



Wavelet™ V2

Industrial IoT Edge Device



Interoperable

Connect any sensor to any software system

Cost-effective

Save time and money with plug-and-play installation

Cybersecure

Encryption, authentication and remote updates

Comprehensive

Encompassing all required equipment and services

DELIVERING DECISIONS FROM FIELD ASSETS DATA

Ayyeka's Wavelet™ is a ruggedized, battery-powered, wireless Industrial Internet of Things (IIoT) edge device. Seamlessly combined with powerful software, the Wavelet™ offers continuous monitoring and situational awareness. Our end-to-end solution helps municipal and industrial operators increase efficiency, reduce downtime and failures, and improve compliance.

The Wavelet™ is designed for compatibility and interoperability to connect decision-makers with their critical assets. The device generates and securely transmits sensor data to a software platform, where it can be managed and integrated into third-party applications, such as SCADA, data analytics, and GIS.

Through the creation and management of data from field assets, Ayyeka's solution transforms and adds intelligence to new and existing infrastructure networks alike.

Sensors Inputs

Sensors ports	3 ports; supports up to 12 sensors using cable splitters
Sensor connection	Wired with M12 connectors
Serial interfaces	RS485, RS232, SDI-12
Serial protocols	Modbus RTU, ASCII, custom
Serial channels	16
Analog channels	4 - 4-20 mA / 0-24 V
Digital input channels	5 - Dry contacts or 2.8V max. With a subset of periodic, edge pulse counting configuration
Digital output channels	5 - 0V/2.8V output levels
Sensor power supply	350mA, 12V or 3.6V

Power

Primary power supply	Internal lithium battery; field-replaceable
Internal battery capacity	32Ah
Battery life¹	Up to 10 years
External power	6-24VDC with automatic power source switching

Data and software

Data hosting	Cloud or on-premises
Software integration	REST API, CSV
SCADA integration	CSV, DNP3, OPC-UA
AyyekaGo mobile app	iOS, Android
Device memory	8 GB
Data communication	Two-way
Alarm threshold	Up to 54 threshold per device
Alert notification	SMS, email, voice

1. Actual battery lifetime depends on sensor power consumption as well as sampling and transmission frequency and environmental conditions such as temperature and humidity.

2. Specific cellular technology availability depends on specific model number and geographic specifics

All statements concerning specifications and operating conditions of the Wavelet correspond to the best information available at the time of printing. Subject to change without prior notice.

Connectivity

Wireless communication²	4G/3G/2G Cellular Optional LoRaWAN
SIM card(s)	Dual SIM slots, 3FF
Data transmission	Periodic, data-dependent
Cellular roaming	Global multi-network SIM(s); data plan included for up to 180+ countries
Configuration and upgrades	Bluetooth Low Energy (BLE), remotely (over-the-air), USB connection
Antenna	External antenna & backup internal antenna
Built-in GPS	Included

Mechanical Enclosure

Dimensions (W x H x D)	13.2 x 16.5 x 7.3 cm (5.2 x 6.5 x 2.9 in.)
Operating temperature	-40° to 80°C (-40° to 176°F)
Ingress protection	IP 68 / NEMA 6P
Enclosure material	Polycarbonate Stainless steel metal parts

Cybersecurity

Data in transit security	TLS 1.3
Device authentication	Hardware based
Bluetooth	ECC key exchange, AES-256 encryption
Firmware/security updates	Full over the air
Physical access	Restricted to diagnostics only