

## Refer to KDB 442812 D01 SDR apps Guide v02r03 Section II

FCC ID: LNQ-WF810G-2

Description	1.1 General software operational description.
Software	ACTIONTEC WiFi Extender WF-810G supports IEEE 802.11 a/b/g/n/ac/ax standards,
(Section 2.944	Modulation Techniques as follows:
(c))	GFSK
	OFDM ,OFDMA and DSSS
	802.11b_DSSS: DBPSK, DQPSK, CCK
	802.11a/n-HT20/n-HT40_OFDM: BPSK, QPSK, 16QAM, 64QAM
	802.11ac-VHT20/ac-VHT40/ac-VHT80/ac-VHT160_OFDM: BPSK, QPSK, 16QAM,
	64QAM, 256QAM
	802.11ax-HE20/ax-HE40/ax-HE80/ax-HE160_OFDMA: BPSK, QPSK, 16QAM, 64QAM,
	256QAM, 1024QAM
	1.2 Describe all the radio frequency parameters that are modified by the software
	without any hardware changes.
	This device does not supports to modify TX power via software or hardware after
	leaving the factory. Users are allowed to modify the frequency channels, allowed
	channel list is compliance with FCC regulatory requirements.
	1.3 High level (simplified) block diagram of the software architecture.
	Refer to exhibit 2 behind this table.
Labelling	2.1 How is the device to be labeled? Will the device have a single label or will it use an
	electronic label per Section 2.925 (e)?  Each device will have a single label with Model Number and FCC ID.
	2.2 How can the FCC verify, in the field, that the correct version of the software is
	running in the device? Submit a description of this capability and instructions for the
	FCC to use in the field to verify that proper software is operating in the device
	The FW revision will be displayed in the TR-069 management system and APP.
	2.3 Describe the means by which software version numbers can be related to any
	future Class III permissive changes. For example: v01.01 was the software version for
	the Initial grant. Version v17.01 was for the first Class III Change. Any Version
	betweenV01.001 to V16.99 is assumed to be representative of the equipment
	exhibits in the initial grant. Version V22.15 would represent the version as modified
	by the Class III change.
	The firmware version of the WF-810G follows the format 0.3.yy.xx-WF810G-pro.yy
	can be used to identify any future Class III permissive changes, xx is the firmware
	revision.



## Security

3.1 Describe the procedure that ensures that third parties (Professional installers, qualified personnel, authorized certified technicians, end users, etc. – not direct employees) cannot operate US sold devices on any other regulatory domain frequencies, or in any manner that is in violation of the certification.

All the access including console port and Telnet/SSH are all disabled. The source is a read-only web page. And the web server is secured with firewalls. This device does not support field upgrade. The only management interface is TR-069 management system. And RF-related and country code are not under control of TR-069 management system. All parameters (RF, Frequencies and etc.) indicating different countries are permanent settings in ROM. So if a device is a product for US, it cannot be changed to another region.

3.2 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.

Third parties don't have the capability.

3.3 Describe how the software updates are distributed for all regulatory domains and what procedures ensures that a product sold in the US can only operate as granted on US frequencies and at authorized radio parameters.

All the access including console port and Telnet/SSH are all disabled. The source is a read-only web page. And the web server is secured with firewalls. This device does not support field upgrade. The only management interface is TR-069 management system. And RF-related and country code are not under control of TR-069 management system. All parameters (RF, Frequencies and etc.) indicating different countries are permanent settings in ROM. So if a device is a product for US, it cannot be changed to another region.

3.4 If the product cannot be modified by third parties and can only operate as granted on US frequencies and with authorized radio parameters, explain how this is achieved.

All the access including console port and Telnet/SSH are all disabled. The source is a read-only web page. And the web server is secured with firewalls. This device does not support field upgrade. The only management interface is TR-069 management system. And RF-related and country code are not under control of TR-069 management system. All parameters (RF, Frequencies and etc.) indicating different countries are permanent settings in ROM. So if a device is a product for US, it cannot be changed to another region.

3.5 What stops third parties from loading non-US versions of software onto products intended for US sale?

All the access including console port and Telnet/SSH are all disabled. The source is a read-only web page. And the web server is secured with firewalls. This device does not support field upgrade. The only management interface is TR-069 management system. And RF-related and country code are not under control of TR-069 management system. All parameters (RF, Frequencies and etc.) indicating different countries are permanent settings in ROM. So if a device is a product for US, it cannot



	be changed to another region.
	3.6 Can third parties make factory level changes to reload non-US domain codes, etc.
	No
Unauthorized	4.1 Describe how open source is the operating code for granted RF properties.
changes (hack)	Describe the difficulty and proprietary nature of the code that controls the RF
to the software	parameters as granted.
	ACTIONTEC firmware in WF-810G is not open source, it is locked and installed at the
	factory, it is not permitted to load any open source codes. How the firmware controls
	the RF parameters as granted: See more details in 3.1

Exhibit 1: Radio Parameters

The product disabled console port and Telnet/SSH. The source is a read-only web page. And the web server is secured with firewalls.

Available settings to the end user include SSID, Password networking mode (bridge or router), IP address and DNS, screen shot of end user side as follows,

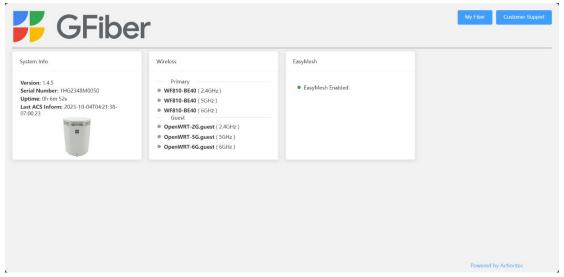
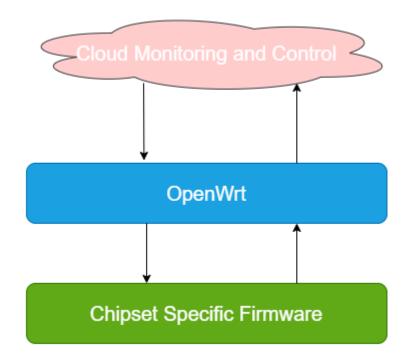
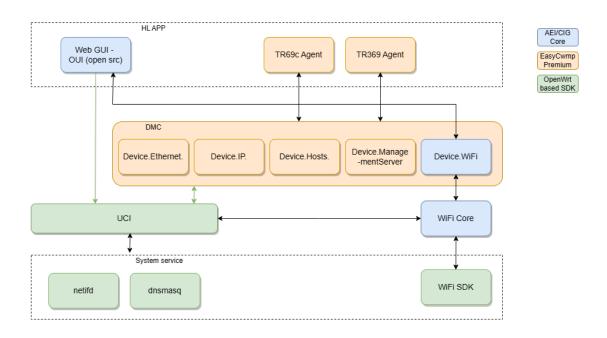


Exhibit 2 block diagram of the software architecture





Sincerely,

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