



## WF-2026

Wi-Fi I/O Module with 5-ch AI, 2-ch AO, 2-ch DI and 3-ch DO (Asia Only)

### Introduction

The WF-2026 is a multifunction module with Wi-Fi interface that includes 5 analog input channels, 2 analog output channels, 2 digital input channels and 3 digital output channels. It provides a programmable input range on all analog input ( $\pm 150$  mV,  $\pm 500$  mV,  $\pm 1$  V,  $\pm 5$  V,  $\pm 10$  V,  $\pm 20$  mA or  $0 \sim +20$  mA) and output range on all analog output (12-bit at  $\pm 5$  V,  $\pm 10$  V,  $0 \sim +20$  mA or  $+4 \sim +20$  mA). Each analog input and output channel can be configured for an individual range and provides a high overvoltage protection of 240 Vrms. Analog Input and output can be jumper selectable as either voltage or current. With the popularity of 802.11 network infrastructure, the WF-2026 makes an easy way to incorporate wireless connectivity into monitoring and control systems. The WF-2026 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	Power: 3000 Vdc DO: 3750 Vdc DI: 3750 Vdc
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 Vdc $\sim$ +30 Vdc
Consumption	2.2 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 $\sim$ +75 $^{\circ}$ C
Storage Temperature	-30 $\sim$ +80 $^{\circ}$ C
Humidity	10 $\sim$ 90% RH, Non-condensing

### Features

- Multifunction (5-AI, 2-AO, 2-DI and 3-DO)
- Individual Channel Configuration
- Jumper Selectable Voltage or Current Input/Output
- Configurable Power-on and Safe Value Settings
- Compatible with IEEE 802.11b/g standards
- Support WEP, WPA and WPA2 wireless encryption
- Support Modbus/TCP and UDP protocols
- Support DHCP network configuration
- Support DO/AO power on value & safe value mechanism
- Overload and Short Circuit Protection for Digital Output
- 240 Vrms Overvoltage Protection for Voltage Input
- $\pm 4$  kV Contact ESD Protection
- Built-in Watchdog



### I/O Specifications

Analog Input		
Channels		5 (Differential)
Type		Voltage, Current
Range	Voltage	$\pm 150$ mV, $\pm 500$ mV, $\pm 1$ V, $\pm 5$ V, $\pm 10$ V
	Current	$0 \sim +20$ mA, $+4 \sim +20$ mA, $\pm 20$ mA (Jumper Selectable)
Resolution		16-bit
Accuracy		$\pm 0.1\%$ of FSR
Sampling Rate		10 Hz (Total)
Input Impedance	Voltage	2 M $\Omega$
	Current	140 $\Omega$
Common Mode Rejection		86 dB Min.
Normal Mode Rejection		100 dB
Overvoltage Protection		240 Vrms
Overcurrent Protection		Yes, 50 mA @ 110 Vdc
Individual Channel Configuration		Yes
Zero Drift		$\pm 20$ $\mu$ V/ $^{\circ}$ C
Span Drift		$\pm 25$ ppm/ $^{\circ}$ C
Analog Output		
Channels		2
Type	Voltage	$+0 \sim +5$ Vdc, $+0 \sim +10$ Vdc, $\pm 5$ Vdc, $\pm 10$ Vdc
	Current	$+0 \sim +20$ mA, $+4 \sim +20$ mA (Jumper Selectable)
Resolution		12-bit
Accuracy		$\pm 0.1\%$ of FSR
Voltage Output Capability		10 Vdc @ 20 mA
Power on Value		Yes, Programmable
Safe Value		Yes, Programmable
Digital Input/Counter		
Channels		2
Type		Dry Contact: Source
Dry Contact	ON Voltage Level	Close to GND
	OFF Voltage Level	Open
Digital Output		
Channels		3
Sink/Source (NPN/PNP)		Sink (NPN)
Load Voltage		+3.5 $\sim$ +50 V
Max. Load Current		700 mA per channel
Overvoltage Protection		60 Vdc
Short-Circuit Protection		Yes
Power on Value		Yes, Programmable
Safe Value		Yes, Programmable

## Applications



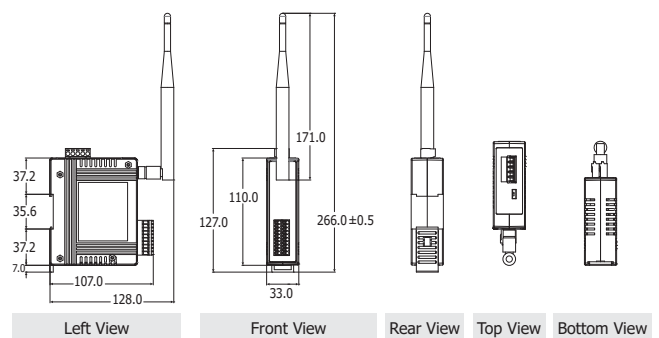
## Wire Connections

Voltage Input		Current Input	
Digital Input		ON State Readback as 1	OFF State Readback as 0
Dry Contact (Source)			
Digital Output		ON State Readback as 1	OFF State Readback as 0
Open Collector (Sink)			

## Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment
VI0-	20	19 VI0+
VI1-	18	17 VI1+
VI2-	16	15 VI2+
VI3-	14	13 VI3+
VI4-	12	11 VI4+
VO0-	10	09 VO0+
VO1-	08	07 VO1+
DI0	06	05 DO0
DI1	04	03 DO1
DGND	02	01 DO2

## Dimensions (Units: mm)



## Ordering Information

<b>WF-2026 CR</b>	Wi-Fi I/O Module with 5-ch AI, 2-ch AO, 2-ch DI and 3-ch DO (Asia Only) (RoHS) Includes ANT-124-05 Antenna and CA-0910 Cable
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## 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)