

Yunke China Information Technology Limited

SOFTWARE SECURITY U-NII

Reference (active link): [KDB 594280 D02 U-NII Device Security v01r02](#)

I. General Description

1. Describe how any software/firmware update will be obtained, downloaded, and installed. Software that is accessed through manufacturer's website or device's management system, must describe the different levels of security.

Ans: The manufacturer provides the update software to the owner, who can upload the software via the user interface.

2. Describe all the radio frequency parameters that are modified by any software/firmware without any hardware changes. Are these parameters in some way limited, such that, it will not exceed the authorized parameters?

Ans: Frequencies cannot be changed, also not via software upgrade.

3. Describe in detail the authentication protocols that are in place to ensure that the source of the software/firmware is legitimate. Describe in detail how the software is protected against modification.

Ans: The software complies with the IEEE802.11an standard and the firmware update is password protected.

4. Describe in detail the verification protocols in place to ensure that installed software/firmware is legitimate.

Ans: The software complies with the IEEE802.11an standard

5. Describe in detail any encryption methods used to support the use of legitimate software/firmware.

Ans: The software update is password protected and at booting the software checks the device hardware ID so it always matches.

6. 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?

Ans: EUT does not support both master and client.

II. Third-Party Access Control

1. Explain if any third parties have the capability to operate a US sold device on any other regulatory domain, frequencies, or in any manner that is in violation of the certification.

Ans: The regulatory domain settings are not affected by software update, they are fixed in the device and not able to change.

2. What prevents third parties from loading non-US versions of the software/firmware on the device? Describe in detail how the device is protected from "flashing" and the installation of third-party firmware such as DD-WRT.6

Ans: The EUT cannot accept third-party software, since manufacturer the software only works with the hardware ID produced by the manufacturer, which is checked when booting the device.

3. For Certified Transmitter modular devices, describe how the module grantee ensures that hosts manufactures 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 parameters are not modified outside the grant of authorization.

Ans: The EUT is not a modular device, this situation cannot occur.

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III. User Configuration Guide

1. To whom is the UI accessible? (Professional installer, end user, other.)

Ans: Professional installer mainly, some end user with GUI user name/password

a) What parameters are viewable to the professional installer/end-user?

Ans: SSID

b) What parameters are accessible or modifiable by the professional installer?

Ans: SSID, password, FCC certified operation modes/channels only, IP address.

(1) Are the parameters in some way limited, so that the installers will not enter parameters that exceed those authorized?

Ans: Cannot operate any more than explained in 1. b), above, so cannot occur.

(2) What controls exist that the user cannot operate the device outside its authorization in the U.S.?

Ans: Any operation of software update does not affect the factory programmed FCC certified operation modes/channels.

c) What parameters are accessible or modifiable to by the end-user?

Ans: It is not possible to change parameters to bring the EUT outside the FCC domain, only select FCC certified operation modes/channels/frequencies can be chosen, nothing else.

(1) Are the parameters in some way limited, so that the installers will not enter parameters that exceed those authorized?

Ans: Yes, FCC certified operation modes/channels/frequencies can be chosen only.

(2) What controls exist that the user cannot operate the device outside its authorization in the U.S.?

Ans: other regulatory domains are not available, only factory programmed FCC certified operation modes/channels which will not change at software upgrade.

d) Is the country code factory set? Can it be changed in the UI?

(1) If so, what controls exist to ensure that the device can only operate within its authorization in the U.S.?

Ans: Country code selection is not implemented, only FCC settings, cannot be changed, also not by software upgrade.

e) What are the default parameters when the device is restarted?

Ans: FCC certified operation modes/channels only.

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.

Ans: No bridge or mesh mode supported.

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?

Ans: The EUT cannot be configured as both master and client.

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

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Section 15.407(a))

Ans: The device comes only with the certified antenna. All supported modes are covered by the FCC certification of the device, and cannot operate outside, even not by software upgrade.

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