

Subject.: Acknowledgment of FCC Modular approval requirements

FCC ID : ZAAQS-ISP4520US

To Whom It May Concern:

ISP4520 Smart LoRa and BLE Module

Modular Approval Requirement	Yes	No
(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.	Yes	
(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.	Yes	
(iii) The modular transmitter must have its own power supply regulation.	Yes	
(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.	Yes	
(v) The modular transmitter must be tested in a stand-alone configuration	Yes	
(vi) The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.	Yes	
(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.	Yes	

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(viii) The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.	Yes	
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- (i) The module is shielded by a metal layer that is applied to the over mold compound and that makes connection to internal metal layers in the substrate creating a complete Faraday cage around the radio elements.
- (ii) The transmitters have buffered data inputs that pass via the integrated microprocessor
- (iii) Both LoRa and BLE radios have integrated DCDC converters and LDOs
- (iv) The antenna is permanently connected to the module and is inside the overmold compound
- (v) The transmitters are standalone
- (vi) The label is laser etched onto the top surface of the module
- (vii) The user manual complies with this requirement
- (viii) The module complies with RF exposure requirements

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