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AYYEKA: SEEING BEYOND THE HORIZON
Managers and operators of complex infrastructures, systems, and smart services need to think quickly, act prudently, and plan strategically. Ayyeka’s end-to-end technology solutions for data monetization facilitate these processes by providing accurate and reliable data from the field.

Connecting decision makers’ desktops directly to dispersed and remote assets enables effective and sustainable management of infrastructure and systems of every kind. Monitoring is easier, choices are more informed, transparency increases, and productivity grows. Ayyeka’s scalable platform is an advanced, economical alternative to expensive legacy data capture and time-consuming manual data collection. Ayyeka’s solution consists of the Wavelet edge device that connects to one or more sensors and generates data, and the StreamView data hub (a data and device management software IoT platform).

AYYEKA: THE TRIPLE EDGE SOLUTION

Ayyeka offers a triple-edge solution that includes cutting-edge data processing, cyber security, and energy efficiency.

**DATA PROCESSING**
Real-time data processing and advanced visualization provide a steady flow of actionable information and valuable insights.

**CYBER SECURITY**
Military-grade, state-of-the-art encryption and authentication technology safeguard your data from the field to the server.

**ENERGY EFFICIENCY**
Ultra-low power, fully-autonomous operation provides energy efficiency, improved reliability, and reduced downtime and maintenance.
Ayyeka rethinks large infrastructure management and operation. Its end-to-end technologies address data generation challenges in complex systems and infrastructures of all kinds, and especially where monitoring and control of remote and dispersed assets is critical to reliable and efficient operations.

Currently, Ayekka solutions are being used to streamline monitoring and operation of water and wastewater infrastructures, oil and gas assets, and smart grids and cities in numerous locations in North and South America and Europe. Thanks to this state-of-the-art technology, operators are alerted to faulty equipment, leaks, predicted floods, chemical discharges and other public health and safety hazards. Unparalleled cyber security prevents damage to hardware, software, and data; consequently, there is no disruption or misdirection of critical services. In addition, the system is used to gauge impact of operations on the environment by regularly monitoring the underground and surface water, air quality and weather, in compliance with environmental regulation requirements.
WATER
Effective management of water networks, including reservoirs, distribution pipelines, control valves, and supply tanks is essential to public health and improved customer satisfaction. Remote monitoring enables operators to optimize pressure, reduce energy consumption, decrease non-revenue water (NRW), and ensure compliance with water quality regulations.

WASTEWATER
Critical to the prevention of public health and safety hazards, smart, real-time wastewater management includes monitoring water levels to prevent polluting and costly sewer overflow, identifying the presence of corrosive gases before they damage infrastructure, identifying pump failures and pinpointing other emergencies at lift stations and elsewhere.

SMART CITIES
Industrial IoT technology is increasingly being used to improve quality of life and safety in urban environments. Creating visibility of dispersed assets and infrastructure allows municipalities, regulators, and other stakeholders to identify issues in near-real time and make more informed planning decisions. Ayyeka’s remote monitoring solutions can improve energy efficiency, reduce congestion and enhance security.

OIL AND GAS
Data from remote upstream, midstream, and downstream assets enables operators to increase production, reduce downtime, and mitigate health and safety risks. Near-real-time measurements of pressure and flow help improve productivity throughout the life cycle of oil and gas development and in the distribution network. Ayyeka offers ideal solutions for connecting stranded I/O to the cloud and SCADA systems.

ENVIRONMENT
In compliance with environmental protection agency (EPA) and government regulation, organizations are responsible for ongoing monitoring of air quality, noise levels, surface water levels, soil and water quality, and more. Accurate assessment of the impact of operations on natural resources is critical to determining sustainable ecosystem management strategies.

ENERGY
Increased operation efficiency and improved performance of energy networks is critical to the management and visibility of dispersed assets. Moving beyond metering, remote asset data relating to vibrations, leaks, levels and other conditions is transforming field operations and leading digitization across the energy space.
SUCCESS STORIES

IMPROVING WASTEWATER AND STORMWATER MANAGEMENT TO REDUCE HEALTH HAZARDS

The Metropolitan Sewer District of Greater Cincinnati (MSDGC), a wastewater operator serving more than 850,000 residents of Cincinnati, Ohio, chose Ayekka technology to help it overcome the challenges of combined sewer overflow and precipitation monitoring. Ayekka’s comprehensive network interfaced seamlessly with MSDGC’s SCADA systems. Sensors for measuring sewer level, open channel flow, and precipitation enabled proactive preventive strategies, decreased operational costs, and enhanced decision-making.

ENHANCING SMART WATER MANAGEMENT

Padania Acque, which provides drinking water to 360,000 residents in the Province of Cremona, Italy, integrated Ayekka’s technologies in the measurement of pressure, flow, and level throughout its 2,100 km pipeline water network. This large-scale, unprecedented smart water management project launched in 2017 was architected and coordinated by Omnicon in cooperation with A2A Smart City, which set up a LoRaWAN network for ultra-low-power connectivity. Field crews are able to view the secured data directly using a Bluetooth-enabled smartphone app. Benefits of the project include: reduced energy consumption, grid water losses, and labor-hours.

SAFEGUARDING CRITICAL ASSETS AGAINST INTRUSION AND DETECTING DOWNTIME

In collaboration with a multi-national aerospace and defense contractor, Ayekka provided a state government in Mexico with visibility to safeguard its land mobile radio systems (LMRS). In remote locations with limited cellular coverage, Ayekka provided a Wavelet with dual SIM cards for multi-network support and communication redundancy. Multiple sensors detected intrusion, motion, fire, and power failure, providing the local government with timely alerts to increase security and improve reliability of the LMRS.
REDUCING DISTURBANCES FROM MINING OPERATIONS AND COMPLYING WITH REGULATIONS

At one of the world’s largest coal mines in Colombia, the operator selected Ayyeka to provide a unified solution for its telemetry requirements. A fleet of Wavelets was deployed around the mining facilities and in nearby communities to measure air quality, ground pressure, water level, and water quality data. With this data, the customer was able to evaluate the timing and effectiveness of its blasting, while mitigating disturbances to nearby communities and complying with local regulations.

MAKING TRANSPARENCY AND COMPLIANCE SIMPLER

When state legislators imposed stricter combined sewage overflow (CSO) reporting requirements, the city of Rutland, Vermont decided to increase transparency and provide real time information on CSO to its 16,500 residents, legislators and operators. Ayyeka’s solution has affordably revolutionized the operation of a 100-year old wastewater system without introducing any physical changes. An added benefit: the system is also supporting a hydrologic and hydraulic study that will greatly improve performance in the long term.

FIGHTING LAND DEGRADATION AND REDUCING ECONOMIC LOSSES

In northern Israel’s Harod Valley, Ayyeka’s integrated solutions allow researchers from the Ben Gurion University in the Negev to assess the efficiency of various soil conservation measures by monitoring the extent of soil erosion represented by water and sediment yields. Other partners in this project: Yamma; Israel’s Ministry of Agriculture and Rural Development; and the Southern Jordan River and Drainage Authority.
AYYEKA’S EXPANDING TECHNOLOGIES
A LOOK AT OUR TECHNOLOGY STACK AND SERVICES

Ayyeka hardware, system software and service solutions enable data collection from any sensor and transmission over any communication network using any server. They integrate with any SCADA, software or business intelligence platform, thereby enhancing management capabilities without the need to introduce huge changes, retrain manpower and incur extra expenses.

Our Wavelet kits consist of a Wavelet edge device, desired process sensor, and associated pluggable connections and cables. Preconfigured or customizable to meet changing applications and operational requirements, they allow for plug-and-play installation and require minimal maintenance.

Ayyeka’s StreamView data hub provides easy and intuitive data visualization and tactical edge analytics for effective management of the Wavelet fleet and identification and quick response to critical events.

Ayyeka’s service plan enables to choose from one or multiple Subscription Plans – Starter, Industrial, or Enterprise – tailored to the needs of each use case.
AYYEKA’S TECHNOLOGY STACK: INTEGRATED, MODULAR, AND PRECONFIGURED/CUSTOMIZABLE

Software Applications & SCADA

StreamView Data Hub

Wireless Network Communication

Wavelet Device

Any Sensor

Physical Infrastructure & Environment
WHY CHOOSE AYYEKA?

---

**Reduced Cost of Ownership**

Ayyeka’s all-in-one solution provides hardware, software, and services that reduce total cost of ownership. This solution is integrated, modular, and preconfigured to allow for plug-and-play installation (allowing startup in as little as a few minutes) and requires minimal maintenance.

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**Software & SCADA**

From cloud-based hosting or on-premises based solutions to secured and streamlined SCADA connectivity, Ayyeka provides all the tools needed to deliver data directly where it is needed. Integrating with models, analytics, and business intelligence (BI) solutions has never been easier.

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**Versatility & Scalability**

Collect any type of data using the sensor-agnostic Wavelet. Customize any feature to meet changing application and operational requirements. StreamView’s user-friendly, powerful interface makes managing one device just as easy as managing a large-scale fleet.

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**Cyber-Security**

In every layer, from the ground up, Ayyeka’s solutions are embedded with the most advanced cyber-security technology. Protective features include data encryption and two-way authentication.

---

**Alerts & Tactical Edge Analytics**

Process data, identify, and immediately respond to critical events at the device level in the field. Sample at regular or optimized intervals with advanced data acquisition technology and receive alert notifications via SMS, email, voice and in the SCADA system.

---

**Industrial-Grade & Intrinsically Safe**

The Wavelet’s UV-resistant polycarbonate enclosure complies with UL 94V-0 flammability standards and has a IP68 / NEMA 6P waterproofing rating. Intrinsically safe certification allows for installations in the most challenging and hazardous of environments.
Ayyeka’s Wavelet is an Industrial Internet of Things (IIoT) device created to bring modularity and flexibility to the world of remote data acquisition.

The Wavelet is a secure, intrinsically safe and robust device that autonomously operates industrial-grade third-party sensors. The Wavelet operates using internal battery, solar power, or a permanent power source. Sensor data is generated and transmitted securely, then stored on Ayyeka’s cloud-server or the customer’s on-premises server. Data can be visualized and managed through Ayyeka’s web-based graphical data management system, the StreamView, or integrated into third-party software applications and SCADA systems.

Following its introduction to the infrastructure market, the Wavelet is becoming a dominant IIoT solution for setting up cyber-secure, plug-and-play, affordable smart infrastructure networks.
WAVELET SPECIFICATIONS

External (Front)

- Top Mounted Bolt Hole
- Magnetic Activator
- IP 68 / NEMA 6P Wavelet Mechanical Enclosure
- Slots for Zip Ties and/or Bolts for Attachment

External (Bottom)

- External Power Port
- Discrete Port
- External Antenna Port
- Analog Port
- Serial Port

Internal (Layer 1)

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

Internal (Layer 2)

- GPS Antenna
- External GSM Antenna
- Internal GSM Antenna
- Dual Global SIM Cards
- Industrial-Grade Internal Memory

Dimensions:
- 17.4 cm (6.8 in.)
- 7.3 cm (2.9 in.)
- 13.3 cm (5.2 in.)

### Data & Software

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Hosting</td>
<td>Secure Cloud or On-Premises</td>
</tr>
<tr>
<td>Cyber-Security</td>
<td>TLS 1.2 Protocol</td>
</tr>
<tr>
<td>Software Integration</td>
<td>REST API</td>
</tr>
<tr>
<td>SCADA Integration</td>
<td>CSV, DNP3, OPC-UA, FTP</td>
</tr>
<tr>
<td>Ayyeka IoT Platform Software</td>
<td>Web-based from desktop, tablet, and mobile</td>
</tr>
<tr>
<td>AyyekaGo Mobile App</td>
<td>iOS, Android</td>
</tr>
<tr>
<td>Data Export Options</td>
<td>CSV</td>
</tr>
<tr>
<td>Device Memory</td>
<td>8 GB</td>
</tr>
<tr>
<td>Data Communication</td>
<td>Two-way</td>
</tr>
<tr>
<td>Alarm Threshold</td>
<td>Up to 4 per data stream</td>
</tr>
<tr>
<td>Alert Notification</td>
<td>SMS, email, voice</td>
</tr>
<tr>
<td>System Health Check</td>
<td>Included</td>
</tr>
</tbody>
</table>

### Power

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Power Supply</td>
<td>Internal Lithium Battery (field-replaceable and non-rechargeable), 3.9 V DC 3A</td>
</tr>
<tr>
<td>Internal Battery Capacity</td>
<td>32Ah</td>
</tr>
<tr>
<td>Operational Run Time</td>
<td>Up to 5+ Years*</td>
</tr>
<tr>
<td>Battery Status Notifications</td>
<td>Included</td>
</tr>
<tr>
<td>External Power</td>
<td>Solar and line power; automatic power source switching</td>
</tr>
<tr>
<td>Voltage Input</td>
<td>5-28VDC</td>
</tr>
</tbody>
</table>

### Sensor Integration

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor Ports</td>
<td>3 ports; supports up to 10 sensors using cable splitters</td>
</tr>
<tr>
<td>Sensor Position</td>
<td>External Hard-Wired</td>
</tr>
<tr>
<td>Serial Interfaces</td>
<td>RS485, RS232, SDI-12</td>
</tr>
<tr>
<td>Serial Protocols</td>
<td>Modbus RTU, ASCII, custom</td>
</tr>
<tr>
<td>Serial Channels</td>
<td>Up to 16</td>
</tr>
<tr>
<td>Analog Channels</td>
<td>Up to 4 (4-20 mA, 0-27.5 V)</td>
</tr>
<tr>
<td>Discrete Channels</td>
<td>Dry contact, open collector Up to 3 total inputs (up to 2 pulse counting) 39Hz max pulse frequency Up to 1 output, max 2.8V</td>
</tr>
<tr>
<td>Sensor Power Supply Output</td>
<td>350mA, 12V</td>
</tr>
</tbody>
</table>

### Connectivity

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Interfaces</td>
<td>Cellular (4G/3G/2G), LoRaWAN, Bluetooth</td>
</tr>
<tr>
<td>SIM Card(s)</td>
<td>Dual SIM slots</td>
</tr>
<tr>
<td>Cellular Roaming</td>
<td>Multi-network global SIM(s); data plan included supporting 140+ countries</td>
</tr>
<tr>
<td>Configuration &amp; Upgrades</td>
<td>Remotely (over-the-air), USB PC connection</td>
</tr>
<tr>
<td>Data Transmission</td>
<td>Periodic, data-dependent</td>
</tr>
<tr>
<td>Antenna</td>
<td>External antenna support with backup internal antenna</td>
</tr>
<tr>
<td>Built-In GPS</td>
<td>Included</td>
</tr>
</tbody>
</table>

### Mechanical Enclosure**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED Indicator</td>
<td>Included</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>13.2 cm x 16.5 cm x 7.3 cm (5.2 in. x 6.5 in. x 2.9 in.)</td>
</tr>
<tr>
<td>Weight</td>
<td>0.9 kg (2.0 lbs)</td>
</tr>
<tr>
<td>Enclosure Material</td>
<td>Polycarbonate (UL 94V-0 and UV-resistant)</td>
</tr>
<tr>
<td>Ingress Protection</td>
<td>IP 68 / NEMA 6P</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to 80°C (-40°F to 176°F)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to 80°C (-40°F to 176°F)</td>
</tr>
</tbody>
</table>

### Intrinsic Safety (optional)**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approvals</td>
<td>USA/Canada Class I Div 1 Zone 0 ATEX Zone 0 IECEx</td>
</tr>
<tr>
<td>External Power</td>
<td>5-12VDC, 1.65 to 2.2A current limited</td>
</tr>
<tr>
<td>Max. Ambient Temperature</td>
<td>68°C (154°F)</td>
</tr>
<tr>
<td>Sensor Ports</td>
<td>3 Ports; cable splitters not permitted</td>
</tr>
<tr>
<td>Antenna</td>
<td>External antenna support only</td>
</tr>
<tr>
<td>Enclosure Material</td>
<td>Polycarbonate with ABS Alloy</td>
</tr>
<tr>
<td>Weight</td>
<td>1.0 kg (2.2 lbs)</td>
</tr>
</tbody>
</table>

*Class I Div 1, Groups C & D II 1G Ex ia IIB T4 Ga IP68 IECEx Certificate No. IECEx ITL 18.0003X Tamb = -40 +68°C

**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 **

*Battery lifetime depends on sensor power consumption and sampling and transmission frequency.

**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
WHAT IS THE StreamView?

The StreamView is Ayyeka’s web interface that allows for easy and intuitive data visualization and effective management of the Wavelet fleet. Its tactical edge analytics allow you to identify critical events and respond quickly.

MAIN FEATURES INCLUDE:

VISUALIZATION
- GPS-enabled asset location to pinpoint devices on a map
- Real-time data from the field with intuitive charting to identify trends

REPORTS
- Powerful report generation tools to output data in seconds
- Filter by site and data stream to compare feeds side-by-side

USER MANAGEMENT
- Manage users and roles at the asset-based level
- Easily update contact information to ensure users receive alerts

API
- Generate and manage API clients
- RESTful web services integration with third party software applications

FLEET MANAGEMENT
- Easy configuration of one or thousands of devices
- Manage and monitor your use of digital services

DEVICE MANAGEMENT
- Push commands to devices on a one-by-one or fleet-wide basis
- Configure threshold alerts for situational awareness
For the specific requirements of every use case, Ayyeka provides the ultimate level of flexibility for selecting digital and professional services. Eliminate complexity and reduce the costs of working with multiple vendors, maintaining servers, downloading desktop software, protecting against cyber-security threats, managing single-provider cellular communication contracts, and engaging in IT integration projects. Ayyeka’s Subscription Plans and Add-ons provide a streamlined and comprehensive offer of secure cloud hosting; encrypted communication with multi-network cellular data; unlimited user access to the StreamView hub for data and device management; software and firmware upgrades; APIs for data export; alert notifications; and more.

Select one or multiple Subscription Plans – Starter, Industrial, or Enterprise– for your fleet to serve the needs of each use case. Optimize the cost structure across your deployments by switching between plans based on changing needs. Layer one or multiple Add-ons onto the plan as needed to enhance the capabilities of a given device. Utilize the digital and professional services that your use case requires and save on those that may not be needed. The streamlined approach and flexibility in Ayyeka’s offering make implementing and scaling your remote monitoring deployment easier than ever.

### Ayyeka’s Service Plan

<table>
<thead>
<tr>
<th>Service</th>
<th>Wavelet device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td></td>
</tr>
<tr>
<td>Cellular</td>
<td>LoRaWAN</td>
</tr>
<tr>
<td>Cloud</td>
<td>On-premises</td>
</tr>
<tr>
<td>Hybrid</td>
<td></td>
</tr>
<tr>
<td>SCADA driver</td>
<td>API</td>
</tr>
<tr>
<td>StreamView data hub</td>
<td></td>
</tr>
</tbody>
</table>

### The Ayyeka Subscriptions and Add-Ons include the following:

- Cellular (4G/3G/2G) and LoRaWAN data connectivity
- Cyber-secure data transmission and encryption
- Over-the-air device configuration and firmware updates
- Embedded GPS locating and mapping
- Secure cloud data hosting
- On-premises data hosting
- Ayyeka’s StreamView data hub and device management software
- AyyekaGo mobile app for in the field installations and device management
- Email, SMS, and voice threshold alerts
- Battery life and device health notifications
- API for 3rd-party software integration
- SCADA drivers
- Email and phone customer support
SEEING FAR IN THE FIELD
The Wavelet is a unified solution for generating data from virtually any type of infrastructure or asset. Ayyeka offers a variety of Wavelet Kits, or you can design your own kit, according to the desired measurement parameters, type of power source, as well as connectivity, data storage, and data integration preferences.

Pre-configured and ready to use out-of-the-box, the device comes with a magnetic activator, installation hardware, and any accessories needed to support the use case. Once the sensor and antenna are installed and connected to the Wavelet, the system can be activated using the Wavelet activator. The 15-minute activation sequence can be monitored and managed using Bluetooth pairing with AyyekaGo (in the field device installation and management mobile app).

Embedded GPS enables geo-location and mapping in the StreamView data hub. Continuous time-stamped data is transmitted from the device almost immediately. Device settings, including sampling and transmission intervals, as well as threshold alerts can be configured over-the-air.

Ayyeka is committed to continuous innovation. We welcome inquiries for incorporating new technologies and extending our product and solutions offering.

**MEASUREMENT PARAMETERS:**

**Physical**
- Current
- Door Position
- Flow
- Humidity
- Incline
- Level
- Precipitation
- Pressure
- Soil Moisture
- Solar Insolation
- Temperature
- Vibration
- Wind Speed

**Chemical**
- Conductivity
- Dissolved Oxygen (DO)
- Hydrogen Sulfide (H2S)
- ORP
- Particulate Matter (PM)
- pH
- Salinity
- Total Suspended Solids (TSS)

**WAVELET CONFIGURATION:**

**Power**
- Internal battery
- External battery
- Solar panel assembly
- Line power

**Communication**
- Cellular (4G/3G/2G)
- LoRaWAN (optional)
- Bluetooth

**Antenna**
- External
- Internal (backup)

**Server**
- Cloud
- On-Premises
- Hybrid

**DASHBOARD:**

**StreamView data hub**
- Desktop
- Tablet
- Mobile

**SCADA**
- CSV
- DNP3
- OPC-UA

**API**
- REST
<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE00172-A-6</td>
<td>Submersible Pressure Sensor</td>
<td>- 0-6.9 bar (0-100 psi), Absolute Pressure Type, Analog - 4-20mA</td>
</tr>
<tr>
<td>SE00012-SER-11</td>
<td>Submersible Hydrostatic Level Sensor</td>
<td>- 0-1 bar (0-15 psi), Guage Pressure Type, Serial - RS485</td>
</tr>
<tr>
<td>SE0011-SER-11</td>
<td>Ultrasonic Level Sensor</td>
<td>- 0-3-7.5 m (1-25 ft) Range, Serial - RS485</td>
</tr>
<tr>
<td>SE00096-A-12</td>
<td>Radar Level Sensor</td>
<td>- 8 m (26 ft) Range, Analog - 4-20mA</td>
</tr>
<tr>
<td>SE00097-A</td>
<td>Radar Level Sensor</td>
<td>- 35 m (115 ft) Range, Analog - 4-20mA</td>
</tr>
<tr>
<td>SE0015-D-15</td>
<td>Float Level Switch</td>
<td>- Normally Open, Discrete - Digital</td>
</tr>
<tr>
<td>SE0017-SER-15</td>
<td>Turbidity and Temperature Sensor</td>
<td>- Serial - RS485/SDI-12</td>
</tr>
<tr>
<td>SE0018-SER-15</td>
<td>4-Electrode Conductivity, Salinity, and Temperature Sensor</td>
<td>- Serial - RS485/SDI-12</td>
</tr>
<tr>
<td>SE0019-SER-15</td>
<td>Dissolved Oxygen and Temperature Sensor</td>
<td>- Serial - RS485/SDI-12</td>
</tr>
</tbody>
</table>
SENSORS AND ACCESSORIES

Part No. SE00020-SER-15
pH, ORP, and Temperature Sensor
- Serial - RS485/SDI-12

Part No. SE00034-SER-15
Hydrologic Submersible Hydrostatic Level Sensor
- 0-10 m (0-33 ft) Range, Serial - RS485

Part No. SE00067-SER-15
Hydrologic Submersible Hydrostatic Level, Conductivity, and Temperature Sensor
- Serial - RS485

Part No. SE00022-D
Tipping Bucket Rain Gauge
- Unheated, Discrete - Pulse

Part No. SE00103-SER
Compact Weather Monitoring System
- Serial - RS485/SDI-12

Part No. SE00144-SER-3
Three Phase Power Analyzer
- Serial - RS485

Part No. SE00094-SER-1
AC Current Transformer
- 0-100A, Serial - RS485

Part No. SE00128-A-2
Intrinsically Safe Pressure Sensor
- 0-6.9 bar (0-100 psi), Analog - 4-20mA

Part No. SE00108-A-6
Intrinsically Safe Hydrostatic Level Sensor
- 0-0.34 bar (0-5 psi), Analog - 4-20mA
<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
</table>
| SE00169-SER-11 | Intrinsically Safe Ultrasonic Level Sensor  
- 0-3-7.5 m (1-25 ft) Range, Serial - RS485 |
| SE00100-SER | Explosion-Proof Intrinsically Safe Guided Wave Radar Level Sensor  
- Oil-Water Interface Detector, Serial - RS485 |
| WA00182 | Wavelet Internal Lithium Battery  
(field replaceable and non-rechargeable)  
3.9VDC 3A, 32Ah Capacity |
| WA00148-2 | Power Port Cable Assembly  
- M8 3-Pin Female Connector with 2 m (6 ft) Cable with Flying Leads |
| WA00196 | External Primary Battery Pack,  
(field replaceable and non-rechargeable)  
- 45 Alkaline D-Cells, 52Ah Capacity  
(900Wh @ 22.5 to 12VDC) |
| WA00016 | Industrial Power Supply  
- 100-240VAC Input, 12VDC Output |
| WA00149 | Indoor Power Supply, US Wall Plug  
- 1.5 m (5 ft) Power Cable with M8 3-Pin Female Field Attachable Connector |
| WA00151 | Indoor Power Supply, Europlug  
- 1.5 m (5 ft) Power Cable with M8 3-Pin Female Field Attachable Connector |
| WA00154-NAM / -ROW | 10W / 15W Solar Panel Assembly  
- Pre-Assembled Electronics, Power Cable with M8 3-Pin Female Field Attachable Connector |
## ACCESSORIES

<table>
<thead>
<tr>
<th>Part No. WA00180</th>
<th>Variety 3-Pack:</th>
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<tbody>
<tr>
<td></td>
<td>- 1 each of M12 8-Pin Female, M12 8-Pin Male, and M12 5-Pin Female Field Attachable Connectors</td>
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<tr>
<th>Part No. WA00183</th>
<th>Field Attachable Connector</th>
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<tbody>
<tr>
<td></td>
<td>- M12 8-Pin Female for Analog Port</td>
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<th>Part No. WA00167</th>
<th>Field Attachable Connector</th>
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<tr>
<td></td>
<td>- M12 8-Pin Male for Serial Port</td>
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<th>Part No. WA00169</th>
<th>Field Attachable Connector</th>
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<tbody>
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<td>- M12 5-Pin Female for Discrete Port</td>
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<th>Part No. WA00170</th>
<th>Field Attachable Connector</th>
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<td>- M8 3-Pin Female for External Power Supp</td>
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<th>Part No. WA00158</th>
<th>2-Port Analog Cable Splitter</th>
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<tbody>
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<td></td>
<td>- 1 x M12 8-Pin Female to 2 x M12 8-Pin Male, 30 cm (1-ft) Cable</td>
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<th>Part No. WA00157</th>
<th>4-Port Analog Cable Splitter</th>
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<tr>
<td></td>
<td>- 1 x M12 8-Pin Female to 4 x M12 8-Pin Male, 30 cm (1-ft) Cable</td>
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<tr>
<th>Part No. WA00156</th>
<th>2-Port Serial Cable Splitter</th>
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<td>- 1 x M12 8-Pin Male to 2 x M12 8-Pin Female, 30 cm (1-ft) Cable</td>
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<th>Part No. WA00155</th>
<th>4-Port Serial Cable Splitter</th>
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<td>- 1 x M12 8-Pin Male to 2 x M12 8-Pin Female, 30 cm (1-ft) Cable</td>
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</table>
Part No. WA00146
2-Port Discrete Cable Splitter
- 1 x M12 5-Pin Female to 2 x M12 5-Pin Male, 30 cm (1-ft) Cable

Part No. WA00138-3
Analog Cable Assembly
- M12 8-Pin Female Field Attachable Connector with 3 m (10 ft) Cable with Flying Leads

Part No. WA00198
Serial Cable Assembly
M12 8-Pin Male Field Attachable Connector with 3 m (10 ft) Cable with Flying Leads

Part No. WA00201
Discrete Cable Assembly
- M12 8-Pin Female Field Attachable Connector with 3 m (10 ft) Cable with Flying Leads

Part No. WA00178
Cellular Antenna - Dome
- 4G/3G/2G (698-960 MHz, 1710-2700 MHz), 1.5 m (5 ft) Cable, 316 SS SMA Male Field Attachable Connector

Part No. WA00197
Back Cover Kit - Cover with Screws
- (6x M3.5x25), 6x O-Rings, and 1x Back Cover Gasket

Part No. WA00199
Wavelet Gasket Set
- 1 each of Back Cover, Lower Enclosure, and Interface Board Gaskets

Part No. WA00181
Desiccant Pack for Wavelet
- 4x 10 gr packs

Part No. WA00201
Magnetic Wavelet Activator with Carabiner

* For additional product details please contact your sales representative.
MEET THE TEAM

ARIEL STERN, CO-FOUNDER & CEO
In addition to overseeing Ayyeks’s global operations, Ariel specializes in cyber solutions for the IoT industry. In the past, he served in the Israeli Air Force, (rank of captain), and managed airborne control systems and special projects in coordination with world-leading defense contractors. He has a B.Sc. in Electrical Engineering from the Technion- Institute of Technology.

YAIR POLEG, CO-FOUNDER & CTO
An expert on signal processing, Yair spearheads Ayyeka’s innovative technological and intelligence R&D. In the past, he served as a team leader and project manager in the IDF’s prestigious 8200 unit. Yair has a PhD in Computer Scienceseses from the Hebrew University of Jerusalem.

RON GROSSMAN, CFO
With 15 years of experience in executive level finances, Ron oversees Ayyeka’s financial operations, business planning, and strategy development. Ron has an MBA from Imperial College, University of London, and a law degree from London Guildhall University.

DAVID DOLPHIN, SENIOR DIRECTOR OF SALES
David drives Ayyeka’s digital solutions to market and specializes in helping Ayyeka’s water and wastewater clients improve performance and services. He brings over 20 years of executive experience working in companies such as Veolia, Elga Ltd., Hanovia, and Rohm & Hass. David has a B.Sc. in Mechanical Engineering from Aston University

LAURIE MARR, DIRECTOR OF PRODUCT AND SERVICES
Laurie brings with her over 20 years of experience in IBM and various start-ups. A seasoned software professional with a passion for implementing methodologies that drive growth, Laurie’s skill set includes R&D management, project leadership, and software enablement.

GABY NATIV, DIRECTOR OF R&D
Overseeing Ayyeka’s R&D team, Gaby is responsible for all aspects of software, hardware and firmware development. An expert on the design and development of enterprise software, Gaby joined Ayyeka following a 15-year career as an executive in IBM and a team leader in the IDF’s special 8200 Unit.

NIR BEN-DAVID, DIRECTOR OF ENGINEERING
With 25 years’ experience in the engineering and manufacturing of industrial and medical devices, Nir is responsible for product engineering and optimization. He holds a B.Sc. from Tel Aviv University and an MBA from the University of Derby.
CONTACT US

www.ayyeka.com

info@ayyeka.com

UNITED STATES
Newark, NJ
+1 (310) 876-8040

EUROPE, THE MIDDLE EAST AND AFRICA
Eindhoven, Netherlands
+31 40 209-1001

ISRAEL
Jerusalem, Israel
+972 (2) 624-3732