



# Wi-Fi CERTIFIED™ Certificate



This certificate lists the features that have successfully completed Wi-Fi Alliance interoperability testing. Learn more: [www.wi-fi.org/certification/programs](http://www.wi-fi.org/certification/programs)

## Certification ID: WFA129250

### Product Info

<b>Date of Certification</b>	January 19, 2024
<b>Company</b>	Grandstream Networks, Inc.
<b>Product Name</b>	Long-Range Enterprise Wi-Fi 6 Access Point
<b>Product Model Variant</b>	GWN7660ELR
<b>Model Number</b>	GWN7660ELR
<b>Category</b>	Routers
<b>Sub-category</b>	Enterprise/Service Provider Access Point, Switch/Controller or Router

### Summary of Certifications

CLASSIFICATION	CERTIFICATION
<b>Access</b>	Passpoint® Release 3
<b>Connectivity</b>	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities Wi-Fi CERTIFIED 6® Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n
<b>Optimization</b>	WMM® Wi-Fi Agile Multiband™
<b>Security</b>	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2022-12 WPA3™-Personal 2022-06
<b>Spectrum &amp; Regulatory Features</b>	Spectrum & Regulatory



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Role: Access Point

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## Wi-Fi Components

### Wi-Fi Component Operating System

Linux 5.4.164

### Wi-Fi Component Firmware

0.4.11.4(init)

### RF Architecture

Bands Supported	Transmit (Tx)	Receive (Rx)
2.4 GHz	2	2
5 GHz	2	2

## Certifications

### 2.4 GHz Spectrum Capabilities

20 MHz Channel Width in 2.4 GHz  
40 MHz Channel Width in 2.4 GHz

### 5 GHz Spectrum Capabilities

20 MHz Channel Width in 5 GHz  
40 MHz Channel Width in 5 GHz  
80 MHz Channel Width in 5 GHz  
160 MHz Channel Width in 5 GHz

### Passpoint® Release 3

Roaming Consortium Selection  
Terms and Conditions  
Venue Information

### Protected Management Frames

### Spectrum & Regulatory

802.11d  
802.11h

### WMM®

### WPA2™-Enterprise 2018-04

EAP methods

### WPA2™-Personal 2021-01

### WPA3™-Enterprise 2022-12

EAP methods  
192-bit security

### WPA3™-Personal 2022-06

### Wi-Fi Agile Multiband™

Automatically populate BSS Transition candidate list  
Cellular Data aware

### Wi-Fi CERTIFIED 6®

A-MPDU with A-MSDU  
Basic Trigger frame in HE MU PPDU



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## Wi-Fi CERTIFIED 6® (continued)

BSRP Trigger frame  
Compressed Block Ack Rx (buffer size 256)  
Compressed Block Ack Tx (buffer size 256)  
DL OFDMA  
Individual Target Wake Time  
LDPC Rx  
LDPC Tx  
MCS 8-9 Rx  
MCS 8-9 Tx  
MCS 10-11 Rx  
MCS 10-11 Tx  
MU EDCA Parameter Set element  
MU-BAR Trigger frame  
MU-RTS Trigger frame  
M-BSSID  
Operating mode indication  
SU beamformer  
SU-MIMO  
TXOP RTS Threshold  
UL OFDMA

## Wi-Fi CERTIFIED™ g

### Wi-Fi CERTIFIED™ n

A-MPDU Tx  
OBSS on Extension Channel  
Short Guard Interval  
STBC

## Wi-Fi CERTIFIED™ a

### Wi-Fi CERTIFIED™ ac

A-MPDU with A-MSDU  
LDPC Rx  
LDPC Tx  
MCS 8-9 Rx  
Short Guard Interval  
STBC  
SU beamformer

## Wi-Fi CERTIFIED™ b