## **FCC ID: PA48E1587**

10 March 2003

TCB TÜV America Inc 10040 Mesa Rim Road San Diego CA 92121

RE: FCC ID: submittal as modular device

- 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. The EUT has all of the RF shielding it requires to meet the FCC limits. It does not rely on the shielding of any host unit it will be installed in.
- 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. The clock controlled modulation for data inputs are fixed and controlled by Texas Instrument S6700 Multi Protocol Transceiver Integrated Chip for the modular transmitter.
- 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. The modular transmitter does not have its own power supply regulation. However, the input power source for the modular transmitter is 5 V DC, 100 mA, which is supplied by the end-use product. This modular transmitter is only used in Kodak's products. Kodak will retain control over final installation of the modular transmitter, such that compliance of the end product is assured. Based on this configuration we would like to obtain "Limited Modular Approval" (LMA) for the modular transmitter.
- 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.

The antenna board was specifically designed to be used with the modular transmitter. The modular transmitter and the antenna board was tested together as a stand alone assembly and was tested in the end-use product.

- 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)). The EUT was tested for radiated emission requirements in a stand-alone configuration and meets the requirements. The AC line conducted emissions were made with the EUT installed in a representative host, as it is a DC powered device, which would be exempt from the AC line conducted requirements.
- 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. The transmitter has its own FCC ID label, + the mfr will put the label on the outside of whatever device it goes into.

The <u>FCC ID: PA48E1587</u> for the transmitter module will be on the RF Tag Reader Board and <u>CONTAINS FCC ID: PA48E1587</u> will be on the outside of the host device.

The <u>IC: 1016B-8E1587</u> for the transmitter module will be on the RF Tag Reader Board and <u>CONTAINS IC: 1016B-8E1587</u> will be on the outside of the host device.

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. The test report shows the transmitter meets all the pertinent requirements, 15.225 has no additional specific requirements that need be addressed.

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. The transmitter meets RF exposure requirements.

## **FCC ID: PA48E1587**



5 March 2003

TCB TÜV America Inc 10040 Mesa Rim Road San Diego CA 92121

Dear Sir or Madam:

We, Eastman Kodak Company [1 Imation Way, Oakdale MN 55128, USA], hereby authorize TÜV America Inc - Product Service [1775 Old Highway 8, Suite 104, New Brighton MN 55112-1891] to act as our agent in all matters relating to applications for equipment authorization, including the signing of all documents relating to these matters. I further certify that the applicant nor any party to the application is subject to a denial of Federal benefits, that includes FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862.

This authorization expires on December 31, 2003.

Sincerely,

Eric Donaldson

Director of Engineering

(p) 651-393-1121

(f) 651-393-1122

Email Address: eric.donaldson@kodak.com



July 22, 2003

TCB TÜV America Inc 10040 Mesa Rim Road San Diego CA 92121

Re: Request of Confidentiality

Pursuant to Sections 0.457(d)(1)(ii) and 0.459 of the Commission's Rules, the Applicant hereby requests confidential treatment of information accompanying as outlined below:

- Block Diagram
- Functional Block Description
- RF Tag Reader Board Schematic and PWB Artwork
- RF Antenna Board Schematic and PWB Artwork

The above materials contain trade secrets and proprietary information not customarily released to the public. The public disclosure of these matters might be harmful to the Applicant and provide unjustified benefits to its competitors.

The Applicant understands that pursuant to Rule 0.457(d)(1)(ii), disclosure of this Application and all accompanying documentation will not be made before the date of the Grant for this Application.

Sincerely

Bimal S. Patel

HSE EMC/PS Engineer Kodak Health Imaging Mail Station Discovery 3B-61

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