



Date: September 28, 2017

REF: NovAtel Inc.  
FCC ID: UTU-01019715

Subject: Limited Modular Transmitter

(i) 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.

**Answer: The Module has its own shielding**

(ii) 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.

**Answer: All modulation and data input(s) are buffered. The EUT has buffered data inputs, it is integrated on the RF chip.**

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

**Answer: PMU is built in to the RF chip**

(iv) The modular transmitter must comply with the antenna and transmission system requirements of §§ 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 § 15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section.

**Answer: The antenna is a PCB (trace) antenna that meets the FCC antenna requirements.**

(v) 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 § 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 § 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 § 15.31(i)).

**Answer: The device is being tested in a typical host configuration and therefore a Limited Modular approval specific to this host is being requested.**

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

**Answer: There is a permanently affixed label on the shield of the RF Module.**

(vii) 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.

**Answer: RF Exposure information is located in the Product User's Manual in a prominent location.**

(viii) The modular transmitter must comply with any applicable RF exposure requirements in its final configuration. **Answer: A Maximum Permissible Exposure report has been provided in this filing.**

Sincerely,

A handwritten signature in blue ink, appearing to read "Roland Jackman".

Roland Jackman  
Senior Compliance Specialist NovAtel Inc.