Vision™ Metering

AMI Using the Public Wireless Network

15 years of data for $13!

A Low Cost Solution for the Public Wireless Network

Vision Metering's Cat M1 modem meters are designed to function on Verizon and T-Mobile and AT&T networks. These meters are ideal for AMI, Solar, Net Metering and sub-metering applications. Cat M1 communications occurs on the sidebands of the mainstream of 4G & 5G, thus minimizing reducing traffic in the main pipe..

Cat M1 is half duplex communication and only requires one antenna versus 4G requiring two antennas to achieve full duplex. This makes it an ideal solution for machine to machine communications and extremely reliable.

Vision's Cat M1 modems are mounted in the XT meter platform. The modem can be mounted in every form of electric meter. Many variations are available including 200 amp disconnect switches on 1S, 2S and 12S meters.

Modem Meters can be read using Vision's 2020 & EndSight, Itron's MV-90 and Primestone head end systems. A development document is available for anyone desiring to write their own system to read these meters.

There are also various forms of these modem meters which have UL approval including 2S, 12S and 16S and 2S with remote disconnect switch. When ordering, UL must be specified.

Vision uses the U-Blox family of modems in its offerings. U-Blox modems are compatible with all of the public wireless carriers in the US and Canada. They may be compatible with system in other countries as well. The modem was approved as a separate device and may be used in other applications.

All Cat M1 Modem Meters Include:

♦ Time of Use

♦ KW, KVAR & KVA Demand

♦ Continuously Cumulative Demand

♦ 12 Channels of Load Profile

♦ Net Metering

♦ Reactive Metering

♦ Four Quadrant Metering

♦ 400 Entry Event Log

♦ Cat M1 Modem currently certified on Verizon and T-Mobile/Sprint

♦ Available in All Metering Forms; 1S, 2S & 12S are available with Disconnect

♦ Visible LEDs indicate Modem's Operation
Green = heartbeat one second off and on
Blue = connected to the network
Red/Orange - network connection error

♦ ANSI C.12.18, C12.19 & C12.20 Compliant

♦ Functions with Vision's 2020 and EndSight, Itron's MV-90, Primestone's Primeread and MSF Data's system

GENERAL XT SPECIFICATIONS

- **ANSI C12.18, C12.19, C12.20, & c37.90.1 Compliant**
- **Magnetically Shielded Current Transformers for Current Measurement (Optional)**
- **120-480 VAC operation**
- **LCD Display is soldered to the board**
- **12 Channels of Load Profile**
- **Time of Use**
- **Demand, KW, KVAR & KVA**
- **Reactive Metering**
- **Four Quadrant Metering**
- **400 Events in the Event Log**
- **Delivered, Received and Net Metering**
- **Alternate Mode with programmable display values**
- **Accuracy Class +/-0.2%**
- **Shipped with Accuracy better than +/-0.15%**
- **Designed for 20 Year Life**
- **Battery options for Display, Ram, and Clock**
- **Continuous Instantaneous KW**
- **Uses Vision 20/20 Software for Programming (available with the purchase of meters at no charge)**
- **50/60 Hz +/-5%**
- **Utilizes Maxim Teridian Technology**
- **200 Amp Disconnect Switch Option**
- **30 Digit User Defined Security Key**
- **-40 to +85 Degree C Operation**
- **5 to 95% Relative Humidity**
- **Functions with Itron's MV90 System**

SYSTEMS COMPATIBILITY

Vision 2020 Programming Software

Vision EndSight Head End Software

Itron MV-90 & MV-LT

PrimeStone PrimeRead

Also Energy NOC

U-BLOX CHIPSET CHARACTERISTICS

Vision Metering's Cat M1 modem use the U-Blox Sara 410 Chipset.

- Global configurability with single hardware version
- Flexible mode selection as LTE Cat M1, LTE Cat MB1, EGPRS –only /preferred
- Critical firmware updates delivered via uFOTA with LWM2M
- Low power consumption
- Extended range in buildings, basements and with NB1 underground
- Easy migration between U-Blox 2G, 3G and 4G modules
- Cat M1/NB1 deployed bands 2, 3, 4, 5, 8, 12, 13, 20, 26, and 39 in M1 only

ORDERING INFORMATION

FM 2S 2LUU1P
FM 2S with Disconnect Switch 2LUU2P
FM 2S with Disconnect Switch & UL.............2LUU2P(UL)
FM 3S 3NUU1P
FM 4S 3NUU1P
FM 5S 4NUU1P
FM 6S 6NUU1P
FM 9S 9NUU1P
FM 12S MLUU1P
FM 12S with Disconnect Switch MLUU2P
FM 12S UL Approved ....MMUU1P(UL)
FM 16S ZLUU1P
FM 16S UL Approved..............................ZMUU1P(UL)