



WAVELET WASTEWATER QUALITY KIT

Model No. WA2240 - SE00017-21

SUMMARY

Monitoring wastewater quality is essential to ensuring and managing the efficiency of treatment and distribution infrastructure. Wastewater quality has significant implications for public and ecosystem health. Proper management is fundamental to achieving operational excellence and providing outstanding service to consumers.

The customizable Wavelet Wastewater Quality Kit can include up to three sensors measuring various water quality parameters. The fully autonomous system provides regular feedback on the state of the wastewater network, assisting network operators to ensure public and employee safety and avoid service disruptions.

WAVELET PLATFORM FEATURES

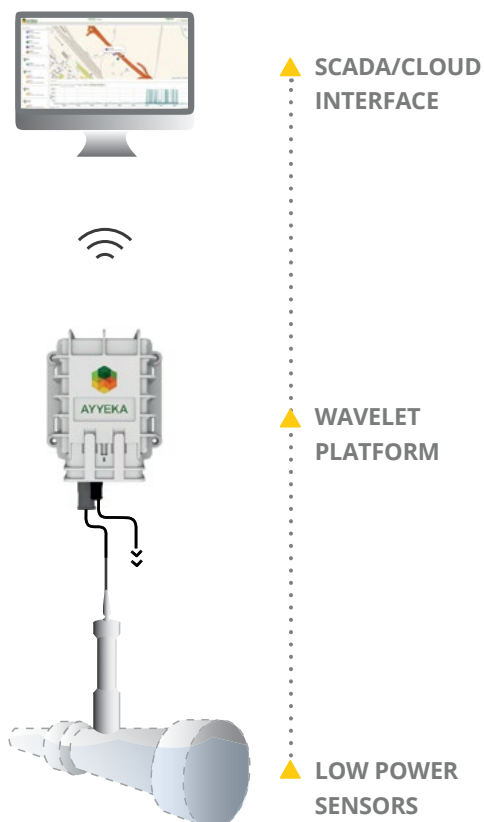
- ▶ PLUG-AND-PLAY
- ▶ BUILT-IN SCADA INTERFACE
- ▶ CYBER-SECURITY
- ▶ USER-FRIENDLY DATA VISUALIZATION
- ▶ CLOUD-BASED DATA STORAGE
- ▶ REMOTE NETWORK MANAGEMENT
- ▶ GLOBAL GSM CELLULAR SERVICE
- ▶ PROGRAMMABLE THRESHOLDS
- ▶ E-MAIL & SMS ALERTS
- ▶ GPS TIME & LOCATION SYNC
- ▶ LOW POWER CONSUMPTION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



SENSOR SPECIFICATIONS

▶ Turbidity & Temperature Sensor

Range	0 – 4,000 NTU
Accuracy	< 5% of reading

▶ Conductivity, Salinity & Temperature Sensor

Type	Conductivity sensor with electrodes
Conductivity Range	0 – 200.0 μ S/cm
Salinity Range	0 – 78 g/kg (0 – 172 lbs)
TDS (KCl) Range	0 – 133,000 ppm
Accuracy	\pm 1% of full range

▶ Optical Dissolved Oxygen (DO) & Temperature Sensor

Type	Optical measure by luminescence
Range	0.00–20.00 mg/L, 0.00–20.00 ppm, 0–200%
Accuracy	\pm 0.1 mg/L, \pm 0.1 ppm, \pm 0.1%
Water Velocity	No minimum velocity

▶ pH, ORP & Temperature Sensor

pH	Range	0 – 14 pH
	Resolution	0.01 pH
	Accuracy	\pm 0.1 pH
ORP	Range	-1000mV to +1000 mV
	Resolution	0.1 mV
	Accuracy	\pm 2 mV
Temperature	Range	0°C to 50°C (32°F to 122°F)
	Resolution	0.01°C (0.2°F)
	Accuracy	\pm 0.5°C (\pm 0.9°F)

▶ TSS Sensor

Type	Light transmission and absorption
Range	0 to 2,000 ppm to 0 to 50% full scale
Resolution	0.05% of full scale
Repeatability	0.05% of full scale

The sensors pre-integrated into Wavelet Wastewater Quality Kit support real-time monitoring of influent and effluent quality.



CASE STUDY

- ▶ **Client:** Municipal Wastewater Utility
- ▶ **Description:** One of Israel's largest cities is home to numerous factories that produce industrial wastewater. Industrial sewage from surrounding factories flowed to the wastewater treatment plant in an uncontrolled manner. The utility used manual monitoring methods that were not able to record the precise time and location of the uncontrolled sewage flow.
- ▶ **Solution:** The utility installed Wastewater Quality Kits, enabling them to effectively monitor sewage levels and enforce environmental regulations.



Ayyeka web-based data management system

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.