BLUE SIREN®

Monitor with Vision®

SCADASiren™

FLOW PROPORTIONAL SAMPLER CONTROLLER & WATER QUALITY

Control Samplers using Flow Pace and Alarm Trigger on Level and Water Quality Sensors. ** Sampler Not Included, compatible with Hach, Sigma, ISCO, Manning, Xylem and many more

DualWave Ultrasonic Doppler Flow Sensor Included

Rugged Design with Clear View Window and LCD

SCADASiren™

The SCADASiren™ is a multi-application wall mount monitoring system with LCD and flow totalizer. Multiple SCADA output options are available including 4-20 mA, RS485, serial and analog output modules.

Optional USB allows for onsite data collection not requiring external connection to a field computer to collect data.

Automatically upload data for analysis to BlueLive® Cloud, DropBox®, GoogleDrive® or FTP location of your choice. Future proof worldwide LTE wireless module supports multiple countries and cellular frequencies, WiFi option also supported.

Built-in multi-media platform allows direct connection of our vision camera taking simultaneous pictures that correlate directly with sensor readings. Receive alarm emails with not only critical data but also images supporting the condition.

Automatically upload data for analysis to BlueLive® Cloud, DropBox®, GoogleDrive® or FTP location of your choice. Future proof worldwide LTE wireless module supports multiple countries and cellular frequencies, WiFi option also supported.

SPECIFICATION

*Sampler Not Included

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Enclosure:	10 x 8 x 4in (HxWxD), wall mount, fiberglass reinforced polyester, gray, single-door, (2) twist-lock latches, SAR acrylic window.
Data Storage	Internal Storage - 2.5 yr@15 min Sample Rate USB - over 20 years
Total Images	Internal Memory 500 (640x480) Images, USB over one million, Storage changes with image resolution"
Output:	RS485, Sampler Pulse, LCD
Power:	Logger: 3.3 V, Internal: 12 V, External: Max 16 V
Operating Temp.	-40 to 60ºC (-40 to 140ºF)
Connectors:	Spring Load Compression Fit
Power:	Internal 12 V AC / DC Power Supply
Sample Rate:	User Defined, 1 to 60 minutes
Software:	Field-Siren Windows GUI, Cloud Programmable
Protocol:	Compressed Binary
Wireless:	World Wide Cellular: 4G LTE and WiFi
Data Transfer:	Blue-Live® - DropBox® - GoogleDrive® - FTP

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION, DESIGN OR OTHERWISE. ... It shall be the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

Monitor With Vision®

![Blue Siren logo]

BLue SIReN®

Monitor with Vision®
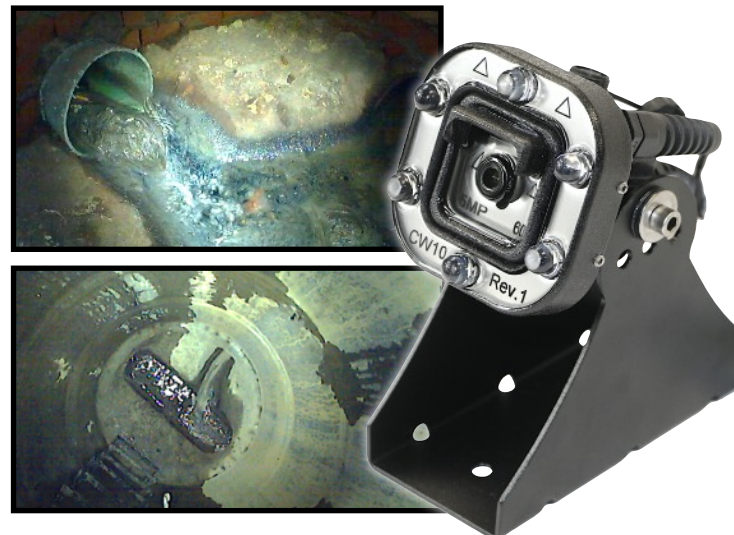
AV Flow Sensor
Flow Proportional Sensor
Ultrasonic Doppler Velocity

Fully Submersible

Dual-Wave Doppler Technology

Averaging Algorithms Applied

Doppler frequency is proportional to the speed of water in m/s

Dual-Wave Velocity

The Blue Siren Dual-Wave Velocity (AV) Sensor uses the Doppler effect to measure velocity using acoustic technology.

This AV sensor contains both pressure-depth and velocity sensors that are highly sensitive and accurate and provide you with data you can count on.

All electronics are encapsulated within the sensor housing.

Velocity is output via serial digital data stream and depth is output via an analog 0-5V signal.

Dual Wave Technology utilizes dual transmitters, filling the flow stream with more sounds waves, reaching a greater acoustic profile.

|	
Pressure:	30ft (10m) 15 PSI or 10ft (3m) 5 PSI
Accuracy:	+/- 2% Laminar Flow
Input Voltage:	6-16V DC
Warmup Time:	2 seconds minimum
Resolution:	1 mm/s or 1 Hz/sec
Range:	0 to +10m/s (-6m/s optional)
Cable:	7.62m (25ft) Standard
Response Time:	4 digital samples/second
Serial Output:	UART - TTL, RS485, Hz
Baud Rate:	4800
Depth Output:	0 - 5V
Depth Accuracy:	5PSI (+-) 1mm or 15PSI (+-) 2mm
Burst Height:	> 100ft (15PSI)
Redundancy:	Multiple Sensors can be used simultaneously using Dual Wave technology
Linearity:	+/- 0.15%
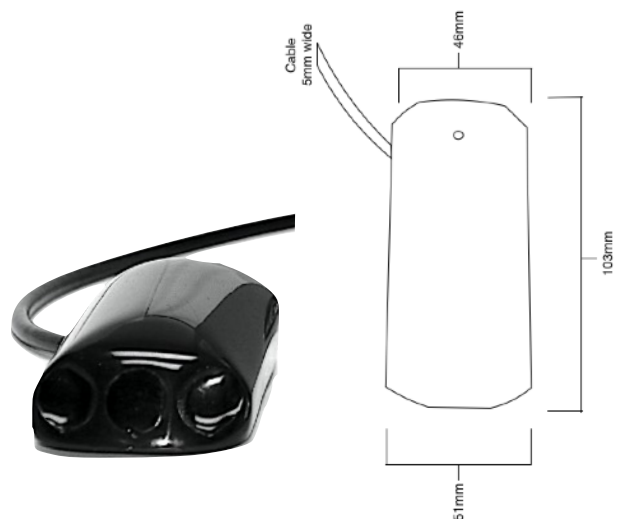
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BLUE SIREN®

Industrial Long Range Ultrasonic Level Sensor Product Specification Sheet

Measure Overflow Depths Manholes and CSO Chambers

Pre-Calibrated for Water Level Detection

Long Range Measurement from 8 inches to 20 ft

Submersible Design

Smart Signal vs Level Detection and Correction when used with Blue Siren Loggers.

Accurately measure from 8 inches (200mm) up to 20ft (6m). Great for ponds, lakes, and manhole monitoring.

Digital output with signal strength information allows the monitor to determine if a reading is good or not. Smart digital processing allows for the elimination of unwanted data commonly associated with non-contact sensors.

All sensors provide precision measurement for wastewater and water flow with non-uniform surfaces by incorporating state-of-the-art transducer technology and processing algorithms.

Technical Specifications:

|	
Body Material:	Rugged PVC
Accuracy:	+/- 0.1% Measurement Accuracy
Beam Angle:	8º Conical
Operating Voltage:	12V DC
Temp. Compensation	Yes
Resolution:	11 Bit
Range:	Dead-Band: 8in (200mm) Maximum Range: 20ft (6m)
Response Time:	60 mS
Sampling Rate:	10 Samples Per Second
Temperature Range:	-40ºC to 70ºC
Relative Humidity:	0 to 95%, non-condensing
Enclosure Rating:	IP68
Range Accuracy:	0.01in (0.25 mm) Measuring Resolution

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Ø1.90

Ø1.90

1.75

1.23

3.08

0.90

0.25

1' NPT
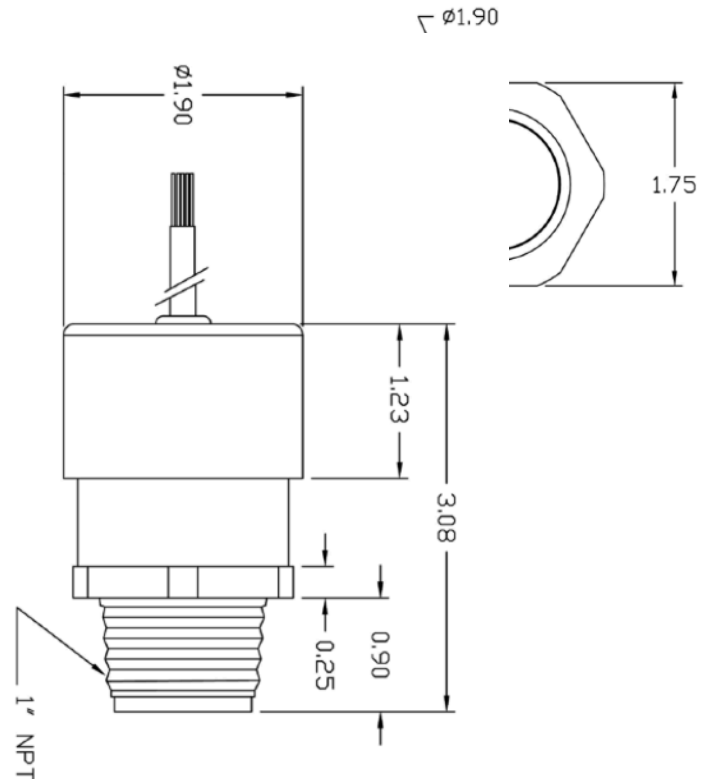
Electrical Conductivity EC Sensor

Fully Submersible

Max Pressure Of 200 PSI

Temperature Range Of 0-110°C

Embedded Conductivity Circuit

Continuous 1 Reading Per Second

Technical Specifications:

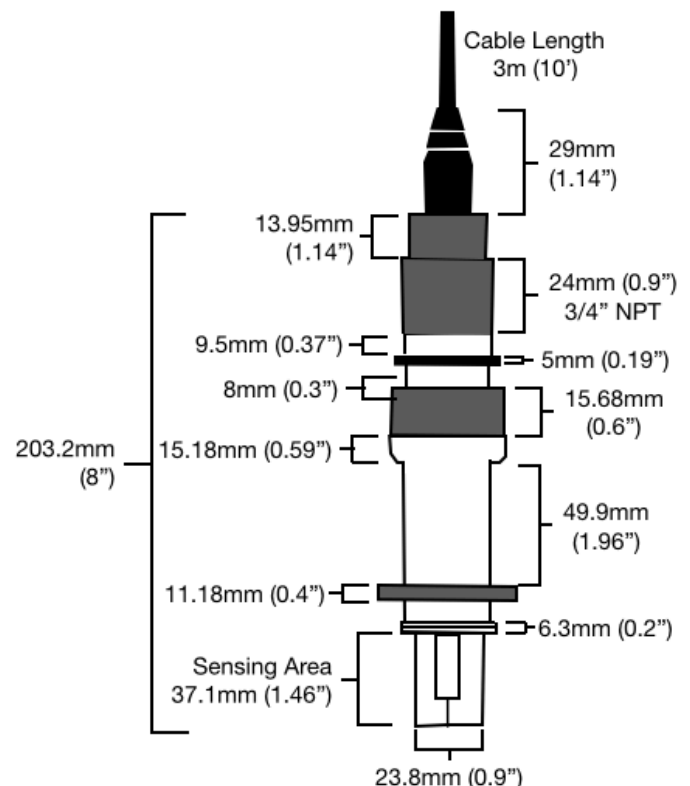|	
Body Material:	CPVC, Graphite, Viton
Temp. Probe Type	Class A Platinum, RTD
Reads:	Conductivity = μS/cm Total Dissolved Solids = ppm Salinity = PSU (ppt) 0.00 - 42.00
Response Time:	1 Reading Per Second
Max Depth:	60m (197ft)
Max Pressure:	200 PSI
Range:	5 - 200,000 μS/cm
Accuracy:	+/- (0.15 + (0.002*t))
Operating Voltage:	3.3V - 5V DC
Temperature Range °C:	0°C to 110°C
Temp. Compensation	Yes
Cable:	3 Meters (10 Feet)
Data Protocol:	UART and I^{2}C
Data Format:	ASCII

Electrical Conductivity

Easily measure and monitor EC levels for industrial, water and wastewater applications.

Two electrodes are stored opposite of each other in the EC probe. When power is applied cations move to the negative electrode while anions move to the positive electrode. The higher the number of free electrolytes in the fluid the higher the EC reading.

This high-temperature resistant sensor is great for industrial application for any fluids up to 60m in depth.

Cable Length 3m (10')

29mm (1.14")

13.95mm (1.14")

24mm (0.9") 3/4" NPT

9.5mm (0.37")

5mm (0.19")

8mm (0.3")

15.68mm (0.6")

15.18mm (0.59")

203.2mm (8")

49.9mm (1.96")

11.18mm (0.4")

6.3mm (0.2")

Sensing Area 37.1mm (1.46")

23.8mm (0.9")

pH Sensor

Fully Submersible

Max Pressure Of 100 PSI

Temperature Range Of 1-99ºC
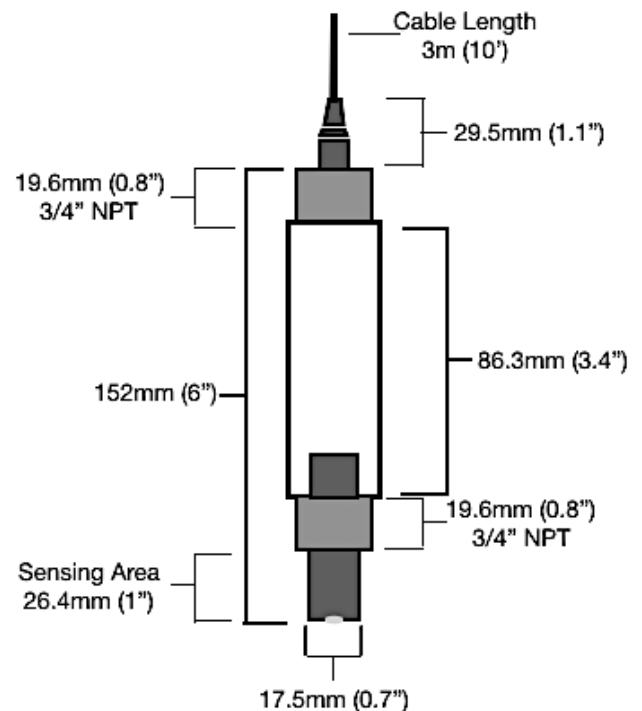
Double Junction Silver/ Silver Chloride

Measure from 0 to 14 pH

Monitor 0-14 pH

Easily measure and autonomously monitor pH levels in water and wastewater applications.

Fully submerge the pH probe into any fresh, salt, or industrial water up to 60m. The probe's glass membrane allows hydrogen particles to diffuse through its outer layer which react with hydrogen particles left in the fluid.

This high-temperature resistant sensor is great for industrial and sewage applications and can monitor pH levels up to 100 PSI with an accuracy of +/-0.002.

Technical Specifications:

Weight:	250 Grams
Body Material:	Ryton Thermoplastic
Max Depth:	60m (197ft)
Max Pressure:	100 PSI
Accuracy:	+/- 0.002
Operating Voltage:	3.3V - 5V
Temp. Compensation	Yes
Resolution:	0.001
Range:	0.001 - 14.000
Temp. Probe Type	Class A Platinum, RTD
Cable:	3 Meters (10 Feet)
Data Protocol:	UART and I^2C
Response Time:	1 Reading Per Second
Data Format:	ASCII
Temperature Range ºC:	1°C to 99°C
Life Expectancy:	~4 Years +

Cable Length 3m (10')

29.5mm (1.1")

19.6mm (0.8") 3/4" NPT

86.3mm (3.4")

152mm (6")

19.6mm (0.8") 3/4" NPT

Sensing Area 26.4mm (1")

17.5mm (0.7")

Dissolved Oxygen DO Sensor
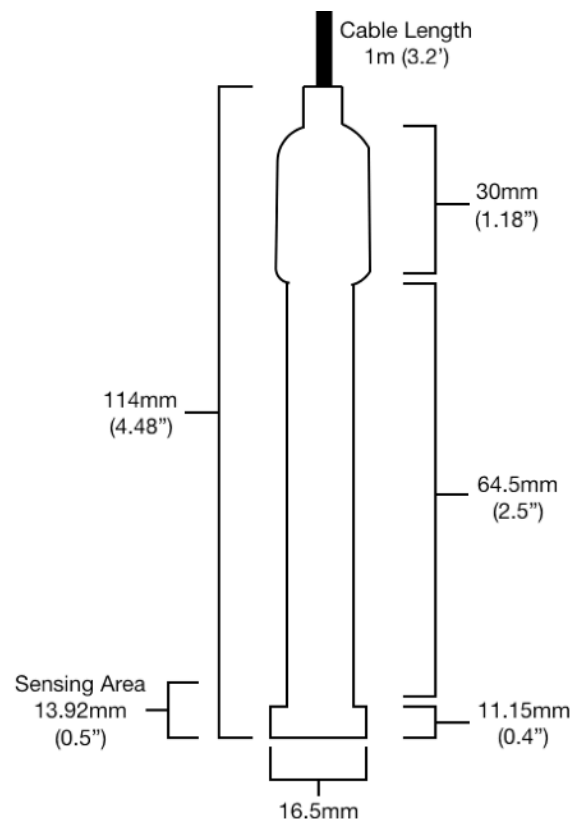
Fully Submersible

Max Pressure Of 500 PSI

Temperature Range Of 1-50ºC

Measure Concentrations of 0.01 -100+ mg/L

Monitor dissolved oxygen levels in water and wastewater using this sensor. Easily connect to the SOLOSiren® allowing you to collect and send wireless DO readings to the cloud for further analysis.

When the probe is submerged, oxygen molecules start to diffuse through the probe's polyethylene membrane at a constant rate. The molecules get reduced at the pure silver cathode and produce a small voltage which is then converted to a DO reading.

Readings can be gathered up to 343 meters with an accuracy of ±0.05 mg/L.

Technical Specifications:

Max Depth:	343 meters (1,125 ft)
Max Pressure:	3,447 kPA (500 PSI)
Accuracy:	+/- 0.05 mg/L
Operating Voltage:	3.3V - 5V
Temp. Compensation	Yes
Range:	0.01 -100+ mg/L 0.1 - 400+ %saturation
Cable:	1 Meter
Data Protocol:	UART and I²C
Response Time:	1 Reading Per Second
Data Format:	ASCII
Temperature Range ºC:	1°C to 50°C
Internal Temp. Sensor:	No
Maintenance:	~18 Months
Life Expectancy:	5 Years +

Cable Length 1m (3.2')

30mm (1.18")

114mm (4.48")

64.5mm (2.5")

Sensing Area 13.92mm (0.5")

11.15mm (0.4")

16.5mm

Fully Submersible

High Range Reads Temperatures as Low as -200ºC and as High as 850ºC.

Cable can be extended up to 300 meters.

Platinum Resistance Thermometer

High Accuracy +/- (0.15 + (0.002*t))

TEMP

High range sensor measures from -200ºC to 850ºC. Measure the toughest of environmental conditions.

High resolution of 0.001ºC make this sensor versatile in the lab, field, soil, industrial and wastewater applications. The cable can be extended up to 300 meters and reads temperatures as low as -200ºC and as high as 850ºC.

Digital processing sends stable readings to the wireless RTU allowing for accurate data with every sample collected.

Technical Specifications:

Dimensions:	6mm x 81cm (0.2" x 32")
Probe Type:	Class A Platinum, RTD
Sensing Material:	304 SS
Connector:	Male BNC
Range:	-200ºC - 850ºC
Accuracy:	+/- (0.15ºC + 0.002 x ºC)
Resolution:	0.001
Response Time:	1 Second Reading
Temperature Output:	ºC, ºK, ºF
Cable Length:	81cm
Min/Max Cable Temp:	-55ºC/125ºC
Operating Voltage:	3.3V - 5V
Data Format:	ASCII
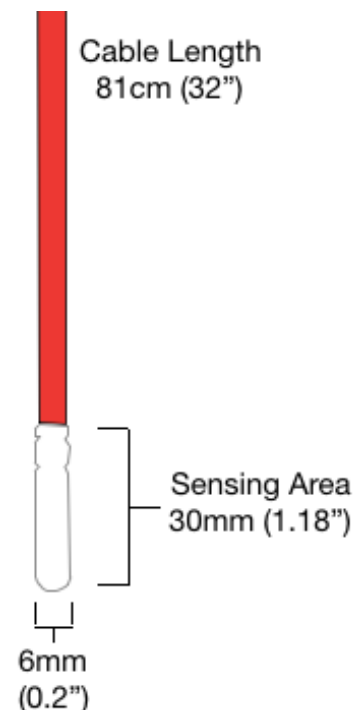
Cable Length 81cm (32")

Sensing Area 30mm (1.18")

6mm (0.2")

INDUSTRIAL 5MP VISION SENSOR

5MP Camera Sensor with High Output LED Ring

Multiple Resolution and Compression Settings

Maximum 5MP resolution

Bult-in Compression

Encapsulated Electronics

Monitor With Vision®

The Blue Siren® 5MP high output LED Camera Sensor is great for thousands of applications: sewer pipes, grease clogging, inflow and infiltration problems, monitor storm grates and implement camera based infrastructure security.

Automatically store images and send them to any server or website. Subscribe to the BlueLive® Database and see your images as they upload. Sensor readings automatically correlate with image time stamps, allowing more in-depth analysis of system conditions.

The Camera Sensor is constructed using impact resistant urethane and encapsulated using optically clear epoxy. Air is fully vacuumed out of each sensor leaving no room for condensation or moisture.

Technical Specifications:

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Pixel Resolution :	2592×1944 (Default), 2048×1536, 1920×1080, 1600×1200, 1280×960, 1024×768, 800×600, VGA, QVGA, 160×120
Sensor:	1/4" CMOS
Baud Rate:	115200bps (default), 19200bps, 38400bps, 57600bps, optional
Angle of View (FOV):	60 degree (default), 120/90/45/30/15/8 degree Optional
Focal Length:	3.6mm (default), 2.8mm/6mm/8mm/ 12mm/ 16mm/25mm Optional
White Balance:	Automatic
Operating Temperature:	-4°F-140°F
Sample Rate:	Minimum 1 minute
Auto Gain Control:	Automatic
Exposure:	Automatic
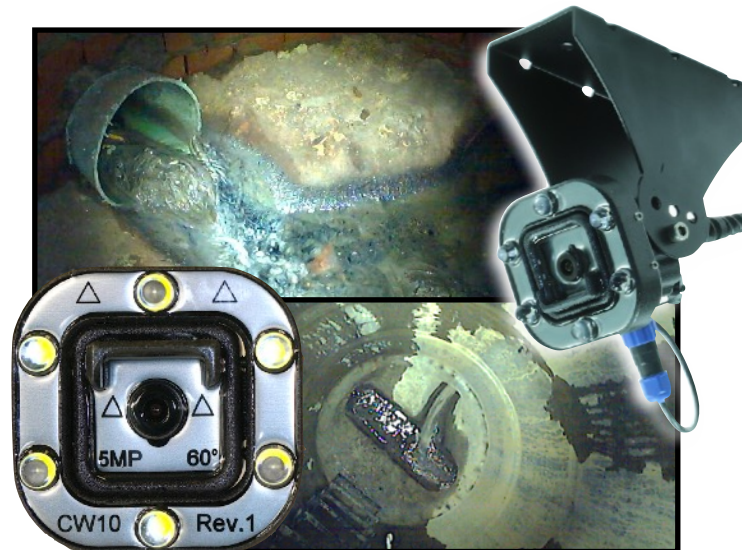
DATA MANAGEMENT
Wireless Cloud Delivery and Data Analysis

View and Analyze Real Time Data

Automatic Delivery to Hosting Provider of your choice, DropBox®, Google Drive®, FTP, email, BlueLive®

Batch View Line and Scatter Plots

Manage Large Networks

Multiple End Users, No Additional Fees

FLEXIBLE DATA PLAN AND DELIVERY OPTIONS:

Automatically upload monitor data to BlueLive®, DropBox®, GoogleDrive®, email, or a FTP location of your choice. The internal worldwide 4G LTE wireless module supports multiple countries and cellular frequencies. In addition, WiFi connectivity options also available for infrastructure implementation. Provide your own SIM card and cellular network or have Blue Siren provide one for you. Blue Siren has low cost options on major networks such as AT&T® and Verizon Wireless®.

Graphical Analysis	Line Graph Batch Analysis	Scatter Plot Batch Analysis	Data Export	Wiifat Export	GIS Analytics	Monitor Map	Wireless Report	Alarm Report	Alarm Setup	Email Config	Data Upload	Settings	Site Info

Multi-Layered Line Graphs

Batch Report and ScatterPlots

GIS, Google Maps, and Spatial Analysis Tools

Image vs Data Correlation and TimeLapse

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