

FCC  
Federal Communications Commission

*Torsten Lohoff*  
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Phone +49 (0) 2102 749 306  
Fax +49 (0) 2102 749 350  
Email: [Torsten.Lohoff@7Layers.de](mailto:Torsten.Lohoff@7Layers.de)

***request for a modular approval - FCC ID LYHBTCOMB01***

Dear Application Examiner,

the Siemens Bluetooth module BTCoMB is seeking FCC authorization as a modular transmitter. The requirement of the FCC Public notice DA00-1407 are met.

The following requirements are fulfilled:

**1. The radio portion of the module is contained in its own RF shielding.**

The radio portion does not have its own RF shielding. This application is for limited modular approval since the BTCoMB module will only be used in Systems by Siemens with its own shielding. Each end product will separately be applied for FCC approval because of the use of multiple technologies in these products and the FCC antenna co-location requirements.

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

The module has a memory management unit inside of the Bluetooth Radio Processor BC417143B-IQN. It buffers the data inputs.

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

The Bluetooth Radio Processor BC417143B-IQN contains an own voltage regulation. In case of changes in the supply voltage VCC (for example caused by temperature changes or other effects), the internal voltage will be stabilized.

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

The module is equipped with unique Hirose UFL antenna connector.

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

The EUT was tested in a stand-alone configuration. See also test setup photos in test report. For radiated measurements, the required distance of 10 cm was ensured by 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. 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 product Users Guide.

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

The maximum measured power output is 48,98 mW (16,9 dBm) together with the maximum antenna gain of +2,0 dBi 77,6 mW (18,9 dBm).

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 general equation:

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

$S_{\max} = 1\text{mW/cm}^2$ ,  $P = 48,98\text{ mW}$ , linear power gain relative to the isotropic radiator = 2 dBi = 1,585 (numeric gain),  $R = 20\text{cm}$  distance.

Solving for S, the result is  $S = 0,0154\text{ mW/cm}^2$  which is below the limit of 1mW/cm<sup>2</sup>.

The portable end product in which the module will be integrated, shall be tested in accordance with the FCC SAR requirements if applicable.

Please contact us if you have any additional questions.

Best Regards

7layers AG