

MEGA-NET™ Fixed Network AMR System Simple Design-Powerful Performance-Exact Water Accountability

LONG DISTANCE RANGE with MINIMAL COMPONENTS and COMPLETE COVERAGE

AUTOMATIC METER READS COLLECTED DAILY with ZERO RUNNING COST

REAL-TIME CONSUMPTIONS ALERTS IDENTIFY PROBLEMS THE DAY THEY OCCUR

System Component

Component Features

Meter Transmission Unit (MTU)



The MTU unit makes a difference. A sophisticated transmitter equipped with the latest SMD technology designed to provide you with the advanced capabilities of a **true Automatic Meter Reading system enabling long range wireless transmission** from meters at remote sites to the Control Center Station (computer/server located in your office)

- **Long Range** – Powered by 2 Watts results in a nominal range of 5 miles, line of sight can reach 20-25 miles, and use of repeaters can expand range to tens and hundreds of miles. Enables all the readings to “come to you” directly at the Control Center, without the need of manual labor. Eliminates all expenses such as meter readers salary, vehicles, insurance, fuel, etc.
- **FCC Licensed Frequency** – Operation on a secure FCC license assures interference-free frequency and reliable uninterrupted communication. Non-licensed systems often experience interference from numerous devices which do not require license, such as, wireless phones, garage door openers, etc. Operates in the VHF (136-174 Mhz) or UHF (400-500 Mhz) frequency bands, assuring a clear channel and no lost readings.
- **Programmable Read Intervals** - Transmits read 4 times daily, daily, weekly or monthly. A trouble shooting MTU is available to monitor hourly water consumptions for possible problem account.
- **Consumption Alerts** – Software alerts Control Center Station of leak detection, tamper detection, high flow, low flow, negative flow, high consumption during water ban hours and consumption on vacant or seasonal homes.
- **Meter Compatibility** – KP’s MTU can read water, gas, and electric meters by reading any type of Encoder or Digital/Pulse register. This compatibility allows for a mixed meter system, supporting an unrestricted meter replacement program that lends opportunity for competitive pricing and emerging technologies.
- **Sub-metering** - 4 ports allowing for 4 meters to be read by one radio.
- **Battery** - Powered by 8 long-lasting lithium batteries - 20 year warranty.
- **Unlimited Data Logging** - Daily reads transmitted/stored on Control Center data base requires no third party communication or expense.
- **Housing** - Rugged water proof and tamper proof IP65 Reinforced polyester housing for outdoor/indoor and pit installations.
- **SCADA / Telemetry** - Optional wireless system for Telemetry transmission. Allows for supervision of various sensors, such as water level, water quality, pumping stations, and shutting off valves remotely
- **MTU Quick Connect** – Field quick connect allows for quick secure field installation.

Receiver



Control Center Station radio transceiver, receives signals from the MTUs directly and/or from repeaters, records data into Control Center database displaying reads on the MCM Meter Reading Software. Compact, easy-to-install connects to computer/server through computers Serial port or USB port.

System Component

Component Features

Repeater



Smart *store and forward* data repeater. Relays messages from MTU's to a Control Center Station or to other repeaters. After receiving a message from a Meter Transmission Unit the repeater checks the content and forwards the message to the Control Center Station or to other repeaters. Messages are encoded with a sophisticated code for error detection.

MCM Software

Consumption Alert Screen



Customer Accounts Screen



Daily Usage Graph



- **MCM Real-Time Meter Reading Software** – Communicates with Receiver logging received reads to Control Center database and generates file of consumption data for the billing system. Detects consumption problems and creates an alert that is displayed at the Control Center. Software runs on new versions of Microsoft Windows™ operating system.
- **Consumption Alerts** - Exception screen alerts Control Center of consumption problems as soon as they occur, not at the end of a billing cycle. i.e.: hi/low/back flow, tamper, leak detection, water ban abuse.
- **Improved Customer Support** - Customer support personnel can now easily pull up real-time data and e-mail any customer a graph showing the account usage history. This allows for easier and faster billing dispute resolution.
- **Additional Features** – Consumption high/low settings can be maintained at customer level or system level supporting seasonal consumption changes. Works in a multi-user and multilingual environment and has security level access parameters.
- **Utility Size** - Scalability from small systems with as little as several hundred meters to large municipal systems with up to 1 million
- **System Water Accounting** - Software compares master meters to local meters, and shows any differences between water distributed in and water consumed by customer, pin-pointing water loss on a daily basis
- **Reports** - Management, customer, consumption and exception reporting available both at the customer and management level. Also, income forecasting of unbilled consumption based on cost vs. sale rate. Reports are available in both number or graph format and export data files are easily generated.
- **Billing System** - No impact on your currently billing system. A simple field mapping will be necessary to pull fields from the meter reading software into your billing system software

Field Terminal Unit (FTU)



FTU is a hand-held unit with Internal FM Receiver that displays Signal Strength Levels of MTU's as measured by Repeater(s). The FTU helps installers to assure a reliable level of communication exists between MTU, network repeaters and Central Control Station. The FTU displays the 'Signal Strength Level' of the installed MTU, as received by a specific repeater, more than one repeater, or the Central Control Station. Using this feature, the installer can improve – during the installation process – the location of the installed MTU, and assure the best quality of communication with the network. The FTU's built-in internal receiver can be field programmed to set the reception frequency and other parameters.

For Further Information or
System Demo Contact:

 **DELTA Engineering Sales**
Metering Technologies and Solutions

P.O. Box 663
Downingtown, PA 19335
Office: 610-873-2290
Email: info@deltaengsales.com
