

Modular Approval Request Letter

Date: 2021-11-08

FCC ID: 2A269-01001

Type of Equipment: Radio module, 1525 - 1559 MHz, 1626.5 - 1660.5 MHz

Herewith we state that the requirements according to FCC Part 15.212 are met and the module qualifies for a single modular transmitter approval.

#	Requirement as per 47 CFR Part 15 Subpart C §15.212	Conditions met? (Y/N)	Realisation / Evidence in FORM 731 application filing
i	RF shielding 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.	Y	All the electronic circuitry of the radio module is covered with a shielding (see external photos).
ii	Buffered modulation/data inputs 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.	Y	A chipset in the module buffers all data and manage them for the radio transceiver chipset (see operational description).
iii	Power supply regulation The modular transmitter must have its own power supply regulation.	Y	The transceiver chipset has its own power supply regulation (see operational description).
iv	Antenna requirements 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). Additional justification and details may be requested – please refer to KDB 996369	Y	The module comes with respective antenna details (see datasheets). The spurious emission requirements are fulfilled (see attached test report).
v	Stand-alone test configuration The modular transmitter must be tested in a stand-alone configuration, i.e., 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 centimetres to ensure 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)).	Y	The module has been tested in a stand-alone configuration (see test report/ test set-up photos).
vi	Labelling The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.	Y	The module has its own label. The instruction for labelling rules for the host device has been stated in the datasheet.
vii	Compliance on specific rule or operating requirements 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	Y	The required FCC rules has been fulfilled and all instructions for maintaining compliance has been clearly stated in the datasheet



	instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.		
viii	RF Exposure Radio frequency devices operating under the provisions of this part are subject to the radio frequency radiation exposure requirements specified in §§1.1307(b), 1.1310, 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of modular transmitters under this section must contain a statement confirming compliance with these requirements. The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.	Y	RF exposure requirements are fulfilled for mobile configuration. The installation of the module is restricted to mobile host devices what is clearly stated in the datasheet For portable applications OEM integrators need SAR evaluation and an own FCC ID.

A handwritten signature in black ink, appearing to be "L. Vieira de Mello", written over a horizontal line.

Laurent Vieira de Mello
COO
Astrocast SA