



GE MDS

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June 16, 2015

To Whom It May Concern:

Subject: Manufacturer’s Declaration for Limited Modular approval for FCC part 90 licensed spectrum and IC RSS-119.

FCC ID: E5MDS-LN400, IC ID: 101D-LN400

FCC KDB 996369

Modular Approval Checklist:

Modular approval requirement	Yes	No (*)
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. It is also intended to prevent coupling between the RF circuitry of the module and any wires or circuits in the device into which the module is installed. Such coupling may result in non-compliant operation.	YES, the RF circuitry is shielded on the PCB	
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.	YES, the Data is buffered through communication drivers to the processors	
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.		No, we will control the host integration and DC regulation as described in Integrator’s Guide.
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 this section.		No, we use standard TNC antenna connector; As per all licensed devices, antenna and transmission system requirements must conform to the conditions of end-user’s site license.
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. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in Section 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 Section 15.27(a)). The length of these lines shall be 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 or commercially available (see Section 15.31(i)).	Yes, the module was tested on the bench outside of the enclosure as a stand-alone device and complies with Part 15, & 90 emission requirements.	

Modular approval requirement	Yes	No (*)
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. This exterior label can use wording such as the following: “Contains Transmitter Module FCC ID: XYZMODEL1” or “Contains FCC ID: XYZMODEL1.” Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.	Yes, there will be a FCC label on the module. The host device will be labeled with “ Contains FCC ID: E5MDS-LN400 ”	
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. A copy of these instructions must be included in the application for equipment authorization. For example, there are very strict operational and timing requirements that must be met before a transmitter is authorized for operation under Section 15.231. For instance, data transmission is prohibited, except for operation under Section 15.231(e), in which case there are separate field strength level and timing requirements. Compliance with these requirements must be assured.	Yes, The module complies with FCC part 15C requirements. Instructions to the OEM installer regarding such requirements for use in host device(s) are included in this application.	
8. The modular transmitter must comply with any applicable RF exposure requirements. For example, RSS-102 and FCC Rules in Sections 2.1091, 2.1093 and specific Sections of Part 15, including 15.319(i), 15.407(f), 15.253(f) and 15.255(g), require that Unlicensed PCS, UNII and millimeter wave devices perform routine environmental evaluation for RF Exposure to demonstrate compliance. In addition, spread spectrum transmitters operating under Section 15.247 are required to address RF Exposure compliance in accordance with Section 15.247(b)(4). Modular transmitters approved under other Sections of Part 15, when necessary, may also need to address certain RF Exposure concerns, typically by providing specific installation and operating instructions for users, installers and other interested parties to ensure compliance.	The module meets this requirement for a Fixed device that shall be used at separation distance of more than 20cm from the human body. The module complies with applicable RSS-102 exposure requirements, in its intended configuration/integration in a host. Refer to the MPE calculation and Integrator’s Guide.	

IC RSP-100, 7.3

Modular Approval Checklist:

Modular approval requirement	Yes	No *
a) The radio elements shall have the radio frequency circuitry shielded. Physical / discrete and tuning capacitors may be located external to the shield, but must be on the module assembly.	YES, the RF circuitry is shielded on the PCB	
b) The module shall have buffered modulation/data input(s) (if such inputs are provided) to ensure that the module will comply with the requirements set out in the applicable RSS standard under conditions of excessive data rates or over-modulation.	YES, the Data is buffered through communication drivers to the processors	
c) The module shall have its own power supply regulation on the module. This is to ensure that the module will comply with the requirements set out in the applicable standard regardless of the design of the power supplying circuitry in the host device which houses the module.		No, we will control the host integration and DC regulation as described in Integrator’s Guide.
d) The module shall comply with the provisions for external power amplifiers and antennas detailed in the applicable RSS standard. The equipment certification submission shall contain a detailed description of the configuration of all antennas that will be used with the module.		No, we use standard TNC antenna connector; As per all licensed devices, antenna and transmission system requirements must conform to the conditions of end-user’s site license.


Modular approval requirement	Yes	No *
e) The module shall be tested for compliance with the applicable standard in a stand-alone configuration, i.e. the module must not be inside another device during testing.	Yes, the module was tested on the bench outside of the enclosure as a stand-alone device and complies with RSS-119 emission requirements.	
f) The module shall comply with the Category I equipment labelling requirements.	Yes, there will be an IC label on the module. The host device will be labeled with "Contains IC ID: 101D-LN400"	
g) The module shall comply with applicable RSS-102 exposure requirements, which are based on the intended use/configurations.	Yes, The module complies with RSS-102 requirements. Instructions to the OEM installer regarding such requirements for use in host device(s) are included in this application.	
h) Is the modular device for an Industry Canada licence-exempt service?		No. LN400 is a licensed device as indicated below.

* This **Limited Modular Approval (LMA)** is applied with the understanding that we, the applicant will demonstrate and will retain control over the final installation of the device, such that compliance of the end product is always assured. The operating condition(s) for the LMA; the module is only approved for use when installed in devices produced by GE MDS, or when proper installation / integration is used as per the user manual instructions.

The LN400 is a wireless 400MHz, FCC part 90 band module that was designed to be integrated into various enclosures designed by GE MDS. All our products are Professional Installation only. These modules are not for sale to the general public. GE MDS has fully trained and qualified personnel.

Dated: 6/25/2015

By:

Signed:  Name: Dennis McCarthy

(Signature)

(Print Name)

Title: Agency Compliance Engineer
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