To: **File**
From: **James L. Stortz**
Subject: **Gridstream RF, Series 5, I210+C, FCC ID: R7PEG1R1X8 Modular Approval Request**
October 28, 2021

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: Gridstream RF, Series 5, I210+C.

Modular Approval Requirements

1.1 RF Shielding

The Gridstream RF, Series 5, I210+C 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 Gridstream RF, Series 5, I210+C 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 Gridstream RF, Series 5, I210+C module uses linear, low-dropout regulators to provide all the electronics with a supply that is fixed, even when the input voltage is varied.

1.4 Antenna Requirement

The Gridstream RF, Series 5, I210+C module comes with a planar inverted-F antenna (PIFA) printed on the board.

1.5 Stand-Alone Testing

All testing on the Gridstream RF, Series 5, I210+C module was conducted standalone, or just the board by itself. 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

There are two transmitters on the module, the on-board Zigbee radio (Gridstream RF, Series 5, I210+c) and the S5-MCM0 module. Both are modular certified. The label requirement is as follow.

A label with the following information is required for the Zigbee radio.

Model: Gridstream RF, Series 5, I210+c
FCC ID: R7PEG1R1X8
IC: 5294A-EG1R1X8.

A label placed on the module with the following information is required for the S5-MCMO. This is required because the S5-MCM0 does not come with a FCC/IC label of its own.

Contains FCC ID: R7PNG0R1S7
Contains IC: 5294A-NG0R1S7

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 Gridstream RF, Series 5, I210+C module complies with all pertinent rules for its section.

1.8 RF Exposure Requirements

The Gridstream RF, Series 5, I210+C module complies with all exposure requirements. As a component used in the Utility industry, this product is not intended for use near human operators.

2.0 In Reference to 15.212(b)

The Gridstream RF, Series 5, I210+C module is always professionally installed and is not sold to the general public.

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

Sincerely,
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