



## Enterprise Layer 2+ Managed Network Switch

### GWN7806(P)

The GWN7806(P) is layer 2+ stackable(pending) 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 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 GWN7806P provides smart dynamic PoE output to power IP phones, IP cameras, Wi-Fi access points and other PoE endpoints. GWN7806(P) is easy to deploy and manage, including managed by the local Web user interface of the GWN7806(P) switch and CLI, the command-line interface. The switch is also supported by GWN.Cloud and GWN Manager, Grandstream's cloud and on-premise network management platform. The GWN7806(P) is the best value enterprise-grade managed switch for small-to-medium businesses.



48 Gigabit Ethernet ports  
and 6 Gigabit SFP+ ports



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



Embedded controller to  
manage switch; GWN.  
Cloud and GWN Manager,  
Grandstream's cloud and  
on-premise Wi-Fi  
management platform



Built-in QoS allows for  
prioritization of network  
traffic



Supports stacking for easy  
management of up to 16  
switches in one interface  
while creating redundant  
backup between multiple  
devices

|                                          | GWN7806                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | GWN7806P        |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Network Protocol</b>                  | 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, IEEE 802.1p, IEEE 802.1Q, IEEE 802.3AB, IEEE 802.1p, IEEE 802.1D, IEEE 802.1s, IEEE 802.1w, IEEE 802.1x                                                                                                                                                                                                                                                                                                                                                  |                 |
| <b>Gigabit Ports</b>                     | 48                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |
| <b>SFP+ Ports</b>                        | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |
|                                          | Note: Support DAC cable, and must be $\leq 5m$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |
| <b>Maximum no. of Supported Modules</b>  | SM-10G: 6<br>MM-10G: 6<br>RJ45-10G: 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |
|                                          | Note: RJ45-10G modules must be interval inserted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |
| <b>Console</b>                           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |
| <b># of PoE Ports</b>                    | /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 48              |
| <b>Integrated Power Supply</b>           | 60W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 470W            |
| <b>Maximum Output Power Per PoE Port</b> | /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 30W             |
| <b>Max Total PoE Output Power</b>        | /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 400W            |
| <b>PoE Standards</b>                     | /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | IEEE 802.3af/at |
| <b>Auxiliary Ports</b>                   | 1x Reset Pinhole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |
| <b>Forwarding Mode</b>                   | Store-and-forward                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |
| <b>Total non-blocking throughput</b>     | 108Gbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |
| <b>Switching Capability</b>              | 216Gbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |
| <b>Forwarding Rate</b>                   | 160.704Mpps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| <b>Packet Buffer</b>                     | 16Mb                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |
| <b>Network Latency</b>                   | <4 $\mu$ s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |
| <b>Switching</b>                         | <ul style="list-style-type: none"> <li>• 32K static, dynamic and filtering MAC addresses</li> <li>• 4K VLANs, port-based VLAN, IEEE 802.1Q VLAN tagging, voice VLAN</li> <li>• VLAN virtual interface</li> <li>• GVRP (pending)</li> <li>• 27 link aggregation</li> <li>• Spanning tree, 64 instances for STP/RSTP/MSTP</li> </ul>                                                                                                                                                                                                                                                                            |                 |
| <b>Routing</b>                           | Static routing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |
| <b>Multicast</b>                         | <ul style="list-style-type: none"> <li>• IGMP Snooping</li> <li>• MLD Snooping</li> <li>• MVR (pending)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |
| <b>QoS/ACL</b>                           | <ul style="list-style-type: none"> <li>• Port priority</li> <li>• Priority mapping</li> <li>• Queue scheduling, including SP, WRR, WFQ, SP-WRR and SP-WFQ</li> <li>• Traffic shaping</li> <li>• Rate limit</li> <li>• 4K ACL for Ethernet, IPv4 and IPv6</li> </ul>                                                                                                                                                                                                                                                                                                                                           |                 |
| <b>DHCP</b>                              | DHCP server, DHCP relay, DHCP Option 82, 60, 160 and 43                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |
| <b>Maintenance</b>                       | CPU and memory monitoring, SNMP, RMON, LLDP&LLDP-MED, backup and restore, syslog, diagnostics including Ping, Traceroute, port mirroring, UDLD(TBD) and copper test                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |
| <b>Security</b>                          | <ul style="list-style-type: none"> <li>• User hierarchical management and password protection, HTTPS, SSH, Telnet</li> <li>• 802.1X authentication</li> <li>• AAA authentication including RADIUS, TACACS+</li> <li>• Storm control</li> <li>• Port isolation, port security, sticky MAC</li> <li>• Filtering MAC address</li> <li>• IP source guard, DoS attack prevention, ARP inspection</li> <li>• DHCP Snooping</li> <li>• Loop protection including BPDU protection, root protection(pending) and loopback protection(pending)</li> <li>• Kensington Security Slot (Kensington Lock) support</li> </ul> |                 |
| <b>Mounting</b>                          | Desktop, Rack-Mount(rack-mounting kits included)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |
| <b>LEDs</b>                              | 1x tri-color LED for device tracking and status indication<br>54x green-color LEDs for data transferring<br>48x yellow-color LEDs for PoE powered (GWN7806P)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
| <b>Fan</b>                               | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |
| <b>Environmental</b>                     | Operation: 0°C to 45°C, humidity: 10% to 90% RH(Non-condensing)<br>Storage: -10°C to 60°C, humidity: 10% to 90% RH(Non-condensing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |
| <b>Dimensions</b>                        | 440mm(L)x301mm(W)x44mm(H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |
| <b>Unit Weight</b>                       | 4.0Kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.1Kg           |
| <b>Package Content</b>                   | Switch, 1x 1.2m(10A) AC Cable, 1x 25cm Ground Cable, 4x Rubber Footpads, 2x Rack-Mounting Kits, 8x Screws(PM 3*6), 1x Power Cord Anti-Trip, 1x Quick Installation Guide, 1x Console Cable(Optional)                                                                                                                                                                                                                                                                                                                                                                                                           |                 |
| <b>Compliance</b>                        | 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 address to hosts in the network
- GVRP(pending) for dynamic VLAN distribution, registration and attribute propagation reduces manual configuration and ensures proper configuration
- Built-in QoS, including Port Priority, Priority Mapping, Queue Scheduling, Traffic Shaping and Rate Limit
- Access Control List (ACL) recognizes and filters data packets by configuring matching rules, processing operations, and time schedules while providing flexible security access control policies
- IGMP Snooping and MLD Snooping to meet the needs of multi-terminal video deployments, including video surveillance, conferencing and more
- Supports IPv6 and IPv4 to coordinate network transition from IPv4 to IPv6
- 1588 PTP TC satisfies precise time synchronization between network devices, improves security and reduces costs compared to GPS time synchronization schemes
- Stacking(pending) 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 supports data transmission and prevents network attacks
- Packet filtering based on binding IP address, MAC address, VLAN and port
- Dynamic ARP Inspection protects against ARP spoofing and ARP flooding attacks common in LAN environments, including gateway spoofing, man-in-the-middle attacks and more.
- IP Source Guard prevents illegal address spoofing including IP/MAC/VLAN spoofing and IP/VLAN spoofing
- DoS Attack Defense, including Land Attack, Smurf Attack, TCP SYN Attack, Ping Flooding and more
- 802.1X, RADIUS, AAA, TACACS+ to provide authentication and authorization for LAN devices
- Supports port security: when the number of MAC addresses learned by a port reaches the maximum, it will be set to error-down status automatically to prevent MAC address attack and control the network traffic of the port.
- DHCP Snooping ensures DHCP packets are only allowed from trusted ports to keep the enterprise DHCP environment safe

## IPv4/IPv6 Dual Protocol Stack

- Supports IPv4 and IPv6 routing protocols, including unicast routing, to satisfy all networking
- Supports an IPv4, IPv6 or IPv4/IPv6 hybrid environment

## Power & Green Energy Efficiency

- All Ethernet ports support EEE (Energy Efficient Ethernet) to provide quick and seamless transitions between normal operation and low power states with low traffic and low power consumption
- Intelligent control of the integrated fan automatically adjusts fan speed based on environmental temperature and provides precise temperature control, energy saving and noise reduction

## Enterprise Grade Reliability

- Supports fault detection and alarms for the power supply and fan, and automatically adjusts the fan speed based on temperature changes to adapt to the environment
- Provides multiple reliability mechanisms at device level, including overcurrent and overvoltage protection, overheat technology and 6kV surge protection for the power supply and network interfaces
- Dual boot of hardware level: the GWN7806 uses two FLASH chips to store boot software (system boot program), achieve hardware level boot redundancy backup, and avoid switching failures due to FLASH chip failures.
- Dual system file redundant backup ensures normal startup and operation of the system, and improves the stability of the device
- STP/RSTP/MSTP guarantees fast convergence, improves fault tolerance, ensures network stability, and provides link load balance and redundancy
- ERPS(pending) loopback detection identifies and removes loops on the network
- VRRP(pending) minimizes network downtime caused by gateway failures
- Link aggregation increases bandwidth and improves reliability and load balancing
- Storm control prevents traffic interruption caused by broadcast, multicast or other unicast packets
- Stacking(pending) supports the virtualization of up to 16 switches into one. This improves the device-level reliability through redundant backups between multiple member devices and improves the link-level reliability through link aggregation across devices.

## Smart PoE Capabilities

- Smart power control for dynamic PoE/PoE+ power allocation per port
- IEEE 802.3af/at support meets the PoE power requirements for security monitoring, audio and video conferencing, Wi-Fi networks and more
- Supports user-defined time periods to control the power supply of PoE port through the Web UI
- Prioritize PoE ports: when remaining power is insufficient, this setting will power the ports based on priority
- Users can configure the maximum power allowed per port. The maximum limit is 30w.
- Dynamic power negotiation via LLDP-MED

## Easy Management and Maintenance

- Managed by GWN.Cloud and GWN Manager
- Supports management by Web GUI, CLI (Console, Telnet, SSH) and SNMP(v1/v2c/v3)
- Provides monitoring of CPU and memory usage for network analysis by supporting common networking tools including Ping, Traceroute, UDLD(TBD) and Copper Test
- Supports RMON, Syslog, traffic statistics and sFlow(pending) for network optimization
- LLDP and LLDP-MED provides automatic discovery, provisioning, and management of endpoint devices
- Stacking(pending) simplifies configuration and management: after a stacking configuration 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 of the stacking system.