

Submetering System for Multifamily Property

Datasheet



TapWatch® is the first fully automated wireless submetering system designed exclusively for the multifamily housing industry. Already installed in over one million apartments nationwide, TapWatch helps you increase your operating income by having residents pay for their own utility usage.



The TapWatch submetering system consists of a number of integrated devices all working together to seamlessly deliver residents utility consumption to the billing company.

Utility Meter



Each apartment utility usage is metered or measured by an installed utility meter.

- The utility meter could be for measuring water, gas, electric or run time
- Meter must be compatible with the Pulse Meter Transmitter (PMT)

You can also use the Inovonics MetraMeter™ with the transmitter integrated into the register body for easy installation and maintenance. For more information please refer to the MetraMeter datasheet.

Pulse Meter Transmitter



The Pulse Meter Transmitter (PMT) provides a means for tracking and transmitting consumption information to the billing company. The PMT is simply connected to a meter's pulse or reed-switch output. As the meter measures the amount of water, gas, or electricity used, the resulting pulses or switch closures are counted by the PMT.

The PMT transmits data approximately once per hour to the Data Collector and Concentrator (DCC). The information in each transmission includes a unique identification number, meter pulse count, tamper status, and the state of the battery.

TapWatch transmitters are compatible with virtually any meter with a pulsed output including meters from: Elster AMCO, Badger, Master Meter, Invensys, ista North America, and many others. For the complete list of compatible meters please visit our website at www.inovonics.com.

Signal Repeater



The signal repeater is an intelligent transceiver that identifies signals coming from Inovonics transmitters and re-broadcasts them. The repeater transmits at a higher power than the transmitters so transmitter RF transmissions only need to reach the repeater to be broadcast throughout the entire network. Repeaters extend the life of the battery in the PMT and create an accurate, reliable and cost effective wireless network infrastructure.

Data Concentrator and Communicator (DCC) and Receiver/Network Coordinator



The Receiver/Network Coordinator receives the transmissions from the PMT's and/or repeater network and sends those to the connected DCC. The DCC, designed specifically for multifamily submetering, can store utility consumption data from 2000 meters for 99 days. The billing company can, at anytime, connect to the DCC via a standard phone line to retrieve utility readings, along with site information and system notices.

TapWatch Software



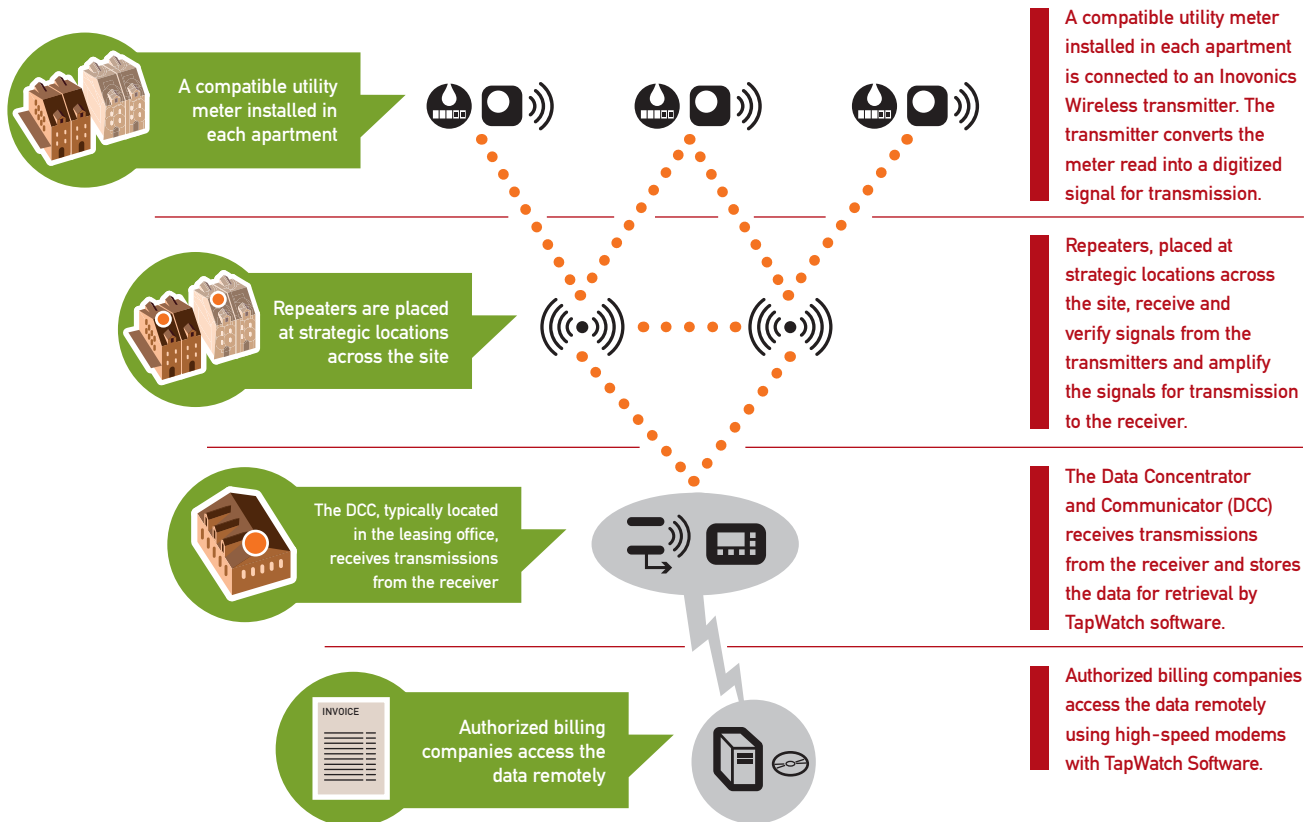
TapWatch software is a Microsoft® Windows™ compatible application for collecting, storing, and communicating data from the site DCC. The software can be used to check the status of a TapWatch system, provide utility consumption data for each monitored apartment for the last 99 days, and update the site DCC information. Billing companies use the TapWatch application to remotely communicate with the DCC and collect, view and maintain meter data, and monitor the status of each transmitter and repeater at the site.





A typical TapWatch system consists of a utility meter with its associated battery powered wireless pulse meter transmitter for each apartment, radio frequency (RF) signal repeaters that make up the network infrastructure, a site receiver/network coordinator, a data concentrator and communicator, and the associated TapWatch software.

How it works



Specifications

Meter Requirements

Compatibility	TapWatch transmitters are compatible with virtually any meter with a pulsed output including meters from Elster AMCO, Badger, Master Meter, Invensys, ista North America, and many others. Contact Inovonics Wireless or your TapWatch solution provider for details.
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Radio

Operating Frequency Range	902-928 MHz
Modulation	Frequency hopping, spread spectrum

Repeater (EN5040-T)

Power Requirements	120 VAC wall transformer included
Open Field Range	Up to 4 miles
Dimensions	Indoor repeater: 6.5" x 3.5" x 1" Outdoor repeater: 7" x 7" x 3"
Operating Environment	-20° to 145°F, up to 90% relative humidity (non-condensing)

Receiver/Network Coordinator (EN6540, FA403)

Power Requirements	Powered by DCC at 11-14 VDC, 80 mA
Dimensions - EN6540	6.5" x 3.5" x 1"
Dimensions - FA403	6.9" x 3.9" x 1.2" (excludes 3" antennae)
Operating Environment	32° to 140°F, up to 90% relative humidity (non-condensing)

DCC (DCC5800)

Power Requirements	120 VAC wall transformer included
Dimensions	11" x 8.5" x 2"
Operating Environment	32° to 140°F, up to 90% relative humidity (non-condensing)
Required Software	TapWatch monitoring software

Transmitters

(applicable for FA5200, EN1501, EN1501-XL and EN1550)

Dimensions	3.5" x 1.7" x 0.92"
Operating Environment	32° to 140°F, up to 90% relative humidity (non-condensing)

FA5200 Series Transmitter

Open Field Range	Up to 2500 feet
Battery Type	2/3 A-size Lithium (Duracell DL123A available through retail outlets)
Typical Battery Life	5 years average*

EN1501 Transmitter

Open Field Range	Up to 5000 feet
Battery Type	2/3 A-size Lithium (Duracell DL123A available through retail outlets)
Typical Battery Life	6 years average*

EN1501-XL Transmitter

Open Field Range	Up to 5000 feet
Battery Type	Panasonic BR-AG Lithium Cylindrical
Typical Battery Life	20 years calculated, 10 years guaranteed

MetraMeter™ EN1550 Integrated Meter and Transmitter

Open Field Range	Up to 5000 feet
Battery Type	Panasonic BR-AG Lithium Cylindrical
Typical Battery Life	20 years calculated, 10 years guaranteed
Water Meter Maincase	Neptune® T-10 5/8" x 3/4"

TapWatch Software (SW5800)

System Requirements	Intel® Pentium® III or equivalent processor Windows 98/Me/2000/NT/XP 256MB of RAM 40MB of available hard-disk space (up to 2GB depending on site data)
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* Typical battery life assumes operating temperatures are between 70° and 90° F. Battery life will be reduced at higher temperatures.

The range and performance of any wireless product depends on the structure and environment in which it operates. Product enhancements may cause our specifications to change without notice.



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