



WAVELET ULTRASONIC CSO KIT

Model No. WA2220 - SE00011, WA2220 - SE00028

SUMMARY

Wavelet Ultrasonic Combined Sewage Overflow (CSO) Kits are comprised of an ultrasonic sensor, Wavelet data-logging and telemetry platform, and data management system all fused into a single streamlined solution. While level switches are limited to detecting when water levels cross a threshold level, ultrasonic sensors are able to measure distance, level, and volume.

Some cities have a combined sewer system, where wastewater and rainwater are mixed. CSO is the common term used when a significant amount of storm water causes the sewage to overflow, causing pollutants to enter varying water bodies. Real-time awareness of CSO events is critical for public health and safety, and compliance with the EPA CSO Control Policy. Management of these time-sensitive conditions is aided by the Wavelet's automatic SMS and email alerts when an emergency event occurs.

WAVELET PLATFORM FEATURES

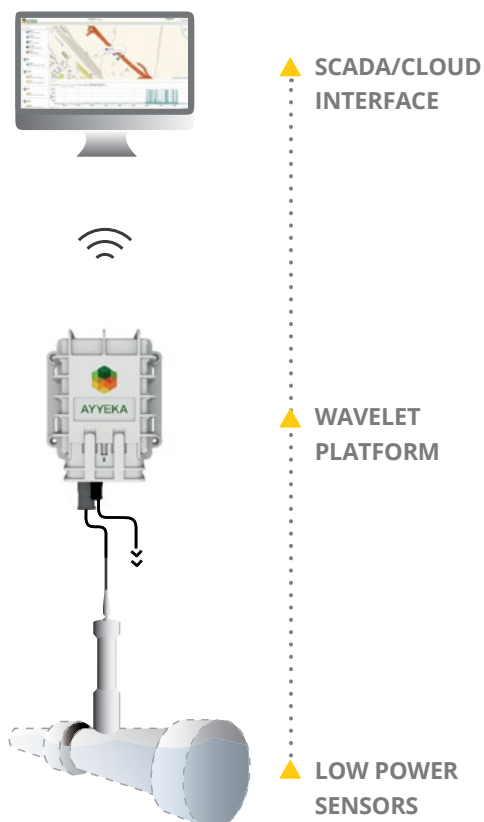
- ▶ PLUG-AND-PLAY
- ▶ BUILT-IN SCADA INTERFACE
- ▶ CYBER-SECURITY
- ▶ USER-FRIENDLY DATA VISUALIZATION
- ▶ CLOUD-BASED DATA STORAGE
- ▶ REMOTE NETWORK MANAGEMENT
- ▶ GLOBAL GSM CELLULAR SERVICE
- ▶ PROGRAMMABLE THRESHOLDS
- ▶ E-MAIL & SMS ALERTS
- ▶ GPS TIME & LOCATION SYNC
- ▶ LOW POWER CONSUMPTION
- ▶ AUTONOMOUS OPERATION



THE WAVELET PLATFORM

Wavelet brings together end-to-end, turnkey solutions that cover all of your continuous remote monitoring needs. Starting from the smart sensors, across the transmission platform, through data management, we have created unique monitoring kits to measure and monitor a range of water supply, water quality, wastewater and hydrologic parameters. Wavelet Kits are all designed to help facilitate more effective water network management.

Ayyeka's Wavelet Kit features a fully integrated, plug-and-play monitoring solution that fits seamlessly onto any water infrastructure and sends the data securely to you. Our Kits provide you with total visibility of your networks. The Kits are easy to setup and use, and will save valuable time and money.



ULTRASONIC NON-CONTACT SENSOR SPECIFICATIONS

PC/PBT blend upper housing.
Ceramic, PVDF faced transducer.
Internal temperature compensation.
Beam Pattern is 9° off axis.
Frequency: 43 kHz or 69 KHz, depending on model
Accuracy of 0.25% of detect range.
Operating range from 10 cm to 12 m (4 in. to 40 ft).
Min. operating temperature range of 34°C to 60°C (-30°F to 140°F).

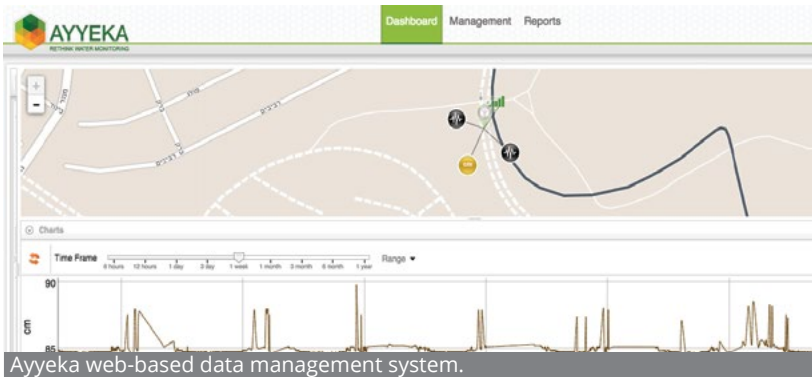
SENSOR HIGHLIGHTS

- ▶ Versatile solution not just for level sensing, but for any situation where a Modbus ultrasonic sensor is required.
- ▶ Quick and easy set-up with daisy chain wiring.
- ▶ Liquid-tight, non-metallic spiral strain relief.
- ▶ Sensor features NEMA 6P water resistance rating.



CASE STUDY

- ▶ **Client:** Municipality
- ▶ **Application:** Regulatory Enforcement
- ▶ **Description:** Factories operating in an industrial zone of a large city are required to report malfunctions leading to uncontrolled discharge of effluent. A municipal water utility dealt with several incidences in which industrial effluent entered its treatment facilities.
- ▶ **Solution:** Ayyeka's Wavelet solution reduced operating expenses of the utility by enabling the utility to effectively monitor sewage levels and enforce regulation.



WAVELET PLATFORM SPECIFICATIONS

▶ DATA & SOFTWARE

Ayyeka Data Server	Ayyeka Private Cloud and/or Customer On-Premises Server
User Interface	Web-Based, Tablet & Mobile
Data Export Options	Excel, CSV
SCADA & 3rd Party Integration	OPC/DNP3/API
Data Encryption	AES 256
Internal Memory	32 GB

▶ CONNECTIVITY & INTERFACE

Cellular Network	Multi-Cellular Carrier: 2G, 3G and CDMA (Verizon)
Data Transmission Profiles	Periodic, Data Dependent
Event Driven Alerts	SMS, E-Mail, API
Configuration & Upgrades	Remotely Over-The-Air, USB PC Connection
Antenna	Internal or External
SIM Card	Included

▶ POWER

Primary Power Supply	Internal Lithium Battery
Operational Run Time	3,500+ Transmissions per Battery Pack, Field Replaceable Battery
External Power Supply (Optional)	4.5V-28V, Automatic Power Source Switching
Battery Level Notifications	Included

Ayyeka provides cyber-secure, plug-and-play, remote monitoring solutions designed for various markets. Founded in 2011, Ayyeka has an installed base in challenging locations and earned a reputation for excellent customer service. Bringing together a state-of-the-art hardware and cloud-based software package, Ayyeka's solutions are leading the infrastructure monitoring sector into the future.