

# LETTERHEAD

Federal Communications Commission  
Equipment Authorization Branch  
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## PART 15 UNLICENSED MODULAR TRANSMITTER APPROVAL

**Hermann Sewerin GmbH**  
**FCC ID: WSP860221**  
**IC: 7994A-860221**

Gentlemen,

the transceiver module with the above listed product identification is seeking FCC / IC authorization as a limited modular transmitter. The requirements of the FCC Public notice DA00-1407 are met except item 3, power supply regulation.

The following requirements are fulfilled:

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

The radio portion of the module is contained in its own RF shielding. The two metallic shielding cages are all around solder connected to ground. (see the schematic diagram)

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

The module buffers the data I/O inside of the IC 1.

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

The limited modular transmitter has no own voltage regulation for the RF portion. The module relies on power supply of the host equipment. The integrator must ensure that the supply voltage is kept within the specified voltage range the modular transmitter is tested with. Otherwise for the final product an equipment certification is required.

**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 antennas 17015.7RSMA, 17013.RSMA or W1038, which are equipped with unique antenna connectors.

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

The EUT was tested in a stand-alone configuration (pls. refer to test setup photo exhibit).

**6. The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.**

This modular transmitter is equipped with a permanently affixed label as shown in the exhibit "ID Label Location". The outside of the host device into which the module is installed must display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: WSP860221" or "Contains FCC ID: WSP860221" and "Contains Transmitter Module IC: 7994A-860221" or "Contains IC: 7994A-860221" respectively.

**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 modular transmitter is compliant with all applicable FCC rules. Detailed instructions are given in the product Users Guide, exhibit "SEW860221\_integration.pdf".

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

The maximum measured output power is 98.2 mW [19.92 dBm].

The maximum antenna gain is defined with 7 dBi [equal to a numeric gain of 5.02]

The maximum permissible exposure defined in 47 CFR 1.1310 is 1 mW/cm<sup>2</sup>.

The maximum level at 20 cm distance is calculated using the general equation:

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

P = 98.2 mW,

G = 5.02

R = 20 cm

Solving for S, the power density at 20 cm is 0.098 mW/cm<sup>2</sup>, which is well below the limit.

This OEM module is approved for use in products operating as mobile transmitting device with respect to 2.1091.

Sincerely,



Bastian Ruppert  
Hermann Sewerin GmbH