

To: File
From: James L. Stortz
Subject: LTE-M Cellular, FCC ID: R7PEG1R1S7 Modular Approval Request

April 20, 2020

Scope

47CFR 15.212 communicates requirements for products requesting modular approval. In particular, eight requirements are enumerated along with a request that each of the eight be explained for any product requesting such approval. It is the purpose of this document to respond to those eight requirements in regard to the Landis+Gyr product: LTE-M Cellular.

Modular Approval Requirements

1.1 RF Shielding

The LTE-M Cellular module is self-shielding and is not dependent on any component or characteristic of the device into which it is embedded. Shielding is accomplished through a combination of metallic self-shielding components, copper planes, guards, and vias in the PCB. The result is a design that has been proven to be neither sensitive to outside influence nor capable of introducing interference into outside components.

1.2 Buffered Modulation / Data Inputs

The LTE-M Cellular module does not have external modulation or data inputs. Rather, the RF sections are driven by an on-board microprocessor which directly controls the RF data lines and operates so as to not allow excessive modulation.

1.3 Power Supply Regulation

The LTE-M Cellular module uses a buck converter that provides a low noise regulated voltage to the modem and other electronics with a fixed voltage, even when the input voltage is varied.

1.4 Antenna Requirement

The LTE-M Cellular module utilizes a -3.07dBi Inverted-F antenna.

1.5 Stand-Alone Testing

All testing on the LTE-M Cellular module was conducted standalone. No shields or enclosures were used, other than those fully integrated into the modules themselves. No ferrites were used on data or power lines during testing. These devices are DC powered and exceed applicable conducted emission requirements.

1.6 Labeling

As indicated, each LTE-M Cellular module will have its own FCC ID label. In addition, devices into which they are placed will have labels indicating that this module is contained within. Exact text will be as specified in 47CFR 15.212.

1.7 Specific Rules and Operating Requirements

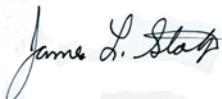
The LTE-M Cellular module complies with all pertinent rules for its section.

1.8 RF Exposure Requirements

The LTE-M Cellular module complies with all exposure requirements. As a component used in the Utility industry, this product is not intended for use near human operators.

This module undergoes continuous, rigorous testing to ensure that full compliance is always maintained.

Sincerely,
James L. Stortz



Title: Director of Hardware Engineering