AYYEKA

Wavelet™ V2

Industrial IoT Edge Device

Compatible

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.

Data & Software

Data hosting	Cloud or on-premises
Cyber-security	TLS 1.2 protocol (AES-256)
Software integration	REST API, CSV
SCADA integration	CSV, DNP3, OPC-UA
IoT software platform	Web-based from desktop, tablet, and mobile
AyyekaGo mobile app	iOS, Android
Data export options	CSV, FTP
Device memory	8 GB
Data communication	Two-way authentication
Alarm threshold	Up to 4 per data stream
Alert notification	SMS, email, voice
System health check	Included

Connectivity

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

Power

Primary power supply	Internal lithium battery (field-replaceable and non-rechargeable), 3.9 V DC 3A
Internal battery capacity	32Ah
Battery life	Up to 5+ years
Battery life notifications	Included
External power	6-24VDC automatic power source switching

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	0.9 kg (2.0 lbs)
Enclosure material	Polycarbonate (UL 94V-0 and UV-resistant)
Ingress protection	IP 68 / NEMA 6P
Operating temperature	-40° to +80°C (-40° to 176°F)
Storage temperature	-40° to +80°C (-40° to 176°F)

Sensors Input

Sensor 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 contact, open drain Pulse counting: up to 2 at 39Hz max pulse frequency
Digital output channel	5 at 0V/2.8V Up to 3 simultaneously
Sensor power supply	12V or 3.6V, 350mA

Certifications

Safety	EN 61010-1 2010 IEC 61010-1
FCC	FCC Part 15 Subpart B
EMC	EN 301 489-1 V2.1.1 2017 EN 301 489-7 V1.3.1 2005
Spurious emissions	EN 301 511 V12.5.1 2017
Radiated emissions	EN 301 908-1 V11.1.1 2016
IP68 / NEMA6P	EN 60529:1992+A2:2013 IEC 60529:1989/AM1:1999
CE	Approved

[1] Actual battery lifetime depends on sensor power consumption as well as sampling and transmission frequency.

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