queue Scheduling, Traffic Shaping and Rate Limit.
- Standard ACL, Extended ACL: ACL to realize the filtering of data packets by configuring matching rules, processing operations and time schedule, and provide flexible security access control policies.
- IGMP Snooping and MLD Snooping to meet the needs of multi-terminal HD video surveillance and video conference.
- IPv6 to meet the needs of the network transition from IPv4 to IPv6.
- 1588v2 TC satisfies high-precision time synchronization between network devices, improves security while reducing costs compared to GPS time synchronization schemes.
- Stacking provides powerful network expansion capability. By adding member devices, you can easily expand the number of ports, bandwidth and processing capacity of the stacking system.

Multiple Security Prevention Mechanism

- Static MAC table, dynamic MAC table to allow data transmission, and filter MAC table to avoid network attacks.
- Packet filtering based on binding of IP address, MAC address, VLAN and port.
- Dynamic ARP Inspection to protect against ARP spoofing and ARP flooding attacks such as gateway spoofing, man-in-the middle attacks and etc. that are common in LAN environment.
- IP/IPv6 Source Guard to prevent illegal address spoofing including IP(v6)/ MAC/VLAN spoofing and IP(v6)/VLAN spoofing.
- DoS Attack Defense, including Land Attack, Smurf Attack, TCP SYN Attack, Ping Flooding and more.
- 802.1X, MAC, RADIUS, AAA, TACACS+ authentications to provide authentication function for LAN devices.
- Supports 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 or stop learning to prevent MAC address attack and control the network traffic of the port.
- Supports DHCP/DHCPv6 Snooping. Only allow DHCP/DHCPv6 packets from trusted ports to keep the enterprise
- DHCP/DHCPv6 environment safe.

Diverse Reliability Protection

- RPS, External redundant power module (optional), ensures stable business use continuously.
- Supports fault detection and alarm for power supply and fan, and automatically adjust the fan speed based on temperature changes to better adapt to the environment.
- Multiple reliability protection at device level, such as overcurrent protection, overvoltage protection, overheat technology and surge protection.
- Dual boot of hardware level. Use two FLASH chips to store boot software (system boot program), achieve hardware level boot redundancy backup, and avoid switching failure due to FLASH chip failures.
- Dual system file redundancy backup ensures the normal startup and operation of the system, and improves the stability of the device.
- Link aggregation to increase bandwidth, improve reliability and load balancing
- Compatible with PVST(+)/RPVST(+) for faster convergence. Optimizing network performance through VLAN-based network load balance.
- ERPS (pending), loopback detection to identify and remove loops on the network.
- Storm control to prevent traffic interruption caused by broadcast, multicast or certain unicast packets.
- Supports stacking of up to 4 switches into one logical device, enhancing reliability through device redundancy and inter-device link aggregation.
- VRRP (pending) to minimize network downtime caused by gateway failure.

PoE Power Supply Capability (Only GWN7810P series support)

- PoE power supply and comply with the IEEE 802.3af/at/bt standards to meet the PoE power supply requirements of security monitoring, audio and video conferencing, wireless signal coverage and more scenarios.
- Supports setting user-defined time period to control the power supply of PoE port on Web GUI.
- Setting priority of PoE ports. When remaining power is insufficient, it will power the ports based on priorities.
- Users can configure the maximum power allowed per port. The maximum limit is 30w per port, even 60W for some port.
- Dynamic power negotiation via LLDP-MED.

Easy Management and Maintenance

- Managed by Web GUI, CLI(Console, Telnet, SSH) and SNMP (v1/v2c/v3).
- Monitoring of CPU and memory usage. Support common networking tools such as Ping, Traceroute, UDLD(TBD) and Copper Test to analysis networking issues.
- Supports RMON, Syslog, traffic statistics, and sFlow for comprehensive network monitoring, traffic analysis, performance optimization, and efficient network management..
- LLDP and LLDP-MED for automatic discovery, provisioning and management of endpoint devices.
- Managed by GDMS Networking (unlimited devices), GWN Manager, and GWN series routers; supports mobile app management, automatic network discovery and configuration.
- Supports multiple languages, including Vietnamese, English, Simplified Chinese, Latin American Spanish, French, German, etc.
- SD-WAN support through GWN Series Routers and standard third-party SD-WAN gateways (via IEEE 802.1Q VLAN & L2/L3 protocols), supporting branch connectivity without relying on traditional Public IP deployment, with centralized management and visual monitoring.
- Stacking simplifies configuration and management. After stacking is formed, multiple physical devices become a virtual device. Users can log in to the stacking system through any member device to uniformly configure and manage all member devices of the stacking system.

Power and Green Energy Efficiency

- High efficiency power supply module, higher efficiency of power supply system.
- All Ethernet ports support EEE(Energy Efficient Ethernet), fast transitions between normal operation and low power states with low traffic and low power consumption
- Intelligent control of fan speed based on environmental temperature. Precise temperature control, energy saving and noise reduction.

IPv4/IPv6 Dual Protocol Stack

- IPv4 routing protocol, including IPv4 unicast routing to satisfy different networking needs.
- IPv6 routing protocols, including IPv6 unicast routing to satisfy different networking needs.
- Supports an IPv4, IPv6 or IPv4/IPv6 hybrid environment.