



To: Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD 21046-1609

CC: Curtis-Straus LLC TCB

Re: Single Modular Approval Request

To whom it may concern,

We **SignalFire Telemetry, Inc.** are applying for a **single modular approval** for our device with;

FCC ID: W8V-SFTS500

The following information is being provided regarding **modular approval** per the requirements of CFR 47 FCC 15.212.

This transceiver is a complete RF module with an integral reference oscillator. External connections are provided for power and data communication.

The following numbered items correspond to requirements listed in 15.212 of the FCC rules.

1) The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.

The module has a shield covering the entire Radio/RF portion of the module.

2) The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with part 15 requirements under conditions of excessive data rates or over-modulation.

All I/O to the module are buffered from the radio. There is no direct way an input (or output) pin can modulate the radio or change its output. There is no direct connection from any I/O pin to the radio transmitter.

See the block diagram for more detail.

3) The modular transmitter must have its own power supply regulation.

All power inputs are regulated by linear regulators. See the block diagram for more detail.

4) The modular transmitter must comply with the antenna and transmission system requirements of Sec. Sec. 15.203, 15.204(b) and 15.204(c). The antenna must either be permanently attached or employ a "unique" antenna coupler (at all connections between the module and the antenna, including the cable). The "professional installation" provision of Sec. 15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section.

The antenna connection for this module is a SMA connector internal to the required housing and access is not allowed or easily accomplished. The module will always be sold as a system with either a "unique" external antenna connection or a permanently attached antenna. Refer to the manual for approved antennas.

5) The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing for compliance with part 15 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in Sec. 15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see Sec. 15.27(a)). The length of these lines shall be the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see Sec. 15.31(i)).

The module may be powered by both a battery and/or an external power supply. The module will be powered with an AC/DC power supply for AC conducted measurements. The module was tested in a stand-alone configuration.

6) The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.

The module will have a label permanently attached, and the FCC declaration appears in the product manual.

7) *If using a permanently affixed label, the modular transmitter must be labeled with its own FCC identification number, and, if the FCC identification number 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: **W8V-SFTS500**'' or ``Contains FCC ID: **W8V-SFTS500**'' Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.*

The manual contains detail on the required end product labeling requirement.

8) *The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.*

The module meets 2.1091 of the FCC rules for RF exposure as a mobile device. Instructions and warnings are included in the product manual.

Joshua Schadel
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