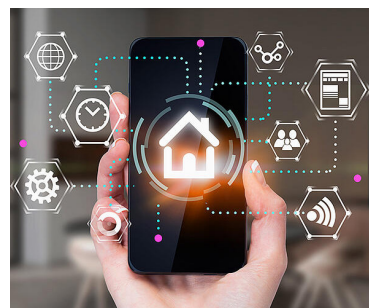# Grandstream Wi-Fi 6 APs
GWN Series

What Makes Wi-Fi 6 Great?

Wi-Fi 6 is the latest and greatest standard for Wi-Fi technology. It was created to support the modern generation of dense environments where many users and many devices require consistent and reliable Wi-Fi connentions. Wi-Fi 6 technology maximizes the amount of signals an access point and router can send and recieve at the same time, allowing them to communicate with more decices at the same time and to send data to multiple devices in the same broadcast. It is ideal for the modern generation of connected and smart devices.

OFDMA Technology

- One of the biggest additions to Wi-Fi 6
- OFDMA directly impacts uplink and downlink streams and
- Controls how client devices are connected to the access point and bandwidth prioritization.
- Organizes bandwidth usage by client devices into Resource Units
- Resource units are what allows the access point to carry multiple services for different needs simultaneously
- Ideal for deployments with a wide variety of device types (VoIP phones, laptops, IoT, etc.)

MU-MIMO and Wi-Fi 6

- Intoduced on Wi-Fi 5 but improved with Wi-Fi 6
- Wi-Fi 6 MU-MIMO enables all devices to communicate with the access point simultaneously
- The advantage of this is improved performance of each spatial stream.
- Each access point you deploy will experience increased efficiency in environments with multiple simultaneous users, along with a slight decrease in client latency.
- Improved MU-MIMO means less total access points needed in a solution, which makes for a less expensive Wi-Fi 6 deployment.

GWN Series & Wi-Fi 6

This sales kit includes all of Grandstream's Wi-Fi 6 APs while providing the insight needed to communicate & sell GWN series Wi-Fi 6 APs.

	GWN7660	GWN7660LR	GWN7664
Wi-Fi Standards	IEEE 802.11 a/b/g/n/ac/ax (Wi-Fi 6)		
MU-MIMO	2x2:2		4x4:4
Coverage Range	Up to 175 meters	Up to 250 meters	Up to 175 meters
Concurrent Clients	256+	256+	512
Network Interfaces	2x Gigabit ports	2x Gigabit ports	1x 1G Port and 1x 2.5G Port
Throughput	1.77 Gbps	1.77 Gbps	3.5 Gbps

GWN7660
Overview and Basics

Wi Fi 6 CERTIFIED™

About the GWN7660

The GWN7660 offers dual-band 2x2:2 MU-MIMO with DL/UL OFDMA technology and a sophisticated antenna design for maximum network throughput and expanded Wi-Fi coverage range. To ensure easy installation and management, the GWN7660 uses a controller-less distributed network management design in which the controller is embedded within the product's Web user interface. The GWN7660 is also supported by GWN.Cloud. It offers an effective solution for high density deployments.

Product Positioning

GWN7660 is a perfect Wi-Fi access point for business-grade wireless network deployments with medium-to-high user density, including small-to-medium sized businesses, multiple floor buildings, residential settings and commercial locations and similar environments. The GWN7660 offers a seamless connection with Grandstream's Wi-Fi capable IP phones.

Supports 256+ concurrent Wi-Fi client devices

175 meters
Up to 175 meter coverage range

PoE
Self power adaptation upon auto-detection of PoE or PoE+

Competitive Features

- 1.77Gbps aggregate wireless throughput and 2xGigabit wireline ports
- Dual-band 2x2:2 MU-MIMO technology
- DL/UL OFDMA technology
- Supports 256+ concurrent Wi-Fi client devices
- Up to 175-meter coverage range
- Self power adaptation upon auto-detection of PoE/PoE+
- Anti-hacking secure boot and critical data/control lockdown via digital signatures
- Embedded controller can manage up to 50 local GWN series APs; GWN.Cloud offers unlimited AP management; GWN.Manager offers premise-based software controller

GWN7660 Key Technical Specifications

Wi-Fi Standards	IEEE 802.11 a/b/g/n/ac/ax (Wi-Fi 6)
Antennas	2 dual band internal antennas 2.4GHz: gain 3dBi, 5 GHz: gain 3dBi
Frequency Bands	2.4GHz radio: 2412 - 2484 GHz / 5GHz radio: 5180 - 5825 GHz
Coverage Range	Up to 175 meters *coverage range can vary based on environment
Wi-Fi and System Security	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise, anti-hacking secure boot and critical data/control lockdown via digital signatures, unique security certificate and random default password per device
Concurrent Clients	256+
Network Interfaces	2 x autosensing 10/100/1000 Base-T Ethernet Ports

WiFi 6 CERTIFIED™

About the GWN7660LR

The GWN7660LR offers IP66 weatherproof certified casing, dual-band 2x2:2 MU-MIMO technology with DL/UL OFDMA technology and a sophisticated antenna design for maximum network throughput and extended coverage range of up to 250 meters.. To ensure easy installation and management, the GWN7660 uses a controller-less distributed network management design in which the controller is embedded within the product's Web user interface. The GWN7660LR is also supported by GWN.Cloud.

Product Positioning

The GWN7660LR provides a powerful long-range access point that is designed for dense Wi-Fi environments such as medium-to-large offices, schools, colleges/universities, hotels, convention centers, stadiums, gymnasiums, auditoriums and more. The GWN7660LR is the ideal Wi-Fi AP for voice-over-Wi-Fi deployment and offers a seamless connection with Grandstream's Wi-Fi capable voice and video IP phones.

Supports 256+ concurrent Wi-Fi client devices

250 meters
Up to 250 meter coverage range

PoE
Self power adaptation upon auto-detection of PoE or PoE+

Competitive Features

- 1.77Gbps aggregate wireless throughput and 2xGigabit wireline ports
- Dual-band 2x2:2 MU-MIMO technology
- DL/UL OFDMA technology
- Supports 256+ concurrent Wi-Fi client devices
- Up to 250-meter coverage range
- Self power adaptation upon auto-detection of PoE/PoE+
- Anti-hacking secure boot and critical data/control lockdown via digital signatures
- Embedded controller can manage up to 50 local GWN series APs; GWN.Cloud offers unlimited AP management; GWN.Manager offers premise-based software controller

GWN7660LR Key Technical Specifications

Wi-Fi Standards	IEEE 802.11 a/b/g/n/ac/ax (Wi-Fi 6)
Antennas	2 dual band internal antennas 2.4GHz: gain 3.5dBi, 5 GHz: gain 3.5dBi
Frequency Bands	2.4GHz radio: 2412 - 2484 GHz / 5GHz radio: 5180 - 5825 GHz
Coverage Range	Up to 250 meters *coverage range can vary based on environment
Wi-Fi and System Security	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise, anti-hacking secure boot and critical data/control lockdown via digital signatures, unique security certificate and random default password per device
Concurrent Clients	256+
Network Interfaces	2 x autosensing 10/100/1000 Base-T Ethernet Ports

GWN7664
Overview and Basics

Wi Fi 6 CERTIFIED™

About the GWN7664

The GWN7664 offers a high-end Wi-Fi access point with dual-band 4x4:4 MUMIMO, DL/UL OFDMA technology and a sophisticated internal antenna design for stronger anti-interference, more stable connection, maximum network throughput and expanded Wi-Fi coverage range. To ensure easy installation and management, the GWN7664 uses a controller-less distributed network management design in which the controller is embedded within the product's Web user interface. The GWN7664 is also supported by GWN.Cloud.

Product Positioning

The GWN7664 is a high-end, enterprise-grade 802.11ax Wi-Fi 6 access point, ideal for small-to-medium sized businesses, multiple floor buildings, residential settings and commercial locations. It provides top-of-the-line Wi-Fi speeds and client support in order to offer the ideal solution for dense environments with hundreds to thousands of users. As of Jan. 2022, the GWN7664 provides the fastest throughput and most client support of any GWN series AP.

Supports 512 concurrent Wi-Fi client devices

175 meters — Up to 175 meter coverage range

PoE — Self power adaptation upon auto-detection of PoE or PoE+

Competitive Features

- 3.55Gbps aggregate wireless throughput and 2x Gigabit wireline ports
- Dual-band 4x4:4 MU-MIMO technology
- DL/UL OFDMA technology
- Supports 512 concurrent Wi-Fi client devices
- Up to 175-meter coverage range
- Self power adaptation upon auto-detection of PoE/PoE+
- Anti-hacking secure boot and critical data/control lockdown via digital signatures
- Embedded controller can manage up to 50 local GWN series APs; GWN.Cloud offers unlimited AP management; GWN. Manager offers premise-based software controller

GWN7664 Key Technical Specifications

Wi-Fi Standards	IEEE 802.11 a/b/g/n/ac/ax (Wi-Fi 6)
Antennas	4 dual band internal antennas 2.4GHz: gain 3dBi, 5 GHz: gain 4dBi
Frequency Bands	2.4GHz radio: 2412 - 2484 GHz / 5GHz radio: 5180 - 5825 GHz
Coverage Range	Up to 175 meters *coverage range can vary based on environment
Wi-Fi and System Security	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise, anti-hacking secure boot and critical data/control lockdown via digital signatures, unique security certificate and random default password per device
Concurrent Clients	512
Network Interfaces	1x 1G Port and 1x 2.5G Port, supports 3.5Gbps aggregate wire throughput

Affordable and Powerful

The GWN Series provides a competitive device that was designed for an affordable Wi-Fi 6 solution, perfect for delivering the advantages of Wi-Fi 6 to offices, lecture halls, and other demanding wireless deployments

- **Wi-Fi 6:** Wi-Fi 6 exclusive technology allows the access point to better serve dense network deployments.
- **Market Leading Wi-Fi Standards:** 802.11a/b/g/n/ac/ax standards, this supports past, present, and future Wi-Fi devices
- **Greater Performance for Less Money:** 256+ or 512 concurrent devices, 175 and 250 meter coverage range, 1.77 or 3.5 Gbps aggregate dual-band throughput

Flexible & Free Management

Choose between three ways to manage your GWN Series wireless network:

- **GWN.Cloud:** Grandstream's cloud-based Wi-Fi access point management platform. Configure, manage, and troubleshoot unlimited wireless deployments entirely from the cloud
- **GWN Manager:** For deployments with higher security standards, the GWN Manager is a premise-based version of the GWN.Cloud
- **Built-in Controller:** GWN Series APs can manage up to 50 local GWN series access points

Market-Leading Features

The GWN7660, GWN7660LR and GWN7664 come equipped with advanced performance-boosting features:

- **UL/DL OFDMA:** Access points running on the 801.11ax standard perform better in dense environments and are designed to manager multiple Wi-Fi devices with varying bandwidth demands
- **Beamforming Technology:** AP detects wireless clients and focus signals towards them
- **Multiple Customized SSIDs:** Up to 32 SSID channels with customized client configurations, captive portal, and bandwidth limits
- **QoS Standards:** Prioritizes certain network traffic/devices so critical tasks don't compete for bandwidth, can be customized based on deployment

Easy Client Configuration

The way wireless clients access the internet through a GWN Series AP can be highly customized based on AP or SSID.

- **Blacklist:** Prevents specific MAC addresses from connecting
- **Connection Time:** Enforce timeout of a connection and requires renewal
- **Wireless Client Limit:** Puts a cap on the maximum amount of wireless clients that can be connected to an SSID at a single time
- **Bandwith Rules:** A variety of rules that restrict the bandwidth usage of client devices

GWN Series Deployment Scenarios

Offices

Medium and large offices can utilize the GWN Series to create a mobile working environment for employees that doesn't sacrifice on performance.

- Wi-Fi 6 delivers an effective wireless connection for dense BYOD networks
- Onsite IT teams can easily manage, configure, and troubleshoot Wi-Fi network on their own
- Wi-Fi 6 OFDMA and QoS standards can organize the many different devices competing for bandwidth, limiting background usage and prioritizing Wi-Fi voice and video

Commercial Shops

Commercial stores can use the GWN Series to create Wi-Fi environments for both guests and staff.

- Multiple network SSIDs and client configuration can be used to create dedicated networks for staff and guests
- Captive portals create secure public Wi-Fi channels
- Wi-Fi 6 standard can be leveraged to create a fast network for customers carrying smart devices

Education

Within demanding education environments, the GWN Series can help both staff and students exceed with a rapid wireless connection.

- Client configuration allows students to only access Wi-Fi during specific times, through certain access points, or with whitelisted devices
- Wi-Fi network can easily be adjusted for year-to-year needs as student levels fluctuate
- High density solution for public and private schools that require cutting-edge Wi-Fi technology for new education strategies

GWN.CLOUD

INTERNET

WP810

Wireless Devices

WiFi 6 CERTIFIED™

Cordless Wi-Fi Phones

- Wi-Fi 6 MU-MIMO and UL/DL OFDMA creates a wireless environment that can simultaneously serve both Wi-Fi voice devices and typical wireless workstations effectively
- GWNs auto-recognizes Grandstream WP800 series wireless handsets and automatically share security authentications across the network, creating a seamless roaming experience

Desktop Endpoints

- Grandstream has a variety of Wi-Fi enabled desktop phones, deploying these devices will allow for less costly ethernet cabling and a less complicated infrastructure
- QoS standards will keep a high-quality experience, whether video conferencing on Grandstream multi-media video-phones or calling on one the GRP series of carrier-grade IP phones

Wi-Fi Access Point Management

- Both Grandstream cloud-based AP management platform, GWN.Cloud, and on-premise software management platform, GWN Manager, are able to add, configure, and monitor the GWN Series within a GWN wireless network
- All GWN series APs are compatible with all other GWN series access points within Grandstream's portfolio, allowing it to actively manage up to 50 other GWN access points

GWN.CLOUD

Intercoms and Paging

- Grandstream's GSC series of intercom and paging devices are Wi-Fi capable so any and all pages and intercom calls can be executed over the wireless network, reducing cost and infrastructure management
- The GWN Series is also equipped with dual gigabit networking ports that can provide an ethernet connection to a nearby ceiling mounted GSC series device if a wired connection is needed

GWN Series
Wi-Fi 6 AP Comparison

Model	GWN7660	GWN7660LR	GWN7664
Client Devices	256+	256+	512+
Range	up to 175 Meters	up to 250 Meters	up to 175 Meters
Network Interfaces	2x autosensing 10/100/1000 Base-T Ethernet Ports	2x autosensing 10/100/1000 Base-T Ethernet Ports	1x 1G Port and 1x 2.5G Port
PoE/PoE+	Supports PoE 802.3af/ 802.3at; Max Consumption: 9W	Supports PoE 802.3af/ 802.3at; Max Consumption: 12.9W	Supports PoE 802.3af/ 802.3at; Max Consumption: 17W
2.4G Throughput	573.5Mbps (2x2:2 MIMO)	573.5Mbps (2x2:2 MIMO)	1147Mbps (4x4:4 MIMO)
5G Throughput	1201Mbps (2x2:2 MU-MIMO)	1201Mbps (2×2:2 MU-MIMO)	2402Mbps (4x4:4 MU-MIMO)
Wi-Fi Standards	IEEE 802.11 a/b/g/n/ac/ax		
SSIDs	32 SSIDs total, 16 per radio (2.4Ghz and 5Ghz)		
Network Management	GWN.Cloud GWN Manager Embedded Controller		
Antennas	2 dual band internal antennas	2 dual band antennas	8 individual internal antennas, 4 per band
Wi-Fi & System Security	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise (TKIP/AES); WPA3, anti-hacking secure boot and critical data/control lockdown via digital signatures, unique security certificate and random default password per device		
Dimensions	180.4x180.4x40.8mm	358.3mm(L) x 115mm(W) x 45.3mm(H)	205.3mm(L) x 205.3mm(W) x 405.9mm(H
Mounting	Indoor wall mount or ceiling mount, kits included	Outdoor wall or pole mount, kits included	Indoor wall mount or ceiling mount, kits included

GWN Series
Wi-Fi 5 APs

Specifications					Outdoor Access Points	
Model						
	GWN7602	**GWN7605**	**GWN7615**	**GWN7630**	**GWN7605LR**	**GWN7630LR**
Client Devices	Up to 80	100+	200+	200+	100+	200+
Range	100 Meters	165 Meters	175 Meters	175 Meters	250 Meters	300 Meters
Network Interfaces	1x 10/100/1000M uplink Ethernet port with PoE/PoE+ 2x 10/100M Ethernet port with PSE 1x 10/100M Ethernet port	2 x autosensing 10/100/1000 Base-T Ethernet Ports	2x autosensing 10/100/1000 Base-T Ethernet Ports	2x autosensing 10/100/1000 Base-T Ethernet Ports	2x autosensing 10/100/1000 Base-T Ethernet Ports	2x autosensing 10/100/1000 Base-T Ethernet Ports
PoE/PoE+	Supports 802.3 az; PoE 802.3af/ 802.3at PSE max output per port: 6W; Max Consumption: 20W	Supports PoE 802.3af/ 802.3at Max Consumption: 10.16W	Supports PoE 802.3af/802.3at; Max consumption: 12.5W	Supports PoE 802.3af/ 802.3at; Max Consumption: 16.5W	Supports PoE 802.3af/802.3at; Max Consumption: 10.16W	Supports PoE 802.3af/802.3at; Max Consumption: 16.5W
2.4G Throughput	300Mbps (2x2:2 MIMO)	300Mbps (2x2:2 MIMO)	450Mbps (3x3:3 MIMO)	600Mbps (4x4:4 MIMO)	300Mbps (2x2:2 MIMO)	600Mbps (4×4:4 MIMO)
5G Throughput	867Mbps (2x2:2 MIMO)	867Mbps (2x2:2 MIMO)	1300Mbps (3x3:3 MU-MIMO)	1733Mbps (4×4:4 MU-MIMO)	867Mbps (2x2:2 MU-MIMO)	1733Mbps (4×4:4 MU-MIMO)
Wi-Fi Standards	IEEE 802.11a/b/g/n/ac (Wave-2)	IEEE 802.11a/b/g/n/ac (Wave-2)	IEEE 802.11a/b/g/n/ac (Wave-2)	IEEE 802.11 a/b/g/n/ac (Wave-2)	IEEE 802.11 a/b/g/n/ac (Wave-2)	IEEE 802.11a/b/g/n/ac (Wave-2)
SSIDs	8 SSIDs total, 4 per radio	16 SSIDs total, 8 per radio	32 SSIDs total, 16 per radio	32 SSIDs total, 16 per radio	16 SSIDs total, 8 per radio	32 SSIDs total, 16 per radio
Network Management	GWN.Cloud GWN Manager	GWN.Cloud GWN Manager Embedded Controller	GWN.Cloud GWN Manager Embedded Controller	GWN.Cloud GWN Manager Embedded Controller	GWN.Cloud GWN Manager Embedded Controller	GWN.Cloud GWN Manager Embedded Controller
Antennas	2 dual band internal antennas	2 dual band internal antennas	2 dual band internal antennas	4 dual band internal antennas	2 dual band antennas	4 detachable/changeable dual-band omnidirectional antennas
Wi-Fi & System Security	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise, anti-hacking secure boot and critical data/control lockdown via digital signatures	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise (TKIP/AES), anti-hacking secure boot and critical data/control lockdown via digital signatures	WEP, WPA/WPA2-PSK, WPA/WPA2 Enteprise, anti-hacking secure boot and critical data/control lockdown via digital signatures	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise, anti-hacking secure boot and critical data/control lockdown via digital signatures	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise (TKIP/AES), anti-hacking secure boot and critical data/control lockdown via digital signatures	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise, anti-hacking secure boot and critical data/control lockdown via digital signatures
Dimensions	135x115x30mm	180.4x180.4x40.8mm	205.4x205.4x45.9mm	205.3x205.3x45.9mm	358.3x115x45.3mm	533.1x115x40mm
Mounting	Wall Mountable	Indoor wall mount or ceiling mount	Indoor wall mount or ceiling mount	Indoor wall mount or ceiling mount	Outdoor metal bar mount or wall mount, kits included	Wall mount or pole mount
Weatherproof Capabilities	N/A	N/A	N/A	N/A	IP66-level	IP66-level