

May 28, 2009

Nemko Canada Inc.
303 River Road
Ottawa, Ontario, Canada
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Attn: Director of Certification

FCC ID: XC7ECOREXRFID

Request for Limited Modular Authority

We hereby request Limited Modular Approval based on the numbered requirements identified below as we address them to be included in our application for equipment authorization.

1. The modular transmitter must have its own RF shielding. This is intended to ensure that the module does not have to rely upon the shielding provided by the device into which it is installed in order for all modular transmitter emissions to comply with Part 15 limits. It is also intended to prevent coupling between the RF circuitry of the module and any wires or circuits in the device into which the module is installed. Such coupling may result in non-compliant operation.

Vestara: The RF module has been successfully tested standalone outside of any enclosure and fulfills the emission requirements of the FCC rules without additional RF shielding. Also, the module will only be installed in Vestara products and will not be available standalone for commercial use.

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.

Vestara: The RFID transceiver IC, a Texas Instruments TRF7961, is set internally on powerup to a fixed data rate of 26.48 kbps. External modulation of the transmitter is disabled by permanently tying the TRF7961 IC MOD pin to ground.

3. The modular transmitter must have its own power supply regulation. This is intended to ensure that the module will comply with Part 15 requirements regardless of the design of the power supplying circuitry in the device into which the module is installed.



Vestara: The transceiver IC is sourced from external 3.3V and 5V regulators and also internally contains its own voltage regulators. One internal regulator is specifically for controlling the RF transmitter supply power. The RF voltage will be stabilized and compensated for temperature changes and other effects through these regulators.

4. The modular transmitter must comply with the antenna requirements of Section 15.203 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). Any antenna used with the module must be approved with the module, either at the time of initial authorization or through a Class II permissive change. The “professional installation” provision of Section 15.203 may not be applied to modules.

Vestara: The antenna is comprised of permanent traces on the printed circuit board that contains the RF module and the antenna cannot be altered or disconnected.

5. 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. 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 Section 15.27(a)). The length of these lines shall be 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 or commercially available (see Section 15.31(i)).

Vestara: The RF module meets this requirement by having been tested and found compliant with Part 15 Class B conducted and radiated requirements in a standalone module configuration. Ferrites were not used for any cable assemblies to achieve compliance.

Please refer to the supplied Nemko report for compliance details.

6. 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.”

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.

Vestara: This requirement will be met by Vestara attaching a permanent label to each RFID transceiver module PCB during assembly. The text of the label will read " FCC ID: XC7ECOREXRFID"

In addition, the outside of any Vestara device containing this RF module will have a similar label that will state that the device "Contains an RF module, FCC ID: XC7ECOREXRFID".

Vestara will ensure that all products and assemblies will include appropriate FCC information for ALL modular approved devices installed within the enclosure and external labels for ALL devices that contain approved RF modules.

Please see FCC label document supplied.

7. The modular transmitter must comply with any specific rule or operating requirements applicable to the 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. For example, there are very strict operational and timing requirements that must be met before a transmitter is authorized for operation under Section 15.231. For instance, data transmission is prohibited, except for operation under Section 15.231(e), in which case there are separate field strength level and timing requirements. Compliance with these requirements must be assured.

Vestara: Vestara will control the design, manufacture and test of products that utilize the RF module. As a result, Vestara will ensure compliance to any specific rule or operating requirements applicable to 802.15 transmitter circuitry, and as approved by the results of this finding. The end product user will not have access to the RF module as installed in a Vestara product.

8. The modular transmitter must comply with any applicable RF exposure requirements. For example, FCC Rules in Sections 2.1091, 2.1093 and specific Sections of Part 15, including 15.319(i), 15.407(f), 15.253(f) and 15.255(g), require that Unlicensed PCS, UNII and millimeter wave devices perform routine environmental evaluation for RF Exposure to demonstrate compliance. In addition, spread spectrum transmitters operating under Section 15.247 are required to address RF Exposure compliance in



accordance with Section 15.247(b)(4). Modular transmitters approved under other Sections of Part 15, when necessary, may also need to address certain RF Exposure concerns, typically by providing specific installation and operating instructions for users, installers and other interested parties to ensure compliance.

Vestara: The RF module will only be installed inside of Vestara end user products and will not be used as a portable device. The RF module is not meant to be used within 20 cm of the body of the user. Also, the RF module operates at a low frequency, 13.56 MHz and at low transmit power, less than 200 mW maximum, and does not exceed the RF exposure guidelines limits.

Vestara seeks Limited Modular Approval for the RF module based on our ability to satisfy the requirements listed above. Vestara will maintain the ability to control the manufacture, installation and usage of the RF module to maintain compliance to the FCC part 15 requirements.

The RF module will not be sold as a stand alone module to an external customer.

In each case, the RF module will be manufactured and installed by Vestara into an external enclosure suitable for the application. The RF module transceiver electronics will remain unmodified from the design disclosed in this filing.

Sincerely,

A handwritten signature in black ink that reads "Scott Mallett". The signature is fluid and cursive, with "Scott" on the top line and "Mallett" on the bottom line.

Scott Mallett
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