WAVELET

WAVELET SPECIFICATIONS

▶ DATA & SOFTWARE

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

▶ POWER

Primary Power Supply	Internal Military Grade Lithium Battery, 3.9V DC 3A
Operational Run Time	3,500+ Transmissions per Battery Pack, Field Replaceable Battery
External Power Supply (Optional)	4.5V – 28V, Automatic Power Source Switching
Power Options	Solar and Permanent Powered Compatibility
Battery Level Notifications	Included

▶ CONNECTIVITY

Cellular Network	Multi-Cellular Carrier: 2G, 3G and CDMA (Verizon)
SIM Card	Global SIM Card Included
Data Transmission Profiles	Periodic, Data Dependent
Cellular Roaming	Global SIM Card Supports Over 110 Countries
Event Driven Alerts	SMS, E-mail, API
Alarm Threshold	Up to 4 (HH, H, L, LL)
Configuration & Upgrades	Remotely Over-The-Air, USB PC Connection
Antenna	Internal or External
GPS	Included

▶ SENSOR INTEGRATION

No. of Sensor Connectors	Up to 3
Serial Interfaces	RS232 RS485 SDI12
Serial Protocols	Modbus RTU ASCI Custom
Analog Inputs	Up to 4 (current loop, voltage)
Digital Inputs	Up to 2
Sensor Power Supply	12 V, 350 mA

▶ MECHANICAL ENCLOSURE

Dimensions (W x H x D)	13.2 cm x 16.5 cm x 7.3 cm (5.2 in x 6.5 in x 2.9 in)
Weight	700g (1.5 lbs)
Material	Polycarbonate
Waterproofing Rating	IP 68 / NEMA 6P
Storage Temperature Range	-40°C to +80°C (-40°F to +176°F)
Operational Temperature Range	-20°C to +60°C (-4°F to +140°F)
Connectors	Industrial Grade

* Complies with: Radiated emission standards (ETSI EN 301 489-1/ -17 Class B and CFR 47 FCC Part 15 Subpart B Class B), Immunity per ETSI EN 301 489-1/-17 EN 61000-4-2, 3, 4, 5, 6, RoHS, Directive 2002/95/EC and CE.

APPLICATIONS

- **SMART WATER NETWORKS** CREATED TO BETTER MANAGE WATER AND WASTEWATER RESOURCES

- **SMART POWER GRID** SETUP ENABLING ENERGY EFFICIENT POWER NETWORKS

- **ENVIRONMENTAL** MONITORING FOR RESEARCH AND GOVERNMENTAL DATABASES

- **CIVIL INFRASTRUCTURE** DATA COLLECTED AUTONOMOUSLY FACILITATING PREVENTATIVE MAINTENANCE

- **OIL AND GAS** DATA REMOTELY COLLECTED AND PROVIDED TO DECISION MAKERS

- **SMART CITIES** BUILT ALL WITH THE SAME MODULAR WAVELET PLATFORM THROUGHOUT
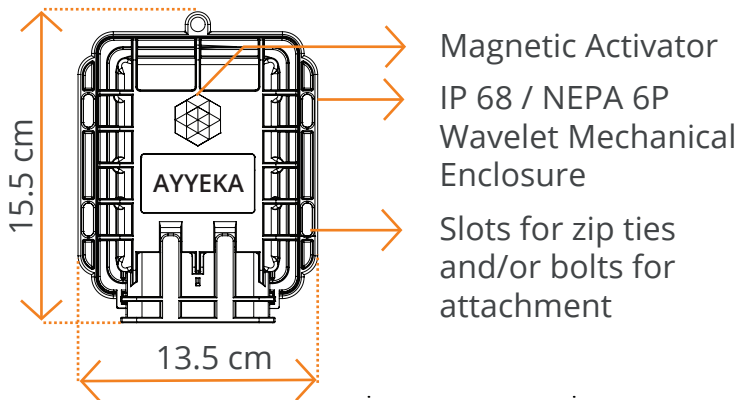
DESCRIPTION

Ayyeka's Wavelet offers a cyber-secure, autonomous, and comprehensive solution of all components and services required for remote infrastructure monitoring. After defining the customer's needs, sensors are pre-integrated with the Wavelet platform which is then ready for plug-and-play installation onto existing infrastructure. Collected data can be stored on Ayyeka's secure private cloud server, or be integrated directly into the client's servers.

The Wavelet platform is a comprehensive and streamlined solution that delivers field data to decision makers. Wavelet is comprised of communication components and services, which continuously collect, store and transmit encrypted data for a cyber-secure remote monitoring solution utilizing cloud infrastructure.
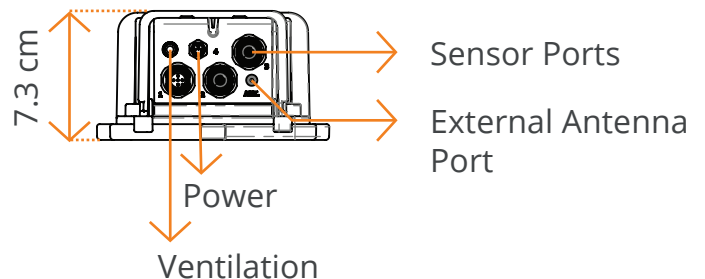
Ayyeka offers a web-based user interface that enables clients to configure the Wavelet device over-the-air and program threshold levels for email and/or SMS alerts for various parameters, visualize data in real-time, and produce reports with a few clicks for presentation and analysis. With Ayyeka's API, data is integrated directly into client's SCADA systems, business intelligence or other analytic software.
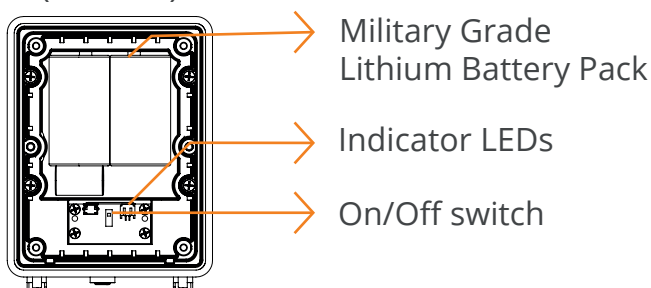
DRAWING

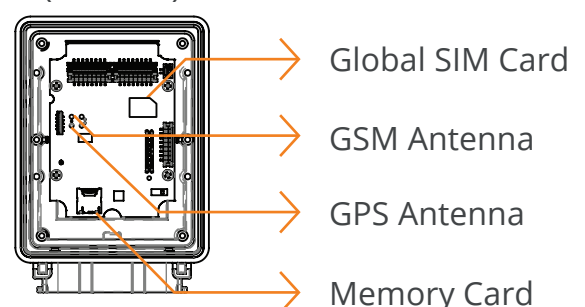## FRONT

15.5 cm
13.5 cm

- Magnetic Activator
- IP 68 / NEPA 6P Wavelet Mechanical Enclosure
- Slots for zip ties and/or bolts for attachment

BOTTOM

7.3 cm

- Sensor Ports
- External Antenna Port
- Power
- Ventilation

INTERNAL
(LAYER 1)

- Military Grade Lithium Battery Pack
- Indicator LEDs
- On/Off switch

INTERNAL
(LAYER 2)

- Global SIM Card
- GSM Antenna
- GPS Antenna
- Memory Card
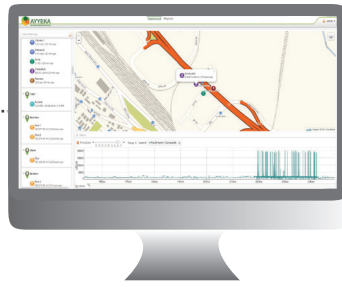
SCADA CONNECTIVITY

From cloud-based hosting and an intuitive user-interface to secured and streamlined SCADA connectivity, Wavelet delivers data directly where it is needed. Integrating with models, analytics and business intelligence solutions has never been easier.

CYBER-SECURE

Wavelet Kits are embedded in every layer from the ground up with the most advanced cyber-security technology including sensor authentication and data encryption.

MULTI-CELLULAR

Wavelet Kits support 2G, 3G, and Verizon networks all within the same device, and interchangeably use the strongest available cellular signal to ensure connectivity in even the most remote locations.
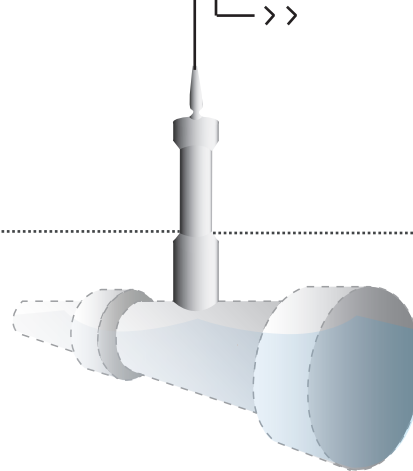
EXTENDED BATTERY LIFE

With over 3,500+ transmissions, Wavelet's low-power and predictive analysis algorithms result in up to 30% extended battery life as compared to similar technologies.

EFFECTIVE

As an integrated, modular, and preconfigured solution that allows for plug-and-play installation and requires minimal maintenance, Wavelet Kits deliver an attractive total cost of ownership.

MODULAR & PLUG-AND-PLAY

Wavelet Kits are sensor-agnostic, utilizing various configurations of sensors and samplers. Easily installed and operating within minutes, Wavelet Kits can be used to build or extend smart water networks.

AYYEKA
Rethink Water Monitoring

Distributed by:

Ayyeka provides cyber-secure, plug-and-play, remote monitoring solutions designed for various markets. Founded in 2011, Ayyeka has a successful installed base in challenging locations and earned a reputation for excellent sales and 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.

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