



## WF-IO-4N

Wi-Fi Wireless Module with one I/O Slot

### Features

- Support Wi-Fi 2.4/5 GHz
- Compatible with IEEE 802.11a/b/g/n standards
- Support AP and STA mode
- Support WEP, WPA, WPA2 and WPA3 wireless encryption
- Support Modbus/TCP&UDP and MQTT Protocols
- One XV I/O board can be installed
- Support Web-based configuration
- Built-in WDT
- Supports I/O pair-connection mode.



### Introduction

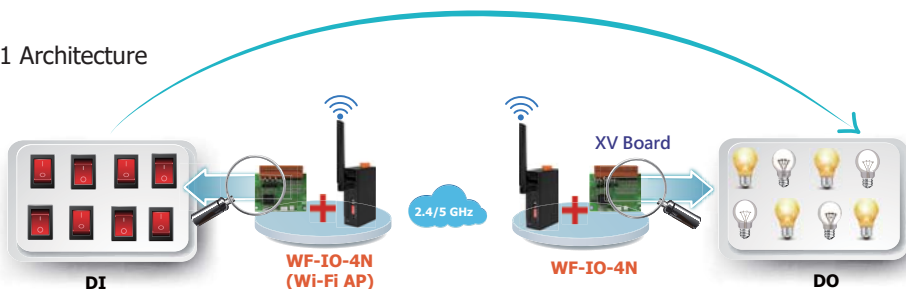
The WF-IO-4N is a dual-band Wi-Fi universal I/O module designed to easily connect and control devices over Wi-Fi networks. The WF-IO-4N supports both 2.4 GHz and 5 GHz Wi-Fi bands and adopting Modbus/TCP&UDP and MQTT Protocols, WF-IO-4N can be seamlessly integrated into automation control, remote monitoring and IoT applications. The key feature of WF-IO-4N lies in its modular I/O expansion design. The main unit provides a standardized interface that can be paired with different XV I/O boards, allowing flexible combinations of digital I/O, analog I/O and relay control. Users can quickly reconfigure or expand I/O specifications according to project needs without replacing the WF-IO-4N module, reducing costs while enhancing system flexibility. In addition, the WF-IO-4N supports wireless firmware updates and features a web-based configuration interface, making installation and maintenance more convenient. Whether for single-device control or large-scale deployment, WF-IO-4N delivers a stable, secure, and highly scalable solution.

### Applications

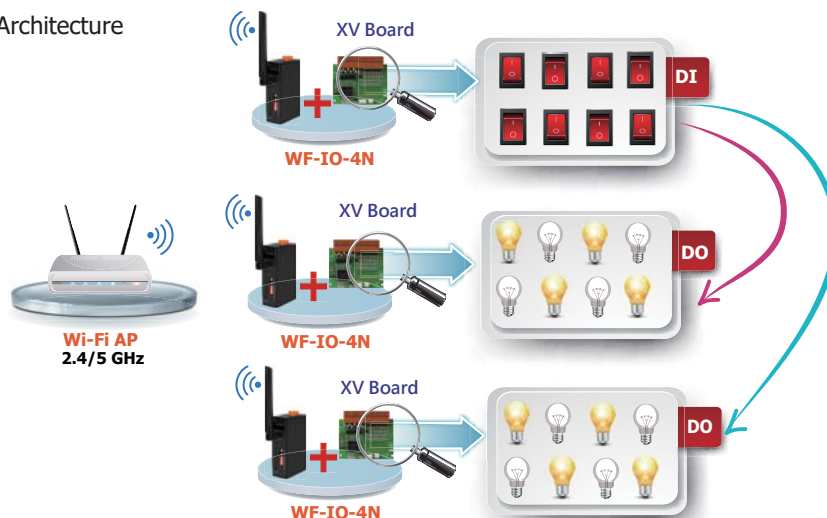
- Wi-Fi Application Architecture



- Pair Connection - 1-to-1 Architecture



- Pair Connection - 1-to-1 Architecture

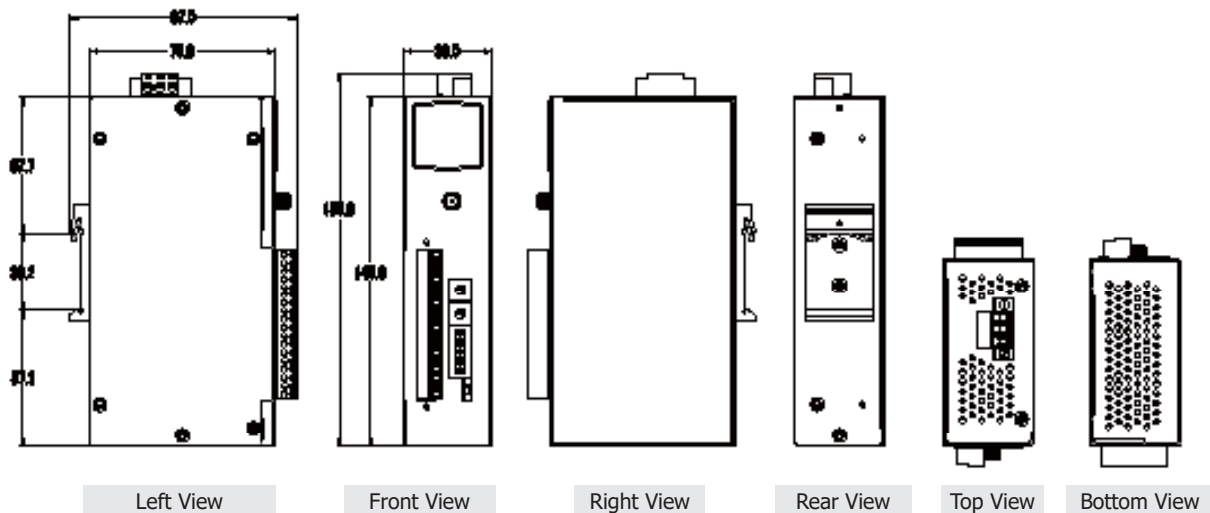


## System Specifications

<b>Model</b>	<b>WF-IO-4N</b>
<b>LED Indicators</b>	
Status	PWR, Wi-Fi, RSSI
<b>Wi-Fi</b>	
Transmission Distance (LoS)	50 meters (LOS)
Standard	IEEE 802.11 a/b/g/n
RX Sensitivity	-94.5 dBm @ 2.4GHz -89 dBm @ 5 GHz
Output Power	16 dBm @ 2.4GHz 15.1 dBm @ 5 GHz
Mode	Access Point (AP) & Station (STA)
Frequency	2.4 / 5 GHz
Protocol	Modbus/TCP, Modbus/UDP, MQTT
Encryption	Open, WPA/WPA2-PSK, WPA3-PSK
Client	Max. 4 Clients (AP mode)
<b>Antenna</b>	
Type	Omni-Directional
Connector	RP-SMA Male (Plug)

<b>Model</b>	<b>WF-IO-4N</b>
Gain (dBi)	3 dBi @ 2.4 GHz 5.5 dBi @ 5 GHz
<b>I/O Expansion</b>	
I/O Type	plug-in, XV-board
Slots	XV series I/O board * 1
<b>Power</b>	
Input Range	+10 VDC ~ +30 VDC
Consumption	1.5 W @ 24 VDC
<b>Mechanical</b>	
Casing	Metel
Dimensions (mm)	158 mm x 38 mm x 97 mm
Installation	DIN-Rail
<b>Environment</b>	
Operating Temperature	-25°C ~ +75°C
Storage Temperature	-30°C ~ +80°C
Humidity	10 to 90% RH (Non-condensing)

## Dimensions (Units: mm)



## XV-board supported list

DIO Expansion		Relay Output Expansion		Multi-Function Expansion			
XV107 (A)	XV111 (A)	XV116	XV161-SL	XV303	XV306	XV308	XV310
XV110	-	XV119	-	XV305	XV307	XV386	XV315

## Ordering Information

<b>WF-IO-4N CR</b>	Wi-Fi Wireless Module with one I/O Slot (RoHS)
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