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XYZ IoT Viron

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Introducing XYZ IoT Viron - The Environmental Monitoring Solution

XYZ IoT Viron provides cutting-edge, real-time insights into your customers' environment—helping them monitor, analyze, and optimize key environmental parameters like temperature, humidity, air quality, CO2 levels, noise, and more. With our comprehensive solution, they can ensure a healthier, safer, and more efficient environment for your organization.

Why IoT Viron is the right solution for your customers' business

- Optimizing Energy Performance - Energy usage becomes efficient with data, reports, and predictive maintenance.
- Business Insight - Making business decisions based on insights from reports and data analysis.
- Provides Visibility of Energy Usage - Monitoring energy via features that provide visual energy consumption, alarms, and status.
- Business Operation Efficiency - Remote energy monitoring through field equipment access and alarm settings.

IoT-Based Environmental Monitoring

IoT environmental monitoring is a process that uses Internet of Things (IoT) technology to collect data about the environment, such as air quality, temperature, and humidity levels.

This data can then be analysed to better understand the indoor and outdoor environment and make informed decisions about how to reduce the impact of negative aspects of the local environment on the business. Alternatively, it can be used to change business activities to help protect the planet or the local community.

These IoT-based systems can be used to detect issues in the environment that are largely invisible, normalised or taken for granted. Allowing businesses to take action by reducing their negative environmental footprint and protecting employees, visitors and the community at large.

IoT is, therefore, becoming increasingly popular across a range of industries for its ability to provide statistics, real-time data and insights that can help businesses understand their environmental impact and how to reduce it, as well as comply with environmental

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Learn how the XYZ IoT Viron works: [Check out the Viron Training Video](#) - it covers all the key features.

Customer value:

The value of Viron solutions lies in the wide range of benefits they provide across various dimensions, including operational efficiency, cost savings, compliance, safety, and sustainability. These solutions enable businesses to monitor and control environmental factors in real time, delivering actionable insights that directly improve both short-term performance and long-term strategy.

Value to XYZ:

These solutions strengthen our position to revolutionize industries by providing enhanced connectivity, automation, and data-driven insights. It also helps us to tap the massive growth potential we see across industries.

Who we are working with:

We have partnerships with large system integrators such as [ScienceMonitor Southbase](#), and [ITGeo](#).

How it works

XYZ IoT Viron works by using connected sensors and devices to continuously measure and track various environmental parameters such as temperature, humidity, air quality, noise levels, light, and more. These devices gather real-time data, which is then transmitted to a central platform where it can be analyzed, visualized, and acted upon. The system allows users to monitor environmental conditions remotely, automate responses, and make informed decisions based on the collected data. Here's a breakdown of how the process works:

1. Sensors and Devices

- **Data Collection:** IoT environmental monitoring begins with the deployment of sensors that measure specific environmental factors. Common types of sensors include:
 - **Temperature and Humidity Sensors:** Measure ambient conditions in various settings like offices, factories, or agricultural fields.
 - **Air Quality Sensors:** Detect levels of gases like CO₂, CO, VOCs (volatile organic compounds), and particulate matter (PM2.5 or PM10).
 - **Light and Noise Sensors:** Track ambient light levels and noise pollution in environments like smart buildings or urban areas.
 - **Pressure and Water Sensors:** Monitor conditions such as atmospheric pressure or water levels in flood-prone areas or industrial sites.

These sensors are equipped with connectivity modules (such as Wi-Fi, Bluetooth, Zigbee, or LoRaWAN) that allow them to transmit the collected data.

2. Data Transmission

- **Connectivity:** Once the data is collected, it is transmitted over a network to a centralized hub or cloud platform. Depending on the application, different communication protocols may be used:
 - **Wi-Fi** or **Ethernet** in smart buildings or facilities with stable internet infrastructure.
 - **Cellular** (3G/4G/5G) for remote or distributed locations where wired internet is unavailable.
 - **LoRaWAN** or **NB-IoT** for low-power, wide-area networks that need to cover large distances (e.g., smart agriculture or environmental monitoring in rural areas).

The choice of connectivity depends on factors like range, data transmission frequency, power consumption, and network availability.

3. Data Storage and Processing (Cloud or Edge)

- **Edge Processing:** In some cases, initial data processing is done locally (on the edge) to reduce the amount of data sent to the cloud and to enable faster real-time actions. For instance, if a temperature sensor detects a rapid spike, an edge device (gateway) can immediately trigger an alert.
- **Cloud Processing:** Data is typically sent to a cloud platform where it can be aggregated, processed, and analyzed at scale. Cloud computing allows for the storage of large amounts of data and the use of advanced analytics or machine learning to derive insights.

This stage involves:- **Data normalization:** Converting data into a consistent format. - **Data filtering:** Removing noise or irrelevant data. - **Data storage:** Storing historical data for analysis, reporting, and compliance.

4. Data Analysis and Insights

- **Analytics Platforms:** The raw data from sensors is processed and analyzed to generate actionable insights. Using algorithms and machine learning models, the platform can identify patterns, trends, and anomalies in the data. For example:
 - **Predictive Analytics:** Detecting patterns that predict future conditions, such as a rise in CO₂ levels or humidity that could affect equipment or indoor air quality.
 - **Threshold-Based Alerts:** Setting predefined thresholds (e.g., maximum safe temperature), so that the system sends real-time alerts when conditions go outside the acceptable range.
 - **Historical Data Analysis:** Reviewing trends over time to make data-driven decisions about environmental control measures or operational improvements.

AI and Machine Learning are often integrated into IoT monitoring platforms to enhance the analysis, predicting failures or optimizing systems based on learned behaviors.

5. Visualization and Monitoring

- **User Dashboard:** The data and insights are presented on a user-friendly dashboard or interface that allows operators to visualize real-time conditions. This dashboard can be accessed via desktop, mobile devices, or dedicated control systems.
 - **Real-Time Monitoring:** Users can view current environmental conditions across multiple locations, compare different data sets, and get an overview of historical data.
 - **Customizable Alerts and Notifications:** Users can configure the system to send automatic alerts via email, SMS, or in-app notifications whenever the system detects a critical environmental change.
 - **Interactive Maps and Graphs:** For large facilities or outdoor monitoring, geographic information systems (GIS) and maps may be used to display sensor data across different areas.

6. Automation and Control

- **Automated Responses:** One of the key benefits of IoT environmental monitoring is the ability to automate actions based on data. This could include:
 - **HVAC Control:** Automatically adjusting heating, ventilation, and air conditioning systems in response to changes in temperature or humidity levels.
 - **Ventilation:** Increasing airflow or filtration if air quality sensors detect elevated levels of pollutants or gases.
 - **Watering Systems:** Activating irrigation systems in agriculture when soil moisture sensors detect that crops need water.

These automated actions help maintain optimal environmental conditions, improve energy efficiency, and reduce manual intervention.

7. Alerts and Notifications

- **Threshold-Based Alerts:** If any parameter (e.g., temperature, humidity, or air quality) exceeds or drops below a predefined threshold, the system sends out real-time alerts to the designated personnel. These alerts can be customized based on the criticality of the condition.
- **Predictive Alerts:** Using historical data, the system can predict when conditions are likely to move out of range (e.g., based on trends of rising temperatures) and issue early warnings.

8. Integration with Other Systems

- **Building Management Systems (BMS):** IoT environmental monitoring can integrate with BMS to automate building-wide controls such as lighting, HVAC, and security based on environmental data.
- **SCADA or Industrial Systems:** In industrial environments, IoT solutions can integrate with Supervisory Control and Data Acquisition (SCADA) systems for seamless control and monitoring of plant-wide operations.
- **ERP and Analytics Platforms:** The data collected from IoT devices can be fed into enterprise resource planning (ERP) or business intelligence

systems for broader operational insights and strategic planning.

Portable Monitoring Kit

Key features:

1. **Compact and Portable Design** - The kit is lightweight, easy to transport, and designed for on-the-go deployment in diverse environments such as field operations, warehouses, or temporary setups.
2. **Multi-Sensor Integration** - Portable monitoring kits often come with multiple integrated sensors that can track environmental parameters such as temperature, humidity, air quality, etc.
3. **Wireless Connectivity** - The kit uses wireless communication technologies like Wi-Fi, Bluetooth, Zigbee, LoRaWAN, or cellular (4G/5G) to transmit data in real time.
4. **Real-Time Data Monitoring and Alerts** - The device provides real-time monitoring, sending data to a cloud platform or mobile application. Users can set custom thresholds for environmental conditions and receive real-time alerts if these are exceeded.
5. **Battery-Powered Operation** - Many portable kits are battery-powered, allowing for hours or days of autonomous operation without being plugged into a power source.
6. **GPS and Geolocation Capabilities** - Some portable monitoring kits are equipped with GPS functionality to track the exact location of environmental readings.
7. **Low Power Consumption** - IoT environment portable monitoring kits are designed with energy-efficient sensors and communication technologies, minimizing battery consumption and maximizing operational lifespan.

Pricing

\$7,500 is the upfront price and includes all margins, \$50 per month is the ongoing subscription price.

The hardware cost can be paid over a term, but it's important to note that these aren't IFP as each have a different cost of capital.

1 year = \$650/mo

2 year = \$325/mo

3 year = \$300/mo

4 year = \$275/mo

Optional wall bracket = \$185

Worksite monitoring price guide:

Equipment & installation	Monthly plan	Recommended servicing
\$6,800	\$60	Yearly
\$7,400	\$60	Yearly
\$11,000	\$60	Yearly
\$6,000	\$60	Yearly
\$3,700	\$60	Yearly

Tools and Resources



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