

## Operational Description

### For Zigbee function

This device is a DirecTV setop box, which operates in the 2.4GHz frequency spectrum with throughput of 250kb/s which  $\pi/4$  QPSK technique will be applied.

The transmitter of the EUT is powered by 12Vdc from AC adapter. The antenna type for this device is Twisted slot antenna without antenna connector.

The other instruction, please have a look at the user's manual.

### For WLAN function

This device is a DirecTV Setop box, which operates in 5GHz bands the maximum data rate could be up to 600Mbps which OFDM technique. If the signal to noise ratio is too poor which could not support 600Mbps, the 11Mbps data rate with OFDM technique will be applied.

The transmitter of the EUT is powered by the 12Vdc from AC adapter. The antenna is Embedded antenna with Murata antenna connector.

The other instruction, please have a look at the user's manual.

FCC 15.407(c) states: The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met"

Data transmission is always initiated by software, which is then pass down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets (ACKs, CTS, PSpoll, etc...) are initiated by the MAC. There are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets are being transmitted.