

WF-2026

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

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
- ±4 kV Contact ESD Protection
- Built-in Watchdog

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 (±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V, ±20 mA or 0 ~ +20 mA) and output range on all analog output (12-bit at ±5 V, ±10 V, 0 ~ +20 mA or +4 ~ +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 ~ +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 ~ +75 °C
Storage Temperature	-30 ~ +80 °C
Humidity	10 ~ 90% RH, Non-condensing

I/O Specifications

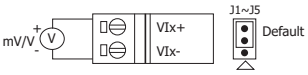
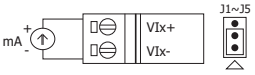
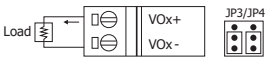
Analog Input		
Channels		5 (Differential)
Type		Voltage, Current
Range	Voltage	±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V
	Current	0 ~ +20 mA, +4 ~ +20 mA, ±20 mA (Jumper Selectable)
Resolution		16-bit
Accuracy		±0.1% of FSR
Sampling Rate		10 Hz (Total)
Input Impedance	Voltage	2 MΩ
	Current	140 Ω
Common Mode 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		±20 μV/°C
Span Drift		±25 ppm/°C
Analog Output		
Channels		2
Type	Voltage	+0 ~ +5 VDC, +0 ~ +10 VDC, ±5 VDC, ±10 VDC
	Current	+0 ~ +20 mA, +4 ~ +20 mA (Jumper Selectable)
Resolution		12-bit
Accuracy		±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 ~ +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

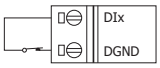
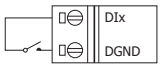
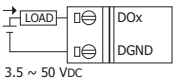
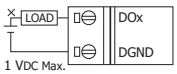
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Applications



Wire Connections

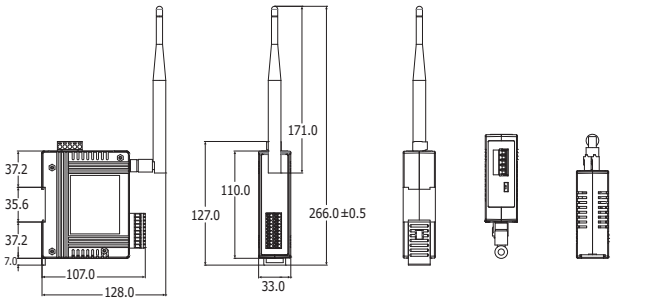
Voltage Input	Current Input
	
Voltage Output	**Current Output**
	

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)



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

Ordering Information

WF-2026 CR	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

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)

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