



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 ID: WFA113013

Product Info

Date of Certification	October 28, 2021
Company	Grandstream Networks, Inc.
Product Name	Outdoor Long-Range Wi-Fi 6 Access Point
Product Model Variant	Outdoor Long-Range Wi-Fi 6 Access Point
Model Number	GWN7660LR
Category	Routers
Sub-category	Enterprise/Service Provider Access Point, Switch/Controller or Router

Summary of Certifications

CLASSIFICATION	CERTIFICATION
Network management	WMM® Wi-Fi Agile Multiband™
Security	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2020-02 WPA3™-Personal 2020-02
Wi-Fi (MAC/PHY)	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities Spectrum & Regulatory Wi-Fi CERTIFIED 6® Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n

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Role: Access Point

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Wi-Fi Components

Wi-Fi Component Operating System

Linux ,version:4.4.60

Wi-Fi Component Firmware

0.3.31.2(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

Protected Management Frames

Spectrum & Regulatory

802.11d
802.11h

WMM®

WPA2™-Enterprise 2018-04

EAP methods

WPA2™-Personal 2021-01

WPA3™-Enterprise 2020-02

EAP methods
192-bit security

WPA3™-Personal 2020-02

Wi-Fi Agile Multiband™

Automatically populate BSS Transition candidate list

Wi-Fi CERTIFIED 6®

A-MPDU with A-MSDU
Basic Trigger frame in HE MU PPDU
BSRP Trigger frame
Compressed Block Ack Rx (buffer size 256)
Compressed Block Ack Tx (buffer size 256)
DL MU-MIMO
DL OFDMA
Individual Target Wake Time
LDPC Rx
LDPC Tx

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Wi-Fi CERTIFIED 6® (continued)

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
Operating mode subfield in A-Control field
Operating mode indication
Operating mode UL MU Rx
SU beamformer
SU-MIMO
TXOP RTS Threshold
UL OFDMA

Wi-Fi CERTIFIED™ n (continued)

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

Wi-Fi CERTIFIED™ a

Wi-Fi CERTIFIED™ ac

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

Wi-Fi CERTIFIED™ b

Wi-Fi CERTIFIED™ g

Wi-Fi CERTIFIED™ n

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