Modular Approval Requirements

Modular Approval is being requested for this device. There are eight requirements that the device must meet for full modular approval. The following paragraphs detail these requirements and the manner in which the device meets them.

The module meets all of the technical specifications applicable to the frequency band of operation.

The module has its own RF shielding.

> *The module contains an internal shield as shown in the detailed drawings provided with this application.*

All modulation and data input(s) are buffered.

> *Data to the modulation circuit is buffered on the module via the WirelessUSB integrated circuit. Refer to the information regarding the on-board SERDES provided with the file "Theory of Operations – RF.pdf".*

The module has its own power supply regulation and local reference oscillator.

> *The remote module contains its own power supply regulation and the rf reference oscillator is contained within the module (reference 13 MHz oscillator Y1).*
>
> *Power supply requlation is provided within the WirelessUSB integrated circuit that regulates the control voltage to the rf and data circuits.*
>
> *Details of clocking and power management are contained on page 3 of 32 the document "Theory of Operations – RF.pdf".*

The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204(c). The certification submission contains a detailed description of the configuration of all antennas that will be used with the module.

> *The remote module uses a non-standard Hirose connector that will be internal to the end-products into which this module is installed.*

For Industry Canada, the module meets certification labeling requirements. Host devices that contain separately certified modules do not need to be re-certified, provided that they meet the following conditions:

- The host device, as a stand alone unit without any separately certified modules, complies with all applicable Radio Standards Specifications.
- The host device and all the separately certified modules it contains jointly meet the safety requirements of RSS-102, if applicable.
- The host device complies with the certification labeling requirements of each of the modules it contains.

The module is appropriately labeled (refer to the label and label location drawings contained within this application).

For the FCC, the modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing. This is intended to demonstrate that the module is capable of complying with Part 15 emission limits regardless of the device into which it is eventually installed. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in Section 15.207.

Test data contained in this application is for the device tested as a stand-alone device. Radiated spurious emissions data demonstrating compliance with the requirements of Part 15 of the FCC rules for intentional radiators has been provided. Note that these tests were performed with no shield on the device to demonstrate compliance with the relevant limits.

AC conducted emissions were measured on the external AC-DC bench supply used to power the device during the tests.

For the FCC, the modular transmitter must be labeled with its own FCC ID number, and, if the FCC ID is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: “Contains Transmitter Module FCC ID: XYZMODEL1” or “Contains FCC ID: XYZMODEL1.”

The module is appropriately labeled (refer to the label and label location drawings contained within this application

The modular transmitter must comply with any applicable RF exposure requirements.

The module meets the requirements for a portable device that may be used at separation distances of less than 2.5cm from the human body because its output power is below the threshold of $60/f_{GHz}$ mW (25mW for a 2.4GHz device).