



A **UNOVA** Company

Intermec Technologies Corp
Norand Mobile Systems Division
550 Second Street S.E.
Cedar Rapids, IA 52401
USA

TRANSMITTER MODULAR APPROVAL ATTESTATION

Federal Communications Commission
Authorization and Evaluation Division
7435 Oakland Mill Road
Columbia, Maryland 21046

Re: Application Modular Approval Certification for FCC ID: EHA-BTM210

Gentlemen

The following attestation addresses the eight requirements to support modular approval as required by the FCC Public Notice DA00-1407 "Part 15 Unlicensed Modular Transmitter Approval".

Transmitter modular approval, conditional requirements.

- 1) The BTM210 radio module has its own shielding and is tested herein extended outside of an Intermec 730 terminal. The shield is added during manufacturing and is not easily removed. Instructions to end-users will warn of possible regulatory consequences for modifying the radio in any manner.
- 2) As a radio module designed specifically for data transfer, only data and power is presented to the radio. The radio circuitry buffers all modulation and control of the transmitter. Control of the transmitter is via data commands and software instructions contained within the module. The transmitter presented in the report is tested with the radio operated at the maximum power. Data commands may reduce the power transmitted but may not influence the modulation content.
- 3) This radio module does not contain an on-board voltage regulator. The transmitter is specified to operate across a voltage range of +3.3V +/- 0.3volt. Within the test report we show the operation of the transmitter across a voltage range of +3.0 to +3.6 volts. Testing shows the power output and operating frequency is maintained within the parameters defined in the regulations. The 3.3-volt source is a standard supply voltage in many "state of the art" mobile computers and portable printers. Products that do not have the industry standard 3.3 volts to operate the radio will have to incorporate a regulator to operate the radio within the +3.3v +/-0.3 volt range. All Intermec products have either a highly regulated supply sourced from the AC powerline or rechargeable batteries. For battery operated units there is a low battery cut-off to insure stable operation of the computer and memory. When low battery is detected all function ceases at a voltage that insures the processing and storage of data is not corrupted. The low battery detect also serves to maintain the operating voltage of the radio within the parameter specified above. Resellers for the radio will be instructed to maintain the voltage tolerances listed herein.
- 4) The radio uses an on-board antenna. The provisions to address a connector that meets the unique coupler requirements does not apply.

5) The radio is tested herein is on an extended flexible cable connected to an Intermec 730. The radio is extended four inches (10-cm) beyond the host computer. The extender allows the radio to be placed horizontal and vertical for a complete evaluation of the radiated characteristics of the shielding on the radio. AC power to the Intermec 730 operated the unit during testing. AC line conducted emissions are presented utilizing the same 730 operating from the Intermec charger for the unit. Alternate AC power sources for the radio is required to meet the emissions limits stated in CFR47 Part 15.207. As the primary radio integrator, Intermec performs AC conducted emission testing and generates FCC Class I Permissive Change reports to address alternate AC power supplies for the radio. OEM integrators will be informed of their regulatory obligations to perform unintentional and intentional radiator emissions testing and certification on their final product as required in the FCC rules.

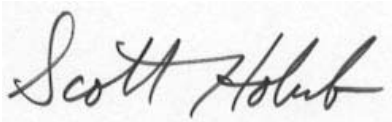
6) As a small module the radio is not always accessible to the end user once the radio is integrated within a product. Products that restrict access to the radio will have an external label that is visible to users. The label will state "Contains: FCC ID: EHA-BTM210". Currently Intermec must install the radio during manufacturing. If and when the radio can be installed as a service retrofit, the service instructions will include labeling requirements for the exterior of the final product that addresses visibility of the FCC ID. The BTM210 radio is not an option that the end user can install. The radio may be offered as an OEM radio to selected customers. Those Resellers will also be instructed to label the exterior of products where access to the PC card is restricted.

7) The radio module as manufactured is completely controlled by the onboard processor. There are no influences to the operation of the transmitter the end user can induce that will operate the radio outside of scope of the regulations. This radio complies to the operating conditions outlined in FCC Part 15.247 as a Frequency Hopping Spread Spectrum transmitter operating in the 2400-2483.5 MHz band.

8) The transmitter herein was tested with the antenna that is integrated on the radio module. Compliance to RF exposure requirements for this antenna is included within this application for approval. Appropriate warning statement will be placed with each end product user information based on the results of the RF exposure data filed with this application. OEM Resellers will be advised to include a similar statement to inform the users of any requirements for RF safety.

Please contact me by telephone at (319) 369-3865 or by e-mail (scott.holub@Intermec.com) if there are questions or additional information needed concerning this attestation.

Sincerely,

A handwritten signature in black ink that reads "Scott Holub". The signature is written in a cursive, flowing style.

Scott Holub
Regulatory Compliance Engineer III
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