

SOFTWARE SECURITY DECLARATION FOR U-NII DEVICES

FCC ID: CNFCPBN1, KDB 594280 D02 U-NII Device Security v01r03

General Description	1. Describe how any software/firmware updates for elements that 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.	No software/firmware update can affect the device's RF parameters.
	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?	All RF parameter is fixed at the chip level. Not possible to modify any of RF parameters.
	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.	There is currently no authentication protocols in place to check for a valid firmware outside of product registration and serial number.
	4. Describe in detail any encryption methods used to support the use of legitimate RF-related software/firmware.	Firmware is not encrypted. RF related parameters/limits are stored in a separate part of non-volatile storage and are not part of the firmware.
	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, the device acts as master in some band of operation and client in another, how does compliance ensure in each band of operation?	When this device is operating as client in 5 GHz operation, it will operate in "world" mode in which it will use passive scanning to conform to region and requirements and bands allowed. Channels for client mode: 5180-5240MHz, 5260-5320MHz, 5500-5700MHz, 5745 - 5825MHz When this device is operating as master in 5GHz bands, it is set at factory to support only UNII-3 channel. Channels for master mode: UNII-3: 5745-5825 MHz (CH 155) RF parameters are not affected when this device is either master or client mode.
Third-Party Access Control	1. Explain if any third party 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.	Third parties do not have the capability to change RF parameters or country domains.
	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	This device does not permit third-party software or firmware installation. The firmware installation does not change any RF parameters and/or settings.

	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.	
	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.	N/A, this device is not a modular device.
USER-CONFIGURATION 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.	
	a. What parameters are viewable and configurable by different parties?	N/A. Features can be configured via GoPro Quik app or QR code, but no RF parameters can be modified.
	b. What parameters are accessible or modifiable by the professional installer or system integrators?	
	(1) Are the parameters in some way limited, so that the installers will not enter parameters that exceed those authorized?	N/A-This device is not subject to professional installation.
	(2) What controls exist that the user cannot operate the device outside its authorization in the U.S.?	All RF parameter is fixed at the chip level. Installer and user will not be able to modify any of RF parameters.
	c. What parameters are accessible or modifiable by the end-user?	
	(1) Are the parameters in some way limited, so that the user or installers will not enter parameters that exceed those authorized?	RF parameters are programmed in flash memory and not accessible to the end-user.
	(2) What controls exist so that the user cannot operate the device outside its authorization in the U.S.?	RF parameters are programmed in flash memory and not accessible to the end-user. This includes the country code regulatory parameters.
	d. Is the country code factory set? Can it be changed in the UI?	The country code is factory set and can not be changed in the UI.
	(1) If it can be changed, what controls exist to ensure that the device can only operate within its authorization in the U.S.?	N/A
	e. What are the default parameters when the device is restarted?	At each start up the factory configured country code and antenna gain are read from non-volatile memory.
	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 905462D02.	Not supported.
	3. For a device that can be configured as a master and client (with active passives canning), 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?	When this device is operating as client in 5 GHz operation, it will operate in "world" mode in which it will use passive scanning to conform to region and requirements and bands allowed.

		Channels for client mode: 5180-5240MHz, 5260-5320MHz, 5500-5700MHz, 5745 - 5825MHz When this device is operating as master in 5GHz bands, it is set at factory to support only UNII-3 channel. Channels for master mode: UNII-3: 5745-5825 MHz (CH 155) RF parameters are not affected when this device is either master or client mode.
	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.	N/A. The device can only be used as point-to-point for media off-loading to mobile device.