

# WISE-4050

## 4-ch Digital Input and 4-ch Digital Output IoT Wireless I/O Module



### Features

- 4-ch digital input and 4-ch digital output
- 2.4GHz Wi-Fi reducing the wiring cost during big data acquisition
- Easily extend the existing network by adding APs, and share existing Ethernet software
- Configured by mobile devices directly without installing any software or Apps
- Zero data loss using the log function with RTC time stamp
- Data can be automatically pushed to Dropbox or computer
- Supports RESTful web API in JSON format for IoT integration

### Introduction

The WISE-4000 series is an Ethernet-based wireless IoT device, integrated with I/O data acquisition, processing, and publishing functions. As well as various I/O types, the WISE-4000 series provides data pre-scaling, data logic, and data logger functions. Data can be accessed via mobile devices and be securely published to the cloud anytime from anywhere.

### Features

#### IEEE 802.11 b/g/n 2.4GHz Wi-Fi with AP Mode

The Wi-Fi interface is easily integrated with wired or wireless Ethernet devices, users only need to add a wireless router or AP to extend existing Ethernet network to wireless. The limited AP mode enables the WISE-4000 to be accessed via other Wi-Fi devices directly as an AP.



#### HTML5 Web Configuration Interface

All the configuration interfaces are applied in web service, and the web pages are based on HTML5, so users can configure the WISE-4000 without the limitation of OS/devices. You can use your mobile phone or tablet to directly configure the WISE-4000.



#### RESTful Web Service with Security Socket

As well as supporting Modbus/TCP, the WISE-4000 series also supports IoT communication protocol, RESTful web service. Data can be polled or even be pushed automatically from the WISE-4000 when the I/O status is changed. The I/O status can be retrieved over the web using JSON. The WISE-4000 also supports HTTPS which has security that can be used in a Wide Area Network (WAN).



#### Data Storage

The WISE-4000 can log up to 10,000 samples of data with a time stamp. The I/O data can be logged periodically, and also when the I/O status changes. Once the memory is full, users can choose to overwrite the old data to ring log or just stop the log function.



#### Cloud Storage

Data logger can push the data to file-based cloud services like Dropbox using pre-configured criteria. With RESTful API, the data can also be pushed to a private cloud server in the format of JSON. Users can setup their private cloud server using the provided RESTful API and their own platform.



# Specifications

## Digital Input

- Channels 4
- Logic Level Dry Contact 0: Open  
1: Close to DI COM  
Wet Contact 0: 0 ~ 3 V<sub>DC</sub>  
1: 10 ~ 30 V<sub>DC</sub> (3 mA min.)
- Isolation 3,000 V<sub>rms</sub>
- Supports 3 kHz Counter Input (32-bit + 1-bit overflow)
- Keep/Discard Counter Value when Power-off
- Supports 3 kHz Frequency Input
- Supports Inverted DI Status

## Digital Output

- Channels 4  
(Open collector to 30 V, 400 mA max. for resistance load)
- Isolation 3,000 V<sub>rms</sub>
- Supports 5 kHz Pules Output
- Supports High-to-Low and Low-to-High Delay Output

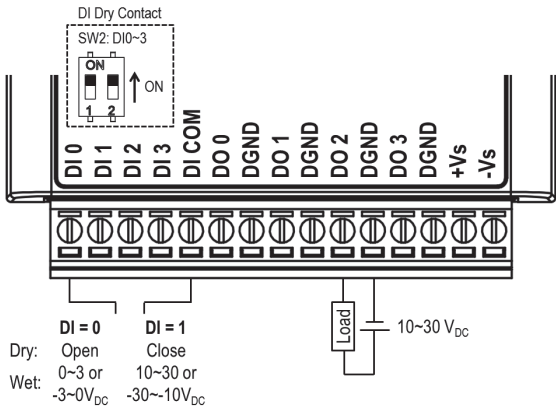
## General

- WLAN IEEE 802.11b/g/n 2.4GHz
- Outdoor Range 110 m with line of sight
- Connectors Plug-in screw terminal block (I/O and power)
- Watchdog Timer System (1.6 second) and Communication (programmable)
- Certification CE, FCC, R&TTE, NCC, SRRC, RoHS, KC, ANATEL
- Dimensions (W x H x D) 80 x 148 x 25 mm
- Enclosure PC
- Mounting DIN 35 rail, wall, and stack
- Power Input 10 ~ 30 V<sub>DC</sub>
- Power Consumption 2.2 W @ 24 V<sub>DC</sub>
- Power Reversal Protection
- Supports User Defined Modbus Address
- Supports Data Log Function Up to 10000 samples with RTC time stamp
- Supported Protocols Modbus/TCP, TCP/IP, UDP, DHCP, and HTTP, MQTT
- Supports RESTful Web API in JSON format
- Supports Web Server in HTML5 with JavaScript & CSS3
- Supports System Configuration Backup and User Access Control

## Environment

- Operating Temperature -25 ~ 70°C (-13~158°F)
- Storage Temperature -40 ~ 85°C (-40~185°F)
- Operating Humidity 20 ~ 95% RH (non-condensing)
- Storage Humidity 0 ~ 95% RH (non-condensing)

## Pin Assignment



## Ordering Information

- WISE-4050-AE 4-ch Digital Input and 4-ch Digital Output IoT Wireless I/O Module

## Selection Table

Model Name	Universal Input	Digital Input	Digital Output	Relay Output	RS-485
WISE-4012	4		2		
WISE-4050		4	4		
WISE-4051		8			1
WISE-4060		4		4	

## Accessories

- PWR-242-AE DIN-rail Power Supply (2.1A Output Current)
- PWR-243-AE Panel Mount Power Supply (3A Output Current)
- PWR-244-AE Panel Mount Power Supply (4.2A Output Current)

## Dimensions

