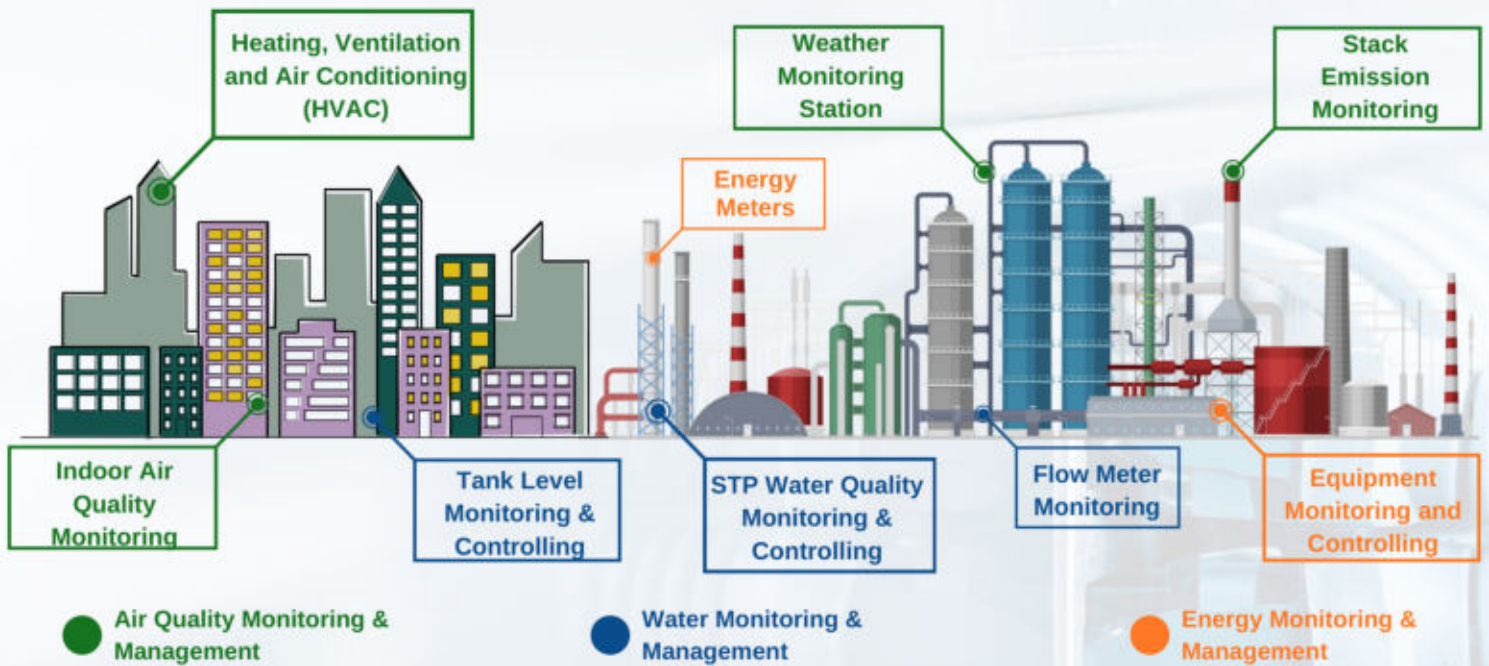




# FountLab

## EMBEDDING INTELLIGENCE



### Allwaters - Water & Wastewater Treatment

Bldg-11B/610, Lokmanyagar CHS, Nr.Datta Mandir, 213/1 Sadashiv Peth, Pune-30

[www.allwaters.in](http://www.allwaters.in)





## Table of Content

| Sr. No. | Particular                                          | Page No. |
|---------|-----------------------------------------------------|----------|
| 1       | About FountLab Solutions Pvt. Ltd.                  | 4        |
| 2       | About All Waters                                    |          |
| 3       | About AASMA IoT Cloud Platform                      | 5        |
| 4       | FL iBTU (Energy Management System)                  | 6        |
| 5       | FL i-AHU Controller (Air Handling Unit)             | 8        |
| 6       | FL i-CT Controller (Cooling Tower)                  | 12       |
| 7       | FL i-Chiller Controller                             | 14       |
| 8       | FL i-Pump Controller                                | 16       |
| 9       | FL iFanBox (HVLS/Industrial Fan)                    | 18       |
| 10      | FL-IAQ (Indoor Air Quality) Monitoring              | 20       |
| 11      | FL-OAQ (Outdoor Air Quality) Monitoring             | 22       |
| 12      | FL-WMS (Weather Monitoring System)                  | 24       |
| 13      | FL WQM (Water Quality Monitoring)                   | 28       |
| 14      | FL DO Monitoring and Controlling (Dissolved Oxygen) | 32       |
| 15      | FL iFM (Intelligent Flow Meter)                     | 34       |
| 16      | FL Water Level Monitoring                           | 36       |
| 17      | FL DG Monitoring                                    | 38       |
| 18      | FL Transformer Monitoring                           | 40       |
| 19      | FL iLightBox                                        | 42       |
| 20      | FL I/O Controller Series                            | 44       |
| 21      | FL I/O Modgate Series                               | 45       |
| 22      | FL Signal Converters                                | 47       |
|         | Contact Us                                          |          |



## ABOUT FOUNTLAB SOLUTIONS PVT. LTD.

FountLab is customer-centric, technology-driven and process-oriented company. We solve industry-specific problems by combining IoT technology, data science, and subject matter expertise.

Our mission at FountLab Solutions Pvt. Ltd. is to empower businesses to make informed decisions about their energy, water, and air quality by providing custom solutions and automation. We are dedicated to creating socially responsible buildings that prioritize low-carbon emissions, promote green energy practices, and encourage sustainable habits.

## ABOUT ALL WATERS

All waters expertise in providing sustainable, customer centric solutions for water and waste water treatment. AllWaters assist clients in improving their overall operational efficiency of STP/ETP and WTP plants through continuous data monitoring of critical parameters. Automatization of equipment's which results in major energy and costs savings.



We are an eclectic group of people who share a magical vision of the future.



Our in-house software, firmware & hardware teams work under one roof.



We prototype, design & build our products, allowing us to better service our customers.



**We Help  
Organizations  
to Make Better  
Energy  
Decisions**



We are a customer focused, technology driven and process-oriented company.



We support companies of tomorrow to turn into a data driven digital organization.



We solve industry-specific problems by combining IoT, big data and subject matter expertise.

## ABOUT AASMA IoT PLATFORM

It is designed to bring data together from any sensor, device or system. It is a fully integrated enterprise solution that has been specifically built for the Internet of Things. AASMA can connect any sensor or device and gather data in real-time. The platform provides a range of tools and features to manage and analyze the data, including dashboards, analytics, and reporting tools. This enables businesses to gain valuable insights from the data and make informed decisions.

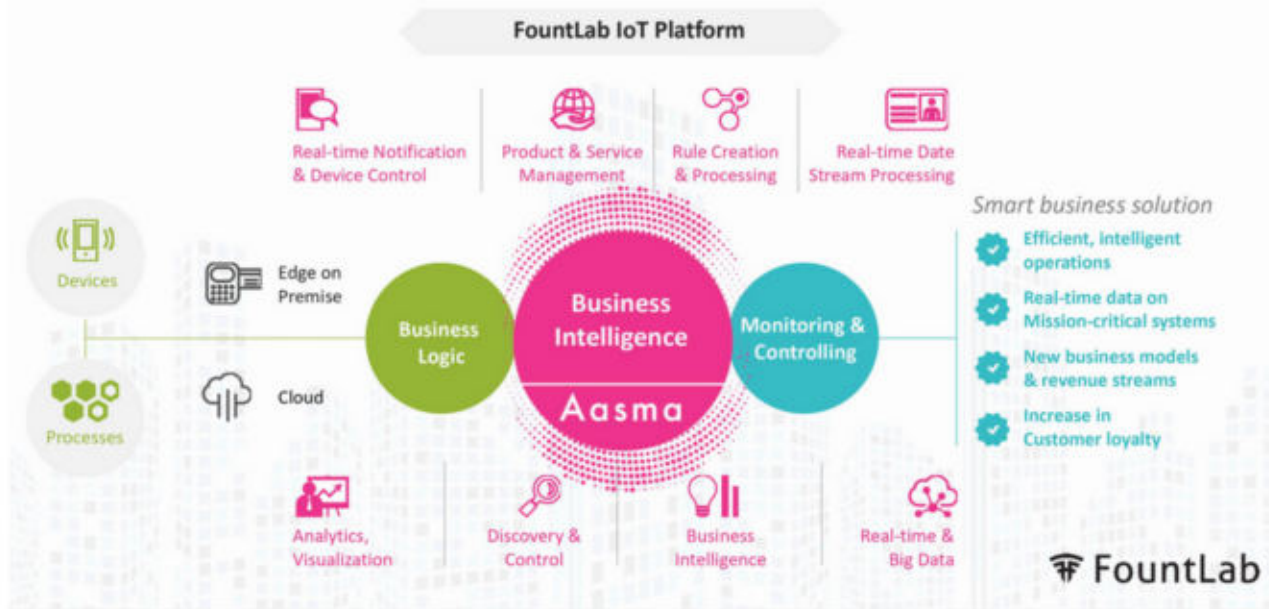
AASMA is designed to be user-friendly and easy to use, even for non-technical users. It also provides a range of APIs and SDKs, making it easy to integrate with other systems and platforms.



*The easiest way to **bring data together** from any sensor or device or system.*



*A fully **integrated enterprise solution** designed from the ground up for the Internet of things.*



***Packed full of features, Everything integrated for you to launch your IoT solution.***



#### **Powerful Infrastructure**

The Aasma infrastructure is designed for ultimate scalability and maximum redundancy.



#### **Secure and Encrypted**

Our entire platform is covered by a SSL/TLS stack to provide maximum security.



#### **Rules, Events and Triggers**

Wherever the events come from, our solution provides ease of setting custom rules to suit your workflow



**Aasma**  
IOT Platform

**FountLab**



#### **Analytics and Monitoring**

Examine and visualize data to gain valuable insights and improve operational efficiency.



#### **Device Management**

Register devices with unique identifiers for authentication. Create device groups and send software updates.



#### **Device and Data Agnostic**

Open architecture for incorporating a wide range of third-party software and devices..

# FL iBTU

## Product Details

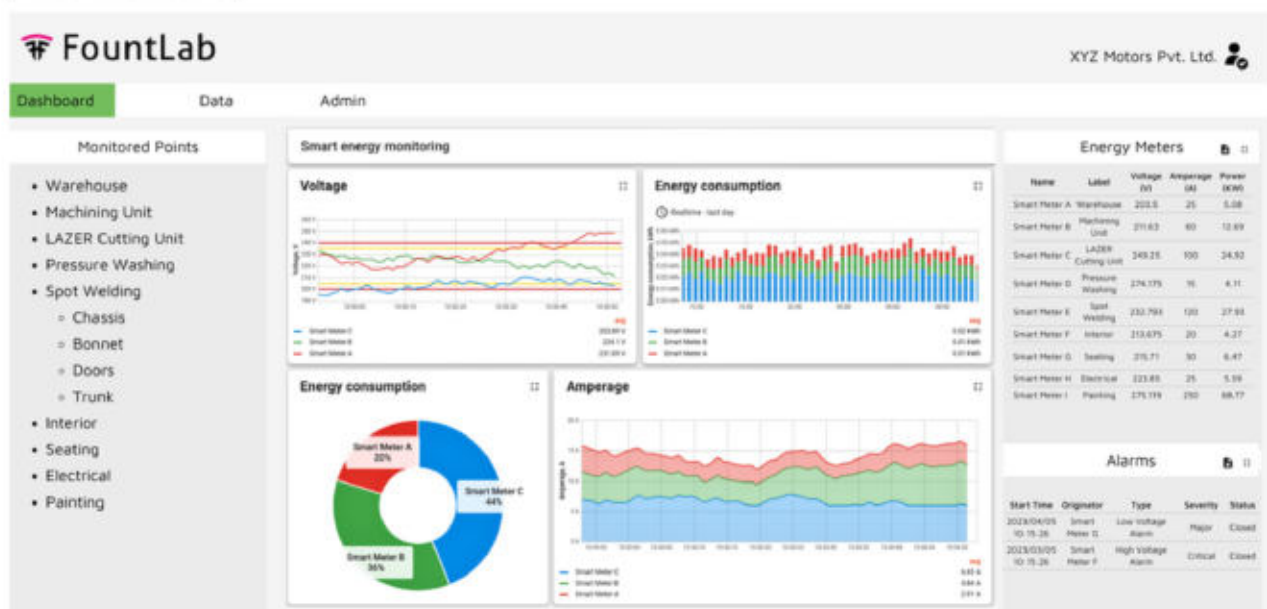
FountLab's Intelligent British Thermal Unit Monitoring System (iBTU) stands at the forefront of technological innovation, revolutionizing the way we manage heating and cooling energy. This cutting-edge solution provides users with precise and real-time insights into their energy consumption and efficiency, empowering them to make informed decisions that lead to cost reduction and enhanced operational effectiveness.

By offering a comprehensive understanding of heating and cooling patterns, the iBTU system enables users to optimize their energy usage, identify potential inefficiencies, and implement targeted improvements, ultimately contributing to sustainable and cost-effective energy management.



\*NOTE: Images shown are for representation purpose only, actual device may vary

## Dashboard





## Features



Non-intrusive  
System Installation  
& Commissioning



Cost Effective  
Scalable IoT Solution



Equipment-Level  
Monitoring



Cost-effective and  
accurate data analysis.



Compliance and  
Reporting



Easy to integrate in any  
system, old or new



Secure and  
reliable cloud  
platform



Hassle Free  
After Sale  
Services and AMC



Multiple connectivity  
options like Ethernet,  
GSM, Wi-Fi etc.

## Advantages



Energy  
Optimization



Scalable and Future-  
Ready



Integration with Smart  
Meters



Smart Predictive  
Maintenance



Cost Savings in energy  
and maintenance



Demand Response  
Capabilities

## List of Parameters Monitored

| Sr.No. | Parameter                    |
|--------|------------------------------|
| 1      | Real-Time Energy Consumption |
| 2      | Power Quality                |
| 3      | Energy Demand                |
| 4      | Energy Usage by Equipment    |
| 5      | Energy Efficiency Metrics    |
| 6      | Environmental Parameters     |
| 7      | Renewable Energy Integration |
| 8      | Water and Gas Consumption    |

## Applications / Use Cases



Commercial  
Buildings



Residential  
Societies



Hospitals and  
Health Centers



Manufacturing  
Plants



Government  
Infrastructures



# FL i-AHU Controller

## Product Details

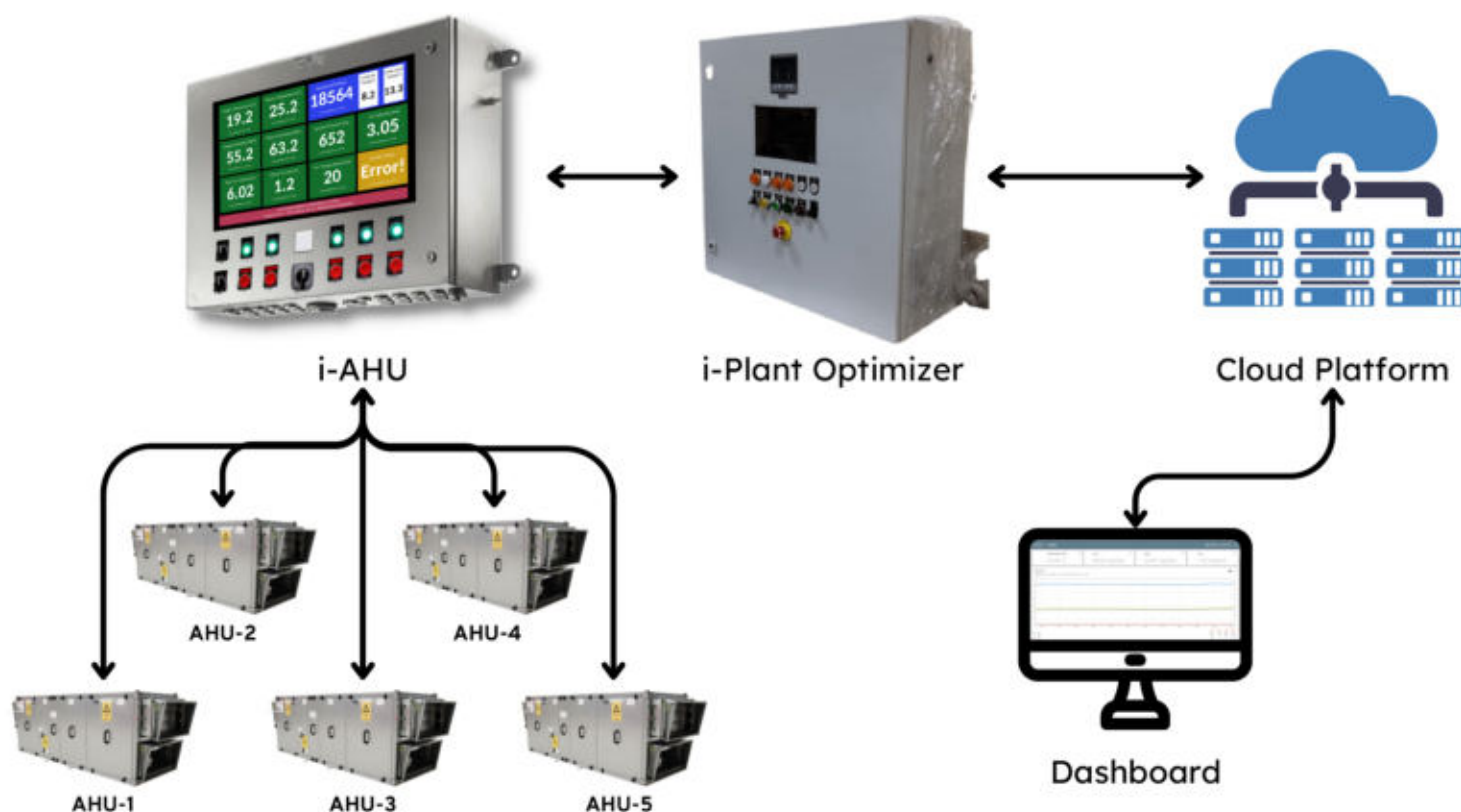
FountLab's intelligent Air Handling Unit Controller is a smart monitoring and controlling system designed to solve the problem of poor indoor air quality and poor energy optimizations using wireless sensors and a control unit, in real-time. The system adjusts the air handling unit as needed to maintain optimal indoor air quality levels.

The combination of IoT and mod gates can lead to substantial energy savings, lower operating costs, and reduced carbon footprint.



*\*NOTE: Images shown are for representation purpose only, actual device may vary*

## How It works?





## Features



Non-intrusive  
System Installation  
& Commissioning



Cost Effective  
Scalable IoT Solution



Reduced Energy  
Consumption



Customizable  
Thresholds and Alerts



Compliance and  
Reporting



Advance Wireless Sensor  
Integration



Secure and  
reliable cloud  
platform



Hassel Free  
After Sale  
Services and AMC



Multiple connectivity  
options like Ethernet,  
GSM, Wi-Fi etc.

## Advantages



Energy  
Optimization



Scalable and Future-  
Ready



Enhanced Occupant  
Comfort and Productivity



Smart Predictive  
Maintenance



Cost Savings in energy  
and maintenance



Sustainability and  
Reduced Carbon Footprint

## List of Sensors

| Sr.No. | Parameter                        | Range           | Resolution | Accuracy     |
|--------|----------------------------------|-----------------|------------|--------------|
| 1      | Air Temperature                  | 0-70 deg C      | 0.1 deg C  | +/-0.5 deg C |
| 2      | CHW and HW Temperature           | 0-150 deg C     | 0.1 deg C  | +/-0.5 deg C |
| 3      | Humidity                         | 0-95% RH        | 0.1 RH     | +/- 2% RH    |
| 4      | CO2                              | 400ppm-5000ppm  | 1ppm       | +/-10%       |
| 5      | PM10                             | 0-1000ug/m3     | 1ug/m3     | +/-15%       |
| 6      | PM2.5                            | 0-1000ug/m3     | 1ug/m3     | +/- 25%      |
| 7      | Differential Pressure (Duct)     | 0-1000 Pa       | 1Pa        | +/-1%        |
| 8      | Air Velocity Sensor              | 0-3500Pa        | 1Pa        | +/-1%        |
| 9      | BTU/Ultrasonic Water Flow Sensor | 0.22m/s - 14m/s | -          | +/-1%        |

## Applications / Use Cases



Commercial  
Buildings



Residential  
Societies



Pharmaceutical  
Industry



Manufacturing  
Plants



Malls and  
Shopping Centers



### FL-AVT (Air Velocity Transmitter)



- Duct Air Velocity Measurement
- Simple and secure installation
- Power supply: SELV 24VAC/DC $\pm$ 10%
- Output: 0-10V or 4-20mA
- Compact and fashionable design
- No drift and high accuracy
- Detection Range: 2-10m/s 2-20m/s 2-30m/s

### FL-ADHT (Air Duct Humidity & Temperature Sensor)



- Humidity and Temperature measurements for air ducts
- Simple and Secure Installation
- 0-10V or 4-20mA measuring signals
- Compact Size and Modern Design
- Humidity Sensing Range: 0% - 100% (+/- 0.3k)
- Temperature Sensing Range: -40C - 80C
- Power Supply: VDC18V - VDC30V (Max 2VA)

### FL-Duct CO2 Sensor

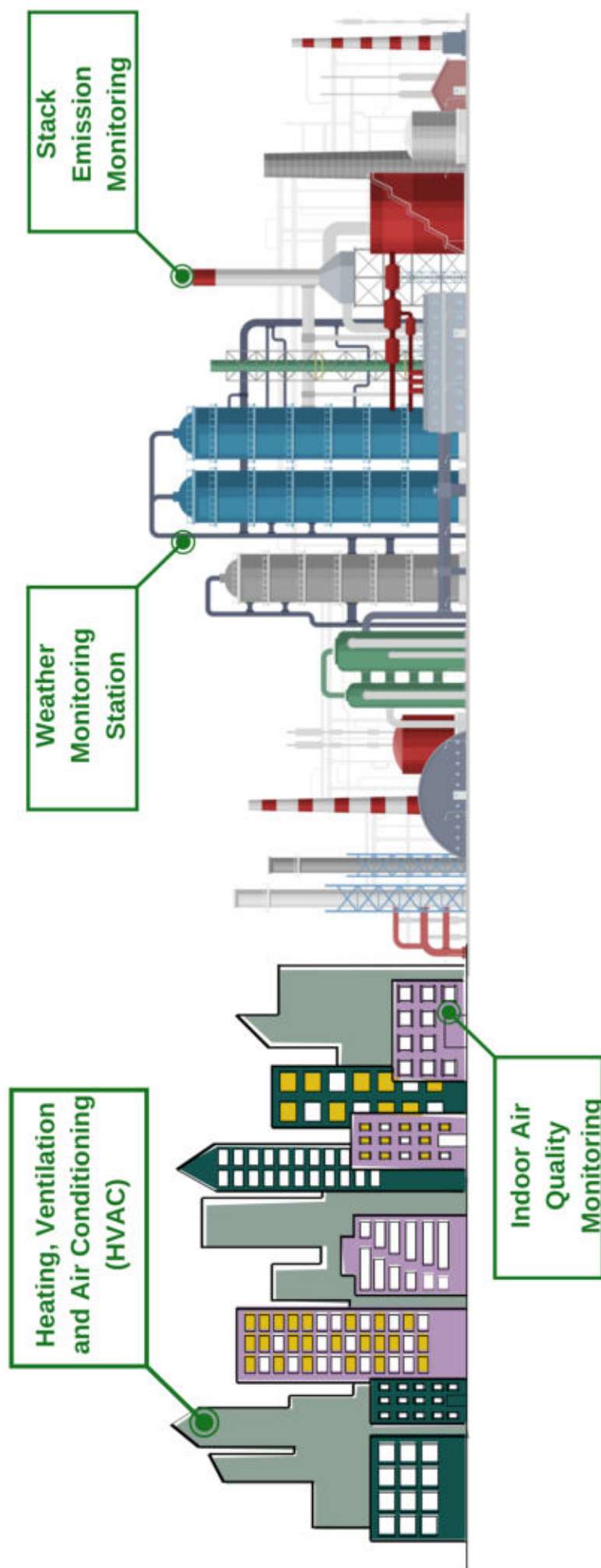


- Supply / Return Air CO2 Measurements for air ducts
- Simple and Secure Installation
- Compact Size and Modern Design
- CO2 Sensing Range: 0 ppm - 2000 ppm
- Measurement Accuracy: +/- 2% Reading Value
- Resolution: 1 ppm

### FL-DPS (Differential Pressure Sensor)



- Differential Pressure Sensor for clean room, boiler, dust collector, vacuum cleaner, power plant, air conditioning
- High sensitivity, high precision and strong overload resistance
- OUTPUT SIGNAL: 4-20mA
- Range: -2kpa ~+2Kpa, -1kpa ~+1Kpa, 0-500pa, 0-1kpa, 0-3kpa, 0-4kpa (optional)
- Measurement accuracy: 0.2%FS



● Air Quality Monitoring  
& Management



# FL i-CT Controller

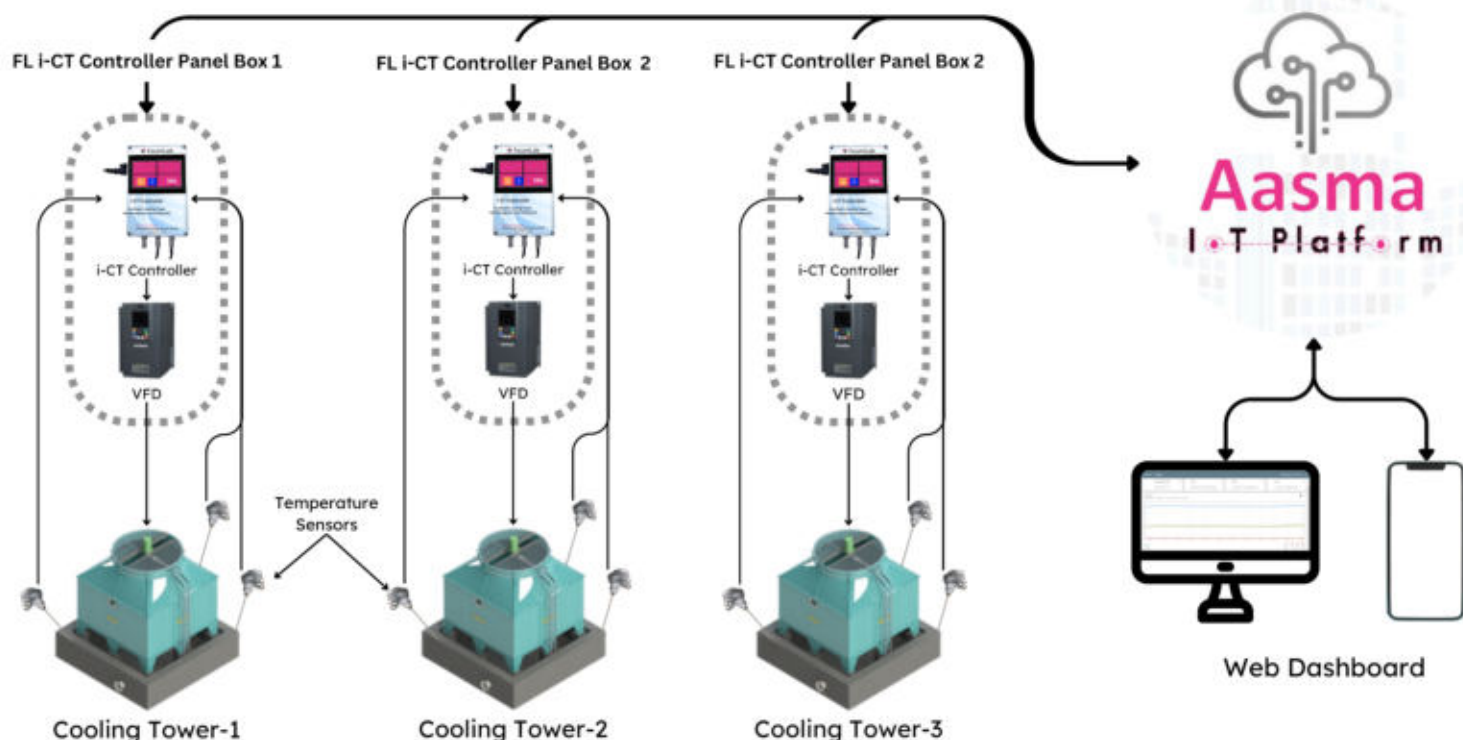
## Product Details

Introducing FL i-CT (Cooling Tower) Controller an advanced and intelligent solution revolutionizing the way cooling tower systems are monitored and controlled. With precise monitoring of water level, cooling tower fan performance, make-up water, and water quality, our controller ensures maximum efficiency, enhanced performance, and optimized energy usage. Proactive maintenance alerts and predictive recommendations streamline maintenance routines, while advanced analytics and reporting provide valuable insights for long-term efficiency gains.



## How It works?

\*NOTE: Images shown are for representation purpose only, actual device may vary

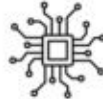




## Features



Non-intrusive  
Installation &  
Commissioning



Cost Effective  
Scalable IoT Solution



Reduced Energy  
Consumption



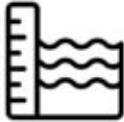
Customizable  
Thresholds and Alerts  
for controlling



Compliance, Analytics  
and Reporting



Multiple Cooling  
Tower Monitoring and  
controlling



Provision for sump  
Water Level  
monitoring



Optional Real-time  
monitoring of water  
quality (TDS)



Multiple connectivity  
options like Ethernet,  
GSM, Wi-Fi etc.

## Advantages



Energy  
Optimization



Maximized cooling  
tower system efficiency



Optimized Water  
Consumption



Smart Predictive  
Maintenance



Cost Savings in energy  
and maintenance



Sustainability and  
Reduced Carbon Footprint

## Monitoring and Controlling of Cooling Tower

| Sr.No. | Description                                                                                                           |
|--------|-----------------------------------------------------------------------------------------------------------------------|
| 1      | Monitoring of Wet Bulb and Dry Bulb Temperature at the Louvers                                                        |
| 2      | Monitoring of Fan Power Consumption (VFD/Electric Meter)                                                              |
| 3      | Monitoring of Water Temperature at the Inlet Header and Sump (Basin)                                                  |
| 4      | Monitoring of Water Total Dissolved Solids (TDS) (Optional)                                                           |
| 5      | Monitoring of Sump Water Level (Optional)                                                                             |
| 6      | Controlling of Cooling Tower Fan based on Sump Water Temperature with Manual Setting of Min. & Max. Temperature Range |
| 7      | Cooling Tower Effectiveness Measurement (Efficiency)                                                                  |

## Applications / Use Cases



Commercial  
Buildings



Hotels and  
Hospitals



Pharmaceutical  
Industry



Manufacturing  
Plants



Malls and  
Shopping Centers



# FL i-Chiller Con

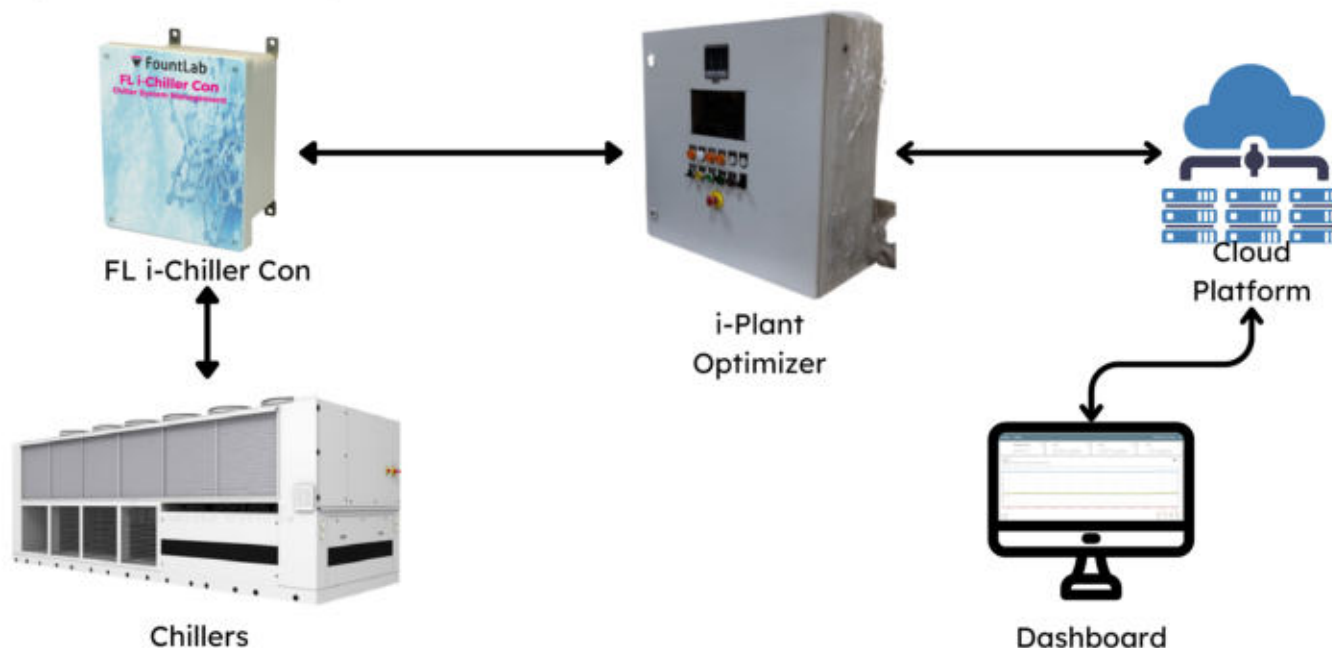
## Product Details

Introducing FL i-Chiller Controller, powered by Aasma IoT Platform, a game-changing solution for chiller system management. With its comprehensive monitoring of water level, cooling tower fan performance, make-up water, and water quality, our intelligent controller ensures peak chiller operation. Coupled with the powerful capabilities of Aasma IoT Platform, it delivers real-time insights, advanced analytics, and remote control options, empowering you to optimize efficiency, reduce energy consumption, and enhance performance



\*NOTE: Images shown are for representation purpose only, actual device may vary

## How It works?





## Features



Non-intrusive  
System Installation  
& Commissioning



Cost Effective  
Scalable IoT Solution



Reduced Energy  
Consumption



Customizable  
Thresholds and Alerts



Compliance and  
Reporting



Advance Wireless Sensor  
Integration



Secure and  
reliable cloud  
platform



Hassel Free  
After Sale  
Services and AMC



Multiple connectivity  
options like Ethernet,  
GSM, Wi-Fi etc.

## Advantages



Energy  
Optimization



Scalable and Future-  
Ready



Reduced Water  
Consumption



Smart Predictive  
Maintenance



Cost Savings in energy  
and maintenance



Sustainability and  
Reduced Carbon Footprint

## List of Parameters Monitored

| Sr.No. | Parameter                   |
|--------|-----------------------------|
| 1      | Temperature                 |
| 2      | Differential pressure       |
| 3      | Water Flow rate             |
| 4      | Compressor speed            |
| 5      | Condenser water temperature |
| 6      | Evaporator pressure         |
| 7      | Refrigerant flow rate       |

## Applications / Use Cases



Commercial  
Buildings



Residential  
Societies



Pharmaceutical  
Industry



Manufacturing  
Plants



Malls and  
Shopping Centers



# FL i-Pump Controller

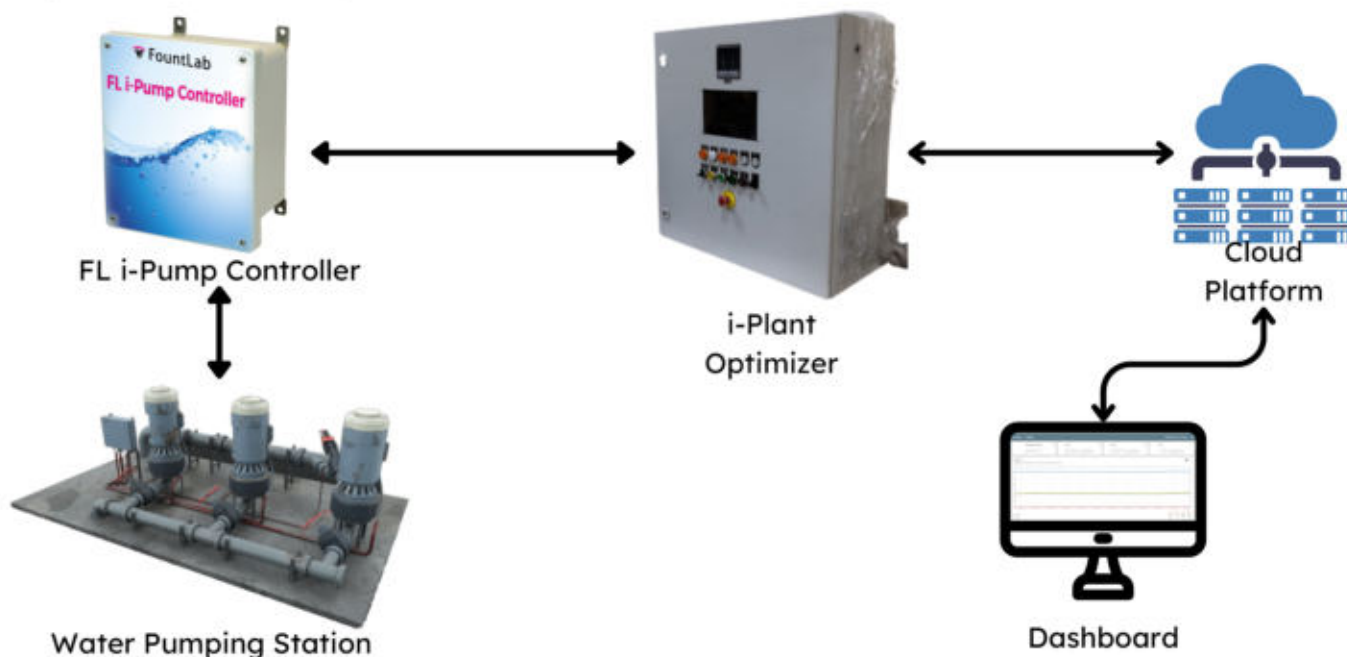
## Product Details

Introducing FL i-Pump Controller, the pinnacle of technological advancement in pump system management. Our cutting-edge solution utilizes advanced monitoring capabilities to provide precise control and optimization of crucial parameters such as sequencing, primary flow and head, secondary flow and head, and condenser flow and head. With state-of-the-art algorithms and real-time data analysis, FL i-Pump Controller ensures unparalleled performance, energy efficiency, and predictive maintenance.



*\*NOTE: Images shown are for representation purpose only, actual device may vary*

## How It works?





## Features



Non-intrusive  
System Installation  
& Commissioning



Cost Effective  
Scalable IoT Solution



Reduced Energy  
Consumption



Customizable  
Thresholds and Alerts



Compliance and  
Reporting



Advance Wireless Sensor  
Integration



Secure and  
reliable cloud  
platform



Hassel Free  
After Sale  
Services and AMC



Multiple connectivity  
options like Ethernet,  
GSM, Wi-Fi etc.

## Advantages



Energy  
Optimization



Scalable and Future-  
Ready



Reduced Water  
Consumption



Smart Predictive  
Maintenance



Cost Savings in energy  
and maintenance



Sustainability and  
Reduced Carbon Footprint

## List of Parameters Monitored

| Sr.No. | Parameter               |
|--------|-------------------------|
| 1      | Sequencing              |
| 2      | Primary Flow and Head   |
| 3      | Secondary Flow and Head |
| 4      | Condenser Flow and Head |

## Applications / Use Cases



Commercial  
Buildings



Residential  
Societies



Pharmaceutical  
Industry



Manufacturing  
Plants



Malls and  
Shopping Centers



# FL iFanBox

## Product Details

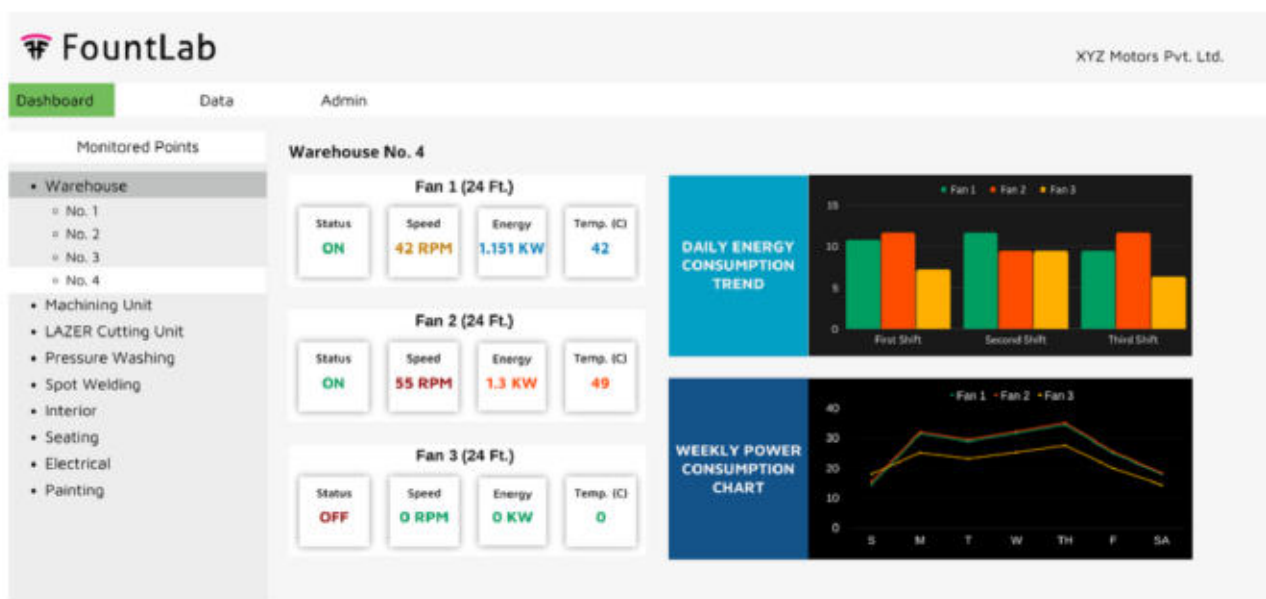
iFanBox is an Intelligent HVLS / Industrial Fan Monitor and Controlling System that offers efficient control and monitoring of High Volume Low Speed (HVLS) fans through IoT technology. Designed to improve the performance of large commercial and industrial spaces, iFanBox allows you to take control of your HVLS fans remotely, saving time, money, and energy.

With its real-time monitoring, automatic control, customizable settings, remote access, and easy installation, iFanBox is the ideal solution for businesses looking to improve their energy efficiency, comfort, and bottom line.



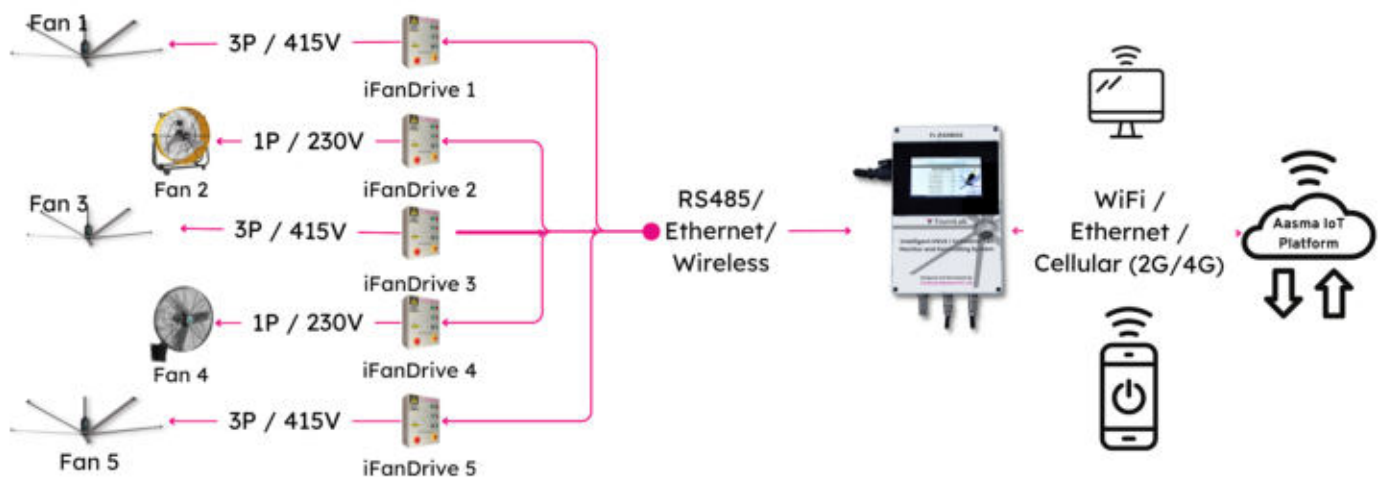
\*NOTE: Images shown are for representation purpose only, actual device may vary

## Dashboard





## How It works?



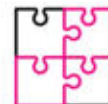
## Features



24x7 real-time monitoring with controlling



Predictive and Preventive Maintenance



Compatibility with Every Major Inverter



Touchscreen HMI for ease of manual control



Energy Consumption Management



Comfortable Environmental Control



Secure and reliable cloud platform



Hassle Free After Sale Services and AMC



Multiple connectivity options like Ethernet, GSM, Wi-Fi etc.

## Advantages



Energy Optimization



Scalable and Future-Ready



Enhanced Occupant Comfort and Productivity



Smart Predictive Maintenance



Cost Savings in energy and maintenance



Sustainability and Reduced Carbon Footprint

## Applications / Use Cases



Commercial Buildings



Workshops and Warehouses



Pharmaceutical Industry



Manufacturing Plants



Malls and Shopping Centers



# FL-IAQ

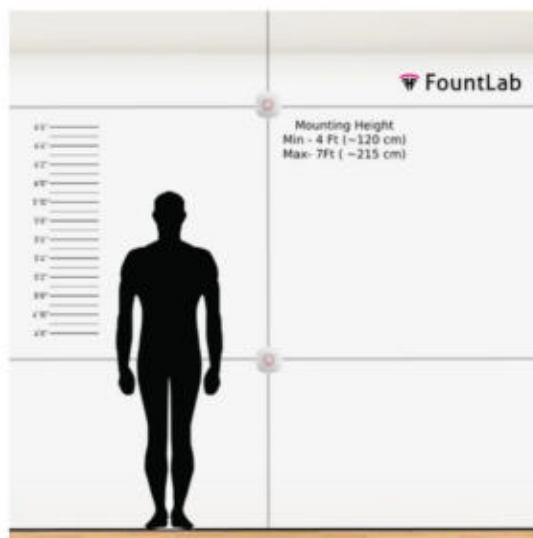
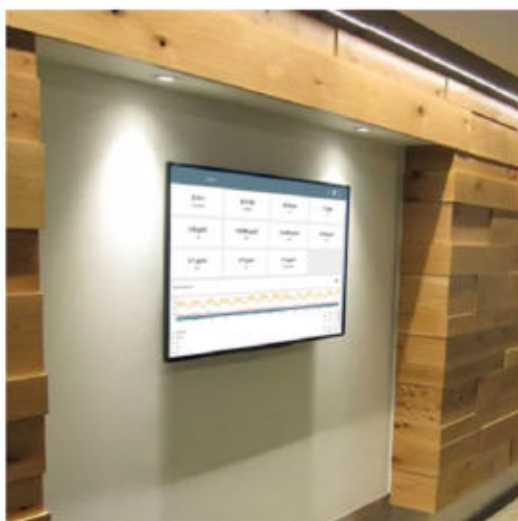
## Product Details

FL-IAQ (Indoor Air Quality) Monitoring, is a single Point Solution to monitor and control Indoor Air Quality With 24\*7 Real-time Data Monitoring & Multiple Sensors using Cloud Services.

Monitoring of essential air quality parameters like Temperature, Humidity, CO2, CO, O3, PM10, PM2.5, PM1, Total Volatile Organic Compounds (TVOCs), NO2, SO2, Formaldehyde (HCHO). You can also display the ambient Indoor Air Quality Live on Display.



*\*NOTE: Images shown are for representation purpose only, actual device may vary*



## How It works?



FL IAQ



Cloud Platform



Dashboard



## Features



Non-intrusive  
System Installation  
& Commissioning



Cost Effective  
Scalable IoT Solution



Reduced Energy  
Consumption



Customizable  
Thresholds and Alerts



Compliance and  
Reporting



Advance Industrial Sensor  
Integration



Secure and  
reliable cloud  
platform



Hassel Free  
After Sale  
Services and AMC



Multiple connectivity  
options like Ethernet,  
GSM, Wi-Fi etc.

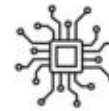
## Advantages



Health and Well-  
being of occupants



Can Cover 500 sq.ft.  
approx. using single  
device



Can Monitor Temperature,  
CO<sub>2</sub>, CO, Humidity, PM<sub>10</sub>,  
PM<sub>2.5</sub> sensors etc.



Early Detection of  
Issues



Scalable and Future-  
Ready



Enhanced Occupant  
Comfort and Productivity

## List of Sensors

| Sr.No. | Parameter          | Range                   | Resolution         | Measurement type | Accuracy   |
|--------|--------------------|-------------------------|--------------------|------------------|------------|
| 1      | PM <sub>2.5</sub>  | 0-1000ug/m <sup>3</sup> | 1ug/m <sup>3</sup> | Laser scattering | +/-15%     |
| 2      | PM <sub>10.0</sub> | 0-1000ug/m <sup>3</sup> | 1ug/m <sup>3</sup> | Laser scattering | +/- 25%    |
| 3      | Temperature        | 0-70 deg C              | 0.01deg C          | MEMS             | +/-1 deg C |
| 4      | Humidity           | 0-95% RH                | 0.1 RH             | MEMS             | +/- 5% RH  |
| 5      | CO <sub>2</sub>    | 400ppm-5000ppm          | 1ppm               | NDIR             | +/-10%     |
| 6      | CO                 | 0ppm to 500ppm          | 0.1ppm             | Electrochemical  | +/-10%     |

## Applications / Use Cases



Commercial  
Buildings



Residential  
Societies



Hospitals and  
Health Centers



Manufacturing  
Plants



Malls and  
Shopping Centers



# FL-OAQ

## Product Details

FountLab's Outdoor Air Quality Monitoring system is designed to provide real-time data on a wide range of atmospheric conditions, including temperature, humidity, pollutants like PM10 & PM2.5, CO and Carbon Dioxide (CO<sub>2</sub>). With a network of sensors installed in the device, we are able to gather and process accurate and comprehensive air quality data to give you the most up-to-date information available.

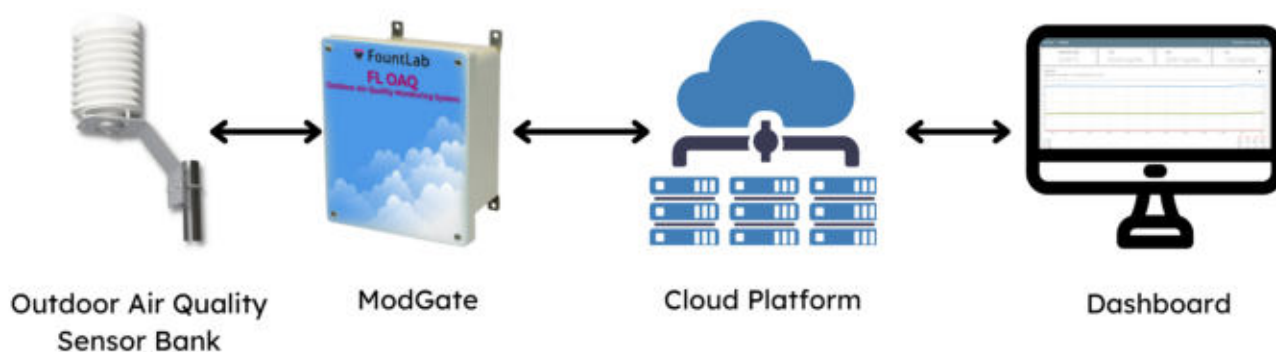
You can access the data through our website or mobile app, which features an intuitive interface and easy-to-read visualizations.



*\*NOTE: Images shown are for representation purpose only, actual device may vary*



## How It works?





## Features



Non-intrusive  
System Installation  
& Commissioning



Cost Effective  
Scalable IoT Solution



IP65 Rated Weather  
Proof Enclosure



Customizable  
Thresholds and Alerts



Compliance and  
Reporting



Advance Industrial Sensor  
Integration



Secure and  
reliable cloud  
platform



Hassel Free  
After Sale  
Services and AMC



Multiple connectivity  
options like Ethernet,  
GSM, Wi-Fi etc.

## Advantages



Public Health  
Protection



Environmental Impact  
Assessment



Policy Development and  
Regulation



Early Detection of  
Issues



Scalable and Future-  
Ready



Climate Change  
Mitigation

## List of Sensors

| Sr.No. | Parameter       | Range                   | Resolution         | Measurement type | Accuracy   |
|--------|-----------------|-------------------------|--------------------|------------------|------------|
| 1      | PM2.5           | 0-1000ug/m <sup>3</sup> | 1ug/m <sup>3</sup> | Laser scattering | +/-15%     |
| 2      | PM10.0          | 0-1000ug/m <sup>3</sup> | 1ug/m <sup>3</sup> | Laser scattering | +/- 25%    |
| 3      | Temperature     | 0-70 deg C              | 0.01deg C          | MEMS             | +/-1 deg C |
| 4      | Humidity        | 0-95% RH                | 0.1 RH             | MEMS             | +/- 5% RH  |
| 5      | CO <sub>2</sub> | 400ppm-5000ppm          | 1ppm               | NDIR             | +/-10%     |
| 6      | CO              | 0ppm to 500ppm          | 0.1ppm             | Electrochemical  | +/-10%     |

## Applications / Use Cases



Commercial  
Buildings



Residential  
Societies



Hospitals and  
Health Centers



Manufacturing  
Plants



Malls and  
Shopping Centers



# FL-WMS

## Product Details

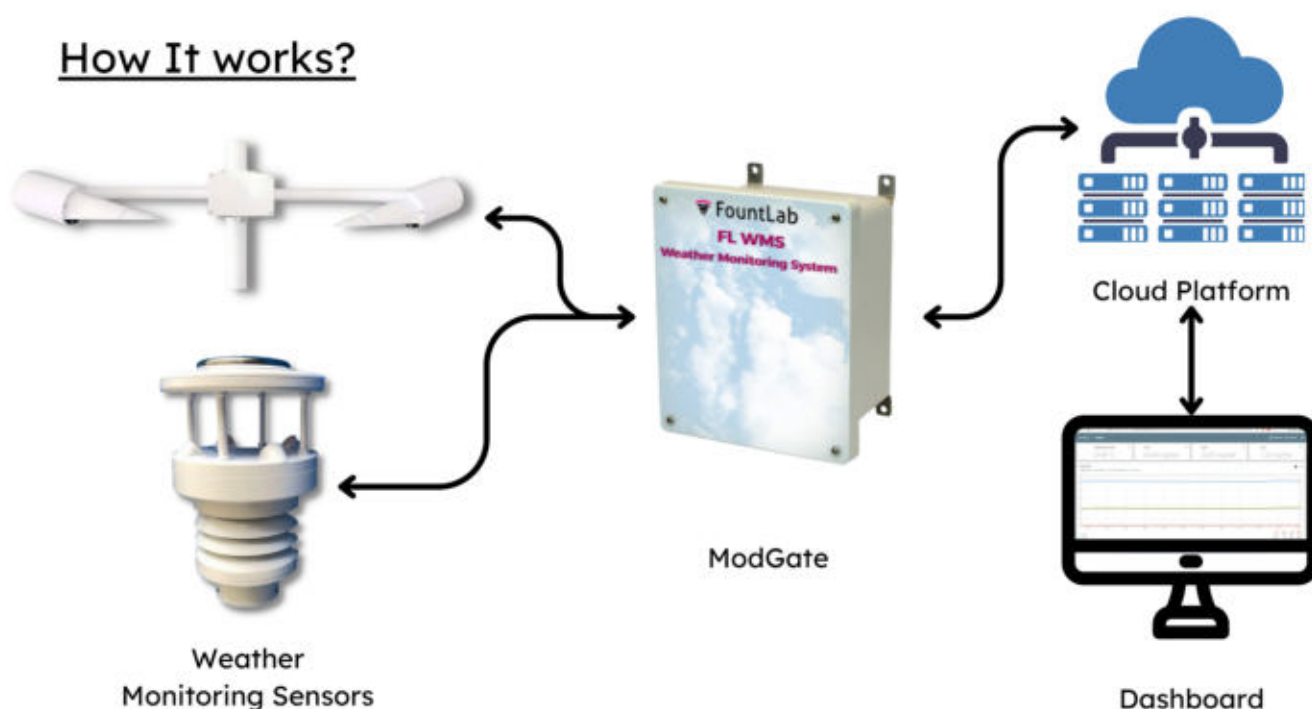
FountLab's Weather Monitoring System, is a one-stop source for accurate and up-to-date weather information. Our system is designed to provide real-time data on a wide range of atmospheric conditions, including temperature, humidity, air pressure, wind speed and direction, and more. With a network of sensors installed in the device, we are able to gather and process accurate and comprehensive weather data to give you the most up-to-date information available.

The system is designed to withstand the harshest of the weather and provide reliable data consistently



*\*NOTE: Images shown are for representation purpose only, actual device may vary*

## How It works?





## Features



Non-intrusive  
System Installation  
& Commissioning



Cost Effective  
Scalable IoT Solution



IP65 Rated Weather  
Proof Enclosure



Customizable  
Thresholds and Alerts



Compliance and  
Reporting



Advance Industrial Sensor  
Integration



Secure and  
reliable cloud  
platform



Hassel Free  
After Sale  
Services and AMC



Multiple connectivity  
options like Ethernet,  
GSM, Wi-Fi etc.

## Advantages



Public Health  
Protection



Environmental Impact  
Assessment



Policy Development and  
Regulation



Early Detection of  
Issues



Scalable and Future-  
Ready



Climate Change  
Mitigation

## List of Sensors

| Sr.No. | Parameters           | Range            | Resolution    | Accuracy          |
|--------|----------------------|------------------|---------------|-------------------|
| 1      | Temperature          | -40 to 70 deg C  | 0.1 deg C     | +/- 0.3 deg C     |
| 2      | Visibility           | 5m to 30000m     | 10% (<10000m) | +/- 15% (>10000m) |
| 3      | Realtive Humidity    | 0 to 100% RH     | 0.1 % RH      | +/- 2% RH         |
| 4      | Atmospheric pressure | 10hPa to 1100hPa | 0.1hPa        | +/- 0.5 hPa       |
| 5      | Wind direction       | 0 to 359.9 deg   | 0.1 deg       | +/- 3 deg         |
| 6      | Wind Speed           | 0 to 70 m/secs   | 0.05m/sec     | +/- 2%            |
| 7      | Rainfall             | 0 to 6553mm      | 0.01mm        | +/-4 %            |

## Applications / Use Cases



Commercial  
Buildings



Residential  
Societies



Hospitals and  
Health Centers



Manufacturing  
Plants



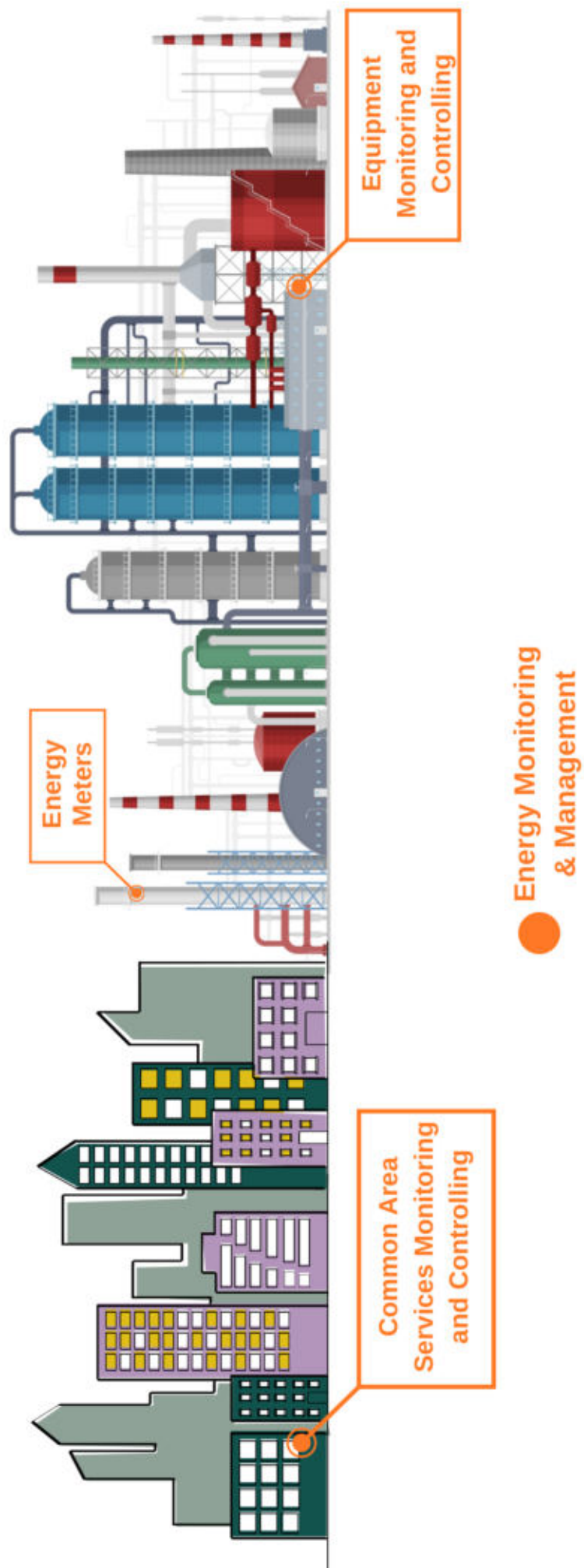
Government  
Infrastructures



## System Specification

|           |                        |                                                                                    |                        |
|-----------|------------------------|------------------------------------------------------------------------------------|------------------------|
| Model     | FLZMS-V1LI             |  |                        |
| Power     | 12V/24V DC             |                                                                                    |                        |
| Sensors   | Atmospheric Visibility |                                                                                    |                        |
| Interface | RS485                  | Protection                                                                         | IP65                   |
| Weight    | <= 4KG                 | Dimension                                                                          | 70.2cm x 23.8cm x 10cm |
| Protocols | Proprietary            | Average Power Consumption                                                          | <140mA@12V             |

|                  |                                                                                     |                                                                                       |                      |
|------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------|
| <b>Model</b>     | FLXA100-06                                                                          |  |                      |
| <b>Power</b>     | 12V/24V DC                                                                          |                                                                                       |                      |
| <b>Sensors</b>   | Wind Speed and Direction, Air Pressure, Temperature, Relative Humidity and Rainfall |                                                                                       |                      |
| <b>Interface</b> | RS485, RS232                                                                        | <b>Protection</b>                                                                     | IP65                 |
| <b>Weight</b>    | <= 2.5KG                                                                            | <b>Dimension</b>                                                                      | 16cm x 16cm x 26.3cm |
| <b>Protocols</b> | MODBUS                                                                              | <b>Average Power Consumption</b>                                                      | 15mA@12V             |





# FL-WQM

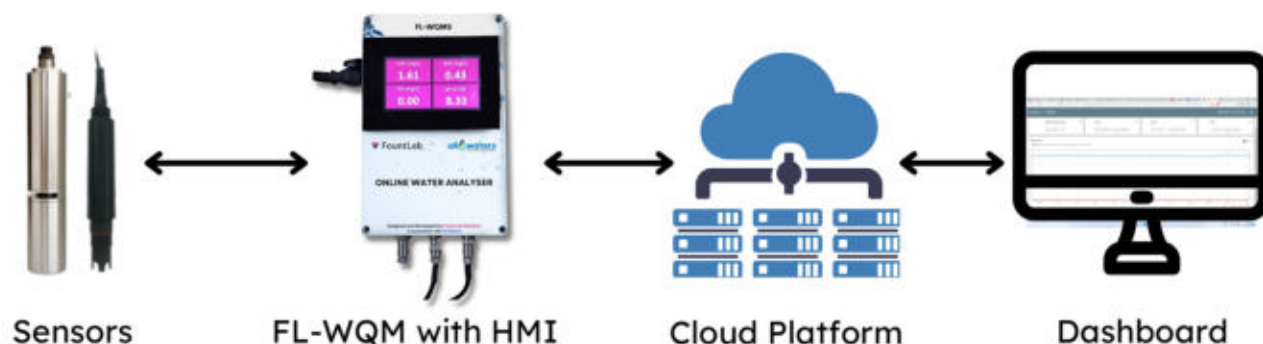
## Product Details

FL-WQM (Water Quality Monitoring), a smart water quality monitoring and management system. It allows Sewage and Effluent Treatment Plants to increase operational efficiency and provide optimum output by 24x7 In-line Data Monitoring. Needless to mention water is among the five basic needs of life on planet earth and FL-WQM allows you to be a responsible consumer.

FL-WQMS are all supplied with an easy-to-use 4.3" capacitive touch screen display Human Machine Interface (HMI).



## How It works?



The sensors and components are designed to effectively manage the safety, health and productivity of every system and thus the organization.



## Features



24x7 real-time monitoring of key parameters.



14+ parameters can be monitored using one single device



Smart access to remote data with an interactive dashboard.



Best-in-class service and support



Fully customizable device configuration and services



Cost-effective and accurate data for further analysis.



Secure and reliable cloud platform



Hassel Free After Sale Services and AMC



Multiple connectivity options like Ethernet, GSM, Wi-Fi etc.

## Advantages



Water Quality Assessment



Improved water quality



Reduced pollution



Improved Public health



Environmental Protection



Water Management and Compliance

## List of Sensors

| Sr.No. | Parameter   | Range      | Resolution | Calibrated         | Measurement Type | Accuracy  |
|--------|-------------|------------|------------|--------------------|------------------|-----------|
| 1      | pH          | 0-14       | 0.01       | Factory Calibrated | Inline           | 0.01      |
| 2      | TSS         | 0-600mg/L  | 0.01mg/L   |                    | Inline           | 0.1mg/L   |
| 3      | BOD         | 0-300mg/L  | 0.01mg/L   |                    | Inline           | 0.1mg/L   |
| 4      | COD         | 0-500mg/L  | 0.01mg/L   |                    | Inline           | 0.1mg/L   |
| 5      | Temperature | 0-80 deg C | 0.1deg C   |                    | Inline           | 0.5 deg C |

## Applications / Use Cases



Commercial Buildings



Residential Societies



Sewage / Effluent Treatment Plant



Manufacturing Plants



Pharmaceutical Industry



## Online COD, BOD & TSS Sensor



### Specifications

Power Supply: 12V DC

Output: RS-485 / Modbus

Housing Material: Stainless Steel /

Titanium

### Cable Information

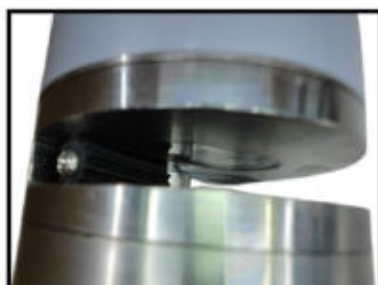
Red - VCC

Black - GND

Yellow - RS485-A

White - RS485-B

| Sr.No. | Parameter | Range      | Resolution | Calibrated         | Measurement Type | Accuracy |
|--------|-----------|------------|------------|--------------------|------------------|----------|
| 1      | TSS       | 0-1000mg/L | 0.01mg/L   | Factory Calibrated | Inline           | 0.1mg/L  |
| 2      | BOD       | 0-500mg/L  | 0.01mg/L   |                    | Inline           | 0.1mg/L  |
| 3      | COD       | 0-1000mg/L | 0.01mg/L   |                    | Inline           | 0.1mg/L  |



**Automatic Sensor Cleaning**

## Online pH Sensor



### Specifications

Range: 0-14

Power Supply: 6-12V DC

Output: RS-485 / Modbus

Housing Material: POM

### Cable Information

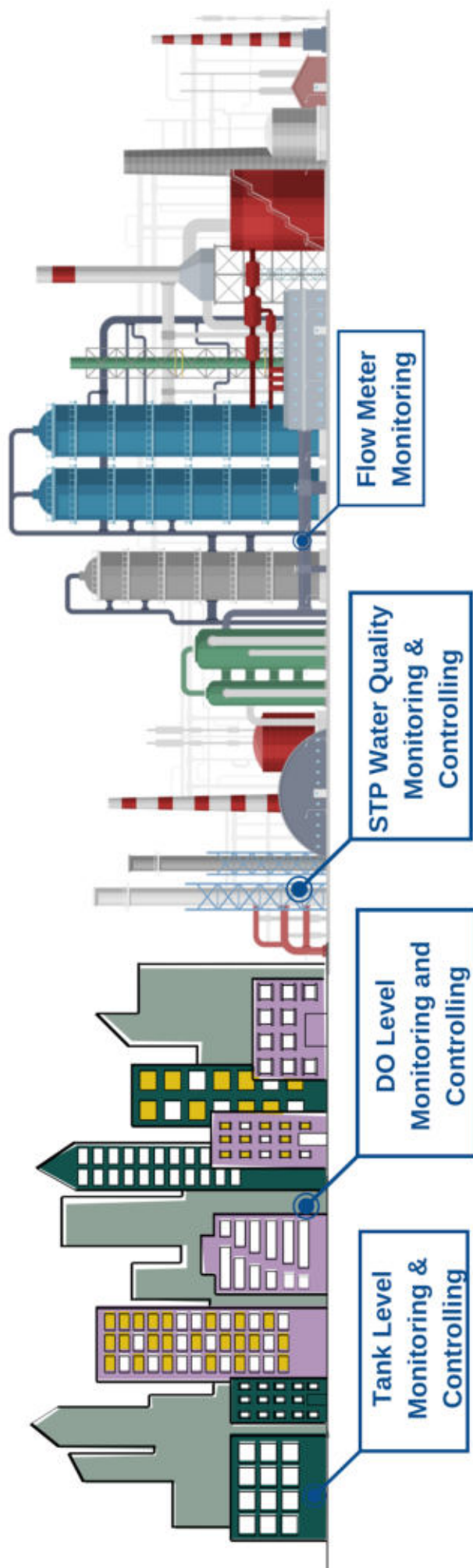
Red - VCC

Black - GND

Yellow - RS485-A

White - RS485-B

| Sr.No. | Parameter   | Range      | Resolution | Calibrated         | Measurement Type | Accuracy  |
|--------|-------------|------------|------------|--------------------|------------------|-----------|
| 1      | pH          | 0-14       | 0.01       | Factory Calibrated | Inline           | 0.01      |
| 2      | Temperature | 0-80 deg C | 0.1deg C   |                    | Inline           | 0.5 deg C |



## ● Water Monitoring & Management



# FL DO Monitoring and Controlling

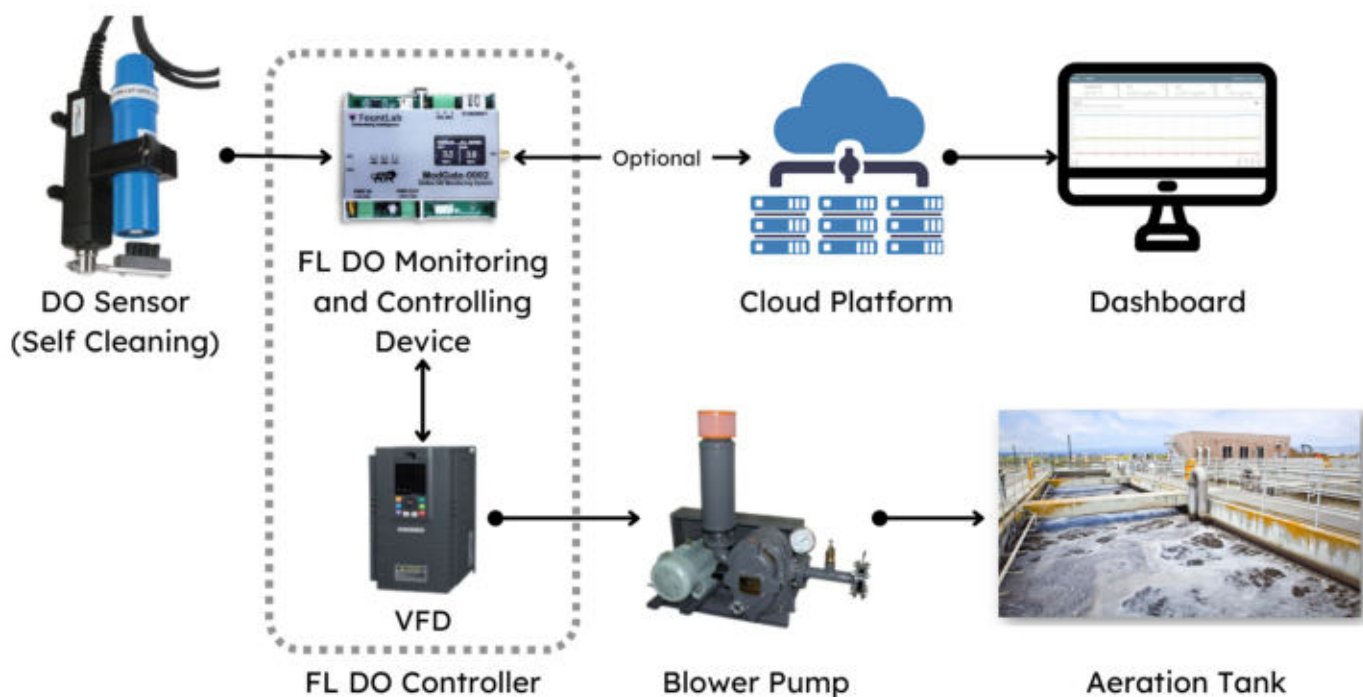
## Product Details

FL DO Monitoring is a cutting-edge solution that revolutionizes the way dissolved oxygen (DO) levels are monitored and managed in water bodies. Our innovative technology offers real-time monitoring and control capabilities, allowing for precise and efficient optimization of DO levels to ensure optimal water quality.

Our solution integrates with automated oxygenation systems, allowing for dynamic adjustment of DO levels based on real-time data. By optimizing oxygenation processes, FL DO Monitoring improves the overall health of water bodies.



## How It works?





## Features



24x7 real-time monitoring



Cost Effective Scalable IoT Solution



Reduced Energy Consumption



Enhanced Water Quality



Compliance and Reporting



Automated Oxygenation Control



Secure and reliable cloud platform



Hassle Free After Sale Services and AMC



Multiple connectivity options like Ethernet, GSM, Wi-Fi etc.

## Advantages



Water Quality Assessment



Improved water quality



Data-driven Decision Making



Cost Savings



Timely Intervention



Water Management and Compliance

## List of Sensors

| Sr.No. | Parameter            | Range        | Resolution | Measurement Type | Accuracy  |
|--------|----------------------|--------------|------------|------------------|-----------|
| 1      | Dissolved Oxygen(DO) | 0 to 20 mg/L | 0.01 mg/L  | Luminescent      | ±0.5 mg/L |

## Applications / Use Cases



Commercial Buildings



Residential Societies



Sewage / Effluent Treatment Plant



Manufacturing Plants



Fresh Water Bodies



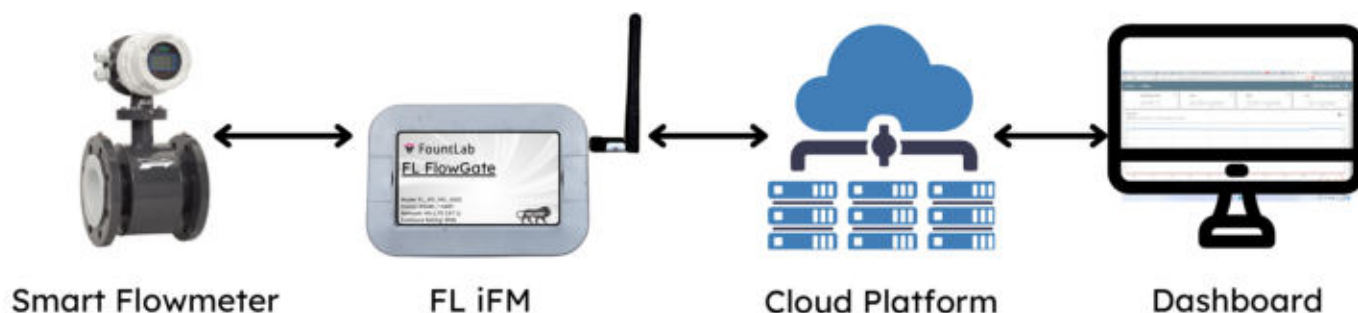
# FL iFM

## Product Details

FL iFM (Intelligent Flow Meter) redefines flow measurement with its innovative modgate technology, effortlessly communicating with any flowmeter, be it analog or digital, and supporting HART protocol for enhanced connectivity. Offering multiple connection options, including 4G, Wi-Fi, BLE, LoRa, and LAN, FL iFM provides the flexibility needed for diverse industrial settings. Seamlessly integrating with the AASMA Cloud Platform, this intelligent meter ensures real-time monitoring and secure data transmission, making it a reliable and adaptable solution for industries seeking precision and connectivity in their flow measurement processes.



## How It works?



The sensors and components are designed to effectively manage the safety, health and productivity of every system and thus the organization.



## Features



24x7 real-time monitoring.



Supports multiple communication protocol



Smart access to remote data with an interactive dashboard.



Best-in-class service and support



Fully customizable device configuration and services



Cost-effective and accurate data for further analysis.



Secure and reliable cloud platform



Hassle Free After Sale Services and AMC



Multiple connectivity options like Ethernet, GSM, Wi-Fi etc.

## Advantages



Water Flow Assessment



Improved water utilization



Reduced Wastage



Improved Public health



Environmental Protection



Water Management and Compliance

## Applications / Use Cases



Commercial Buildings



Residential Societies



Sewage / Effluent Treatment Plant



Manufacturing Plants



Pharmaceutical Industry



# FL Water Level Monitoring

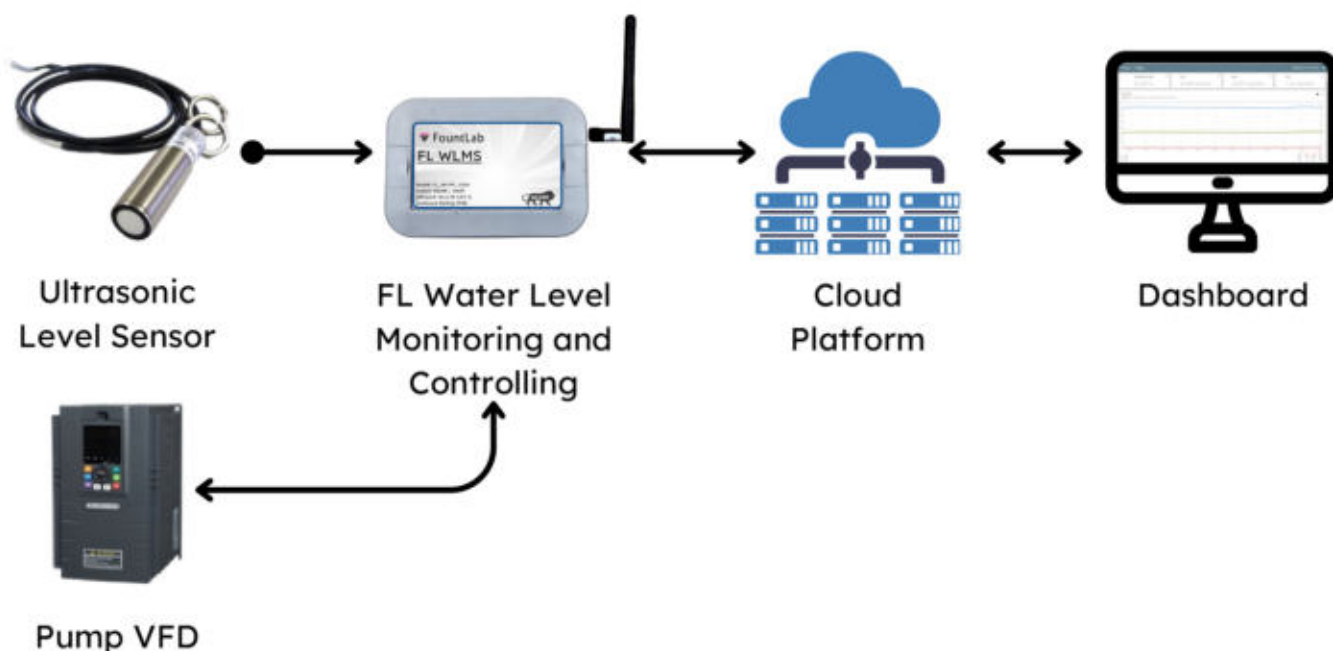
## Product Details

FL Water Level Monitoring and Controlling is an advanced solution designed to optimize water resource management in various applications. With its state-of-the-art technology, this system enables continuous monitoring of water levels in tanks, reservoirs, and other water storage facilities. By providing real-time data and intelligent controls, FL Water Level Monitoring and Controlling empowers users to efficiently manage and conserve water resources. The platform offers precise and accurate monitoring of water levels, ensuring users have a clear understanding of their water storage capacity at all times.



*\*NOTE: Images shown are for representation purpose only, actual device may vary*

## How It works?





## Features



24x7 real-time monitoring



Cost Effective Scalable IoT Solution



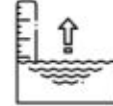
Reduced Energy Consumption



Customizable Thresholds and Alerts



Compliance and Reporting



Automated Water Level Control



Secure and reliable cloud platform



Hassel Free After Sale Services and AMC



Multiple connectivity options like Ethernet, GSM, Wi-Fi etc.

## Advantages



Efficient Resource Management



Improved Insights for Taking Actions



Data-driven Decision Making



Cost Savings



Timely Intervention for Correct Measures



Water Management and Compliance

## List of Sensors

| Sr.No. | Parameter          | Range      | Resolution | Measurement Type | Accuracy             |
|--------|--------------------|------------|------------|------------------|----------------------|
| 1      | Water Level Sensor | 0-5 meters | 0.01 meter | Ultrasonic       | ±1% of Reading Value |

## Applications / Use Cases



Commercial Buildings



Residential Societies



Sewage / Effluent Treatment Plant



Manufacturing Plants



Fresh Water Bodies



# FL DG Monitoring

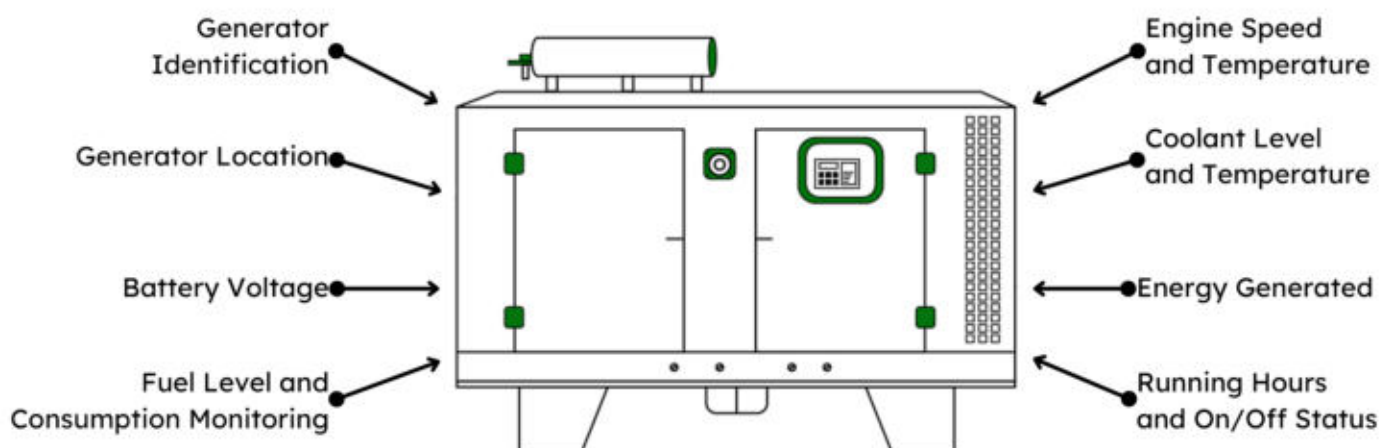
## Product Details

FL DG Monitoring is an advanced solution that offers real-time monitoring of critical generator parameters, including battery voltage, fuel level, and engine faults. With customizable thresholds based on manufacturer recommendations, it alerts users to events like low fuel, fuel leakage, overheating, and engine overspeed. Gensets typically come with a serial (or Ethernet) interface for communication. The reporting dashboard provides detailed analysis and scheduled reports, enabling swift problem identification and efficient solutions.



*\*NOTE: Images shown are for representation purpose only, actual device may vary*

## How It works?





## Features



24x7 real-time monitoring



Remote management and Controlling



Reduced Energy Consumption



Engine Speed and Temperature



Compliance and Reporting



Real-time fuel/leak monitoring



Secure and reliable cloud platform



Hassel Free After Sale Services and AMC



Multiple connectivity options like Ethernet, GSM, Wi-Fi etc.

## Advantages



Efficient Genset Management



Detects Potential Mechanical Problems



High Fuel Consumptions and Theft Alerts



Cost Savings



Timely Intervention for Correct Measures



Real-time interactive dashboards

## List of Parameters Monitored

| Sr.No. | Particulars                     |
|--------|---------------------------------|
| 1      | Identification and GPS Location |
| 2      | Fuel Levels and Consumptions    |
| 3      | Coolant Level and Temperature   |
| 4      | Engine Temperature and RPM      |
| 5      | Power Generated                 |
| 6      | Capacity Utilization            |
| 7      | Running Hours and On/Off Status |

## Applications / Use Cases



Commercial Buildings



Residential Societies



Construction / Development Sites



Disaster Management Operations



Hospitals for Power Backup



# FL Transformer Monitoring

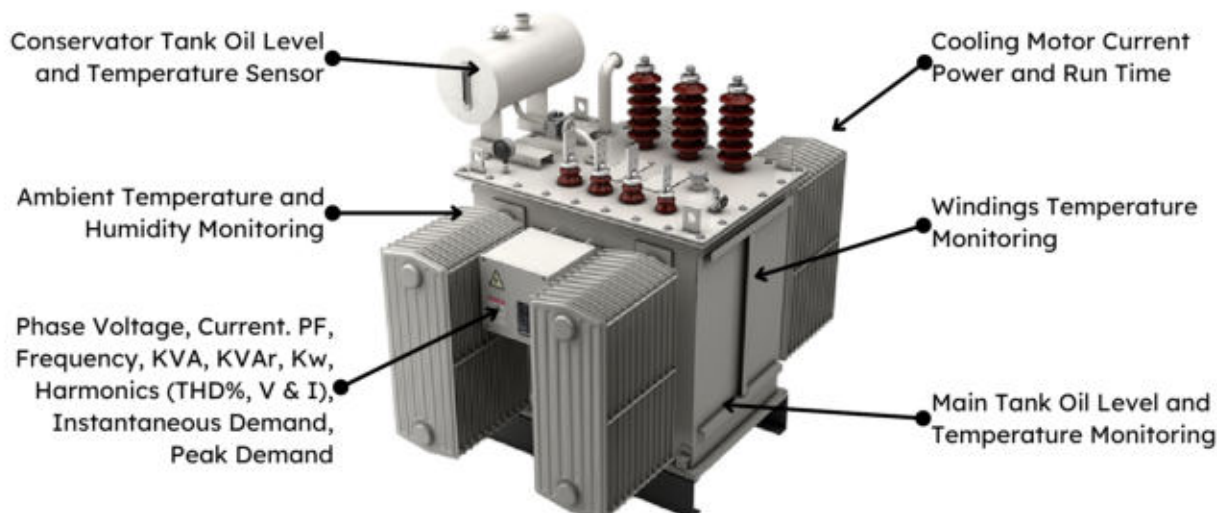
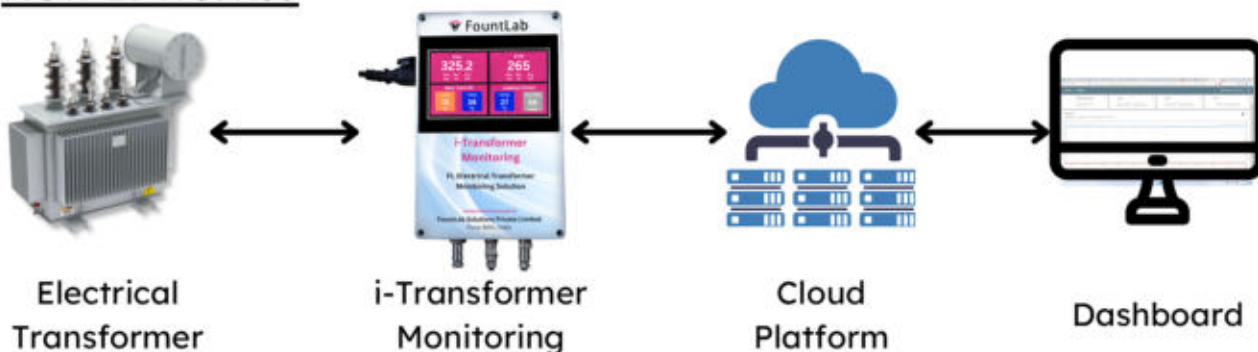
## Product Details

FL Electrical Transformer Monitoring is an advanced solution that continuously monitors critical parameters of electrical transformers, including temperature, oil levels, and fault conditions, in real-time. Customizable thresholds based on recommended limits ensure precise alerting for events like high temperature and low oil levels. With its comprehensive reporting dashboard and scheduled reports, FL Electrical Transformer Monitoring provides detailed insights for efficient monitoring and problem resolution.



## How It works?

\*NOTE: Images shown are for representation purpose only, actual device may vary

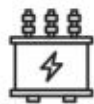




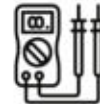
## Features



24x7 real-time monitoring



Remote management and Monitoring



Real-time Load and availability monitoring



Cooling Motor Current, Run Time and Count



Compliance and Reporting



Main Tank Oil Level and Temperature Monitoring



Ambient Temperature and Humidity Monitoring



Hassel Free After Sale Services and AMC



Multiple connectivity options like Ethernet, GSM, Wi-Fi etc.

## Advantages



Low Cooling Oil Level Alerts



Detects Potential Problems



Efficient Transformer Management



Cost Savings



Timely Intervention for Correct Measures



Real-time interactive dashboards

## List of Parameters Monitored

| Sr.No. | Particulars                                                                                                      |
|--------|------------------------------------------------------------------------------------------------------------------|
| 1      | Main Tank Oil Level and Temperature Monitoring                                                                   |
| 2      | Cooling Motor Current Power and Run Time                                                                         |
| 3      | Windings Temperature                                                                                             |
| 4      | Ambient Temperature and Humidity Monitoring                                                                      |
| 6      | Phase Voltage, Current. PF, Frequency, KVA, KVAR, Kw, Harmonics (THD%, V & I), Instantaneous Demand, Peak Demand |
| 7      | Conservator Tank Oil Level and Temperature Sensor                                                                |

## Applications / Use Cases



Commercial Buildings



Residential Societies



Power Switching Stations



Manufacturing Plants



Government Infrastructures



# FL iLightBox

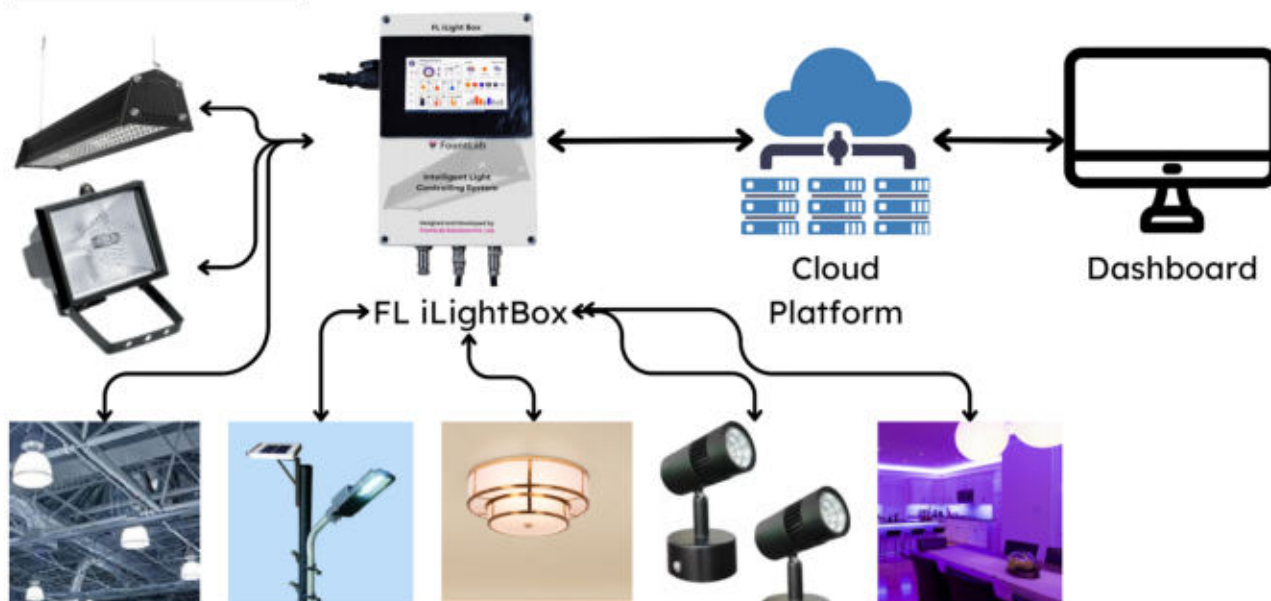
## Product Details

FL iLightBox is a state-of-the-art lighting control solution designed for both residential and commercial applications. With its advanced features and user-friendly interface, FL iLightBox offers seamless integration, effortless customization, and energy efficiency. Whether you're looking to create the perfect ambiance at home or enhance the lighting experience in a commercial space, FL iLightBox allows for easy adjustment of brightness levels, personalized lighting scenes, and intelligent scheduling. Its compatibility with smart home systems ensures smooth integration with other devices, while its simple installation and comprehensive maintenance support make it a reliable choice.



*\*NOTE: Images shown are for representation purpose only, actual device may vary*

## How It works?





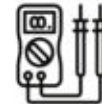
## Features



24x7 real-time monitoring



Remote management and Controlling



Reduced Energy Consumption



Smart Home Compatibility



Intelligent Scheduling



Seamless Integration



Tap Changer Operation



Hassel Free After Sale Services and AMC



Multiple connectivity options like Ethernet, GSM, Wi-Fi etc.

## Advantages



Flexibility and Personalization



Enhanced Lighting Experience



Seamless Integration with Existing Systems



Cost Savings



Timely Intervention for Correct Measures



Real-time interactive dashboards

## List of Parameters Monitored

| Sr.No. | Particulars                    |
|--------|--------------------------------|
| 1      | Lighting Intensity             |
| 2      | Color Temperature              |
| 3      | Energy Consumption             |
| 4      | Operational Status             |
| 5      | Scheduling and Timers          |
| 6      | Occupancy and Motion Detection |
| 7      | Faults and Alerts              |
| 8      | User Preferences and Feedback  |

## Applications / Use Cases



Commercial Buildings



Residential Societies



Power Switching Stations



Manufacturing Plants



Government Infrastructures



# FL I/O CONTROLLER SERIES

## Product Details

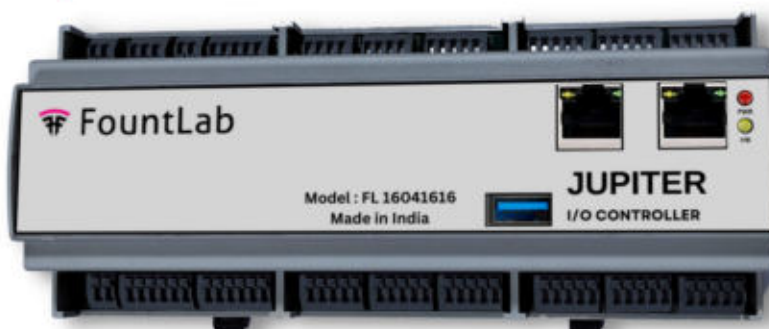
### Neptune IOM (FL 16001620)

- 16 Digital Inputs
- 18 Relay outputs
- 2 High current relay output
- RS-485 Communication
- 16 X 4-20mA Analog inputs or 16 X 0-10 Analog Inputs
- Ethernet connectivity
- micro-SD Card support



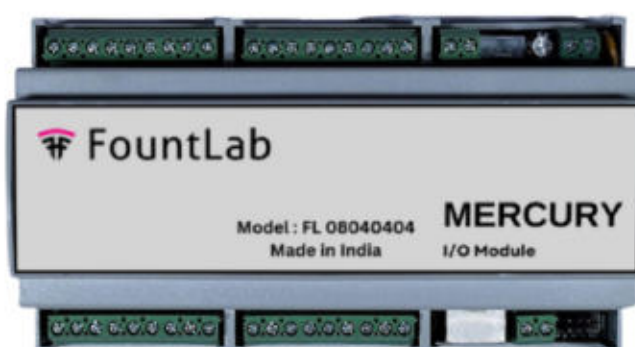
### Jupiter IOM (FL 16041616)

- 16 Digital Inputs
- 16 Relay outputs
- RS-485 Communication
- 16 X 4-20mA Analog inputs or 16 X 0-10 Analog Inputs
- 4 X 0-10 Analog Output
- Ethernet connectivity
- micro-SD Card support



### Mercury IOM (FL 08040404)

- 4 Digital Inputs
- 2 Relay outputs
- 2 High current relay output
- RS-485 Communication
- 8 X 4-20mA Analog inputs or 8 X 0-10 Analog Inputs
- 4 X 4-20mA Analog Output
- Ethernet connectivity



## Applications / Use Cases



Commercial  
Buildings



Residential  
Societies



Hospitals and  
Health Centers



Manufacturing  
Plants



Government  
Infrastructures

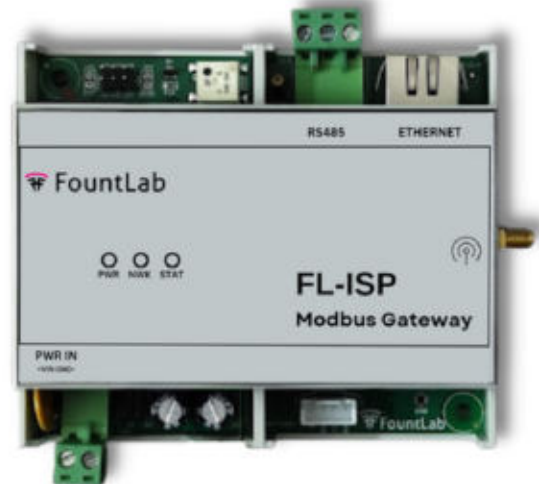


# FL I/O MODGATE SERIES

## Product Details

### FL-ISP ModGate - 0001

- 9 V - 36V Input Voltage
- Isolated RS-485 Communication
- Ethernet as Modbus-TCP or for connectivity
- 4G with Fallback to 2G connectivity with dual sim
- WiFi Connectivity
- LED, Buzzer for indicator
- Protocols support ModBus RTU, Modbus TCP, BACnet MS/TP, BACnet IP, OPCUA



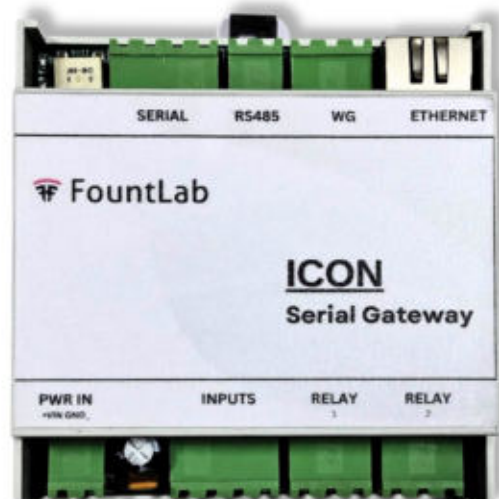
### FL-UNI ModGate - 0002

- 9 V - 36V Input Voltage
- Isolated RS-485 Communication
- Ethernet as Modbus-TCP or for connectivity
- 2G connectivity
- WiFi Connectivity
- LED, Buzzer for indicator
- Optional Power Out Port
- Protocols support ModBus RTU, Modbus TCP, BACnet MS/TP, BACnet IP, OPCUA



### FL-ICON ModGate

- 9 V - 36V Input Voltage
- RS-485 Communication
- RS-232 Communication
- Ethernet as Modbus-TCP or for connectivity
- 2 Isolated Digital Inputs
- 2 Relay Output
- WiFi & Bluetooth Connectivity
- LED, Buzzer for indicator
- 1 Wiegand Input
- Protocols support ModBus RTU, Modbus TCP, BACnet MS/TP, BACnet IP, OPCUA



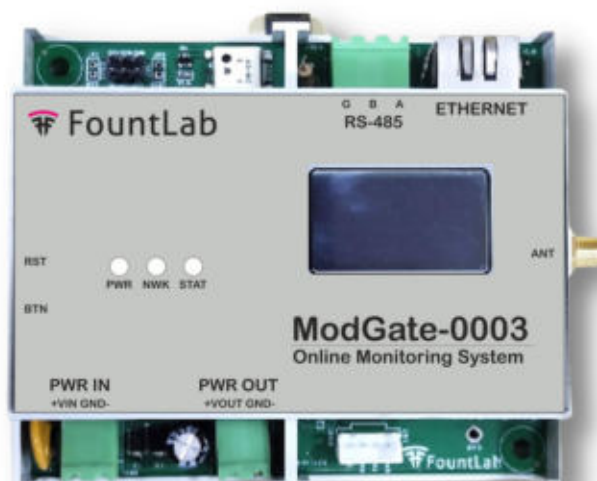


# FL I/O MODGATE SERIES

## Product Details

### FL ModGate - 0003\_OMS

- 9 V - 36V Input Voltage
- Isolated RS-485 Communication
- Ethernet as Modbus-TCP or for connectivity
- 4G LTE, Bluetooth, WiFi & GPS Connectivity
- LED, Buzzer for indicator
- Power Out Port
- Optional OLED Display (1.3")
- Protocols support ModBus RTU, Modbus TCP, BACnet MS/TP, BACnet IP, OPCUA



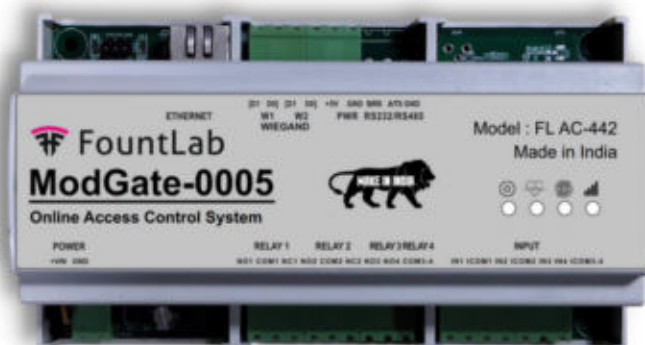
### FL ModGate - 0004\_IO

- 9 V - 36V Input Voltage
- Isolated RS-485 Communication
- Ethernet as Modbus-TCP or for connectivity, 4G LTE, Bluetooth, WiFi & GPS Connectivity
- 2 Isolated Digital Output - Relay Based
- 2 Isolated Digital Input, 2 Analog Input & Output Each
- Protocols support ModBus RTU, Modbus TCP, BACnet MS/TP, BACnet IP, OPCUA



### FL ModGate - 0005\_ACC

- 9V - 36V - 2A Input Voltage
- Isolated & Non-Isolated RS-485 Communication
- 4G LTE (eSIM), Bluetooth, WiFi & GPS Connectivity, Ethernet as Modbus-TCP or for connectivity
- 2 Relay Output, 26-bit Wiegand Supported
- 4 Isolated Digital Inputs (Manual Switch)
- 2 Wiegand Input
- Upto 10000 Event Logs (Internal)
- Protocols support ModBus RTU, Modbus TCP, BACnet MS/TP, BACnet IP, OPCUA





# FL SIGNAL CONVERTER

## Product Details

### FL 4VAI\_TO\_485

- 9 V - 36V Input Voltage
- RS-485 Communication
- 16 Selectable Addresses
- 4 Analog Input (Voltage/Current)
- Optional OLED Display (1.3")



### FL 485\_TO\_2V2I

- 9 V - 36V Input Voltage
- RS-485 Communication
- 16 Selectable Addresses
- 4 Analog Output (2 Voltage & 2 Current)
- Optional OLED Display (1.3")



### FL CT\_TO\_485

- 9 V - 36V Input Voltage
- RS-485 Communication
- 16 Selectable Addresses
- 1 AC Current Input(Isolated CT based)
- 2 Analog Output (1 Voltage & 1 Current)
- Optional OLED Display (1.3")



### FL 485\_TO\_4AVO

- 9 V - 36V Input Voltage
- RS-485 Communication
- 16 Selectable Addresses
- 4 Analog Output (Voltage)
- Optional OLED Display (1.3")



**Call us today to know more!!!**

**Get in touch**



**Allwaters - Water & Wastewater Treatment**

**Ajay Gandham**

**[ajay@allwaters.in](mailto:ajay@allwaters.in) / +91 98231 16019**

Bldg-11B/610, Lokmanyagar CHS, Nr.Datta Mandir,  
213/1 Sadashiv Peth, Pune-30

**[www.allwaters.in](http://www.allwaters.in)**

 **FountLab**

**FountLab Solutions Pvt. Ltd.**

Hinjewadi, Pune (MH), India