

Environmental Monitoring / Climate / Ecology

Precision Monitoring for Climate & Ecosystem Management

Monitor critical environmental parameters such as temperature, humidity, air quality, CO₂, water quality, and soil moisture. Gain actionable data to protect ecosystems, optimize resources, and ensure regulatory compliance.



Use Cases

Transforming Data into Actionable Insights for a Healthier Planet

Our solutions track key parameters like **temperature, humidity, air quality, CO₂ levels, water quality, and soil moisture** to support a wide range of applications. From **climate research** and **pollution control** to **ecosystem management** and **regulatory compliance**, we enable **informed, data-driven decisions for sustainable environmental stewardship**.



Climate Research & Modeling

- Continuous tracking of temperature, humidity, and CO₂ levels
- Supports weather and climate prediction models
- Enables long-term trend analysis and research
- Provides data for scientific publications and reports

Air Quality & Pollution Control

- Monitors PM_{2.5}, PM₁₀, NO₂, SO₂, and CO₂ levels in real time
- Identifies pollution hotspots for corrective action
- Supports regulatory compliance with environmental standards
- Reduces health risks through early warnings and alerts



Water Quality Management

- Tracks pH, turbidity, dissolved oxygen, and contaminants
- Ensures safe water for ecosystems and human consumption
- Detects anomalies for early intervention
- Supports sustainability initiatives and compliance

Soil & Agricultural Monitoring

- Measures soil moisture, temperature, and nutrient levels
- Optimizes irrigation and fertilization schedules
- Prevents crop stress and degradation
- Supports precision agriculture and sustainable farming practices



Ecosystem & Conservation Management

- Monitors forest, wetland, and biodiversity parameters
- Tracks habitat changes and environmental impact
- Supports conservation planning and restoration efforts
- Provides actionable insights for policy-making and sustainable management

Purpose

Why Monitoring Is Mandatory?

Precision Monitoring for Environmental & Ecosystem Health

- Ensures stable environmental conditions and prevents risks through **real-time tracking of temperature, humidity, air quality, and other critical parameters.**
- Enables **early intervention, regulatory compliance, and data-driven decisions** that improve safety, efficiency, and long-term sustainability.



Climate Stability



Regulatory Compliance



Data-Driven Decisions



Conservation Support



Ecology Protection

Data Loggers Deployment

Deploying Our Sensors & Data Loggers for Maximum Efficiency

- Optimized Placement & Coverage:** Strategically deploy our **sensors and data loggers** to monitor critical parameters such as **temperature, humidity, air quality, CO₂, soil moisture, and water quality**, ensuring complete real-time coverage.
- Reliable Insights & Performance:** Continuous data collection from our **devices** provides **accurate, actionable insights to support smarter, data-driven decisions** and efficient environmental management.



Sensor Probes

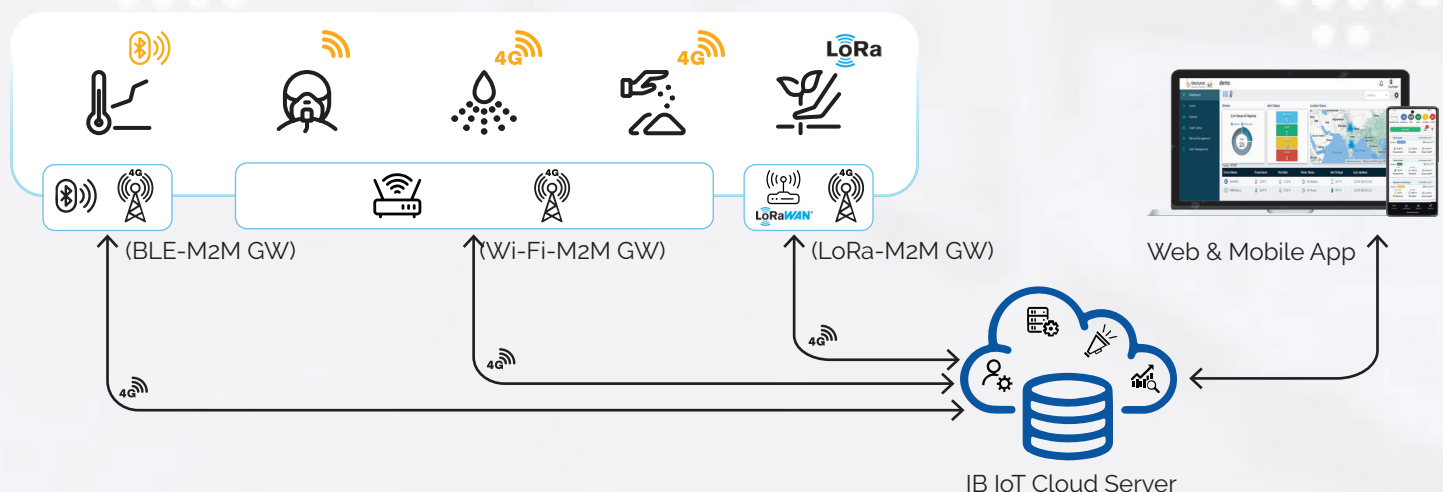


Data Loggers



Gateways

Solution Architecture



Comprehensive Device Compatibility Across All Monitoring Needs

Our **wide range of data loggers** delivers **real-time monitoring** with **alerts and audit-ready records**, ensuring **safety, efficiency, and compliance** across **manufacturing, cold storage, pharmaceuticals, and industrial environments**.

<https://www.idealbytesiot.com/products>

Model No	Gateway	Temperature Range	Humidity Range
IBI-WTH120/ IBI-MTH120	Wi-Fi/4G	-40°C to +120°C	2 to 99% RH
IBI-WTH50/ IBI-MTH50	Wi-Fi/4G	0°C to +50°C	0 to 100% RH
IBI-WTH70/ IBI-MTH70	Wi-Fi/4G	-30°C to +70°C	0% to 95% RH
IBI-MTH120-CN	4G/GPS	Upto +120°C	0% to 100% RH
IBI-MT120-CN	4G/GPS	Upto +120°C	-
IBI-WT350/ IBI-MT350	Wi-Fi/4G	-200°C to +350°C	-
IBI-WT120/ IBI-MT120	Wi-Fi/4G	-40°C to +120°C	-
IBI-WTD120/ IBI-MTD120	Wi-Fi/4G	-40°C to +120°C	-

Hardware Features*

- 1.3" 128x64 OLED Monochrome Display
- 4000 mAh Li-Ion Battery (Up to 20 hrs backup)
- Plug & Play, Wall-Mountable Design
- Configurable Data Polling
- Configurable Internal Data Storage
- 5V/1A DC Power Input
- IP64-Rated Enclosure

Software Features*

- Dashboard, Map & List Views
- Analytics, Device & User Management
- Alerts & Notifications
- 21 CFR Part 11 Compliant Reports (PDF)
- MKT Value, Audit Trail, Alarm Logs & Trend Graphs
- Configurable Data Polling (Default: 15 mins)
- Optional SMS Alerts
- Web & Mobile Apps (iOS & Android)

*Features and specifications vary according to selected model