AYYEKA

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 ASSET 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 1.3 protocol (AES-256)
Software integration	REST API, CSV
SCADA integration	CSV, DNP3, OPC-UA
Ayyeka IoT platform software	Web-based from desktop, tablet, and mobile
AyyekaGo mobile app	iOS, Android
Data export options	CSV, FTP
Device memory	8 GB
Data communication	Bidirectional
Alarm threshold	Up to 4 per data stream
Alert notification	SMS, email, voice
System health check	Included

Power

Primary power supply	Internal lithium battery (field-replaceable and non-rechargeable) ,3.9V DC 3A
Internal battery capacity	32Ah
Battery life	Up to 10 years (usage dependent)
Battery life notifications	Included
External power	6-24VDC automatic power source switching

Sensor Inputs

Sensor ports	3 ports; supports up to 12 sensors using cable splitters
Sensor connection	Wired with M12 connectors
Serial interfaces	RS485, RS232, and SDI-12
Serial protocols	Modbus, SDI-12, ASCII Text, Custom
Serial inputs	16
Analog inputs	4 (4-20 mA, 0-24 V)
Digital inputs	5 dry contact, open drain Pulse counting: up to 2 at 39Hz max pulse frequency
Digital outputs	5 at 0V/2.8V, Up to 3 simultaneously
Sensor power supply Output	200mA, 12V or 3.6V

Connectivity

Cellular/IoT Communication	4G/3G/2G
SIM card	Dual SIM slots, 3FF
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
Data transmission	Periodic, data-dependent
Antenna	External & backup internal antenna
Built-in GPS	Included

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	0.7kg (1.5 lbs)
Enclosure material	Polycarbonate with ABS (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)

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 (FOTA)
Physical access	Restricted to diagnostics only

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

AYYEKA   Ushering in the digital era of infrastructure   www.ayyeka.com   +1 (310) 876-8040   info@ayyeka.com