ICP DAS

WF-2060
Wi-Fi I/O Module with Isolated 6-ch DI and 6-ch Relay (Asia Only)

▣ Features

- ■ Support Relay type digital outputs
- ■ 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 pair connection mode
- ■ Support DO power on value & safe value Mechanism
- ■ Built-in Watchdog

RoHS

■ Introduction

The WF-2060, one member of ICP DAS WF-2000 (Wi-Fi) wireless product family, is a 6-channel isolated digital input with 32-bit counters, 6-channel power relay output module. WF-2060 in WLAN connection complies with the IEEE802.11b/g standards. With the popularity of 802.11 network infrastructure, the WF-2060 makes an easy way to incorporate wireless connectivity into monitoring and control systems. The WF-2060 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	DI: 3750 V_{DC}
Wi-Fi	
Transmission Range	50 meters (LOS)
Standards	IEEE 802.11 b/g (non-RevB version) IEEE 802.11 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	1.6 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		6 Counters: 6
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		10K Hz Max.
Relay Output		
Channels		6
Type		Power Relay (SPST-NO)
Contact Rating		Form A: 5 A 250 V_{AC} (47 ~ 63 Hz) 5 A 30 V_{DC}
Operate Time		Form A: 10 ms
Release Time		Form A: 5 ms
Electrical Endurance		100,000 times min.
Mechanical Endurance		20,000,000 times min.

Applications
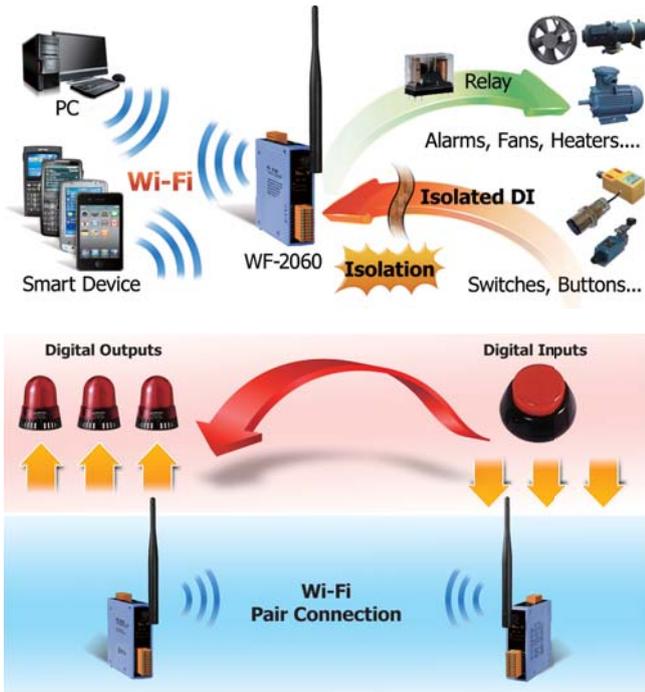
Wire Connections

Input Type	ON State LED ON Readback as 0	OFF State LED OFF Readback as 1
Relay Contact (Dry)	Relay Close — DIx / DI.GND	Relay Open — DIx / DI.GND
Open Collector (Dry)	ON — DIx / DI.GND	OFF — DIx / DI.GND
Relay Contact (Wet)	+/− DI.COM / DIx	+/− DI.COM / DIx
NPN Output (Wet)	ON — DI.COM / DIx	OFF — DI.COM / DIx

Output Type	ON State Readback as 1	OFF State Readback as 0
Relay	AC/DC — Load — RLx NO / RLx COM	AC/DC — Load — RLx NO / RLx COM

Dimensions (Units: mm)

| Left View | Front View | Rear View | Top View | Bottom View |

37.2, 35.6, 37.2, 7.0, 107.0, 128.0, 171.0, 110.0, 127.0, 266.0±0.5, 33.0
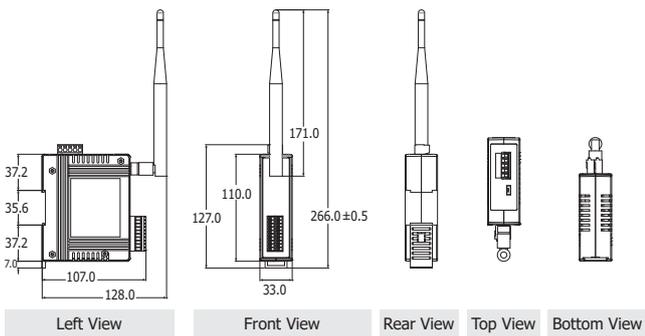
Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
RL0.NO	20	19	DI.GND
RL0.COM	18	17	DI0
RL1.NO	16	15	DI1
RL1.COM	14	13	DI2
RL2.NO	12	11	DI3
RL2.COM	10	09	DI4
RL3.NO	08	07	DI5
RL3.COM	06	05	DI.COM
RL4.NO	04	03	RL5.NO
RL4.COM	02	01	RL5.COM

Ordering Information

WF-2060 CR	Wi-Fi I/O Module with Isolated 6-ch DI (Dry, Wet) and 6-ch Relay (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)