ICP DAS

WF-2051
Wi-Fi I/O Module with Isolated 16-ch DI (Asia Only)

Features

- Support sink/source type digital inputs
- Compatible with IEEE 802.11b/g standards
- Support infrastructure and ad hoc modes for wireless networks
- Support WEP, WPA and WPA2 wireless encryption
- Support Modbus/TCP and UDP protocols
- Support DHCP network configuration
- Built-in Watchdog
- Wide Operating Temperature Range
- 4 kV ESD Protection

RoHS

Introduction

The WF-2051 is a 16-channel isolated digital input with 32-bit counters module and it is one of the members of the WF-2000 wireless product family. In addition, the WF-2051 has WLAN connection complies with the IEEE802.11b/g standards. With the popularity of 802.11 network infrastructure, the WF-2051 makes an easy way to incorporate wireless connectivity into monitoring and control systems. The WF-2051 also supports Modbus/TCP and UDP protocols and the network encryption configuration, which makes perfect integration to SCADA software and offer easy and safe access for users from anytime and anywhere.

System Specifications

Isolation	
Intra-module Isolation	3750 V_{DC}
Wi-Fi	
Transmission Range	50 meters (LOS)
Standards	IEEE 802.11 b/g (non-RevB version) IEEE802.11 b/g/n (RevB version)
Receive Sensitivity	-83 dBm @ 11 Mbps (non-RevB version) -93 dBm @ 11 Mbps (RevB version)
Output Power	8 dBm @ 11 Mbps (non-RevB version) 14 dBm @ 11 Mbps (RevB version)
Mode	Infrastructure & Ad-hoc (non-RevB version) Infrastructure & Limit-AP (RevB version)
Encryption	WEP, WPA and WPA2
Antenna	5 dBi (Omni-Directional)
Power	
Input Range	+10 V_{DC} ~ +30 V_{DC}
Consumption	1.2 W
Mechanical	
Dimensions (W x L x H)	33 mm x 127 mm x 107 mm (Without antenna)
Installation	DIN-Rail Mounting
Environmental	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +80 °C
Humidity	10 ~ 90% RH, Non-condensing

I/O Specifications

Digital Input/Counter		
Channels		16 Counters: 8
Type		Dry Contact Wet Contact
Sink/Source (NPN/PNP)		Dry Contact: Source Wet Contact: Sink/Source
Wet Contact	ON Voltage Level	+10 ~ +50 V
	OFF Voltage Level	+4 V_{DC} Max.
Dry Contact	ON Voltage Level	Close to GND
	OFF Voltage Level	Open
Max. Counts		32-bit (4294967295)
Frequency		8K Hz Max.

■ Applications

PC | Wi-Fi | WF-2051 | Isolation | Isolated DI — Switches, Buttons...
Smart Device

■ Pin Assignments

Pin Assignment	Terminal No.				Pin Assignment
DI.GND	20			19	DI.GND
DI8	18			17	DI0
DI9	16			15	DI1
DI10	14			13	DI2
DI11	12			11	DI3
DI12	10			09	DI4
DI13	08			07	DI5
DI14	06			05	DI6
DI15	04			03	DI7
DI.COM	02			01	DI.COM

■ Dimensions (Units: mm)

37.2 | 35.6 | 37.2 | 7.0 | 107.0 | 128.0 | 171.0 | 110.0 | 127.0 | 266.0±0.5 | 33.0

Left View | Front View | Rear View | Top View | Bottom View
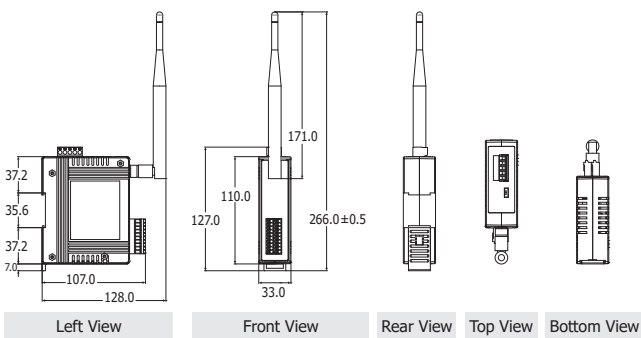
■ Wire Connections

Input Type Dry Contact	ON State LED ON Readback as 0	OFF State LED OFF Readback as 1
Relay Contact	Relay ON — Relay Close — DIx / DI.GND	Relay OFF — Relay Open — DIx / DI.GND
TTL/CMOS Logic	Voltage < 4 V — Logic Level Low / Logic GND — DIx / DI.GND	Voltage > 10 V — Logic Level High / Logic GND — DIx / DI.GND
Open Collector	Open Collector ON — ON — DIx / DI.GND	Open Collector OFF — OFF — DIx / DI.GND

Input Type Wet Contact	ON State LED ON Readback as 0	OFF State LED OFF Readback as 1
Relay Contact	Relay ON — Relay Close — DI.COM / DIx	Relay OFF — Relay Open — DI.COM / DIx
TTL/CMOS Logic	Voltage > 10V — Logic Power / Logic Level Low — DI.COM / DIx	Voltage < 4V — Logic Power / Logic Level High — DI.COM / DIx
NPN Output	Open Collector ON — ON — DI.COM / DIx	Open Collector OFF — OFF — DI.COM / DIx
PNP Output	Open Collector ON — ON — DI.COM / DIx	Open Collector OFF — OFF — DI.COM / DIx

■ Ordering Information

WF-2051 CR	Wi-Fi I/O Module with Isolated 16-ch DI (Dry, Wet) (Asia Only) (RoHS) Includes ANT-124-05 Antenna and CA-0910 Cable

■ Accessories

	3S001-1 CR	Antenna Extension Cable, RG58A/U, RP-SMA Male to RP-SMA Female, 1 M (RoHS)
	3S003-1 CR	Antenna Extension Cable, RG58A/U, RP-SMA Male to RP-SMA Female, 3 M (RoHS)
	3S005-1 CR	Antenna Extension Cable, RG58A/U, RP-SMA Male to RP-SMA Female, 5 M (RoHS)
	3S008-1 CR	Antenna Extension Cable, RG58A/U, RP-SMA Male to RP-SMA Female, 8 M (RoHS)
	ANT-8 CR	8 dBi, 2.4 GHz omni-directional antenna (RP SMA Male Plug) (RoHS)
	ANT-15 CR	15 dBi, 2.4 GHz omni-directional antenna (RP SMA Male Plug) (RoHS)
	ANT-15YG-1 CR	15 dBi, 2.4 GHz directional yagi antenna (RP SMA Male Plug) (RoHS) Includes 3S004 Cable (HDF 200 cable, N type male to RP-SMA male, 1 M)
	ANT-18 CR	18 dBi, 2.4 GHz directional panel antenna (RP SMA Male Plug) (RoHS)
	ANT-21 CR	21 dBi, 2.4 GHz directional grid antenna (RP SMA Male Plug) (RoHS)
	ANT-124-03 CR	3 dBi, 2.4 GHz omni-directional antenna (RP SMA Male Plug) (RoHS)