

# FCC Modular Approval Letter

## RAR40025002

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FCC Part 15.212 Requirement	Comment/Declaration
(i) The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.	<p><b>Comply</b></p> <p>The module has its own RF shielding. It has been tested for radiated emissions with the module in a representative package for the product in which it will be sold.</p>
(ii) 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><b>Comply</b></p> <p>The input to the module is an Ethernet interface. All modulation and 802.11 protocol elements reside within the module. There are no modulation or data inputs to the module which could alter the performance or behavior of the modulator or radio which could cause it to exceed FCC limits.</p>
(iii) The modular transmitter must have its own power supply regulation.	<p><b>Comply</b></p> <p>The unit has its own power supply regulation.</p>
(iv) The modular transmitter must comply with the antenna and transmission system requirements of §§15.203, 15.204(b) 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). The “professional installation” provision of §15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section.	<p><b>Comply</b></p> <p>The antenna is permanently fixed</p>
(v) The modular transmitter must be tested in a stand-alone configuration, <i>i.e.</i> , the module must not be inside another device during testing for compliance with part 15 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in §15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see §15.27(a)). The length of these lines shall be the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see §15.31(i)).	<p><b>Comply</b></p> <p>The module meets part 15 as a stand-alone configuration.</p>
(vi) The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.	<p><b>Comply</b></p> <p>The module will be labeled with its own FCC ID number. Since this label will not be visible when the module is installed in the</p>

	complete product, the manual indicates that the final product shall include a permanent label which uses the wording "Contains FCC ID: RAR40025002". See the labeling information provided with this submission.
(vii) The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.	<p><b>Comply</b></p> <p>The module meets (stand-alone):</p> <ul style="list-style-type: none"> <li>• FCC: 47 CFR Part 15, sub parts C and E</li> <li>• Industry Canada: RSS 210</li> <li>• Since all modulation and 802.11 protocol elements reside within the module, users will not have access to controls which may cause the module to operate outside its normal mode of operation. All timing and control for RF and modulator sections are inaccessible from outside the module.</li> <li>•</li> </ul>
(viii) The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.	<p><b>Comply</b></p> <p>1.1.1 .</p>
<p>(iX) Comment</p> <p>(b) A limited modular approval may be granted for single or split modular transmitters that do not comply with all of the above requirements, e.g. , shielding, minimum signaling amplitude, buffered modulation/data inputs, or power supply regulation, if the manufacturer can demonstrate by alternative means in the application for equipment authorization that the modular transmitter meets all the applicable part 15 requirements under the operating conditions in which the transmitter will be used. Limited modular approval also may be granted in those instances where compliance with RF exposure rules is demonstrated only for particular product configurations. The applicant for certification must state how control of the end product into which the module will be installed will be maintained such that full compliance of the end product is always ensured.</p>	<p><b>Comply</b></p> <p><b>This is a full modular approval.</b></p> <p>The module is under full SW control with embedded on board microprocessor that with hard coded transmit power limits based on the FCC, IC test reports. The module will not transmit above those TX power limits.</p>