



# ECOSiren®

## ULTRASONIC DOPPLER FULLPIPE WIRELESS MONITOR



Accurately Monitor Full Pipe Flow Rates

Ultrasonic Doppler Flow Sensor Included

Connect Multiple Sensors, up to 20 Channels

User Replaceable Internal 12V Battery Supply

Lightweight, Portable Compact Design

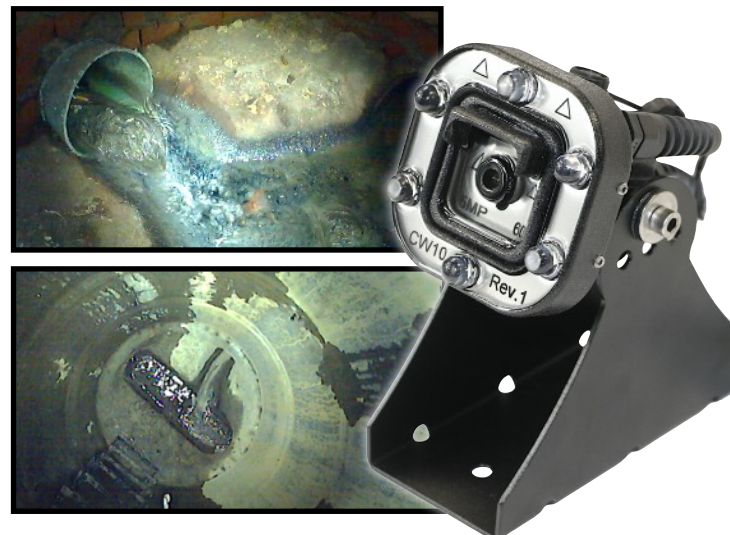
Modular Wireless Design allows 4G or WiFi Connectivity

### ECOSiren® - GO ECO

The ECOSiren® is a multi-sensor autonomous wireless monitoring platform designed to work in outdoor field environments, delivering data to your desk every time. The built-in multi-media platform allows direct connection of our optional vision camera taking simultaneous pictures that correlate directly with sensor readings. Receive alarm emails with images showing the event details and severity.

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.

Dimensions:	(Approximately) L: 12in W: 10in D: 5in
Enclosure:	Impact Proof Plastic
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 60°C (-40 to 140°F)
Connectors:	Vision Port / 12 Channel Output Port External Wireless / Antenna Port 12 Channel Sensor Input Port Internal USB and Wireless Port
Battery Packs:	Internal Dual 12 V D-Cell Alkaline 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



### Monitor with Vision®

Each ECOSiren® monitor has a standardized camera port allowing you to monitor with vision® at any time. Great for overflow verification, industrial trade waste color, and Infiltration detection. Camera resolution can range from 5MP all the way down to 0.1MP, complete with user programmable compression.



Standardized Camera Port on Every ECOSiren® Monitor

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.



# Full Pipe Flow Product Specification Sheet



LCD Display with 2 line 16 characters

4 key tactile feedback membrane keypad

Easy to install

Operates on steel, stainless steel, copper, and plastic

## Full Pipe Flow

The Full-Pipe Flow Sensor sends repetitive ultrasonic waves between its upstream and downstream transducers. The difference between the time it takes for the wave to travel back and forth between the two transducers is directly proportional to the velocity of the fluid traveling through.

When placed on the pipe at a 45° angle the Full-Pipe Flow Sensor allows you to accurately measure industrial, sewage, drinking, and other fluids' velocity.

## Technical Specifications:

Body Material:	Plastic Polycarbonate
Dimensions:	250mm x 48mm x 90mm (electronics + guide rail)
Timing Resolution:	+/-50ps
Flow Velocity Range:	0.1 to 10 m/s
Accuracy:	+/-3% of flow reading for velocity rate >0.3m/s
Repeatability:	+/-0.15% of measured value
Power Input:	12-24V AC or DC
Power Consumption:	7VA max.
Pulse Output:	Opto-isolated MOSFET volt free contact
Frequency Mode:	200 Hz max. (Range 1-200)
Max. Load Voltage/Current:	48V AC / 500mA
Current Output:	4 - 20mA
Current Resolution:	0.1% of full scale
Operating Temp (Electronics):	0°C to 50°C (32°F to 122°F)

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# INDUSTRIAL 5MP CAMERA SENSOR Optional VISION Sensor



Infrared LED Camera With Light Detection

Impact Resistant

Maximum 5MP resolution

Built-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:

Pixel Resolution : 2592x1944 (Default), 2048x1536, 1920x1080, 1600x1200, 1280x960, 1024x768, 800x600, VGA, QVGA, 160x120

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

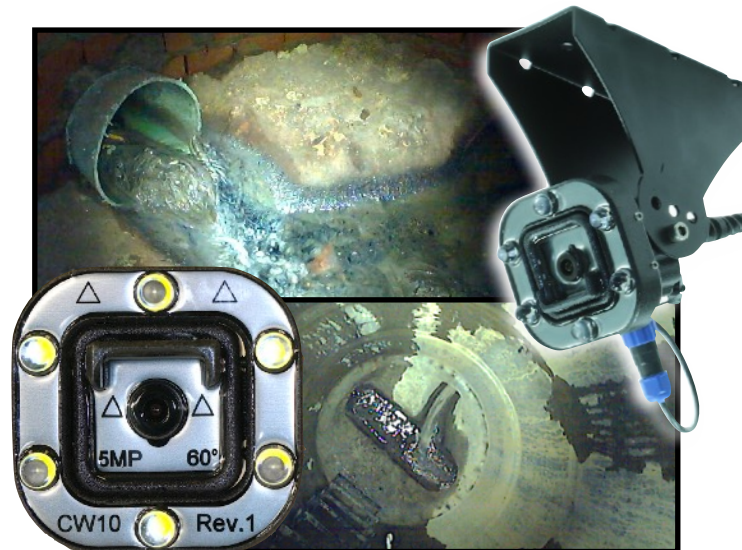
White Balance: Automatic

Operating Temperature: -4°F-140°F

Sample Rate: Minimum 1 minute

Auto Gain Control: Automatic

Exposure: Automatic



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# 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®.



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