

## **Transmitter Certification**

### **Test Report**

**FCC ID: SDB520X**

**FCC Rule Part: CFR 47 Part 24 Subpart D, Part 90 Subpart I, Part 101  
Subpart C**

**ACS Report Number: 06-0147**

Applicant: Advanced Metering Data Systems, LLC

Equipment Type: Water Meter Data Transmitter

Trade Name: Flexnet

Model(s): 510, 520

## **RF Exposure**

**General Information:**

Applicant: ADVANCED METERING DATA SYSTEMS, LLC  
 ACS Project: 06-0147  
 FCC ID: SDB520X  
 Device Category: Fixed  
 Environment: Uncontrolled/General Population

**Technical Information:**

Antenna Type: PCB  
 Antenna Gain: 2.14dBi  
 Max Transmitter Output Power: 31.53 dBm  
 Max System EIRP: 33.67 dBm  
 Operating Configuration: Fixed Mounted to a Wall or Meter Pit  
 Exposure Conditions: Greater than 20cm

**MPE Calculation**

The Power Density (mW/cm<sup>2</sup>) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

- S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)
- P = power input to the antenna (in appropriate units, e.g., mW)
- G = power gain of the antenna in the direction of interest relative to an isotropic radiator
- R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Calculations were performed at low, middle, and high channels within the band of operation.

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure							
Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm <sup>2</sup> )	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )
896.0375	31.16	0.60	1306.17	2.14	1.637	20	0.425
928.93125	31.53	0.62	1422.33	2.14	1.637	20	0.463
959.9875	31.21	0.64	1321.30	2.14	1.637	20	0.430

**Installation Guidelines**

The installation manual contains the following text advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

“RF Exposure (Intentional Radiators Only)

In accordance with FCC requirements of human exposure to radiofrequency fields, the radiating element shall be installed such that a minimum separation distance of 20cm.”

**Conclusion**

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.