

15-OCT-2019

Attention: Application Examiner

RE: Validator 2 use of RF Module FCC ID: Z64-WL18DBMOD
Applicant: Cubic Transportation Systems Ltd.
FCC ID: LVCVAL2

To Whom It May Concern:

The RF Module FCC ID: Z64-WL18DBMOD is used in the Validator 2 for Bluetooth (BT Classic and BLE) and Wi-Fi communications. As stated in the operational description the Validator 2 will only operate in the 2.4GHz bands i.e. channels 1-11 ($F_0 = 2412\text{MHz} - 2462\text{MHz}$). The 5GHz functionality of the Z64-WL18DBMOD is not used. All 5GHz bands listed in module specification are not used and will not be used in this device, that includes all 5GHz bands i.e. 5150-5250MHz, 5250-5350 MHz, 5475-5725 MHz and 5725-5850 MHz bands.

The software is configured to only use the 2.4GHz bands available for use in the USA by following the build instructions given by the manufacturer
<http://www.ti.com/lit/an/swra489/swra489.pdf>

In addition to the driver, this is physically ensured by hardware in multiple instances.

1. The antennae [PN: 1513504-1] the module is connected to are only 2400 -2483.5 MHz Single Band Antennae
2. On the RF output of the module passive components (namely C7-C8, C244-C245, L13-L16) have been placed (schematics exhibit) to create a band pass filter (approx. 1Ghz to 4GHz band). The low pass filter of this stage heavily attenuates frequencies above 4GHz i.e. approx. 24dB at 5GHz.

If you have questions or need further information, please contact the undersigned.

Sincerely,



Chris Curtin
Principal Electronic Design Engineer