

# VerifEye™ Wireless AMR System for Submetering



Wireless MDT



Wireless MDT with LCD



DCAP



Repeater

## Definition

The Leviton VerifEye™ Wireless Automated Meter Reading (AMR) System is specifically designed to support wireless data collection from energy and water submeters in residential multi-tenant and specific commercial building applications. This fixed-network system allows for ease of data acquisition and export to tenant billing software and management platforms.

## Wireless Metering Data Transceiver (MDT)

The MDT records usage data from a wide variety of energy and water meters and transmits that data via radio frequency to the Data Concentrating Access Point (DCAP) in hourly intervals. MDT Models include the following interfaces:

- Single Input Pulse
- Dual Input Pulse
- Encoder
- Interval data options are also available with Time of Use (TOU) models

## Wireless Metering Data Transceiver (MDT) with LCD

For use in properties where easy access to meter readings are required under the Americans with Disabilities Act. The LCD screen displays the consumption for 60 seconds when the button is pushed and displays the same consumption value as the meter. All programmed parameters transfer to the DCAP for seamless integration into the data provided by the CIT and daily reports.

- Specialized enclosure with a standard sized wallplate back piece that mounts to a standard 1-gang electrical box for a professional looking installation
- Powered by two AA batteries for a five year battery life under typical conditions
- NTEP certification #16-013 accepted by California Weights and Measures

## Data Concentrating Access Point (DCAP)

The DCAP is the brains of the VerifEye wireless system incorporating a powerful embedded micro-computer and integrated radio transceiver. The DCAP communicates with each Repeater and MDT and stores meter reading history. The DCAP forwards data daily in the form of a .csv file via Ethernet or Wifi or as a .FTP post. Optional cellular capabilities are available\* in the absence of communications infrastructure. Additional DCAP features include:

- Local storage of up to one million data points
- Multiple levels of security for database access
- Integrated alarm monitoring and configurable e-mail alerts
- Accurate real-time clock
- USB port for initial device setup

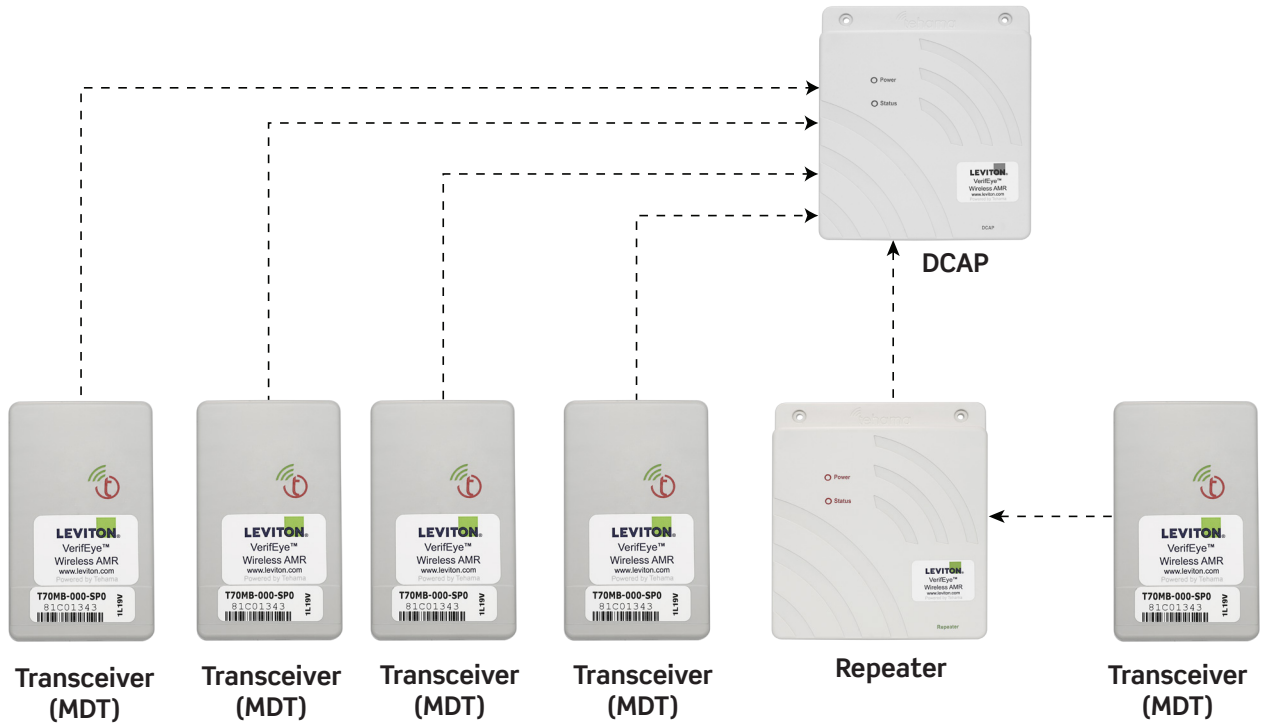
## RF Network Diversity Repeater

Extends the range of two-way radio signals between the MDTs and DCAPs.

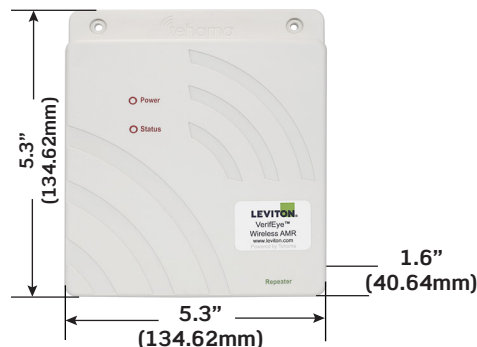
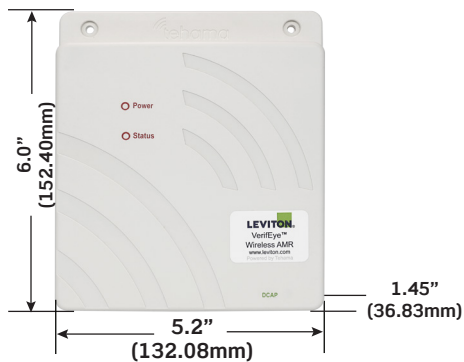
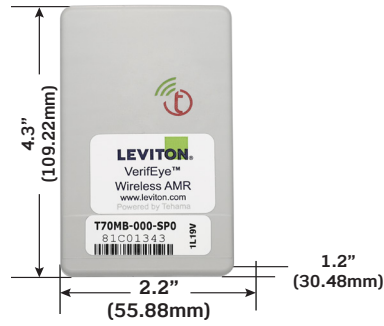
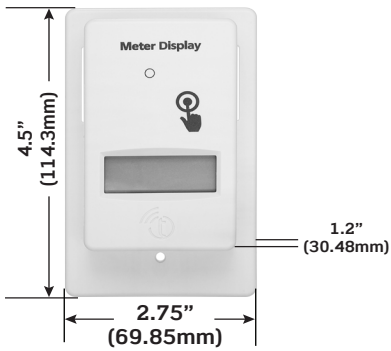
- Provides improved ability to receive distant RF signals
- Diversity antennas for optimal system communications redundancy

\*Consult Factory for all options

## VeriEye Automated Meter Reading (AMR) Wireless Network Diagram



## Dimensions



## Specifications

Radio	
Network Type	2-way mesh network
Other	
Warranty	5-year
Wireless Metering Data Transceiver (MDT)	
Input Options	Pulse signal from water, electric, gas, run-time, or BTU meters, encoded protocol from Neptune or Sensus (auto detecting), Hersey/Zenner pulse water meter (generated pulse meter)
Data Storage	<ul style="list-style-type: none"> <li>T70MB-SP0: none</li> <li>T70MB-ST0, T70MD-ST0: over 3000 data pts. (28+ days @ 15 Min interval)</li> </ul>
Data Resolution	<ul style="list-style-type: none"> <li>T70MB-SP0, T70MD-SP0, T70MB-DP0: 1 hour interval</li> <li>T70MB-ST0, T70MD-ST0: 15 minute interval, top of the hour synchronized</li> </ul>
Radio	902 to 928 MHz; FCC and IC certified, open field range of up to 10 miles*
LED	Indicates ON/OFF and RF network connection status
Operating Environment	-20° to 145°F (-28° to 62°C) up to 90% relative humidity, non-condensing
Power	<ul style="list-style-type: none"> <li>Two AA Alkaline (standard)</li> <li>Two AA Lithium (optional for colder temperatures)</li> </ul>
Battery Life	Up to 5 years at 50°F to 90°F (10°C to 32.2°C), reduced in extreme temperatures
Dimensions	4.3" (109.22mm)L x 2.2" (55.88mm)W x 1.2" (30.48mm)D (Regular)
Wireless Metering Data Transceiver (MDT) with LCD	
Input options	Pulse signal from electric, run time, gas or water meters, encoded protocol, Neptune or Sensus compatible meters, internal temperature sensor
Maximum Cable Run	<ul style="list-style-type: none"> <li>150 feet for pulse units, 24 AWG wire twisted pair</li> <li>150 feet for encoder units, 24 AWG wire twisted pair</li> </ul>
Radio	902-928 MHz; FCC certified, open field range up to 10 miles*
LED	Indicates RF network connection status
LCD	Displays meter count value, activated for 60 seconds by button push, dual pulse unit alternates display between hot and cold readings, units supported: gallons, cubic feet, KWh, liters, m3
Operating Environment	-20 to 145°F (-28 to 62°C) up to 90% relative humidity, non-condensing
Power	Two AA Alkaline batteries included
Battery Life	5 years at 50° F to 90°F (10°C to 32.2°C), reduced in extreme temperatures; display only function: 10 years at 50° to 90°F (10°C to 32.2°C)
Dimensions	Gang box case: 4.5" (114.3)L x 2.75" (69.85mm)W x 1.2" (30.48mm)D
Data Concentrating Access Point (DCAP)	
Radio	902-928MHz; FCC and IC Certified; +28.5dBm transmit power, open field range of up to 0.75 miles*
Power	5VDC, 1A via 120VAC wall transformer included
Communication Options	10/100 Ethernet or WiFi, cellular modem optional**
Communication Protocols	E-mail with .CSV or .OUT files, FTP and Secure FTP, CIT software
Data Storage	Over 3 million time stamped data points, provided over a year of storage for 250 meters with 60 minute interval readings
Security	Multiple permissions levels for database access
Operating Environment	-10 to 145°F (-23 to 62°C), up to 90% relative humidity, non-condensing
Dimensions	6.0" (152.40mm) L x 5.2"(132.08mm) W x 1.45" (36.83mm)D

## Specifications (Cont'd)

Wireless Repeater	
Radio	902-928MHz; FCC certified; +28.5dBm transmit power, open field range over 10 miles*
Power	5VDC, 800mA or greater 120VAC wall transformer. Upon loss of power, an alert message is sent to the DCAP.
Operating Environment	-10 to 145°F (-23 to 62°C), up to 90% relative humidity, non-condensing
Dimensions	5.3" (134.62mm) L x 5.3"(134.62mm) W x 1.6" (40.64mm)D

## Ordering Information

Wireless Meter Data Transceiver (MDT)	
Cat. No.	Description
T70MB-ST0	Wireless Metering Data Transceiver (Wireless DCAP required to complete system), single pulse counter, 15 min TOU battery powered
T70MB-SP0	Wireless Metering Data Transceiver (Wireless DCAP required to complete system), single pulse counter, 1 hour interval, battery powered
T70MB-DP0	Wireless Metering Data Transceiver (Wireless DCAP required to complete system), dual pulse counter, 1 hour interval, battery powered

Wireless Meter Data Transceiver (MDT) with LCD	
Cat. No.	Description
T75MB-SP0	Wireless Metering Data Transceiver with Display (Wireless DCAP required to complete system), single pulse counter, 1 hour interval, battery powered
T75MB-DP0	Wireless Metering Data Transceiver with LCD (Wireless DCAP required to complete system), dual pulse counter, 1 hour interval battery powered

Wireless Data Concentrating Access Points (DCAPs)	
Cat. No.	Description
T25DX-151	DCAP, low capacity (150 meter points max), includes radio receiver
T25DX-102	DCAP, standard capacity (1000 meter points max), includes radio receiver
T25DX-202	DCAP, high capacity (2000 meter points max), includes radio receiver

Wireless Repeater	
Cat. No.	Description
T95RX-000	Wireless Repeater - extended range for use with wireless submetering systems. 5VDC, 800mA (120VAC power supply included)

## Instructions for Bill of Material (BOM) Creation For This System

1. Consult the factory for designing an AMR system as each property or facility will have different requirements
2. For planning purposes, every system will have at least one (1) DCAP and a number of MDTs. Most systems will have a number of repeaters.
3. Refer to the User Guide for more detailed planning guidance before selecting specific elements of the system

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