



MIMOS IoT-based Smart Farming Solution

MIMOS IoT-based Smart Farming Solution is a cost-effective Agriculture and Aquaculture ICT Ecosystem which includes sensors for water-quality monitoring, a triggering mechanism and control solutions based on IoT solution.

Overview

Smart farming is about developing and building a cost-effective monitoring and feedback control system for Agriculture or Aquaculture application. This will enable customers/users to have a better control of key parameter inputs, thus improving their current Agriculture or Aquaculture practices. In aquaculture perspective, a real time monitoring of water quality will ensure that customer or user will be able to react immediately if there is a change on the water quality that will affect the fish breeding or livelihood. For smart agriculture, smart greenhouse maintains a perfect micro-climate and environment for optimal plant growth. Variables important for crops success such as temperature, humidity, light and soil moisture are continuously monitored.

Features

MIMOS IoT-based Smart Farming Solution comprises the following features:

- **User Notification**
User will be notified of any irregular conditions like high acidity or low moisture.
- **Remote Monitoring**
User can readily access the data from their mobile phone and act based on this data.
- **Customisable Threshold Parameters**
User can customise the threshold parameter to suit the requirement of their plants or aqua breed.
- **Automated Control System**
Automated control system evaluate change and take corrective action thus maintaining optimal conditions for fish breeding or plant growth.
- **Sensor Data View**
User is able to retrieve and download raw data for data analysis and future improvement.

Technology Benefits

The main impacts of MIMOS IoT-based Smart Farming Solution are:

- **Smart Control Panel**
Various sensors and actuators are connected to Smart Control Panel which will send data to control centre hosted in cloud. Dashboard showing various status of the sensors are accessible via a smart mobile phone anytime and anywhere.
- **Integration with Mobile Application for Remote Monitoring**
A visual admin dashboard mapped to mobile phone for ease of use and ability to manage and monitor the sensors and devices.
- **Automated Environment**
The automated actions evaluate change, allowing for corrective action thus maintaining optimal conditions for plant growth or aqua breed.

Technology Summary

MIMOS IoT-based Smart Farming Solution

A cost-effective monitoring and feedback control system for Agriculture and Aquaculture application

Industries: Aquaculture (Fisheries), Agriculture (Poultry Farms)

Features

- User notification
- Remote monitoring
- Customisable threshold parameters
- Automated control system
- Sensor data view

Technology Benefits

- Smart control panel
- Integration with mobile application for remote monitoring
- Automated environment



MIMOS Smart Farming Solution (mobile application)

System Requirements

MIMOS IoT-based Smart Farming Solution	
Specification	
Processor	Intel Celeron J3455 (2M Cache, 2.3GHz)
Memory	4GB DDR3 RAM 256GB SSD Drive
WiFi Wireless Communication	Intel Wireless-AC 3168 802.11b/g/n, 100Mbps, 2.400GHz~2.835GHz, WPA/WPA2 security, WEP/TKIP/AES
Network Protocol	HTTP Json, Proprietary MSCAN frame
Wired Communication	USB-RS485 3-wire internal, surge protected
Control Parameter	Schedule/automated
Operating Temperature	0 to 50 Deg celcius
Operating Humidity	0 to 90%RH (non-condensing)
Output Control	16-channel, Configurable via text file
Output Rating	Dry Contact, Normally Open, 30V 5A max
Power Requirement	240VAC,50Hz, 50W
Overall Dimensions (WxHxD)	400x400x200 (mm)

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