Grandstream Networks, Inc.
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 FEDERAL COMMUNICATIONS COMMISSIONS

Authorization and Evaluation Division

7435 Oakland Mills Road

Columbia, MD 21046

Attn: Office of Engineering and Technology
Subject: Attestation letter regarding U-NII Device Security
FCC ID: YZZGWN7605LR

SOFTWARE SECURITY DESCRIPTION		
General Description	1. Describe how any software/firmware updates for elements than can affect the device's RF parameters will be obtained, downloaded, validated and installed. For software that is accessed through manufacturer's website or device's management system, describe the different levels of security as appropriate.	**The whole software bundle is upgraded. Common users cannot modify the software. The software can be obtained by the website http://www.grandstream.com/support . The upgrade can be performed only by professional installers who have logged in to the AP.**
	2. Describe the RF parameters that are modified by any software/firmware without any hardware changes. Are these parameters in some way limited such that any other software/firmware changes will not allow the device to exceed the authorized RF characteristics?	**The radio frequency parameters such as SSID, fixed IP, channel,channel width, radio power, frequency, bandwidth, mode, active spatial streams can be modified. However, these parameters can only be modified by professional installers that have passed the authentication or obtained authorization from the operators.**
	3. Describe in detail the authentication protocols that are in place to ensure that the source of the RF-related software/firmware is valid. Describe in detail how the RF-related software is protected against modification	**Software packages are verified using digital signatures which protect RF and firmware from being modified. Only the software packages that have passed the signature verification can be accepted and used in the system.**

	4. Describe in detail any encryption methods used to support the use of legitimate RF-related software/firmware.	Software packages are verified using a mixed encryption method that integrates RSA, sha1 and AES technologies. When upgrading, the first step is to check the validity. If not passed the check, the upgrade will stop and report failure. Only the software packages that have passed the check can be accepted and go on upgrading.
	5. For a device that can be configured as a master and client (with active or passive scanning), explain how the device ensures compliance for each mode? In particular if the device acts as master in some band of operation and client in another; how is compliance ensured in each band of operation?	AP GWN7605LR supports to work as a master or a slave. Administrator may freely assign an AP to be master, and add the unassigned ones to be slaves in local master network or in GWN Cloud/Manager Management. However, slave AP can only be managed by one Master. When the APs transmit radio, the maximum power is following country's regulations, channels, bands, and MCS rates.
Third-Party Access Control	1. Explain if any third parties have the capability to operate a U.S.-sold device on any other regulatory domain, frequencies, or in any manner that may allow the device to operate in violation of the device's authorization if activated in the U.S	Only the digitally signed software released at http://www.grandstream.com/support or obtained from Grandstream support team can run in the device.
	2. Describe, if the device permits third-party software or firmware installation, what mechanisms are provided by the manufacturer to permit integration of such functions while ensuring that the RF parameters of the device cannot be operated outside its authorization for operation in the U.S. In the description include what controls and/or agreements are in place with providers of third-party functionality to ensure the devices' underlying RF parameters are unchanged and how the manufacturer verifies the functionality.	Third-party software cannot be upgraded or run on the device. Only the digitally signed software released at http://www.grandstream.com/support or obtained from Grandstream support team can run in the device.

	3. For Certified Transmitter modular devices, describe how the module grantee ensures that host manufacturers fully comply with these software security requirements for U-NII devices. If the module is controlled through driver software loaded in the host, describe how the drivers are controlled and managed such that the modular transmitter RF parameters are not modified outside the grant of authorization	The device is not module.

SOFTWARE CONFIGURATION DESCRIPTION（See KDB Publication 594280 D01）		
USER CONFIGURAT ION GUIDE	1. Describe the user configurations permitted through the UI. If different levels of access are permitted for professional installers, system integrators or end-users, describe the differences	The UI is accessible to professional installations only, not to end users. When trying to login, it would ask for access authorization which is only available for professional installers.
	a. What parameters are viewable and configurable by different parties?	The following parameters are viewable to professional installers: radio frequency parameters such as SSID, fixed IP, channel,channel width, radio power, frequency, bandwidth, mode, minimum RSSI, Beacon Interval, DTIM period, active spatial streams, band steering, airtime fairness and mesh. End users have no right to access the configuration UI.
	b. What parameters are accessible or modifiable by the professional installer or system integrators?	The following parameters can be modified to professional installers: SSID, fixed IP, channel, channel width, radio power, frequency, bandwidth, mode, minimum RSSI, Beacon Interval, DTIM period, active spatial streams，band steering, airtime fairness and mesh.
	(1) Are the parameters in some way limited, so that the installers will not enter parameters that exceed those authorized?	The parameters are limited within regulation. All those options are set within the regulation so installers can't choose any parameters that may exceed the authorized.
	(2) What controls exist that the user cannot operate the device outside its authorization in the U.S.?	The UI is accessible to professional installations only, not to end users. When trying to login, it would ask for access authorization which is only available for professional installers.

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	c. What parameters are accessible or modifiable by the end-user?	No parameter is accessible or modifiable by end users. The end users have no right to access the UI for modification.
	(1) Are the parameters in some way limited, so that the user or installers will not enter parameters that exceed those authorized?	The parameters are limited within regulation. All those options are set within the regulation so installers can't choose any parameters that may exceed the authorized.
	(2) What controls exist so that the user cannot operate the device outside its authorization in the U.S.?	The UI is accessible to professional installations only, not to end users. When trying to login, it would ask for access authorization which is only available for professional installers.
	d. Is the country code factory set? Can it be changed in the UI?	There are two 2 versions of factory sets, one is the world version and the other is U.S. version. In the world version, the country code can be modified only by professional installers in the UI when the AP is online; and in the U.S. Version, the country code change will not take effect after being modified.
	(1) If it can be changed, what controls exist to ensure that the device can only operate within its authorization in the U.S.?	Only professional installers have access to modification UI. Professional installers must ensure that the country code is set to USA.
	e. What are the default parameters when the device is restarted?	By default it is US set. If in world version, the default country code is set as US also.
	2. Can the radio be configured in bridge or mesh mode? If yes, an attestation may be required. Further information is available in KDB Publication 905462 D02.	Both bridge and mesh mode are available in this product.
	3. For a device that can be configured as a master and client (with active or passive scanning), if this is user configurable, describe what controls exist, within the UI, to ensure compliance for each mode. If the device acts as a master in some bands and client in others, how is this configured to ensure compliance?	AP GWN7605LR supports to work as a master or a slave. Administrator may freely assign an AP to be master, and add the unassigned ones to be slaves in local master network or in GWN Cloud/Manager Management. However, one slave AP can only be managed by one Master. When the APs transmit radio, the maximum power is following country's regulations, channels, bands, and MCS rates.

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	4. For a device that can be configured as different types of access points, such as point-to-point or point-to-multipoint, and use different types of antennas, describe what controls exist to ensure compliance with applicable limits and the proper antenna is used for each mode of operation. (See Section 15.407(a))	No Point-to-point mode is available on the device.

Signature:
Ning Wei
Deputy Manager