GRANDSTREAM
CONNECTING THE WORLD

Enterprise Layer 2+ Managed Network Switch

GWN7801(P) - GWN7802(P) - GWN7803(P)

The GWN7800 series are Layer 2+ managed network switches that allow small-to-medium enterprises to build scalable, secure, high-performance, and smart business networks that are fully manageable. They support advanced VLANs for flexible and sophisticated traffic segmentation, advanced QoS for prioritization of network traffic, IGMP 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. The GWN7800 series can be managed in a number of ways, including the local web user interface of the switches. The series is also supported by GDMS Networking and GWN Manager, Grandstream's cloud and on-premise Wi-Fi management platforms, and GWN series routers. These enterprise-grade switches are the ideal networking solution for growing businesses.

Gigabit

8/16/24 Gigabit Ethernet ports and 2/4 Gigabit 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

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

	GWN7801	GWN7801P	GWN7802	GWN7802P	GWN7803	GWN7803P
Network Protocols	IPv4, IPv6, IEEE 802.3, IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3x, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1w, IEEE 802.1d, IEEE 802.1s, IEEE 802.1x					
Memory	128 MB RAM, 32 MB Flash					
Jumbo Frame (Bytes)	10240					
PoE Standards	/	IEEE 802.3af/at	/	IEEE 802.3af/at	/	IEEE 802.3af/at
Gigabit Ethernet Ports	8		16		24	
1G SFP Ports	2		4			
Console	1					
PoE Ports	/	8	/	16	/	24
Integrated Power Supply	30 W	150 W	30 W	270 W	30 W	400 W
Max Output Power per PoE Port	/	30 W	/	30 W	/	30 W
Max Total PoE Output Power	/	130 W	/	240 W	/	370 W
PoE Standards	/	IEEE 802.3af/at	/	IEEE 802.3af/at	/	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	10 Gbps		20 Gbps		28 Gbps	
Switching Capability	20 Gbps		40 Gbps		56 Gbps	
Forwarding Rate	14.88 Mpps		29.76 Mpps		41.66 Mpps	
Packet Buffer	4.1 Mb					
Network Latency	Avg <4 µs					
Switching	• 8K 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 • 16 VLAN virtual interface with 9216 MTU • 256 ARP/NDP • 8 link aggregation groups • Spanning tree, 16 instances for STP/RTSP/MSTP/PVST(+)/RPVST(+)					
Routing	32(IPv4)/32(IPv6) static routing, which supports user-defined static routing entries					
Multicast	• IGMP Snooping with IGMPv2 and IGMPv3, 256 IGMP Snooping groups • MLD Snooping with MLDv1 and MLDv2, 256 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 • 128 ACLs for Ethernet, IPv4, and IPv6 with 1.5K total ACEs					
DHCP	DHCP server, DHCP relay, 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 router					
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					
LEDs	1 x tri-color LED for device tracking and status indication 10 x green LEDs for data ports	1 x tri-color LED for device tracking and status indication 10 x green LEDs for data ports 8 x yellow LEDs for PoE ports	1 x tri-color LED for device tracking and status indication 20 x green LEDs for data ports	1 x tri-color LED for device tracking and status indication 20 x green LEDs for data ports 16 x yellow LEDs for PoE ports	1 x tri-color LED for device tracking and status indication 28 x green LEDs for data ports	1 x tri-color LED for device tracking and status indication 28 x green LEDs for data ports 24 x yellow LEDs for PoE ports
Fan	/	/	/	2	/	2
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: 5%–95%, non-condensing					
Dimensions	330 mm × 175 mm × 44 mm (12.99" × 6.89" × 1.73") (L × W × H)		440 mm × 200 mm × 44 mm (17.32" × 7.87" × 1.73") (L × W × H)			
Unit Weight	1.8 kg (3.97 lb)	2 kg (4.41 lb)	2.6 kg (5.73 lb)	3 kg (6.61 lb)	2.7 kg (5.95 lb)	3.3 kg (7.28 lb)
Mounting	Desktop, Wall Mount, or Rack Mount (rack mounting kits included)					
Package Content	1 × Switch 1 × 1.2 m (3.94 ft) AC Cable of 10 A 1 × 25 cm (9.84") Ground Cable 1 × Simplified Quick Installation Guide 1 × Regulatory Information 4 × Rubber Footpads 8 × Flat Head Machine Screws (M3 × 6 mm)					
	2 x Extended Rack-Mounting Kits		2 x Rack Mounting Kits			
Compliance	FCC, CE, RCM, IC, UKCA					

Features & Benefits

Powerful Business Processing Capabilities

- Unicast routing via ACL for data routing between network segments.
- 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.
- ACLs to filter 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 and video conferencing traffic.
- IPv6 support to facilitate a smooth network transition from IPv4 to IPv6.

Multiple Security Prevention Mechanism

- Static MAC tables and dynamic MAC tables allow data transmission, and MAC table filtering protects against network attacks.
- Packet filtering based on binding of IP address, MAC address, VLAN and 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.
- DoS Attack Defense prevents Land Attacks, Smurf Attacks, TCP SYN Attacks, Ping Flooding and more.
- 802.1X, MAC, RADIUS, AAA, and TACACS+ authentications provide authentication 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.

Diverse Reliability Protection

- Support 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.
- STP/RSTP/MSTP guarantees fast convergence, improves fault tolerance, ensures network stability and provides link load balancing and redundancy.
- Compatible with PVST(+) / RPVST(+) for faster convergence, optimizing network performance through VLAN-based network load balancing.
- Loopback detection to keep the port in normal use.
- Link aggregation to increase bandwidth, improve reliability and load balancing.
- Storm control to prevent traffic impact.

PoE Power Suuply Capability (GWN780XP Series Only)

- Complies with IEEE 802.3af/at standards to meet the PoE power supply requirements of security monitoring, audio and video conferencing, wireless signal coverage and more.
- User-defined time periods allow users to control the power supply of PoE ports on Web UI.
- Priority of PoE ports settings allow the series to power ports based on priorities when power is insufficient.
- The maximum output power is 30 W per port. Users can configure the maximum power output via the Web UI.
- Dynamic power negotiation via LLDP-MED.

Easy Management and Maintenance

- Managed via Web GUI, CLI (Console, Telnet), and SNMP (v1/v2c/v3).
- CPU and memory monitoring, Ping, Traceroute, UDLD (TBD), and copper testing to diagnose cable faults and network node issues easily.
- RMON, Syslog, and traffic statistics to optimize the network.
- LLDP and LLDP-MED for convenient topology discovery and device status tracking.
- Managed by GDMS Networking and GWN Manager, and can also be managed by GWN routers.

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.

IPv4/IPv6 Dual Protocol Stack

- IPv4 routing protocol, including IPv4 static routing to satisfy different networking needs.
- IPv6 routing protocols, including IPv6 static routing to satisfy different networking needs.
- Supports deployment in pure IPv4, pure IPv6, or dual-stack networks to fully meet modern networking requirements.