



MIMOS IoT Sensor Node (Mi-SensorNode)

MIMOS Internet of Things (IoT) sensor node with TCP/IP wired or Wi-Fi connection is designed and developed for remote deployment as well as ambient data and Photovoltaic (PV) system monitoring. Mi-SensorNode carries six important sensing parameters such as indoor temperature, indoor humidity, air oxygen, PV voltage, PV current, and PV battery monitoring.

Overview

MIMOS Mi-SensorNode can work seamlessly using a LAN or Wi-Fi network. There are two variants, Sensor Node and Power Node. Both sensor nodes are powered by 12V DC, matching the typical 12V Solar PV system. Nodes can be connected to the Internet via network switch, 3G/4G router or Wi-Fi router. Nodes support IPV4 TCP/IP protocol, and require Internet connection to send data to the cloud or remote servers.

Features

Mi-SensorNode comprises the following features:

■ Easily Extendable Network

Easily extend the existing network by adding gateway to the cloud.

■ Customisable Threshold Parameters

User can customise the threshold parameter to suit their requirements.

■ Data Transmission Stability

Data connectivity is ensured via TCP/IP wired communication or Wi-Fi wireless communication.

■ Low Power

Sensor nodes are powered by 12V DC, matching the typical 12V Solar PV system.

Technology Benefits

The main impacts of Mi-Sensor Node are:

■ Integrated Data Collection

Collect data from the surrounding environment to form the front end for maintenance and monitoring via various sensors and integration to mobile application.

■ Derive Information Analytics

Transform parameters into meaningful data analytics.

■ Enhance Existing Systems

Improve outcome and productivity by real-time monitoring solutions.

Technology Summary

Mi-SensorNode

An Internet of Things (IoT) sensor node for sensing and controlling parameters.

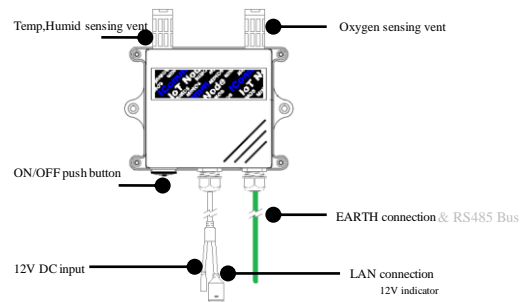
Industries: Agriculture

Features

- Easily extendable network
- Customisable threshold parameters
- Data transmission stability
- Low power

Technology Benefits

- Integrated data collection
- Derive information analytics
- Enhance existing systems



MIMOS Sensor Node (Overview)

Specifications

Mi-SensorNode	
Product specifications	
Processor	32-bit Processor, 80MHz clock speed
Memory	512kbyte built-in flash, 40kbyte built-in RAM
TCP/IP Wired communication	10/100 Mbps, MDI/MDIX, auto switch between cross and direct connection IP, TCP, UDP, DHCP, DNS, HTTP, ARP, ICMP Tx buffer: 6Kbyte, Rx buffer: 4Kbyte
Wi-Fi communication	802.11 b/g/n Client, WPA/WPA2 Security, WEP/TKIP/AES Encryption, IPv4, 2.4GHz
Firmware Update	Access via internal header
User Interface	ON/OFF push button at bottom, Blue LED on power push button, Green LED on LAN port for 12V input indicator, Green LED inside housing
Power Requirement	12V typical (8 to 24VDC), 160mA (max), 50uA (sleep)
Temperature Sensor range	0 to 99°C (± 1.2°C), 0.1°C resolution
Humidity Sensor range	5 to 95%RH (±5%), 0.1%RH resolution
Oxygen Sensor range	0.1 to 25% (±2%), 0.1% resolution
Operating Temperature	0 to 50°C
Operating Humidity	0 to 100% RH (non-condensing)
Data interval	1-hour (programmable, 2minute minimum)
Destination address	Up to 3 destinations (programmable)
Data logging	None
Overall Dimension (WxHxD)	116 x 136 x 41 (mm)