To: **File**

From: **Richard Timko**

Subject: **Gridstream M120 (Guldenberg) Modular Approval Request**

Date: **Feb 23, 2010**

1 Scope

FCC Public Notice **DA 00-1407** released June 26, 2000 communicated guidelines for products requesting modular approval. In particular, 8 requirements were enumerated along with a request that each of the 8 be explained for any product requesting such approval.

It is the purpose of this document to respond to those 8 guidelines in regard to the Cellnet product: Gridstream M120.

2 Modular Approval Requirements

2.1 RF Shielding

The Gridstream M120 module is self-shielding and 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.

2.2 Buffered Modulation / Data Inputs

The Gridstream M120 module does not have external modulation or data inputs. Rather, the RF section is driven by an on-board microprocessor which directly controls the RF data lines and operates so as to not allow excessive modulation.

2.3 Power Supply Regulation

The Gridstream M120 module uses a synchronous boost converter voltage regulator to provide all the electronics with a supply that is fixed, even when the input voltage is varied.

2.4 Antenna Requirement

The Gridstream M120 module uses a Planar Inverted 'F' Antenna (PIFA). The antenna is a custom design, constructed with a cut and folded piece of sheet metal. The antenna is soldered to the PCB and is not changeable.

2.5 Stand-Alone Testing

All testing on the Gridstream M120 module was conducted standalone. No shields or enclosures were used, other than those fully integrated into the module itself. No ferrites were used on data or power lines during testing. These devices are DC powered, and exceed applicable conducted emission requirements.

2.6 Labeling

As indicated, each 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 the FCC Public Notice.

2.7 Specific Rules and Operating Requirements

The Gridstream M120 module complies with all pertinent rules for its section.

2.8 RF Exposure Requirements

The Gridstream M120 module complies with all exposure requirements. As components used in the Utility industry, these product are not intended for use near human operators.

2.9 In Reference to 15.212(b)

The Gridstream M120 module is always professionally installed and is not sold to the general public.