

Federal Communications Commission (FCC)

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14 July 2005  
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Request for modular approval – FCC ID: PI401B

Dear Application Examiner,

Ezurio Limited are seeking FCC approval as modular transmitters for the Bluetooth Modules TRBLU23-00100-01 and TRBLU23-00200-01.

Both modules are fully compliant to the FCC Public notice DA00-1407:

**1. The modular transmitter must have its own RF shielding**

The radio portion of the module is contained in its own RF shielding. See photos in exhibits

**2. The modular transmitter must have buffered modulation/data inputs**

The modulation/data inputs are buffered by a memory management unit inside the IC.

**3. The modular transmitter must have its own power supply regulation**

The modular transmitter has got its own onboard supply voltage regulator.

**4. The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204c**

The transmitter shall only be used with the tested integral antenna.

**5. The modular transmitter must be tested in a stand-alone configuration.**

The EUT was tested in a stand-alone configuration. For the radiated measurements, the required distance between the EUT and support equipment was insured by connecting a cable directly on to the module using a special connector.

**6. The modular transmitter must be labelled with its own FCC ID number.**

The EUT will be labelled with its own FCC ID number. The label is specified in related exhibit. If the module is installed inside of an end-product, the label will not

be visible. In this case the OEM customer will be instructed to how to apply the exterior label.

**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.**

The EUT is compliant with all applicable FCC rules. Detail instructions are given in the Users Guide.

**8. The modular transmitter must comply with any applicable RF exposure requirements.**

The maximum measured power output is 1.7 mW (2.2 dBm), the maximum antenna gain is 2 dBi = numeric gain 1.585 (please refer to the FCC test report).

The maximum permissible exposure is defined in 47 CFR 1.1310 with 1 mW/cm<sup>2</sup>. The distance from the EUT's transmitting antenna where the exposure level reaches the maximum permitted level is calculated using the following equation:

$$S = P * G / 4\pi R^2$$

$S_{\max} = 1\text{mW}/\text{cm}^2$ ,  $P = 1.7 \text{ mW}$ , linear power gain relative to the isotropic radiator = 2.0 dBi = 1.585 (numeric gain),  $R = \text{distance in cm}$

Solving for  $R$ , the 1mW/cm<sup>2</sup> limit is reached in a distance of 0.46 cm to the transmitting antenna.

After installation of the Bluetooth Module, the maximum distance of 0.46 cm must always be ensured. During normal use of the Bluetooth Module it is impossible that the user gets closer to the transmitting antenna.

Please contact us if you have any additional questions.

Best regards

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Ezurio Limited