

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.	Reference oscillator is 13.56MHz quartz. A specific Antenna (ESPUM A40) is connected to EPSUM MR40 C-less reader. Data inputs are transmitted by a RS232 serial communication to EPSUM MR40 reader. Power supply is connected to a six pins connector on EPSUM MR40.
(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.	Measures for FCC RF exposures requirements were performed at maximal power.
(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 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).	EPSUM C40 C-less is only installed in Parkeon's machine; when it will be integrated in new Parkeon's product, Parkeon will verify if supplementary tests or form of authorization are required.
(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 portions 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)).	ESPUM C40 C-less is a transceiver. It operates at 13.56MHz. It respects ISO14443 standard. Data are received on transceiver by a sub carrier modulation of 13,56MHz of the transmitter, which not causing harmful interference.
(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.	Operational description indicates conditions of integration of the equipment (ESPUM C40 C-less). More over, it is only integrated in Parkeon's machines.

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... Such coupling may result in non-compliant operation.	A RF shielding is made with a PCB box. (See pictures in T2X-C40-C-LESS-Internal_photos.pdf).
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.	Data inputs are not directly connected to a HF stage; Data inputs are numeric inputs, they are connected to MFRC531 chip (NXP chip) by way of a serial communication. Moreover MFRC531 chip had an internal buffer.
3. The modular transmitter must have its own power supply regulation. This is intended to ensure that the module will comply with Part 15 requirements regardless of the design of the power supplying circuitry in the device into which the module is installed.	EPSUM MR40 has several internal converters (linear and DC/DC), which generate all internal voltages.
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.	ESPUM C40 C-less is equipment, which must be professionally installed (see professional installation justification in cover letter 2). ESPUM A40 C-less is connected to EPSUM MR40 with specific coaxial cable (SMB connectors).
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...	ESPUM C40 C-less was tested alone. See Emitech Radio Measurement Certification Report (RA-24-08104576-1).

6. The modular transmitter must be labeled 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...	FCC ID of EPSUM C40 C-less is T2X-C40-C-LESS. See T2X-C40-C-LESS-ID_LabelLoc.pdf
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.	The equipment (ESPUM C40 C-less) is only integrated by Parkeon.
8. The modular transmitter must comply with any applicable RF exposure requirements.	See Emitech Radio Measurement Certification Report (RA-24-08104576-1).