



MIMOS Application Quality for Precision Agriculture (Mi-AQAR)

Physical monitoring and farming management in agriculture, specifically for greenhouses and open fields, can now benefit from this unified solution. MIMOS Mi-AQAR combines sensory solutions that measure and respond to inter and intra-field variability in crops, providing real-time in-situ physical parameter measurement and management.

Overview

MIMOS Mi-AQAR is a solution that comprises a combination of robust in-situ sensors, the Web and smart device applications to enable real-time monitoring and control of agriculture farming inputs. Mi-AQAR is designed to cater for fully automated, closed-loop system usage in greenhouses (Mi-AQAR_GH) and semi-automated system for wide open plantation fields (Mi-AQAR_OP).

Features

Mi-AQAR comprises the following features:

■ Robust and Reliable for Outdoor Usage

Mi-AQAR utilises MIMOS Mi-Sensor platforms and products that can withstand harsh outdoor environmental conditions and meet IP65 standard.

■ Real-Time Data Measurement

Mi-AQAR offers in-situ real-time data measurement with remote monitoring capabilities via its comprehensive sensor management system.

■ Wireless Communications

Environment information is transmitted via wireless communications using MIMOS Mi-Porta Mote (wireless transmitter/receiver), MIMOS Mi-Porta Router (extension) and MIMOS Mi-MESA (wireless gateway).

Technology Benefits

The main impacts of Mi-AQAR are:

■ Versatile Deployment

The Mi-AQAR sensory solution is modularly designed to cater for various requirements in greenhouses and open fields' deployments. Furthermore, Mi-AQAR's open platform makes it cost effective for users to expand the system according to operation needs.

■ Remote Monitoring

With Internet connectivity, Mi-AQAR web application allows users to remotely monitor and access data on their desktops or smart devices and use its user-friendly web interface for data visualisation and analysis.

■ Increased Productivity

Wireless communications allow the system to be deployed in remote areas and significantly minimises manual workforce activities, reduces labour dependencies and improves monitoring integrity for accurate and effective decision making.

Technology Summary

Mi-AQAR

A unified solution that comprises a combination of robust in-situ sensors, the Web and smart device applications to enable real time monitoring and control of agriculture farming inputs.

Solutions

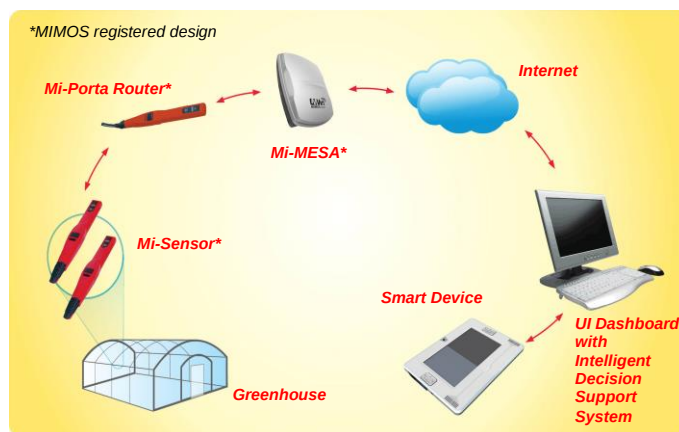
- Mi-AQAR_GH: A solution for greenhouse application
- Mi-AQAR_OP: A solution for open plantation application

Features

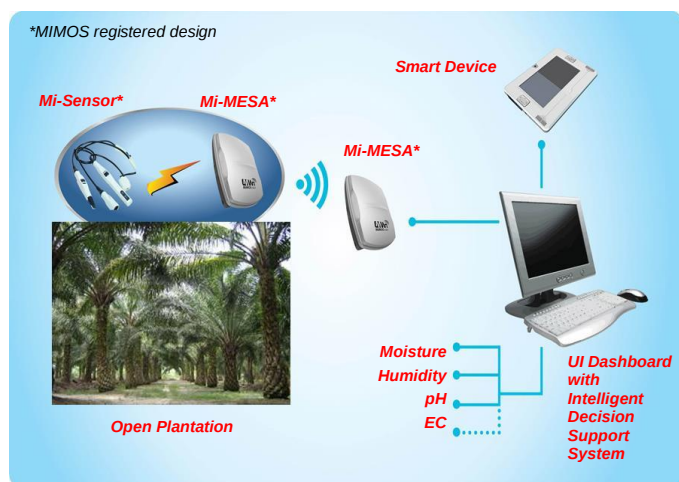
- Robust and reliable for outdoor usage
- Real-time data measurement
- Wireless communications

Technology Benefits

- Versatile deployment
- Remote monitoring
- Increased productivity



MIMOS Mi-AQAR_GH system architecture



MIMOS Mi-AQAR_OP system architecture

Communications

Mi-AQAR_GH and Mi-AQAR_OP Communications	
	Mi-Porta Master 1.0
	Mi-Porta Slave 1.0
	Mi-Porta Mote 1.0
	Mi-Porta Router 2.0
	Mi-MESA
	Mi-Porta USB Dongle*
	Mi-Porta USB-UART*

*Future Release

Sensors

Mi-AQAR_GH and Mi-AQAR_OP Sensors	
	Mi-Sensor Tmini 1.0
	Mi-Sensor T-EC*
	Mi-Sensor H 1.0
	Mi-Sensor T-H 2.0*
	Mi-Sensor T 1.0
	Mi-Sensor M 1.0
	Mi-Sensor M 2.0*
	Mi-Sensor TpH 1.0
	Mi-Sensor TpH 1.1*

*Future Release

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