

**To:** File

**From:** Richard Timko

**Subject:** IWR with DC Utilinet Radio Limited Modular Approval Request **Aug. 28, 2009**

---

## 1.1 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: IWR with DC Utilinet Radio.

## 1.2 Modular Approval Requirements

### RF Shielding

The IWR with DC Utilinet Radio module is self-shielding and is not dependent on any component or characteristic of the device into which they are embedded. Shielding is accomplished through an all-metal enclosure as well as 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.

### 1.2.1 Buffered Modulation / Data Inputs

The IWR with DC Utilinet Radio 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.

### 1.2.2 Power Supply Regulation

The IWR with DC Utilinet Radio module uses linear, low-dropout regulators to provide all the electronics with a supply that is fixed, even when the input voltage is varied.

### 1.2.3 Antenna Requirement

The IWR with DC Utilinet Radio module utilizes an external antenna which is connected by a non-unique SMA-type connector. Therefore, Limited Modular Approval is applicable.

### 1.2.4 Stand-Alone Testing

All testing on the IWR with DC Utilinet Radio 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.

### 1.2.5 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.

### 1.2.6 Specific Rules and Operating Requirements

The IWR with DC Utilinet Radio module complies with all pertinent rules for its section.

### **1.2.7 RF Exposure Requirements**

The IWR with DC Utilinet Radio modules complies with all exposure requirements. As a component used in the Utility industry, this product is not intended for use near human operators.

### **1.2.8 In Reference to 15.212(b)**

The IWR with DC Utilinet Radio module is always professionally installed and is not sold to the general public. It is always installed into controlled or non-accessible areas such as antenna towers and utility poles.

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