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Federal Communications Commission
Authorization and Evaluation Division

Parrot SA would like to apply for Modular FCC approval. This letter is our application for such according to FCC public notice **DA 00-1407**.

9XTEND and Modular Transmitter Requirements

Modular Transmitter Requirements	Manufacturer Clarification
A - In order to be considered a transmitter module, the device must be a complete RF transmitter, i.e., it must have its own reference oscillator (e.g., VCO), antenna, etc. The only connectors to the module, if any, may be power supply and modulation/data inputs.	The module CK5050 is a feature-rich Bluetooth platform dedicated for the integration of Bluetooth applications in car audios, car telematic systems or any systems requiring a complete embedded Bluetooth solution. It only has one connector with the following electrical interfaces: <ul style="list-style-type: none">• Audio• Analog interface : 2 audio inputs + 1 stereo output• Digital I2S interface : 1 stereo input + output• Serial Link : UART for the software interface through AT commands (only for debug)• 3.3 V Power Supply• Optional 1.2V Power Supply RF part is integrated in one chip, and have its own reference oscillator (see <i>block diagram</i>).
B - Compliance with FCC RF Exposure requirements may, in some instances, limit the output power of a module and/or the final applications in which the approved module may be employed.	Bluetooth Radio IC has a power control, in order to limit the output power. This power is defined by software, and cannot be changed, by the user (see datasheet <i>STLC2150.pdf</i>)
C - While the applicant for a device into which an authorized module is installed is not required to obtain a new authorization for the module, this does not preclude the possibility that some other form of authorization or testing may be required for	See datasheet <i>CK5050_Datasheet_1.93.pdf</i> , in paragraph 7 <i>FCC Requirements for module application</i>

<p>the device (e.g., a WLAN into which an authorized module is installed must still be authorized as a PC peripheral, subject to the appropriate equipment authorization).</p>	
<p>D - In the case of a modular transceiver, the modular approval policy only applies to the transmitter portion of such devices. Pursuant to Section 15.101(b), the receiver portion will either be subject to Verification, or it will not be subject to any authorization requirements (unless it is a Scanning Receiver, in which case it is also subject to Certification, pursuant to Section 15.101(a)).</p>	<p>CK5050 module has a Radio Bluetooth IC, in which transmitter and receiver are integrated. Thus, it is also subject to section 15.101(a), because it is a scanning receiver.</p>
<p>E - The holder of the grant of equipment authorization (Grantee) of the module is responsible for the compliance of the module in its final configuration, provided that the OEM, integrator, and/or end user has complied with all of the instructions provided by the Grantee which indicate installation and/or operating conditions necessary for compliance.</p>	<p>These information are exposed in datasheet and final customer should respect these instructions in order to have correct functionality.</p>
<p>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.</p>	<p>The CK5050 module is present as follows, and all electronic components are integrated inside the shielding, except for RF antenna.</p> 
<p>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.</p>	<p>CK5050 module has no modulation/data inputs, but only audio inputs (with low level), and outputs with low level (audio).</p>
<p>3. The modular transmitter must have its own power supply regulation. This is intended to ensure that the module will</p>	<p>In compliance with electrical schematic, modular transmitter integrated in CK5050 module has its own power supply 2.8V, done by LD3985M27R,</p>

<p>comply with Part 15 requirements regardless of the design of the power supplying circuitry in the device into which the module is installed.</p>	<p>named U200 on electrical schematic.</p>
<p>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.</p>	<p>As exposed on photo below, RF antenna is designed directly on PCB.</p> 
<p>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...</p>	<p>As described in <i>CK5050_Datasheet_1.93.pdf</i>, the modular transmitter is tested in a stand-alone configuration. It is plugged on its workbench, and it is only supplied during measurements.</p>
<p>6. The modular transmitter must be labelled 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...</p>	<p>It is ordered to the client to respect conditions exposed in <i>CK5050_Datasheet_1.93.pdf</i>.</p>
<p>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.</p>	<p>Specific rules, and operating conditions are exposed in <i>CK5050_Datasheet_1.93.pdf</i>, in paragraph <i>Electrical Architecture</i></p>
<p>8. The modular transmitter must comply with any applicable RF exposure requirements.</p>	<p>As Bluetooth application, module CK5050 is submitted to FCC part 15 paragraph 15.247 requirements. Results are exposed in the test report.</p>

Sincerely,

Arezki Guerrab

