

Federal Communications Commission Equipment Authorization Division 7435 Oakland Mills Road Columbia, MD 21046 USA

Date: 28<sup>h</sup> June,2025

Subject; Modular Transmitter Application

Company name: Sudhir Srivastava Innovations Pvt. Ltd

FCC ID: 2BOLQ-106MSF0063

Dear Sir/Madam,

This letter includes the FCC application requirements for Modular Transmitter Approval Request for;- This application includes documents for Limited Modular Approval.

FCC KDB 996369 D01 'Module Certification Guide v04r02"; and FCC KDB 996369 D03 "OEM Manual v01r01".

In accordance with 47CFR 15.212 Modular Transmitters and KDB 996369 D01 'Module Certification Guide v04r02", FCC ID 2BOLQ-106MSF0063 has been examined against the following requirements.

Item	Requirement per 15.212 and KDB 996369 D01	Y/N	Explanation from Grantee (Explain why product complies/how it is achieved)
1	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.	N	It is not possible to put a shield as the Antenna is mounted just above RFID reader PCB, moreover the module is installed inside the Actuator, so shielding is not required.
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.	Y	Data to the modulation circuit is buffered on the module inside component U1 on the schematic (Mfg.: STMicroelectronics, Model: CR95HFVMD5T).
3	The modular transmitter must have its own power supply regulation.	Y	The module contains its own power supply regulation and RF reference oscillator is contained within the module. Power supply regulation is provided via pin 13 of U1 on the schematic (Mfg.: STMicroelectronics Model: CR95HF-VMD5T)  The module is powered by 3.3V DC which is provided by MACT TOP PCBA (used as auxiliary equipment during test) of Instrument Actuator.

FCC Modular Approval Request Rev 4.0



4	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	Y	The module connects to its antenna via Connector Header Through Hole 2 position 0.079" (2.00mm). There is one more Supporting Connector, which is same as the above to assemble the module with antenna.  The antenna is a PCB-trace loop antenna (18.5 mm x 30 mm) with Q Factor < 10 at 13.56MHz. Installation instructions for the module explain that only these antennas may be used with the device and that the end user shall not be able to
	this section.		access the antenna port or change antennas.
5	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 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)).	Y	Test data contained in this application is for the device tested in a stand-alone configuration.  Radiated spurious emissions data and AC conducted emissions data demonstrating compliance with the requirements of Part 15 of the FCC rules for intentional radiators has been provided
6	The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.		The module is appropriately labelled (refer to the label and label location drawings contained within this application). Instructions to the end user regarding the labelling requirements for host devices are included in this application.
7	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.	Υ	The module complies with the specific rules and operating requirements for which certification is sought. Instructions to the end user regarding such requirements for use in host devices are included in this application
8	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. Technical information showing the basis for this statement must be submitted to the Commission upon request.	Y	The module operates at 13.56 MHz with a maximum conducted output power of 0.0000102565 mW (10.26 nW) and uses an integrated antenna. Per FCC KDB 447498 D01 and 47 CFR § 2.1093(d)(4), this is well below the 60/f(GHz) mW exemption threshold. RF exposure evaluation is not required, and the module is exempt for use at any separation distance, including in portable applications.

FCC Modular Approval Request Rev 4.0



## Integration Instructions for host product manufacturers

The following items are submitted in support of application for Modular Transmitter FCC ID as noted above as required by the FCC KDB 996369 D03 OEM Manual v01r01.

These items are provided as integration instructions for host product manufacturers (e.g., OEM instruction manual) to use when integrating a module in a host product.

Any requirements that are not applicable to the Module are as indicated below.

Summary of requirements and Checklist. Refer to the KDB for description of the complete requirements;

KDB Ref Sect	Requirements of KDB 996369 D03	User Manual Page Number reference
2.2	List of applicable FCC rules	6-7
2.3	Summarize the specific operational use conditions	1, 6-7
2.4	Limited module procedures	4-5, 6, 10
2.5	Trace antenna designs	1, 4, 6-7
2.6	RF exposure considerations	5
2.7	Antennas	6-7
2.8	Label and compliance information	1, 3-4
2.9	Information on test modes and additional testing requirements	5
2.10	Additional testing, Part 15 Subpart B disclaimer	5
2.11	Note EMI considerations	7-8
2.12	How to make changes	5, 10

Name: Srinivasa Reddy Pilli Date: 28-06-25

Title: Senior Vice President- Govt. Affairs

Signature of applicant

F. T. Negration

FCC Modular Approval Request Rev 4.0