

# Comunicaciones

---

# Reunidas

Networking Solutions



**GRANDSTREAM**

---

CONNECTING THE WORLD

# OUR MISSION



We believe in **connecting the world**

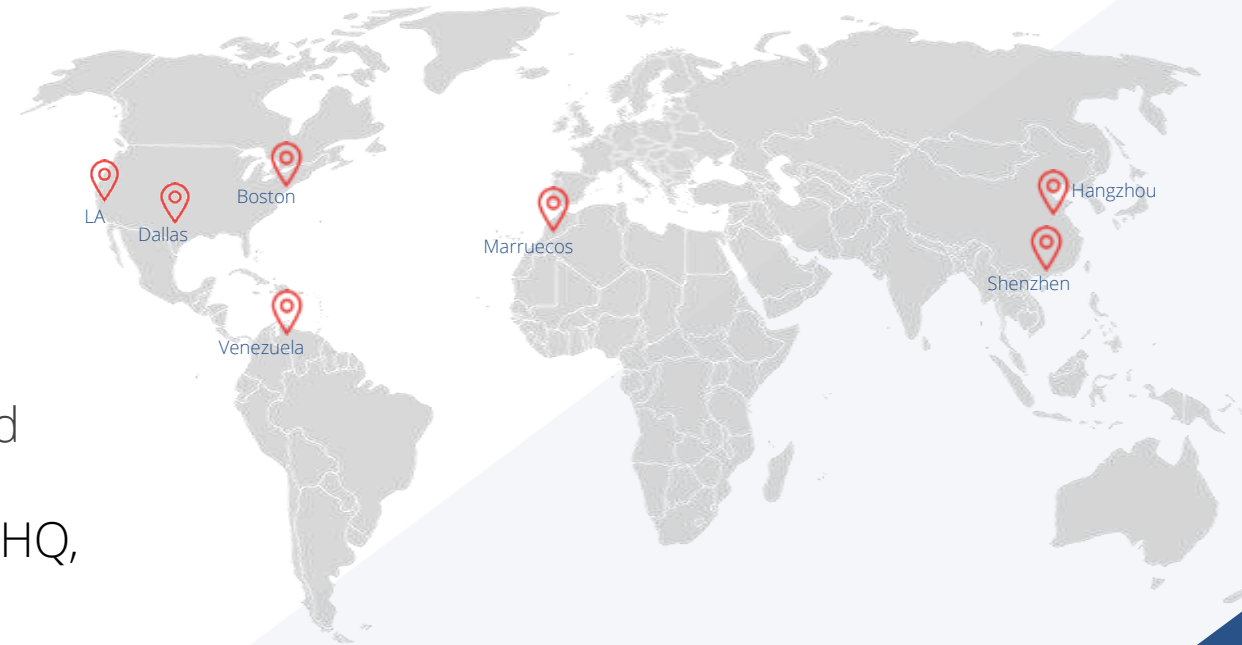
We believe everyone should have the tools to communicate from anywhere on any device

*And we design products that make this belief become a reality...*



# WHO IS GRANDSTREAM

- Designer & manufacturer of **unified communications** and **networking** solutions
- Founded in 2002 in **Boston, MA**
- **+600** employees in 14 countries (+50% R&D Engineers)
- Used and sold in **150 countries** around the world
- **Global presence** with offices in the U.S. (Boston HQ, Los Angeles, Dallas), Venezuela, Morocco, China (Shenzhen and Hangzhou) and Malaysia
- **4 Research and Development Centers** (Dallas, Los Angeles, Shenzhen, and Hangzhou)



# A ONE-STOP SHOP FOR COMMUNICATION SOLUTIONS



## Unified Communications

Voice & Video IP Phones  
IP PBXs  
Gateways & ATAs  
Facility Management  
Voice & Video Conferencing  
Free Device Management Platform

## Networking

Indoor Wi-Fi APs  
Outdoor/Long-Range Wi-Fi APs  
Wi-Fi Routers  
Wired Routers  
Network Switches  
3 Free Management Platforms



# WHY GWN SERIES SOLUTIONS?



## **3-Year Warranty**

Standard on all GWN models



## **Free Management**

GWN.Cloud, GWN Manager and embedded controllers



## **Secure Out-of-the-Box**

Enterprise-grade security on all models



## **Easy Installation**

Add new APs, routers & switches by scanning a barcode with the GWN App



## **Remote Management**

Provides scalability and flexible management options



## **Advanced Features**

Take advantage of Captive portals, Mesh, VPN, QoS and more



## **One-Stop-Shop**

Grandstream offers everything needed to build wired and Wi-Fi networks



## **In-Stock and Available Now**

Contact your distributor today

# MANAGEMENT



- Managed by GWN.Cloud, GWN Manager and embedded controller (accessible via Web GUI)
- Monitoring of CPU and memory usage
- Supports common networking tools such as Ping, Traceroute, UDLD (TBD) and Copper Test
- Supports RMON, Syslog and traffic statistics for network optimization
- LLDP and LLDP-MED for automatic discovery, provisioning and management of endpoint devices



# MANAGEMENT OPTIONS – GWN SERIES

## GWN.CLOUD



- ✓ **FREE**
- ✓ **AWS CLOUD PLATFORM**
- ✓ **MOBILE APP & WEB UI**
- ✓ **UNLIMITED DEVICES**
- ✓ **SECURE CLOUD PROVISIONING**

## GWN.MANAGER



- ✓ **FREE**
- ✓ **SOFTWARE CLIENT & MOBILE APP**
- ✓ **LOCAL SERVER DEPLOYMENTS**
- ✓ **UP TO 3,000 DEVICES**

## BUILT-IN CONTROLLERS



- ✓ **FREE**
- ✓ **EMBEDDED IN WEB UI**
- ✓ **LOCAL NETWORK DEPLOYMENTS of 30-50 GWN DEVICES**

Office

Dashboard

Devices

Clients

Guests

Map

Insight

Alerts

Settings

Organization

## Dashboard

Internet



Router



Switch



AP



Clients

—  
WAN IP3  
Online0  
Offline2  
Online2  
Offline14  
Wired19  
Wireless

Alert

Urgent

0 Unread

Critical

0 Unread

Normal

0 Unread

For the Last 2 hours 1 day 1 week 1 month

## Clients Count

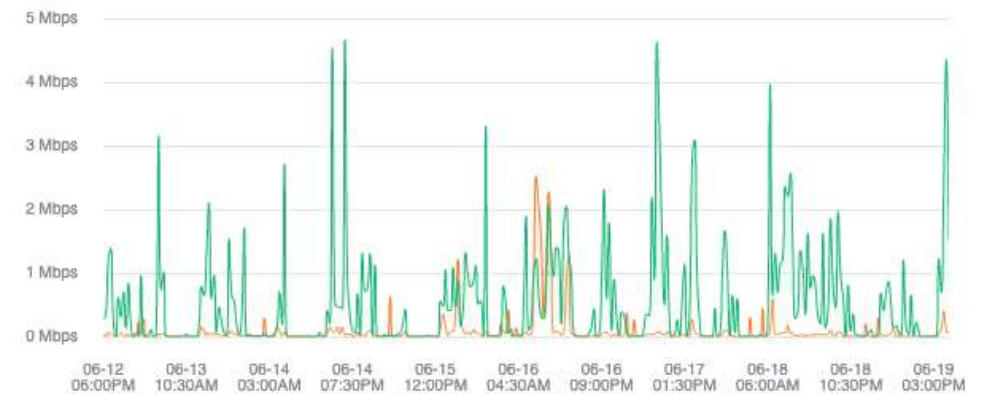
All Clients



## Bandwidth Usage

Total: 6.66 GB 37.57 GB

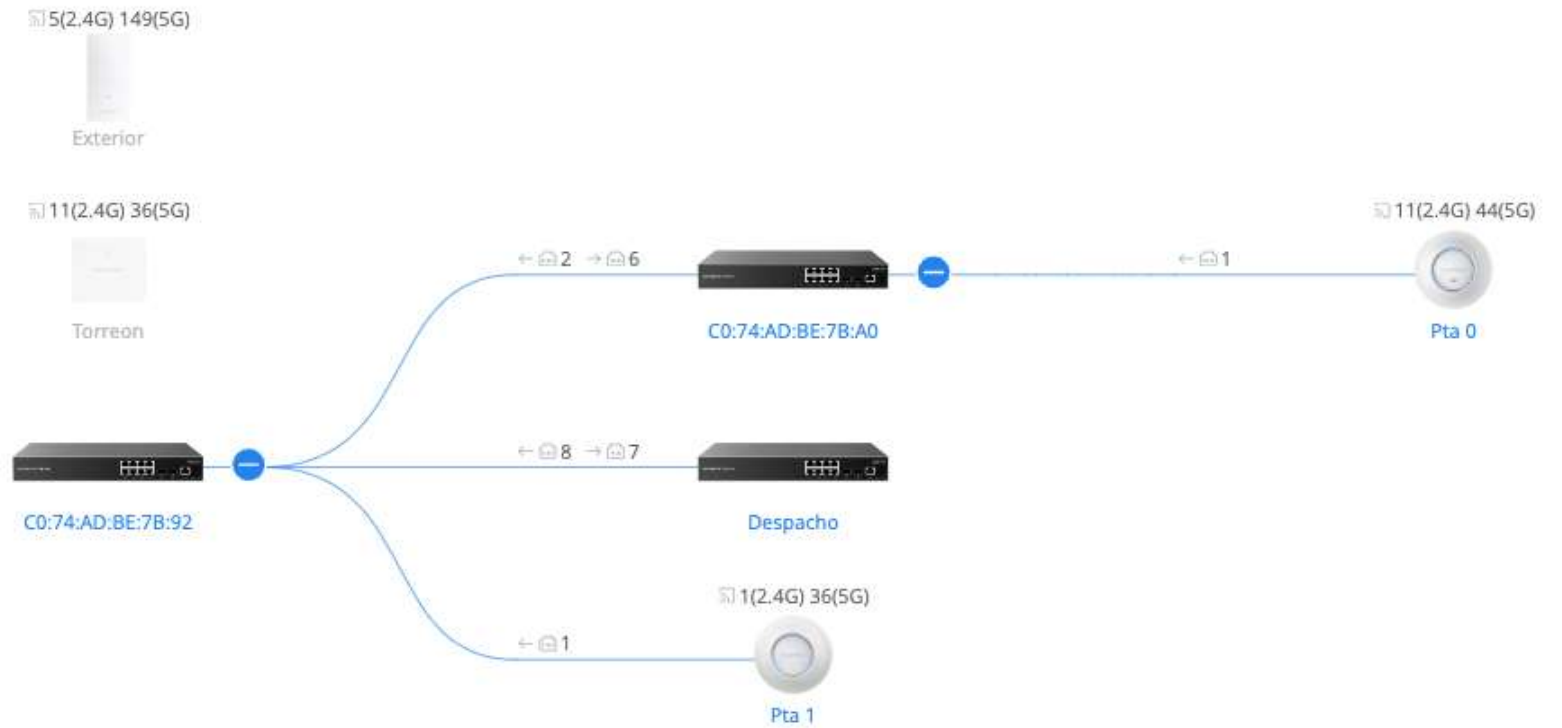
All Clients





## Network Topology

Q Device Name/



# GWN SERIES

---

## Networking Solutions

Our fastest-growing product line, the GWN Series allows you to build powerful and secure networks with industry-leading setup, performance and management. It includes a full portfolio of APs, Routers, Managed and Unmanaged Network Switches and 3 free management options.





# GWN SERIES INDOOR APs



**GWN7602**



**GWN7605**



**GWN7615**



**GWN7624**



**GWN7625**



**GWN7630**



**GWN7660**



**GWN7661**  
**NEW!**



**GWN7662**  
**NEW!**



**GWN7664**



# GWN SERIES ACCESS POINTS

Long-Range & Outdoor APs



***GWN7605LR***



***GWN7630LR***

**WiFi 6  
CERTIFIED**



***GWN7660LR***

**WiFi 6  
CERTIFIED**



***GWN7664LR***

***(WEATHERPROOF LONG-RANGE)***

# GWN SERIES WI-FI APs

## Enterprise-Grade Security Protection



- **Anti-hacking secure boot** requires all critical operating layers of an AP to communicate with each other on boot to ensure the AP only boots-up if fully safe and secure
- **Critical data/control lockdown** locks APs while encrypting data and network setup if a network security event occurs
- **Unique default passwords** on all GWN Series devices keeps your network safe and secure during installation – which is the most common time for hacking attempts
- **Unique security certificates** creates a uniquely secure connection with each client to make it virtually impossible to hack into the network through network clients



# GRANDSTREAM IN THE WI-FI ALLIANCE



Wi-Fi Alliance® is the worldwide network of companies bringing you Wi-Fi®, one of the world's most valued communications technologies. Our vision is to connect everyone and everything, everywhere.

Wi-Fi Alliance drives global Wi-Fi adoption and evolution through thought leadership, spectrum advocacy, and industry-wide collaboration.

**GRANDSTREAM**  
CONNECTING THE WORLD



# GWN SERIES WI-FI 6 ACCESS POINTS



# Wi-Fi 6 - ACCESS POINTS

## GWN Series



Wi-Fi CERTIFIED products have undergone rigorous testing. When a product passes the tests successfully, the manufacturer can use the Wi-Fi CERTIFIED logo.

Certification means that a product has been tested in numerous configurations with a diverse sample of other devices to validate interoperability with other CERTIFIED Wi-Fi equipment operating in the same frequency band.





# Wi-Fi 6 - ACCESS POINTS

**OFDMA** – Maximizing Transmission Efficiency

OFDMA, is a technology that enables an Access Point to **connect with many devices at once**. **OFDMA partitions each radio channel into smaller resource units** that it strategically allocates across clients.

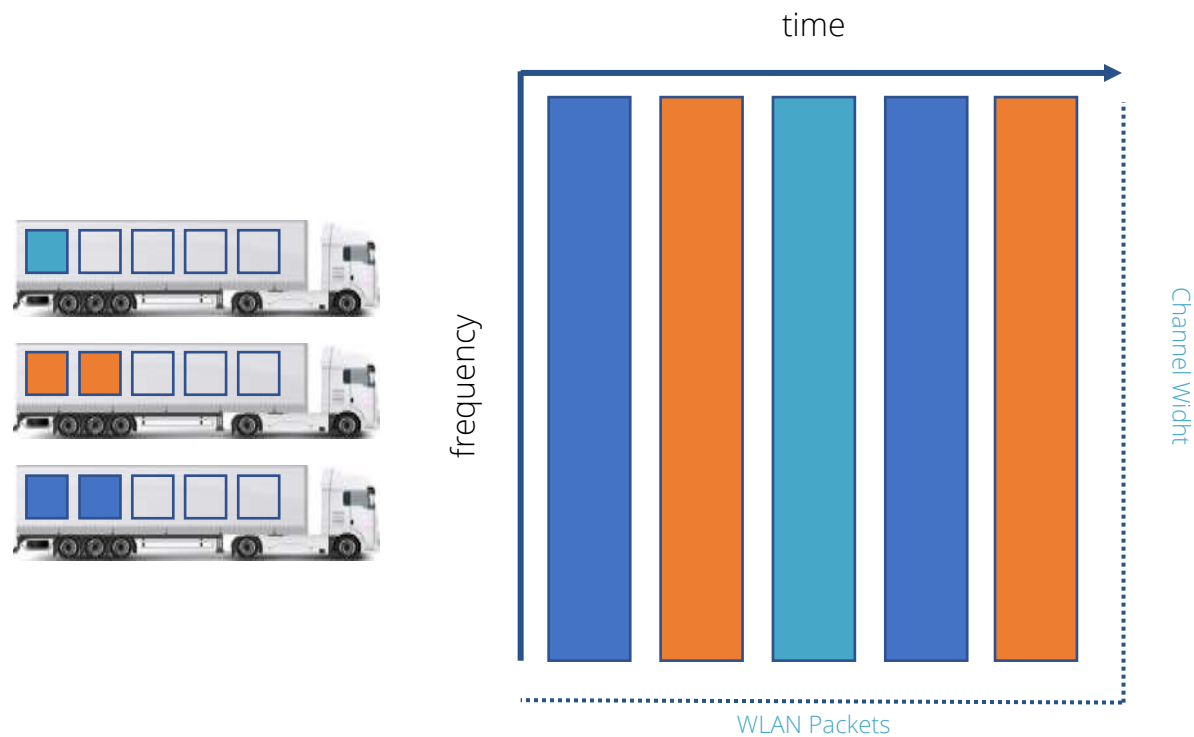
In contrast, a legacy AP can communicate with only one user per channel at a time, and must hold the line open until a given transmission concludes. As a result, wireless performance often suffers in high-density environments.



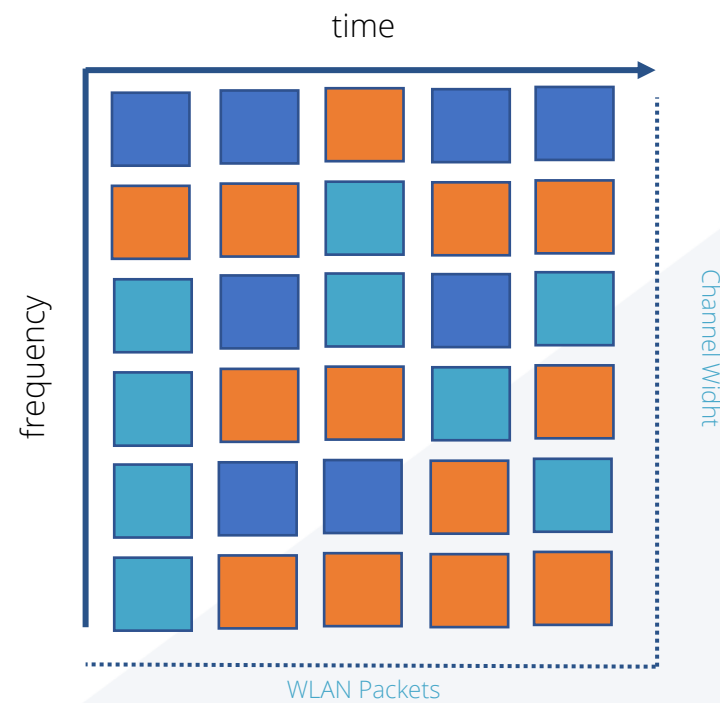
# Wi-Fi 6 - ACCESS POINTS

**OFDMA** – Maximizing Transmission Efficiency

## Wi-Fi 5



## Wi-Fi 6



# Wi-Fi 6 - ACCESS POINTS

## MU-MIMO Technology

Multi-user MIMO allows multiple Wi-Fi devices to **simultaneously receive multiple data streams**.

A wireless access point (AP) can send data to four different Wi-Fi devices at the same time. MU-MIMO can greatly increase the network's throughput and is a real asset for high density networks

Though OFDMA and MU-MIMO allow multiple devices to simultaneously transmit, they are different. **OFDMA can help in high-density environments, while MU-MIMO can aid in high-throughput applications.**



# GWN SERIES

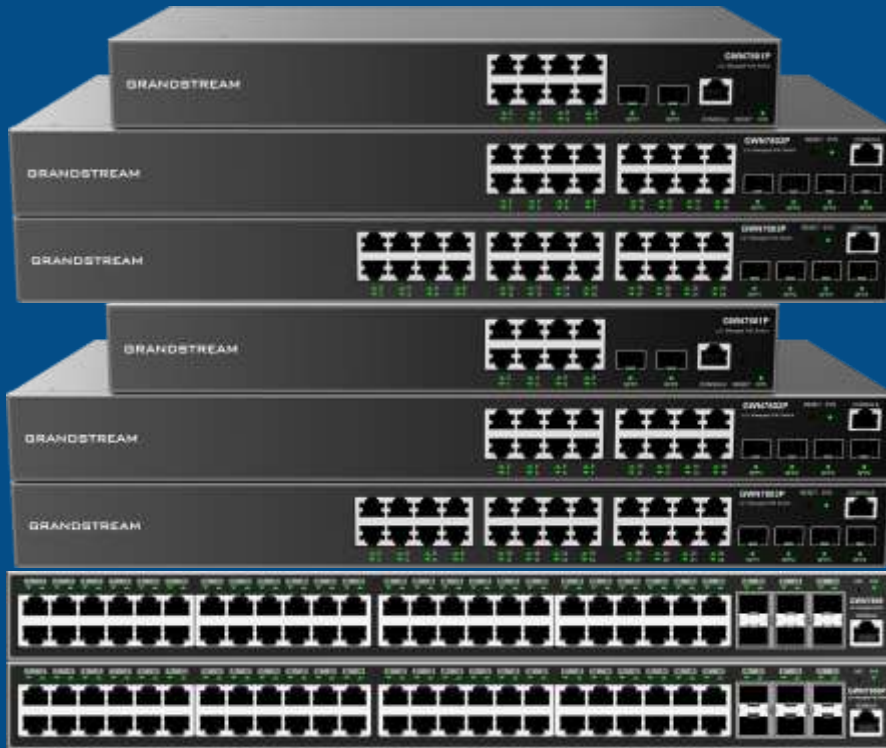
## Networking Solutions

Our fastest-growing product line, the GWN Series allows you to build powerful and secure networks with industry-leading setup, performance and management. It includes a full portfolio of APs, Routers, Managed and Unmanaged Network Switches and 3 free management options.





# GWN Series Network Switches



## GWN7800 Series

Layer 2+ Managed Network Switches  
8 models



## GWN7700 & GWN7700M Series

Unmanaged Network Switches  
7 models



# CONNECT ENDPOINTS TO YOUR NETWORK

Build, Manage & Deploy Your Network with Grandstream



IP Phones



Wi-Fi APs & Routers



IP Cameras



All Other PoE Endpoints

*\*GWN7800 series supports all brands of devices*



# GWN7700 Series Unmanaged Network Switches

GWN7700(P) – GWN7701(P & PA)



5 models  
3 models with PoE  
2 models without PoE



5 or 8 Gigabit ports,  
4 or 8 Gigabit PoE ports  
-Up to 30W p/port



LED Indicators:  
Per port: link/activity/speed  
Per device: power



Broadcast/multicast/  
Unicast storm control  
to monitor traffic levels



Auto MDI/MDIX  
crossover on all ports

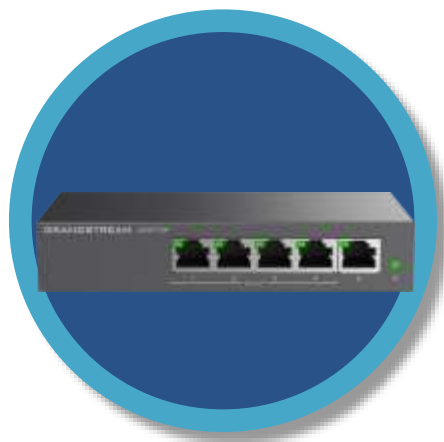
# GWN7700 SERIES UNMANAGED NETWORK SWITCHES

## Model Comparison



**GWN7700**

5 Gigabit ports  
10 Gbps Switching  
Plastic Enclosure  
Desktop & Wall Mount



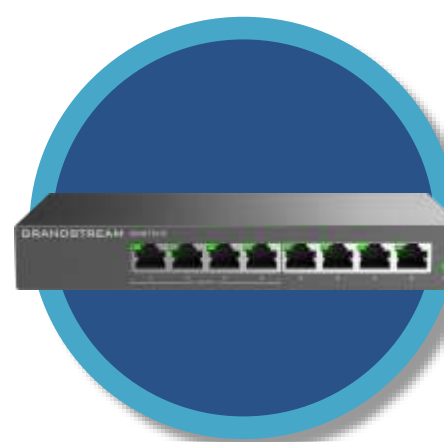
**GWN7700P**

5 Gigabit ports  
4 PoE Ports  
Up to 30W p/ port  
10 Gbps Switching  
Metal Enclosure  
Desktop & Wall Mount



**GWN7701**

8 Gigabit ports  
16 Gbps Switching  
Plastic Enclosure  
Desktop & Wall Mount



**GWN7701P**

8 Gigabit ports  
4 PoE Ports  
Up to 30W p/ port  
16 Gbps Switching  
Metal Enclosure  
Desktop & Wall Mount



**GWN7701PA**

8 Gigabit ports  
8 PoE Ports  
Up to 30W p/ port  
16 Gbps Switching  
Metal Enclosure  
Desktop/Wall/Rack Mount



# PoE

## GWN7700 Series Layer 2 Switches



- Available on GWN7700P, GWN7701P, and GWN7701PA
- 4 or 8 ports
- Supports dynamic PoE/PoE+ power allocation per port
- Up to 30W per port
- Port priority setting





# GWN7700M Series Unmanaged 2.5G Multi-Gigabit Switches

GWN7700M & GWN7701M



5 or 8 Multi-Gigabit ports  
provide  
100/1000/2500Mbps  
connectivity



1x SFP+ Fiber Port  
With 1-Gig or 10 -Gig  
connectivity



LED Indicators:  
Per port: link/activity  
Per device: power



Broadcast/multicast/  
Unicast storm control  
to monitor traffic levels



Auto MDI/MDIX  
crossover on all ports

# GWN7700M SERIES UNMANAGED 2.5 MULTI-GIGABIT

## Network Switch Model Comparison



**GWN7700M**

5 100/1000/2500Mbps ports  
1 SFP+ Fiber Port  
45 Gbps Switching Capacity  
Desktop & Wall-Mount  
Metal Enclosure  
Fan-less



**GWN7701M**

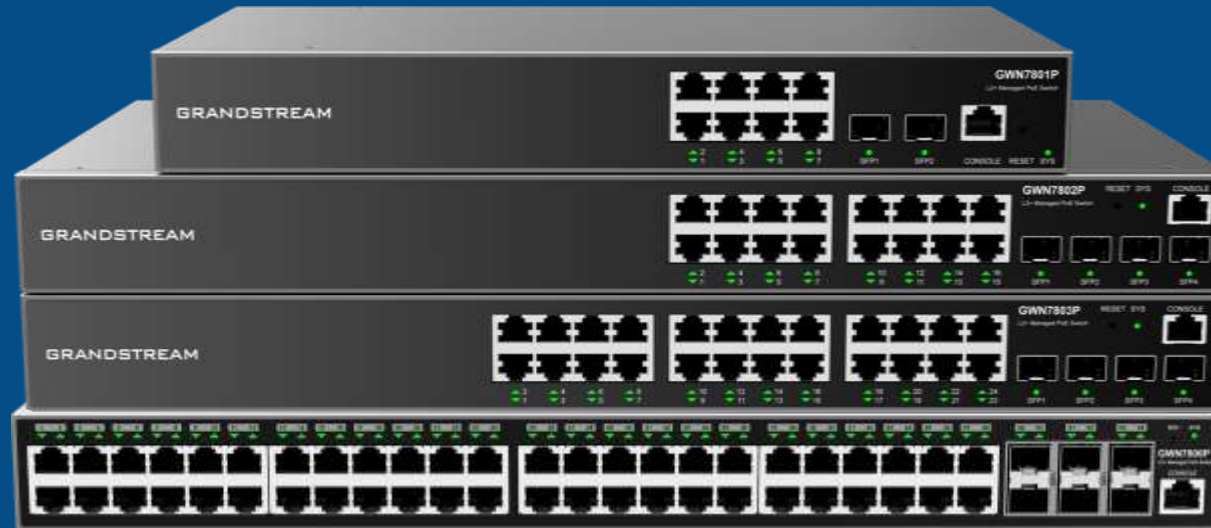
8 100/1000/2500Mbps ports  
1 SFP+ Fiber Port  
60 Gbps Switching Capacity  
Desktop & Wall-Mount  
Metal Enclosure  
Fan-less



# GWN7800 Series

## Layer 2+ Managed Network Switches

GWN7801(P) – GWN7802(P) – GWN7803(P) – GWN7806(P)



8 models  
4 models with PoE  
4 models without PoE



8, 16, 24 or 48  
Gigabit ports,  
2, 4, or 6 Gigabit SFP ports



Managed via embedded  
controller, GWN.Cloud or  
GWN Manager



Built-in QoS  
& Advanced VLAN



Supports IPv4  
and IPv6

# GWN7800 SERIES LAYER 2+ MANAGED SWITCHES

## Model Comparison



**GWN7801(P)**

8 Gigabit ports  
2 SFP Ports  
20 Gbps Switching Capacity  
Desktop Mount

GWN7801P  
8 PoE Ports  
120W Max PoE Power



**GWN7802(P)**

16 Gigabit ports  
4 SFP Ports  
40 Gbps Switching Capacity  
Desktop & Rack-Mount

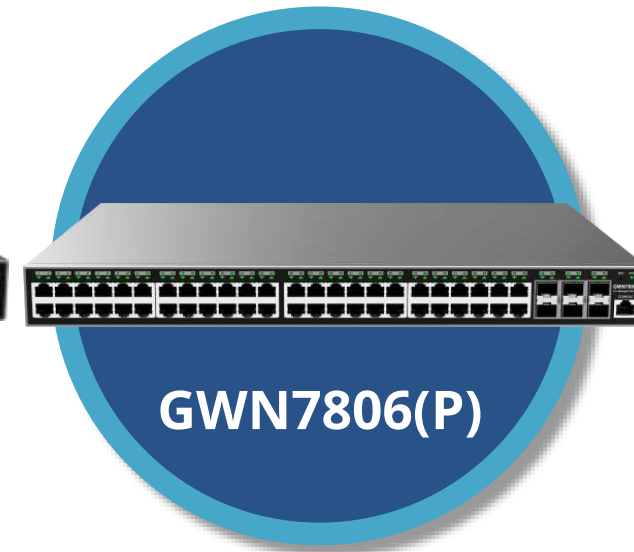
GWN7802P  
16 PoE Ports  
240W Max PoE Power  
Integrated Fan



**GWN7803(P)**

24 Gigabit ports  
4 SFP Ports  
56 Gbps Switching Capacity  
Desktop & Rack-Mount

GWN7803P  
24 PoE Ports  
360W Max PoE Power  
Integrated Fan



**GWN7806(P)**

48 Gigabit ports  
6 SFP Ports  
216 Gbps Switching Capacity  
Desktop & Rack-Mount

GWN7806P  
48 PoE Ports  
400W Max PoE Power  
3 Integrated Fans

# GWN7806(P)

## Enhanced Reliability Features



### Stacking

Easily manage up to 16 switches in one interface while creating redundant backup between devices

### Enhanced Reliability

Fault detection, device protection, dual boot-up, dual system file redundancy, link aggregation, storm control, and more

### Green Energy Efficiency

Intelligent control of the integrated fan adjusts fan speeds based on environmental temperatures and provides precise temperature control and energy savings



# PoE

## GWN7800 Series Layer 2+ Switches



- Available on GWN7801P, GWN7802P, GWN7803P & GWN7806P
- 8, 16, 24 or 48 ports
- Supports dynamic PoE/PoE+ power allocation per port
- IEEE 802.3af/at PoE standards
- Up to 30W per port



# SECURITY PROTECTION & ENCRYPTION

GWN7800 Series Layer 2+ Switches



- Packet filtering based on binding IP address, MAC address, VLAN and port
- 802.1X, RADIUS, AAA and TACACS+ authentications to provide authentication and authorization for LAN devices
- ARP Inspection protects against ARP spoofing
- IP Source Guard to prevent illegal address spoofing
- DoS Protection, including Land Attack, Smurf Attack, TCP SYN Attack, Ping Flooding and more.
- Supports port security to prevent MAC address attacks and control the network traffic of the port
- DHCP Snooping
- Static and dynamic MAC table with MAC table filtering





# SWITCHING CAPABILITY

GWN7800 Series Layer 2+ Switches



- 8K static, dynamic and filtering MAC addresses
- GWN7806(P): 32K static, dynamic & filtering of MAC addresses
- 4K VLANs, port-based VLAN, IEEE 802.1Q VLAN tagging, voice VLAN
- VLAN virtual interface
- 8 link aggregation groups
- GWN7806(P) - 27 link aggregation groups
- Spanning tree, 64 instances for STP/RTSP/MSTP



# BUILT-IN QoS

GWN7800 Series Layer 2+ Switches



- Port Priority
- Priority Mapping
- Queue scheduling including SP, WRR, WFQ, SP-WRR, & SP-WFQ
- Traffic shaping
- Rate limit
- 1.5k ACL for ethernet, IPv4, and IPv6
- Auto detection and prioritization of voice, video and other latency sensitive packets (pending)





# GWN7062 & GWN7052 ROUTERS



***GWN7062***

Wi-Fi 6 Dual-Band Router



***GWN7052 & GWN7052F***

Wi-Fi 5 Dual-Band Router

# GWN7062 & GWN7052 ROUTERS

Deployment Scenarios



Small Office



Home Office



Service Providers  
(Residential / Business)

# GWN7062 & GWN7052 ROUTERS

Highlights



- 100 or 256 concurrent clients
- Wi-Fi 5 and Wi-Fi 6 option
- 1.27 or 1.77 Gbps speeds
- Dual-band 2x2:2 MU-MIMO
- Cloud provisioning & management with GWN.Cloud
- VPN, Mesh networks, firewall features & more

# GWN7062 Wi-Fi 6 DUAL-BAND ROUTER

For Small Business, Home Offices & Service Providers

**Wi-Fi 6**  
CERTIFIED™



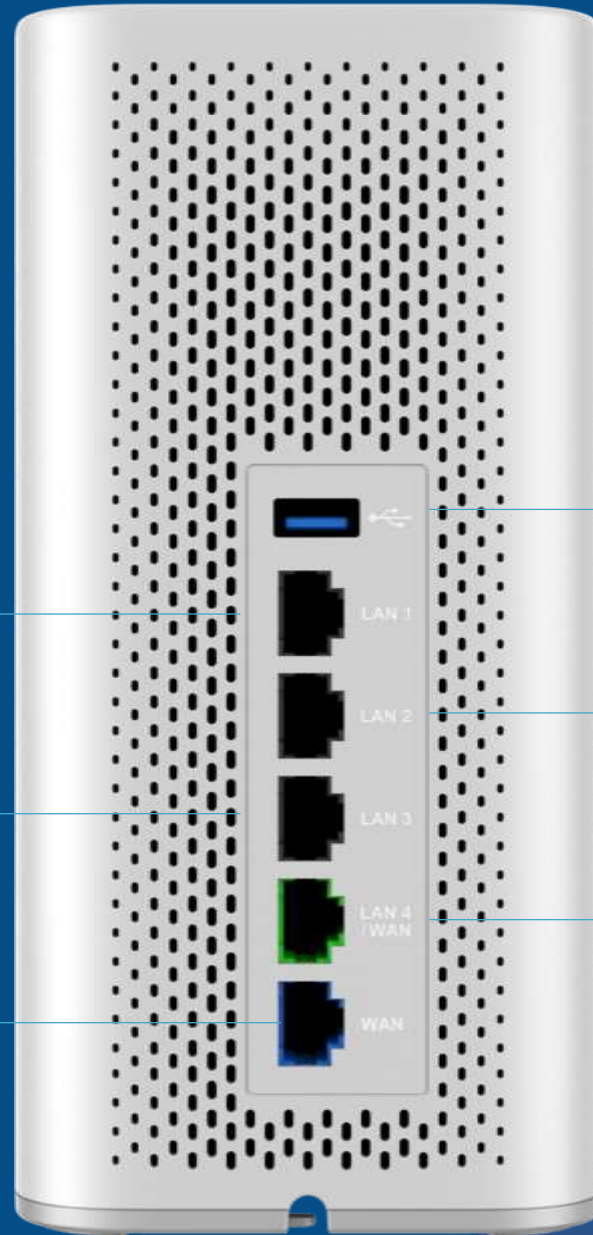
- Supports up to **256 concurrent clients**
- Powered by **Wi-Fi 6** with up to **1.77 Gbps** speeds
- Dual-band **2x2:2 MU-MIMO**
- Built-in **VPN** for easy access to corporate networks
- Supports **Mesh networking** with GWN series APs
- **Cloud provisioning & management** with **GWN.Cloud**
- **Powerful security** features including guest network, network blacklist, secure-boot & critical data/control lockdown, firewall features, etc.



Gigabit ethernet LAN port

Gigabit ethernet LAN port

Gigabit ethernet WAN port



Reset

DC 12V

SYNC



USB 3.0 port

Gigabit ethernet LAN port

Gigabit ethernet WAN/LAN port  
(configurable)





# GWN7052 & GWN7052F DUAL-BAND ROUTER

For Small Business, Home Offices & Service Providers



- Supports up to **100 concurrent clients**
- Powered by 802.11ac **Wi-Fi 5** with up to **1.27 Gbps** speeds
- Dual-band **2x2:2 MU-MIMO**
- 4x **external antennas** (2 per band)
- Built-in **VPN** for easy access to corporate networks
- Supports **Mesh networking** with GWN series APs
- **Cloud provisioning & management** with **GWN.Cloud**
- **Powerful security** features including guest network, network blacklist, secure-boot & critical data/control lockdown, firewall features, etc.





# GWN7052 VS. GWN7052F

## Model Differences



**GWN7052**

- Ports: 1x WAN, 4x LAN
- 128 MB RAM, 30k NAT sessions
- Embedded Controller: 30 GWN APs



**GWN7052F**

- Ports: 1x SFB WAN, 3x LAN, 1x WAN/LAN (configurable)
- 256 MB RAM, 60k NAT sessions
- Embedded Controller: 50 GWN APs

GWN7052



Reset

DC12V

USB 2.0

LAN 1

LAN 2

LAN 3

LAN 4

WAN

*\*All LAN & WAN ports are Gigabit ethernet*



# GWN7052F



Reset DC12V USB 2.0 LAN 1 LAN 2 LAN 3 WAN/LAN SFP WAN

*\*All LAN & WAN ports are Gigabit ethernet*



# BUILT-IN VPN

GWN7052 & GWN7062 Routers



- Allows easy access to corporate and private networks for remote employees, retail chains, etc.
- Client Protocols: L2TP, PPTP, IPSEC, OpenVPN
- Server Protocols: IPSec, OpenVPN



# MESH NETWORKING

GWN7052 & GWN7062 Routers



- Mesh networking with Grandstream GWN Series APs
- Provides easy network expansion
- Ideal solution for service providers



# SECURITY PROTECTION & ENCRYPTION

GWN7052 & GWN7062 Routers



- Anti-hacking secure boot
- Critical data/control lockdown via digital signatures
- Unique security certificates
- Random default passwords
- Firewall: Anti-DOS, traffic rules, NAT & ALG
- Guest network
- Network blacklist





# GWN7000 Series Multi-WAN Gigabit VPN Routers

GWN7001 – GWN7002 – GWN7003



**Multi WAN**

4, 6 or 9 WAN ports (WAN/LAN configurable) with load balancing & failover



Built-in VPN, 50 or 100 concurrent VPN tunnels



**Gigabit**

4, 6 or 9 Gigabit ethernet ports, 2 Gigabit SFP ports (GWN7002 and GWN7003)



Business-grade firewall DDNS, port forwarding, Anti-DoS, traffic rules, NAT, ALG, etc.



Provides application, URL, DNS and web content filtering



Advanced QoS ensure real-time performance and traffic prioritization for network control



1 PoE input; 2 Gigabit PoE output ports (48V) on GWN7002 and GWN7003

# GWN7000 SERIES MULTI-WAN VPN ROUTERS

## Model Comparison



**GWN7001**

6 Gigabit WAN/LAN ports  
0 SFP Ports  
2.2 Gbps Wired Throughput  
Up to 50 VPN Tunnels

PoE Output: N/A  
Embedded Controller: 100 GWN APs  
GWN.Cloud & GWN Manager



**GWN7002**

4 Gigabit WAN/LAN ports  
2 SFP Ports  
2.2 Gbps Wired Throughput  
Up to 50 VPN Tunnels

PoE Output: 2 ports, 48V passive  
Embedded Controller: 100 GWN APs  
GWN.Cloud & GWN Manager



**GWN7003**

9 Gigabit WAN/LAN ports  
2 SFP Ports  
2.2 Gbps Wired Throughput  
Up to 100 VPN Tunnels

PoE Output: 2 ports, 48V passive  
Embedded Controller: 150 GWN APs  
GWN.Cloud & GWN Manager



# MULTI-WAN

GWN7000 Series Routers



- Multiple WAN ports with load balancing and failover
- All ports on all models WAN/LAN configurable
- 6, 4 or 9 Gigabit ethernet ports
- 2 Gigabit SFP ports on GWN7002 and GWN7003



# VPN

## GWN7000 Series Routers



- Built-in VPN support allows easy access to corporate networks
- GWN7001 and GWN7002: Up to 50 VPN tunnels
- GWN7003: Up to 100 VPN tunnels



# PoE OUTPUT & INPUT

GWN7000 Series Routers



- Supported by GWN7002 & GWN7003 (not GWN7001)
- PoE Output: 2x PoE out ports with 48V passive output or IEEE802.3af
- PoE input: standard IEEE 802.3af/at



# FIREWALL

GWN7000 Series Routers



- Built-in firewall on all models
- Supports DDNS, port forwarding, DMZ, UPnP, Anti-DoS, traffic rules, NAT, and ALG



# MONITORING & FILTERING

GWN7000 Series Routers



- Application, URL, DNS and web content filtering blocks access to unsecure and unwanted websites
- Application and protocol monitoring, traffic statistics and **Deep Packet Inspection (DPI)** provide additional monitoring tools



# BUILT-IN QoS

GWN7000 Series Routers



- Built-in advanced QoS ensure real-time performance of critical applications and provides network control through traffic prioritization tools
- VLAN and TOS
- Supports multiple traffic classes, filter-by-port, IP address, DSCP and policing
- QoS supports apps running on GWN networks
- Provides VoIP prioritization, ideal for networks that provide voice and video access



# Thank You

Jacobo Urdiales  
[jurdiales@grandstream.com](mailto:jurdiales@grandstream.com)