aeron®

WATER QUALITY MONITORING SYSTEM

Online Real Time Water Quality Monitoring System for Industrial Water Treatment Plants, Rivers, Lakes, Aqua Farming

ABOUT AERON

Aeron 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 10,000+ units

India's leading company in Inertial Systems

Water Quality Monitoring System

STREAM™

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 a 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

ANALOG INPUTS
12/8 Analog Single Ended or 4/2 Differential Channels
0-20mA, 4-20mA, 0-1V, 0-5V input range

ADC RESOLUTION
24 bit ADC resolution for analog inputs, highest resolution in this class of products

CONNECTIVITY
Wireless connectivity over Wi-Fi, LTE (4G)/UMTS/GPRS and Wired connectivity over Ethernet, RS485 MODBUS

INPUT INTERFACES
Input digital interfaces: SDI-12, RS232, RS485 MODBUS RTU, MODBUS TCP

TIME SYNCHRONIZATION
Time synchronization through GPS, and internet, RTC with backup battery

STORAGE MEMORY
8 GB flash memory for years of data storage

POWER
9-30 VDC operating voltage

PARAMETERS MEASURED

pH	0 – 14 Combined electrode	COD_{eq}	0 – 10,000 ppm UV visible spectroscopy / UV-254 spectral absorption	TOC	0 – 1,000 ppm UV visible spectroscopy / UV-254 spectral absorption	Temperature	0 – 60 °C Resistance thermometer
Turbidity	0 – 1,000 FAU IR Nephelometry	Hardness	0 – 1,000 ppm Ion selective electrode	TSS	0 – 3,700 ppm IR spectroscopy (870nm)	BOD	0 – 1,000 ppm UV spectral absorption
Conductivity	0.001 – 2,000 mS/cm Amperometric with 4 electrodes	Chloride	0 – 200 ppm Ion selective electrode	Total Ammonical Nitrogen	0 – 100 ppm Photometric	Flow Rate	15 – 1200 mm EM Flow Meter
ORP	0 – 2,000 mv Combined electrode	Total ammonia	0 – 20 ppm UV spectroscopy	Manganese	0 – 1,000 ppm Ion selective electrode	Sulphate	0 – 1,000 ppm Ion selective electrode
Copper	0 – 2,000 ppm Ion selective electrode	Nitrite	0 – 100 ppm Ion selective electrode	DO	0 – 100 ppm Optical / Galvanic	Zinc	0 – 1,000 ppm Ion selective electrode

ADVANTAGES

Communication Options

- Wi-Fi
- Ethernet
- Cellular (4G)
- RS485 MODBUS

Scalable Architecture

- Add sensors
- Remove sensors

Alerts & Notification

- Threshold breach
- Health

Power Options

- Solar
- AC

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 8 GB (expandable to 32 GB).

KEY FEATURES

High Precision

With industry leading 24 bit ADC data is acquired with high resolution and precision

Versatile Inputs

Various analog (0-5V, 0-1V, 0-20mV, 4-20mA), digital and serial inputs (RS232, RS485, MODBUS)

Communication

Wireless communication over 4G/LTE, Wi-Fi, LORA*, NB-IoT*, Wired communication over Ethernet, RS485 MODBUS, RS232

GPS

Built-in GPS for precise time synchronisation and location information

HOW IT WORKS

ACQUIRE

The logger collects data from various sensors and equipment with analog, digital and serial output

PROCESS

Data is processed, analyzed, and algorithms are applied for high accuracy.

TRANSMIT

Processed data is transmitted further over wired and wireless interfaces

VISUALIZE

Data is stored on cloud and visualized on powerful web application

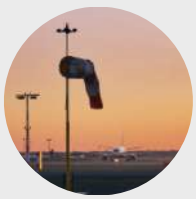
APPLICATIONS

Remote asset monitoring & control

Weather Research

Weather station for solar & wind projects

Water quality monitoring and control



Airport Monitoring

* Optional

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 Strorage

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

Air Quality Monitoring System
GRETA
2018

Air Quality Monitoring System
LAMINAR
2021

Weather Sensors
ALTAIR
2020

Aeron Systems Private Limited

Plot No. 7, Lane No. 5, Laxman Nagar, Balewadi,
Pune, Maharashtra 411045.
sales@aeronsystems.com | www.aeronsystems.com

V070621