GRANDSTREAM
CONNECTING THE WORLD

Layer 3 Aggregation Managed Switches

GWN7830 - GWN7831 - GWN7832

The GWN7830 Series are Layer 3 aggregation managed switches that allow enterprises to build scalable, secure, high performance and smart business networks that are fully manageable and support maximum capacity. 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 GWN7830 series can be managed in several ways, including the local Web user interface of the switch, and CLI, the command line interface. This series is also supported by GDMS Networking and GWN Manager, Grandstream's cloud and on-premise network management platform, and GWN router. With complete end-to-end quality of service, flexible security settings, and support for maximum network capacity, the GWN7830 Series provides enterprise-grade Layer 3 aggregation switches ideal for medium-to-large deployments.

Gigabit

2/4 Gigabit Ethernet ports, 6/24 Gigabit SFP ports, and 4/12 10Gigabit SFP+ ports

Supports deployment in IPv6 and IPv4 networks

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

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

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

	GWN7830	GWN7831	GWN7832
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 802.1p, IEEE 802.1Q, IEEE 802.3AB, IEEE 802.1p, IEEE 802.1D, IEEE 802.1s, IEEE 802.1w, IEEE 802.1x		
Gigabit Ethernet Ports	2	4x Combo	/
1G SFP Ports	6	24	/
10G SFP+ Ports	4		12
	Note: Support DAC Cable and must be ≤ 5m		
Maximum no. of Supported Modules	SM-1G: 6 MM-1G: 6 RJ45-1G: 3 SM-10G: 4 MM-10G: 4 RJ45-10G: 2	SM-1G: 24 MM-1G: 24 RJ45-1G: 12 SM-10G: 4 MM-10G: 4 RJ45-10G: 2	SM-10G: 12 MM-10G: 12 RJ45-10G: 6
	Note: RJ45-1G, RJ45-10G modules must be interval inserted		
Console	1		
Integrated Power Supply	30W	60W	60W
External Redundant Power Supply (RPS)	/	12V/60W	12V/60W
Surge Protection	± 6KV CM and DM for power ± 4KV CM for network ports		± 6KV CM and DM for power
ESD	± 12KV for contact discharge		
Auxiliary Ports	1x Reset Pinhole		
Forwarding Mode	Store-and-forward		
Total non-blocking throughput	48Gbps	64Gbps	120Gbps
Switching Capability	96Gbps	128Gbps	240Gbps
Forwarding Rate	71.424Mpps	95.232Mpps	178.56Mpps
Packet Buffer	12Mb	12Mb	16Mb
Network Latency	<4μs	<4μs	<2μs
Switching	• 16K MAC addresses, including static, dynamic and filtering MAC address • 16 VLAN virtual interface with 9216 MTU • 1K ARP/NDP		• 32K MAC addresses, including static, dynamic and filtering MAC address • 32 VLAN interface with 9216 MTU • 2K ARP/NDP
	• 4K VLANs, port-based VLAN, IEEE 802.1Q VLAN tagging, Mac-based VLAN, protocol-based VLAN • Private VLAN • VOICE VLAN including auto voice VLAN, tagged OUI, and untagged OUI • GVRP(pending) • 32 link aggregation groups • ERPS(pending)		
	Spanning tree, 32 instances for STP/RSTP/MSTP/PVST(+)/RPVST(+)		Spanning tree, 64 instances for STP/RSTP/MSTP/PVST(+)/RPVST(+)
Routing	• 512 (IPv4)/128(IPv6) routes		• 12K (IPv4)/4K(IPv6) routes
	• 32(IPv4)/32(IPv6) static routing • Policy routing (pending) • Dynamic routing, including RIP, RIPng, OSPF, OSPFv3, and BGP • Routing Policy • VRRP(pending)		
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		
	2K ACL for Ethernet, IPv4 and IPv6		4K ACL for Ethernet, IPv4 and IPv6
DHCP	DHCP server, DHCP relay, Option 82, 60, 160 and 43		
Maintenance	• CPU and memory monitoring • Fault detection and alarm for power supply and fan • SNMP including SNMPv1, SNMPv2c, SNMPv3 • RMON • LLDP&LLDP-MED • Backup and 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 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		
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	12x green-color LEDs	32 green-color LEDs	12x bi-color LEDs for 1G/10G
Fan	/	2	
Environmental	Operation: 0°C to 45°C, humidity 10% to 90% RH(Non-condensing) Storage: -10°C to 60°C, humidity: 10% to 90% RH(Non-condensing)		
Dimensions	330mm(L)x175mm(W)x44mm(H)	440mm(L)x200mm(W)x44mm(H)	
Unit Weight	1.91Kg	3.15Kg	2.67Kg
Package Content	1x Switch		
	1x 1.2m(10A) AC Cable		
	1x 25cm Ground Cable		
	4x Rubber Footpads		
	1x Power Cord Anti-Trip		
	2x Extended Rack-Mounting Kits	2x Rack-Mounting Kits	
	8x Screws(KM 3*6)		
	1x Simplified Quick Installation Guide		
	1x Regulatory Paper		
	/	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 policy routing (pending) 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 (pending) to realize VLAN dynamic distribution, registration and attribute propagation, reduce the amount of manual configuration, and ensure the correctness of configuration.
- QoS, including Port Priority, Priority Mapping, Queue Scheduling, Traffic Shaping and Rate Limit.
- 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.
- 1588 PTP 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.
- 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 6KV 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.
- STP/RSTP/MSTP to guarantee fast convergence, improve fault tolerance, ensure stable network and provide link load balance, and redundancy.
- Compatible with PVST(+)/RPVST(+) for faster convergence. Optimizing network performance throughVLAN-based network load balance.
- ERPS (pending), loopback detection to identify and remove loops on the network.
- VRRP (pending) to minimize network downtime caused by gateway failure.
- Link aggregation to increase bandwidth, improve reliability and load balancing.
- Storm control to prevent traffic interruption caused by broadcast, multicast or certain unicast packets.
- Stacking supports the logical virtualization of up to 4 switches into one. It improves the device-level reliability through redundant backup between multiple member devices and the link-level reliability through the link aggregation function across devices.

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(pending) for network optimization.
- LLDP and LLDP-MED for automatic discovery, provisioning and management of endpoint devices.
- Managed by GDMS Networking, GWN Manager, and GWN Series Router.
- 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 andmanage all member devices of the stacking system.

Power & 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 IPv6 static routing, RIPng, OSPFv3 and IPv6 multicast to meet the requirements of IPv6 independent networking and IPv4/IPv6 hybrid networking.
- Policy routing(pending) can not only flexibly adjust routing paths according to actual needs to meet different network requirements, but also dynamically select routing paths based on network load, thereby achieving load balancing.