



Topcon Positioning Systems, Inc.
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Livermore, CA 94550
Phone: 925-2458300

November 11, 2015
Full Modular Approval Justification

In accordance with FCC and Industry Canada rules, a full modular approval is being requested for this device. An itemized list documenting compliance with the modular approval requirements is listed below

(a) 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 contains an aluminum RF shield (please see Internal/External photos submitted together with the other required documents for certification).

(b) 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.

Data to the modulation circuit is buffered on the module via the digital section (U704, U703 and U705 components from schematic).

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

The module contains its own power supply regulation and the RF reference oscillator is contained within the module. Power supply regulation is provided via U701, U200, U201 and U204 from schematic.

(d) 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.

Test data contained in this application is for the device tested in a stand-alone configuration.

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



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(f) The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.

The module complies with the specific rules and operating requirements for which certification is sought. Instructions to the OEM installer or end user regarding such requirements for use in host devices are included in this application.

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

Refer to the MPE calculation.

RSS GEN Checklist		
Modular approval requirement	Yes	No *
(a) The radio elements must have the radio frequency circuitry must be shielded. Physical/discrete and tuning capacitors may be located external to the shield, but must be on the module assembly.	✓	
(b) The module shall have buffered modulation/data input(s) (if such inputs are provided) to ensure that the module will comply with the requirements set out in the applicable RSS standard under conditions of excessive data rates or over-modulation.	✓	
(c) The module shall have its own power supply regulation on the module. This is to ensure that the module will comply with the requirements set out in the applicable standard regardless of the design of the power supplying circuitry in the host device which houses the module.	✓	
(d) The module shall be tested for compliance with the applicable standard in a stand-alone configuration, i.e. the module must not be inside another device during testing.	✓	
(e) The module shall comply with the Category I equipment labelling requirements.	✓	
(f) The module shall comply with applicable RSS-102 exposure requirements, which are based on the intended use/configurations.	✓	
(g) Is the modular device for an Industry Canada licensed exempt service?		X

* Please refer to the previous sections for a detailed explanation if the answer is "No."