

Description Software (Section 2.944 (c))	1.1 General software operational description. Actiontec Tri-Band WiFi6E Router WF-815 supports IEEE 802.11 a/b/g/n/ac/ax standards, Modulation Techniques as follows: 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-815 follows the format 0.3.yy.xx-WF815-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 changes (hack) to the software	4.1 Describe how open source is the operating code for granted RF properties. Describe the difficulty and proprietary nature of the code that controls the RF parameters as granted.
	Actiontec firmware in WF-815 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,

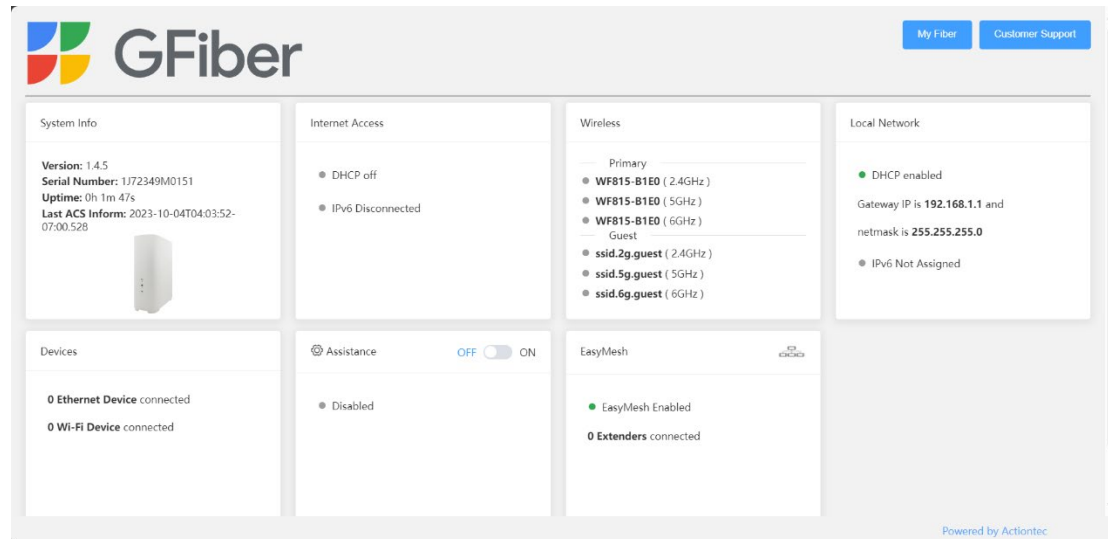
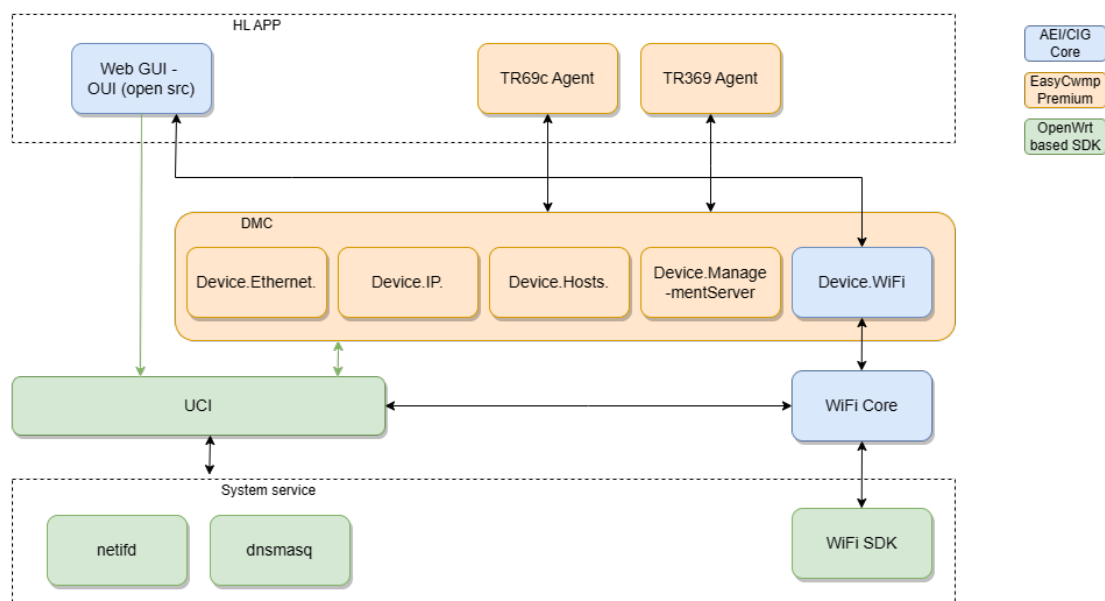
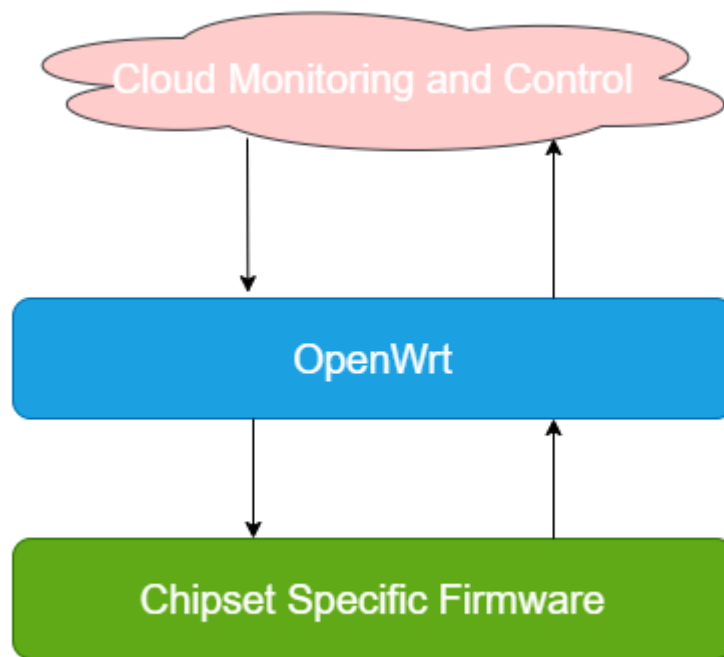


Exhibit 2 block diagram of the software architecture



Sincerely,

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