

Date: 2007-09-26

Subject: Limited Modular Approval request

To: FCC TCB

*Herewith we would like to apply for "Limited Modular Approval" for the following device:*

Applicant/manufacturer: Amber Wireless GmbH  
Module name: OPC1600  
FCC ID: **R7TOPC1600**

This device is subject of this FCC application package. Justification for our request is summarized below:

#### **1. RF shielding**

The module has no RF shielding and was tested without any housing. We apply for a Limited Modular Approval, constrained to be sold to Sasse Elektronik GmbH only. The product is designed for being built into user interfaces of industrial or medical equipment. There is a user manual available which instructs Sasse Elektronik GmbH how to implement the modules and use them in a way that compliance of the product is always ensured.

#### **2. Data Inputs**

The module has buffered data input via SPI-bus to the onboard  $\mu$ -controller (see schematic diagrams). The user has no direct access to the registers of the integrated RF module and can only set a few parameters to control frequency channel, output RF power and bit rate of the device.

#### **3. Power supply regulation**

The module has its own voltage regulator integrated (see schematic diagrams).

#### **4. Antenna**

The transceiver module OPC1600 may be used with one of the following antennas:

- Laird Technologies WCR2400-SMRP
- EAD BT-Blade™ FBT35009-RS-1K5 with 1.5m-RG174-Cable (see test report)

The antenna coupler is a non-standard inverse SMA-socket. The user manual gives instruction to the antenna issue.

#### **5. Stand alone tested**

The EUT has been tested in stand-alone configuration without housing or shielding. The module was connected to the serial port of a standard PC with an evaluation board. The unshielded module was found to conform to FCC Part 15 requirements (see test reports).

#### **6. Labelling**

The user manual addresses the label issue and gives instructions to Sasse Elektronik GmbH how to label the device in which the modular transceiver will be implemented. The user manual shows a label sample.

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### **7. Specific Operation requirements**

The modular transmitter complies with all FCC rules and operating requirements. Instructions to maintain compliance are given in the user manual. The user has no direct access to internal registers of the implemented RF-transmitter. The firmware limits all user inputs to a range where compliant operation with the provision of section 15.249 is achieved. The firmware is not accessible by users.

### **8. RF exposure requirements**

The transceiver module OPC1600 is compliant with all applicable RF exposure requirements for modular transmitter devices. The maximum output power is lower than 1 mW. Instructions for Sasse Elektronik GmbH how to maintain compliance with RF exposure requirements are given in the user manual.

With kind regards,

A handwritten signature in blue ink, appearing to read 'R. Trepper', is written over a light blue horizontal line.

R. Trepper

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