



# WATER QUALITY MONITORING SYSTEM

Online Real Time Water Quality Monitoring System for Industrial  
Water Treatment Plants, River Bodies, Aqua Farming





# ABOUT AERON



**A**eron is a fast growing tech company developing innovative solutions for global customers. Aeron offers a wide range of technology driven products and solutions under Inertial Sensing and IIoT verticals. Backed by strong technical knowhow, refined algorithms and domain research, Aeron's products offer premium features at attractive price points.

Aeron started its IoT business with engine temperature monitoring systems for locomotives and vehicle telematics solutions for automotive OEMs. After this initial success, Aeron started offering data logger and weather monitoring station for smart agriculture and solar applications. Today, Aeron offers a large number of solutions like weather and environment monitoring solutions for renewable energy, smart environment and urban infrastructure and manufacturing sectors.

Under INS vertical, we offer highly refined product families of MEMS based inertial navigation systems. Our superior quality hardware and proven algorithms promise a performance better than most global tactical class MEMS systems. Aeron's Inertial Sensors and Systems offer everything that today's tough applications demand: versatility, ruggedness, precision and reliability over time. Aeron also offers a range of tilt sensors, inclinometers, tilt switches and digital compasses.

At Aeron, we believe that expertise is not merely an accident but an outcome of consistent team effort. Passionate people, well equipped manufacturing, testing facilities and excellent support network make us the trusted partner of our customers.



Located in  
Pune, India



Serving customers  
in 20+ countries



Installed base of  
5,000+ units



India's leading  
company in Inertial  
Systems

# Water Quality Monitoring System

# STREAM<sup>TM</sup>

Introducing STREAM, a smart water quality monitoring and management system. It allows you to monitor and control the pollution in water sources. Needless to mention water is among the five basic needs of life on planet earth and STREAM allows you to be responsible consumer.

Based on latest technology sensors and controller, the STREAM is next generation smart system for wide variety of water quality monitoring requirements. The sensors work on UV, Optical and other advance technologies for the real-time measurement of water quality parameters.

The sensors connect with smart controller which captures the data with high precision multiple times every second, applies advance algorithm on the data and makes it available to user on various platforms. User can access the data on local display, desktop PC and mobile.

The STREAM is available in three variants for installations in different operating environment. The unique design offers reliable operation for long time.



STREAM I+

The Inline variant is installed in the bypass line of the water flowing out of water treatment plants like ETP, STP, and WTP. The system can be installed indoor or outdoor near the treatment plant.



STREAM S+

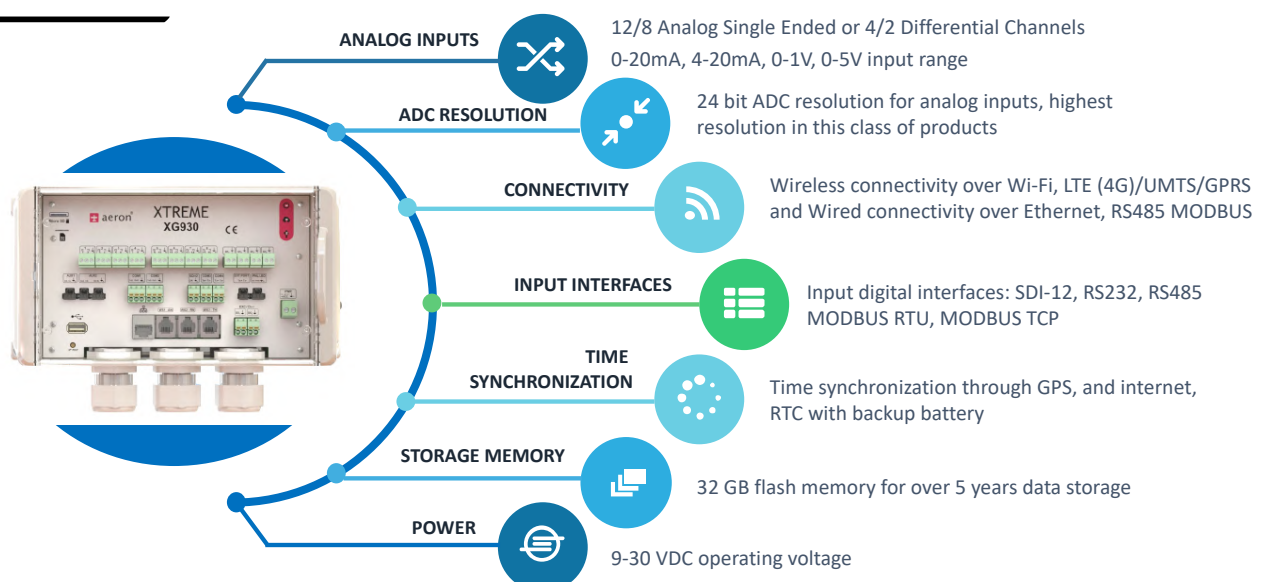
The Submerged version is used for the water in processing tanks, pond, and other submerged applications. The sensor unit is submerged in the water while the controller is installed near the tank.



STREAM F+

The Floating variant is a perfect choice for aquaculture, river water quality, lake, and other water bodies.

## SMART CONTROLLER















# PARAMETERS MEASURED

<b>pH</b> 0 – 14 Combined electrode	<b>COD<sub>eq</sub></b> 0 – 10,000 ppm UV visible spectroscopy / UV-254 spectral absorption	<b>TOC</b> 0 – 1,000 ppm UV visible spectroscopy / UV-254 spectral absorption	<b>BOD</b> 0 – 1,000 ppm UV spectral absorption
<b>Turbidity</b> 0 – 1,000 FAU IR Nephelometry	<b>Hardness</b> 0 – 1,000 ppm Ion selective electrode	<b>TSS</b> 0 – 3,700 ppm IR spectroscopy (870nm)	<b>Total Ammonical Nitrogen</b> 0 – 100 ppm Photometric
<b>Conductivity</b> 0.001 – 2,000 mS/cm Amperometric with 4 electrodes	<b>Chloride</b> 0 – 200 ppm Ion selective electrode	<b>Temperature</b> 0 – 60 °C Resistance thermometer	
<b>ORP</b> 0 – 2,000 mv Combined electrode	<b>Total ammonia</b> 0 – 20 ppm UV spectroscopy	<b>Manganese</b> 0 – 1,000 ppm Ion selective electrode	<b>Sulphate</b> 0 – 1,000 ppm Ion selective electrode
<b>Copper</b> 0 – 2,000 ppm Ion selective electrode	<b>Nitrite</b> 0 – 100 ppm Ion selective electrode	<b>DO</b> 0 – 100 ppm Optical / Galvanic	<b>Zinc</b> 0 – 1,000 ppm Ion selective electrode

# ADVANTAGES

Communication Options	Scalable Architecture	Alerts & Notification	Power Options
 Wi-Fi	 Add sensors	 Threshold breach	 Solar
 Cellular (4G)	 Remove sensors	 Health	 AC
 Ethernet			
 RS485 MODBUS			

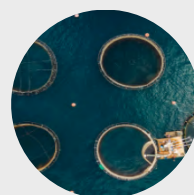
# APPLICATIONS



Effluent /  
Waste  
Treatment



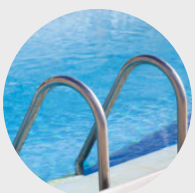
River / Lake /  
Surface Water  
Bodies



Aquaculture /  
Fish Farming



Sewage  
Treatment  
Plant



Swimming  
Pool



Cooling  
Tower





# XTREME - Smart Data Logger

XTREME 2 is a family of powerful smart data loggers which can acquire measurements from multiple sensors over various analog and digital interfaces and communicate the data securely to the cloud (Ethernet/ Wi-Fi / LTE) for real-time data monitoring.

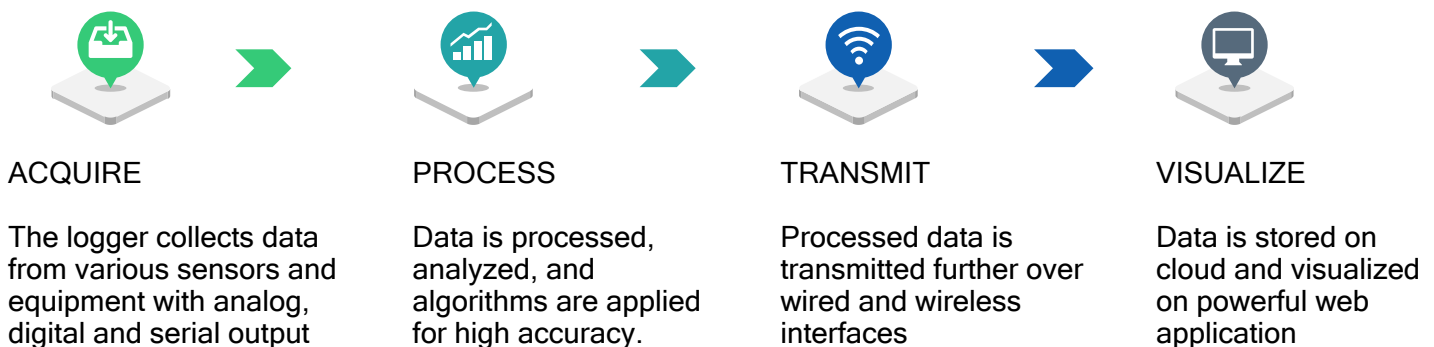
XTREME 2 is capable of sensor sampling at the rate of 1KHz with industry's leading ADC which has a resolution of 24 bit ensuring precision data acquisition. The device comes with inbuilt storage of 32GB.



## KEY FEATURES

- |  |   |
|--|---|
|  <b>High Precision</b><br>With industry leading 24 bit ADC data is acquired with high resolution and precision.            |  <b>Communication</b><br>Wireless communication over 4G/LTE, Wi-Fi, LORA, NB-IoT, Wired communication over Ethernet, RS485 MODBUS, RS232 |
|  <b>Versatile Inputs</b><br>Various analog (0-5V, 0-1V, 0-20mV, 4-20mA), digital and serial inputs (RS232, RS485, MODBUS) |  <b>GPS</b><br>Built-in GPS for precise time synchronisation and location information  |

## HOW IT WORKS



## APPLICATIONS



Weather station for solar & wind projects



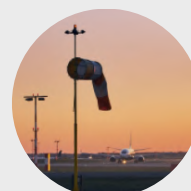
Remote asset monitoring & control



Water quality monitoring and control



Weather Research



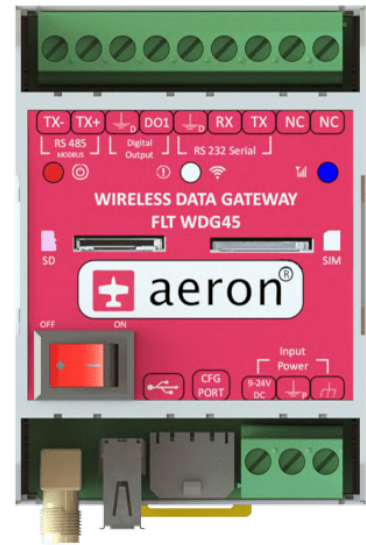
Airport Monitoring

# FLINT - Versatile IoT Gateway

FLINT WDG45 is a versatile, miniature, wireless IoT gateway that connects with various industrial devices such as PLCs, RTU, energy meters, gas meters, over RS485 MODBUS. The device collects and sends this data to the cloud server over GPRS. It also features an onboard SD card memory of 8GB for local data storage.

WDG45 has an in-built rechargeable backup battery. The device can be powered using a wide range (9-28V) DC supply. The device is compact and can be easily integrated into large OEM equipment so as to facilitate remote diagnostic and data acquisition for machine monitoring.

The WDG45 supports multiple protocols including TCP, HTTP, HTTPS, SMTP, FTP, and other customer IoT protocols.



## KEY FEATURES



### Local Storage

Onboard SD card memory of 8GB ensures that your data is not just sent to the cloud but also stored in the device safely



### Firmware Over-The-Air

Free software update over the air ensures that your logger is always up-to-date with the latest features and data processing filters.



### Onboard Battery

A low power consumption device with built-in battery ensures that you have uninterrupted data collection in your critical application



### Easy Configuration

User-friendly software allows easy configuration of the device for quick implementation of your critical Industrial IoT application.

## APPLICATIONS



Industrial internet of things



Remote asset monitoring & control



Industrial Equipment



Rooftop Solar Plants



Smart Agriculture



# IOT PRODUCT TIMELINE



Wireless Data Logger  
ACE DLG88  
2010



Wireless Data Logger  
ACE DLG89  
2014



Wireless  
Data Gateway  
FLINT WDG45  
2015



Smart Data Logger  
XTREME  
2019



Water Quality Monitoring System  
STREAM  
2019



Weather Station  
2012



Weather Sensors  
ALTAIR  
2020



Air Quality Monitoring System  
GRETA  
2018



“what you can measure is what you can control”



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