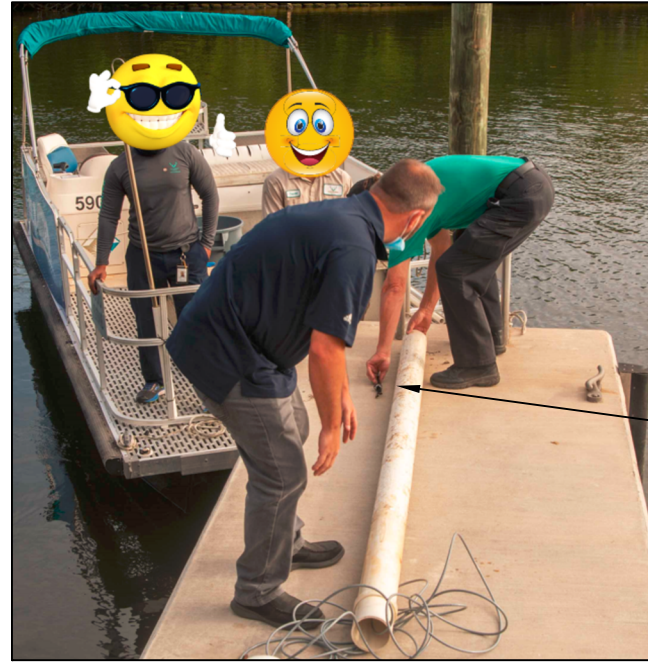
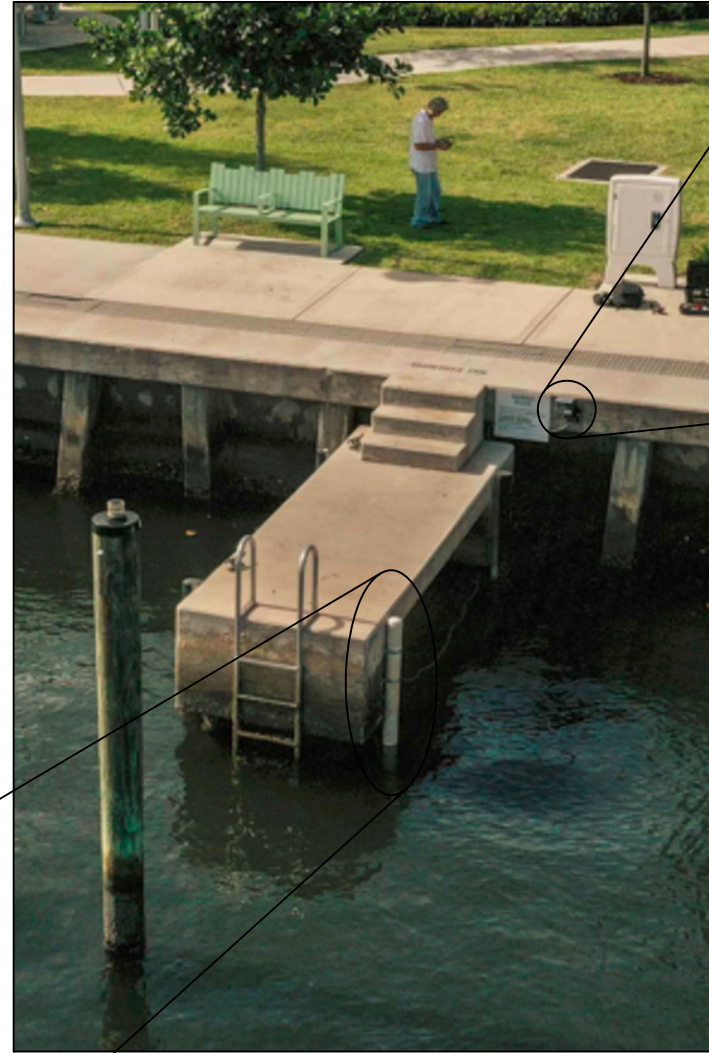


Level - Kit 1



Submersible level sensor.
 **Customer to supply depth of water in feet for tubing.
 **Customer to supply distance from sensor to Wavelet in feet for cable length.



Ayyeka Wavelet V2 shown. Good for 3+ sensors.
 Ayyeka Wavelet 4R also available for up to two sensors.



Level sensor housed in a PCV cylinder fixed to structure.



Camera visual add on option to see field assets.



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REV	DATE	DESCRIPTION	DWG	CHK	APP



525 NW 48th Terrace
 Ocala, FL 34482
 P (352) 861-0067 | www.environmental-md.com

PROJECT NO:	TBD
DESIGNED BY:	JMM 3/18/2023
DRAWN BY:	JMM 3/18/2023
CHECKED BY:	
APPROVED BY:	
SCALE:	N.T.S.

DRAWING TITLE:	Level Kit 1
PROJECT:	Ayyeka Utility Starter Kits

DRAWING NUMBER:	1
SHEET NUMBER:	1 of 5
REV:	0

Level - Kit 1a - Components

Economical 4R Wavelet good for up to (2) sensors.



Wavelet 4R Edge Device - North America (Part # WA4000-31)

- M12 8-pin male analog/serial/discrete and M8 3-pin male power panel connectors, 316 SS
- 2 universal analog inputs (e.g. 4-20mA, 0-20mA, 0-5V, 0-10V, 0-27.5V)
- 16 serial channels (RS485 and RS232 interfaces; Modbus RTU, Modbus ASCII, and custom protocols)
- Up to 2 discrete inputs (dry contact, open drain); up to 2 pulse counting; up to 2 discrete outputs @ 2.8V max across active outputs
- SMA female antenna panel connector, 316 SS – external antenna required and sold separately
- IP68/NEMA 6P polycarbonate, UV-resistant enclosure
- Internal lithium battery (field-replaceable and non-rechargeable), 3.9 VDC 3A, 32Ah capacity
- Cellular modem: LTE-Cat-M1 (CAT-M)
- Multi-network redundancy
- Bluetooth module for smartphone pairing with AyyekaGo mobile app
- Industrial-grade internal memory
- Magnetic Wavelet Activator with carabiner
- 4x anchors and screws and 2x zip ties
- One-year Warranty



**Splitter configuration dependant on analog and serial inputs (if req'd).

2-Port Cable Splitter for Wavelet 4R

- Up to 2x 4-20mA / 0-24V Inputs, 2x discrete I/Os (up to 2 pulse counting), and RS485 and RS232
- 1x M12 8-pin female connector to 2x M12 8-pin male sensor ports

M12 8-Pin Female Field Attachable Connector PG9 - Orange Insert, Wavelet 4R

- Use for Wavelet 4R sensor port and Wavelet 4R Cable Splitters



Hydrostatic Submersible Level Sensor – Vented Gauge – $\pm 0.5\%$ Accuracy – 0-10 mH₂O Range (Part # SE00183-A-GA-10-MWG-10-8F)

- IP68 fully submersible
- 1/4" NPTM process connection
- 10 m (33 ft) vented cable pre-wired with M12 8-pin female vented field attachable connector
- Signal: 4-20mA



WaveCam

Image resolution - 1600x1200, 800x600, or 640x480
 Night vision - Yes - with IR LED illumination
 Minimum illumination - 0.005 LUX
 Range - Up to 50 meters (164 ft.)
 Picture sample rate - 10 min. or lower
 Sensor triggering - Yes – analog, serial, and digital inputs
 Communication - Cellular - through the Wavelet
 Power supply - Battery powered by the Wavelet
 Ingress protection - IP 68 / NEMA 6P
 Dimensions (W x H x D) - (3.8 in. x 7.7 in. x 6.3 in.)
 Operating temperature - -40° to +85°C (-40° to 180°F)
 Storage temperature - -45° to +90°C (-58° to 194°F)

**Anytime a camera is elected external battery power, solar panel, or 120VAC power is recommended.

**With level sensor and camera, the standard internal replaceable battery life expectancy is 6-8 months.
 **If camera option is elected and a battery solution is required for the monitoring application, the external battery pack is recommended. Typical life expectancy with external battery pack is 2-3 years with this option.
 **Optional 120VAC plug in option available to power unit.

--Annual Basic (20) credits per Device per Month plan required w/o WaveCam.
 --Annual Pro (50) credits per Device per Month + additional 50 credits per month required w/ WaveCam option.
 --Annual FIA Lite Plan (per Wavelet)



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				 WATER & WASTEWATER SPECIALISTS 525 NW 48th Terrace Ocala, FL 34482 P (352) 861-0067 www.environmental-md.com		PROJECT NO: TBD DESIGNED BY: JMM 3/18/2023 DRAWN BY: JMM 3/18/2023 CHECKED BY: APPROVED BY: SCALE: N.T.S.		DRAWING TITLE: <h2 style="text-align: center;">Level Kit 1a</h2>		DRAWING NUMBER: <h1 style="text-align: center;">2</h1>																											
<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>DWG</th> <th>CHK</th> <th>APP</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>				REV	DATE	DESCRIPTION	DWG	CHK	APP																									PROJECT: Ayyeka Utility Starter Kits		SHEET NUMBER: REV: 2 of 5 0	
REV	DATE	DESCRIPTION	DWG	CHK	APP																																

Level - Kit 1b - Components

V2 Wavelet good for up to (4) sensors.

- Hydrostatic Submersible Level Sensor – Vented Gauge – ±0.5% Accuracy – 0-10 mH2O Range (Part # SE00183-A-GA-10-MWG-10-8F)
- IP68 fully submersible
 - 1/4" NPTM process connection
 - 10 m (33 ft) vented cable pre-wired with M12 8-pin female vented field attachable connector
 - Signal: 4-20mA



- Wavelet V2 Edge Device – US (Part # WA1111-US-V2)**
- M12 8-pin male analog, M12 8-pin female serial, M12 5-pin discrete, and M8 3-pin male power panel connectors, 316 SS
 - 4 universal analog inputs (e.g. 4-20mA, 0-20mA, 0-5V, 0-10V, 0-27.5V)
 - 16 serial channels (RS485, RS232, and SDI-12 interfaces; Modbus RTU, Modbus ASCII, and custom protocols)
 - Up to 5 discrete inputs (dry contact, open drain); up to 2 pulse counting; up to 3 discrete outputs @ 2.8V max across active outputs
 - SMA female antenna panel connector, 316 SS – external antenna sold separately
 - Internal cellular antenna for back-up redundancy
 - IP68/NEMA 6P polycarbonate, UV-resistant enclosure
 - Internal lithium battery (field-replaceable and non-rechargeable), 3.9 VDC 3A, 32Ah capacity
 - 4G (LTE)/3G/2G cellular modem
 - 2 SIM cards for multi-network redundancy (Verizon, AT&T, and T-Mobile)
 - Bluetooth module for smartphone pairing with AyyekaGo mobile app
 - 8GB industrial-grade internal memory
 - LED communication status indicator
 - Embedded GPS
 - Magnetic Wavelet Activator with carabiner
 - 4x anchors and screws and 2x zip ties
 - One-year Warranty

- WaveCam**
- Image resolution - 1600x1200, 800x600, or 640x480
 - Night vision - Yes - with IR LED illumination
 - Minimum illumination - 0.005 LUX
 - Range - Up to 50 meters (164 ft.)
 - Picture sample rate - 10 min. or lower
 - Sensor triggering - Yes – analog, serial, and digital inputs
 - Communication - Cellular - through the Wavelet
 - Power supply - Battery powered by the Wavelet
 - Ingress protection - IP 68 / NEMA 6P
 - Dimensions (W x H x D) - (3.8 in. x 7.7 in. x 6.3 in.)
 - Operating temperature - -40° to +85°C (-40° to 180°F)
 - Storage temperature - -45° to +90°C (-58° to 194°F)

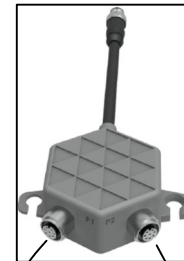


**Anytime a camera is elected external battery power, solar panel, or 120VAC power is recommended.

- VEGA C21 Wired radar sensor for level measurement. Measuring up to 15 M, accuracy ±2mm. Cable length 32'. IP68.
- Optional radar level Sensor.



- 2-Port Analog Cable Splitter for Wavelet V2**
- 2x analog inputs and 1 digital input
 - 1x M12 8-pin male connector to 2x M12 8-pin female sensor ports
- M12 8-Pin Male Field Attachable Connector**
- Use for serial port of Wavelet V2 and Wavelet



**Splitter configuration dependant on actual analog and serial inputs required for application. Other options available.

- 2-Port Serial Cable Splitter for Wavelet V2**
- 2x RS485/SDI-12 or 1x RS485/SDI-12 and 1 RS232/SDI-12 inputs
 - 1x M12 8-pin male connector to 2x M12 8-pin female sensor ports
- M12 8-Pin Male Field Attachable Connector**
- Use for serial port of Wavelet V2 and Wavelet

Mainstream Submersible Velocity Measurement Sensor



**A velocity sensor requires a level sensor to calculate flow.

- Annual Pro (50) credits per Device per Month plan required w/o WaveCam.
- Annual Pro (50) credits per Device per Month + additional 50 credits per month required w/ WaveCam option.
- Annual FIA Lite Plan (per Wavelet)



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**If camera option is elected and a battery solution is required for the monitoring application, the external battery pack is recommended. Typical life expectancy with external battery pack is 2-3 years with this option.
**Optional 120VAC plug in option available to power unit.

REV	DATE	DESCRIPTION	DWG	CHK	APP



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PROJECT NO:	TBD
DESIGNED BY:	JMM 3/18/2023
DRAWN BY:	JMM 3/18/2023
CHECKED BY:	
APPROVED BY:	
SCALE:	N.T.S.

DRAWING TITLE:	Level Kit 1b	DRAWING NUMBER:	3
PROJECT:	Ayyeka Utility Starter Kits	SHEET NUMBER:	3 of 5
		REV:	0

Field Assets Intelligence (FAI) - Software Platform (Included)

The screenshot displays the Ayyeka software interface. On the left is a navigation menu with options: Visualization, Reports, Devices, Account, API, Fleet, Help, and a user profile for tal.avraham... The main area shows a map with a data popup for device ID 3418012858 WA1111-US. The popup contains the following data:

Stream Name	Last Sample
Battery Life	50 % 1 hour ago
Internal Humidity	61.0 % 2 hours ago
GSM	85.0 db 13 hours ago
GPS	1.2 hdop May-12-2020, 20:59:01
Communication Status	NORMAL 1 hour ago
Level	35.982 in. 1 hour ago

Below the map, there is a dashboard view showing a line graph of level data over time (from May 20 to June 10). To the right, a tablet and smartphone are shown displaying the mobile version of the software interface.



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PROJECT NO:	TBD
DESIGNED BY:	JMM 3/18/2023
DRAWN BY:	JMM 3/18/2023
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APPROVED BY:	
SCALE:	N.T.S.

DRAWING TITLE:	Level Kit 1 Cloud Platform
PROJECT:	Ayyeka Utility Starter Kits

DRAWING NUMBER:	4
SHEET NUMBER: REV:	4 of 5 0

Job Name: _____

Project Location: _____

Owner's Contact: _____

Owner's Contact Number: _____

Q & A

What are we monitoring for: _____

What are we monitoring for (parameters): _____

How many sensors will be needed: _____

Is this a vault or manhole installation: _____

If this is an underground install, please define the material of the cover/lid (iron, cast, plastic, concrete): _____

Material to be attaching hardware to: _____

Is location in roadway, or off roadway: _____

What is the roadway material (if applicable): _____

What are the minimum and maximum thresholds to be aware of: _____

Is there good cellular signal at the site location: _____

Sampling rate requirements: _____

Transmission rate requirements: _____

Alarm level thresholds: _____

Additional Notes: _____

STEP 1 - Choose Wavelet



4R



V2



Ex

STEP 2 - Choose Power Option

- Internal Battery
- External Battery
- AC power supply
- DC power supply
- Solar Panel Kit

STEP 3 - Identify Sensor(s) Required



Ayyeka Model VS3 Submersible Level Sensor



VEGAPULS C 21 Radar Sensor for Level



Microflow-i Non-contacting velocity sensor



Mainstream Submersible Velocity Measurement Sensor



Wavecam

Sensor/Channel	Ayyeka Part Number (if known)	Sampling Interval	Engineering Units	Measurement Range	Sensor Interface	Sensor Power Source	Sensor Wake-Up Time in seconds (if known)	Sensor Manufacturer (if known)
1								
2								
3								
4								
5								
6								

Other Sensor Selected: _____

STEP 4 - Identify Antenna Type Required

- Magnetic Mount
 - In-road
 - Dome
 - Patch (Blade)
- ↙ Most common.

STEP 5 - Identify if any Accessories are Required

Accessory 1: _____

Accessory 2: _____

Accessory 3: _____

STEP 6 - Choose a Subscription Plan

	Basic	Professional
Credits / Month	20	50
WaveCam	n/a	Additional 50 credits / month

*Additional information and options available upon request.

*Volume based discounts apply for bulk order of subscription credits as well as for customers with larger installed base of Wavelet edge devices.

Notes:
1) This page is intended to be plotted on 11x17 sheet.



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CHECKED BY:	
APPROVED BY:	
SCALE:	N.T.S.

DRAWING TITLE:	Level Kit 1 Check List	DRAWING NUMBER:	5
PROJECT:	Ayyeka Utility Starter Kits	SHEET NUMBER:	5 of 5
		REV:	0