

# **Quick Start**

### 「WF-2055」Package Checklist

The package includes the following items:

- One WF-2055 module
- **One Quick Start**
- One software utility CD
- One screw driver
- One RS-232 cable (CA-0910)
- One Antenna 2.4GHz 5 dBi (ANT-124-05)

### Note:

If any of these items are missed or damaged, contact the local distributors for more information. Save the shipping materials and cartons in case you want to ship in the future.

### Appearance and pin assignments









### Figure 1: Appearance of the WF-2055

### Table 1: System Status Indicator

System Status Indicator	System Status Indicator					
LED	Module Status	LED Status				
	Wi-Fi communication error	Blink per 100 ms				
PWR	Wi-Fi associate error	Every 1 second flashes twice per 100 ms				
	Wi-Fi unable to connect error	Blink per 1000 ms				
	Wi-Fi network configurations error	Every 1 second flashes three times per 100 ms				
	Power failure	Off				
Wi-Fi	Data transmission	Blink				
	Bus Idle	Off				

#### Table 2: Signal Strength LED Indicator

Signal Strength LED Indicator			
LED Status	Signal strength		
• •	High		
0 🔴 🔴	Medium		
00	Low		
000	Bad or No Signal		

### Table 3: I/O Connector - WF-2055

I/O Connector - WF-2055				
Terminal No.	Pin Assignment	Terminal No.	Pin Assignment	
1	DI.COM	2	EXT.PWR	
3	DI7	4	DO7	
5	DI6	6	DO6	
7	DI5	8	DO5	
9	DI4	10	DO4	
11	DI3	12	DO3	
13	DI2	14	DO2	
15	DI1	16	DO1	
17	DIO	18	DO0	
19	DI.GND	20	EXT.GND	

#### **Operating Mode Selector Switch**

FW mode: Firmware update mode

Move the switch to the OP position after the upgrade is complete.

OP mode: Firmware operation mode

In the WF-2000, the switch is always in the OP position. Only when updating the WF-2000 firmware, the switch can be moved from the OP position to the FW position.

Power/Signal connector	
Pin Assignment	Description
F.G	Frame Ground
+Vs	+10 ~ +30 VDC
GND	Power / RS-232 GND
RxD	RS-232 RxD
TxD	RS-232 TxD

### Table 4: Power/Signal Connector

## Hardware Connection

### Power and Serial port connection

The following figures describe the Power and the COM port to a serial device via serial network.



Figure 2: Power and Serial port wire connection

### I/O connection



Figure 3: DI Dry contact wire connection



Figure 4: DI Wet contact wire connection



Figure 5: DO wire connection

### Installation

Before use, associated hardware configuration, the steps described as follows :

#### Step 1: Checking the WF-2000 series firmware operation mode

It needs to set the DIP switch to the "OP" position (operation mode), as resetting the power, WF-2000 series will be in the operation mode.

### **Step 2: Serial port connection**

WF-2000 series supports RS-232 serial communication. The circuit configuration is as shown in Figure 2.

If you do not need parameter setting, this step can be omitted.

#### **Step 3: Power connection**

Connect the power supply to WF-2000 series' power terminator, as shown in Figure 2.

### WF-2000 series connection setting

WF-2000 Series	Connection	Configuration
----------------	------------	---------------

Net ID Port Number	Wi-Fi Mode		F/W Version:-
1 • 502	Ad-Hoc	-	1.0
Local IP	SSID		Date Created:-
192 . 168 . 255 . 1	WF-	2055	2012/08/08
Gateway	WLK		
192 . 168 . 255 . 254			
Net Mask	WLCH	Encryption	-
255 . 255 . 255 . 0	2 💌	NONE	Read para
MAC Address	Parameter Upload	Interface	-
00:1D:C9:80:12:03	RS-232 💌	COM5 -	Write para
Status Bar	L		-
			FXIT

Figure 6: Connection Configuration

- 01 Net ID : The Unit Identifier in Modbus TCP/IP application data unit. This case is set as "1".
- 02 Port Number : This field is used to set TCP/IP port of connection according to the actual conditions. This case is set TCP/IP port as "502".
- 03 · Local IP : Set the local WF-2000 series' IP. Here set to "192.168.255.1".
- 04 · Gateway : Gateway settings. Here set to "192.168.255.254".
- 05 Net Mask : Net Mask settings. Here set to "255. 255. 255.0".
- 06 Wi-Fi Mode : Wireless network connection mode settings. Here set to "Ad-Hoc" mode. (If select the "AP" mode, wireless AP devices is needed.)
- 07 SSID : Service set identifier. Here set to "WF-2055".
- 08 WLK : The Key of encryption. Here does not have the setting.
- 09 VLCH : Wi-Fi connection channel settings. Here set to "2".
- 10 Encryption : Encryption mode settings. Here set "NONE" (without encryption).
- 11 Upload the parameters : After completing the settings above, select the "RS-232" interface and connections "COM Num". Press "Write para" button to upload the parameters.

### **PC Connection Configuration**

- 01 \ TCP/IP Setting :
  - a. Open Network connections and entry the properties setting of wireless network connections.

	S Network Connections	
	File Edit View Favorites Tools Advanced Help	25
	🔇 Back - 🕥 - 🏂 🔎 Search 🍋 Folders 🔟 -	
	Address 🚳 Network Connections	💙 🄁 Go
Disable Status Repair Wer Available Winders Networks Change Windows Preveal sattings Et Cange Windows Preveal sattings	Network Tasks     Image: Constant of the connection of the conneconnection of the connection of the connection of the connection o	

Figure 7: Properties setting of wireless network connections

b. Select the Internet Protocol (TCP/IP) and press the "Properties" button.

Connect		IKS AUVAILEU	
B B	UFFALO WLI-UC	C-GNHP Wireless L	Configure
This c <u>o</u> r	nnection uses the	e following items:	
<ul> <li>✓ 3<sup>-</sup></li> <li>✓ 3<sup>-</sup></li> <li>✓ 3<sup>-</sup></li> <li>✓ 3<sup>-</sup></li> </ul>	PROFINET IO F SIMATIC Indust Internet Protoco	RT-Protocol V2.0 trial Ethernet (ISO) of (TCP/IP)	
<			>
l <u>t</u>	ostall	<u>U</u> ninstall	Properties
Descri Trans wide acros	ption mission Control F area network pro s diverse interco	Protocol/Internet P tocol that provides nnected networks.	rotocol. The default s communication
✓ Sho <u>v</u> ✓ Notif	⊻icon in notificat y <u>m</u> e when this c	ion area when cor onnection has limit	nnected ted or no connectivity

Figure 8: Properties setting of Internet Protocol (TCP/IP)

c. Click the "Use the following IP address" and entry the **IP address** as "192.168.255.10", **Subnet mask** as "255.255.255.0". Finally, press "OK" button.

'ou can get IP settings assigned nis capability. Otherwise, you ne ne appropriate IP settings.	d automatically if your network supports sed to ask your network administrator fo
O <u>O</u> btain an IP address autor	natically
O Use the following IP address	\$\$:
IP address:	192 . 168 . 255 . 10
S <u>u</u> bnet mask:	255 . 255 . 255 . 0
Default gateway:	w n a
C Distan DNR commendation	
Use the following DNS server	ver addresses:
Preferred DNS server:	
Alternate DNS server	
Filtoniato brito corron.	

Figure 9: IP address setting interface

- 02 · Wireless network connection :
  - a. View available wireless networks and you can see the "WF-2055" wireless network in the list.
  - b. Select the "WF-2055" and press the "Connect" button.



Figure 10: Wireless network connection

c. Press the "Connect Anyway" button for the next step.



Figure 11: Connection confirm interface

d. After waiting for a while, there will appear connection success screen.



Figure12: Connection successful interface

### **PC Connection Test**

- 01 
  Connection test I: Connection with WF-2000 I/O utility
  - a. Open WF-2000 I/O utility and key in the IP address as "192.168.255.1", Port Number as "502". Finally, press the "Connect" button.
  - b. If the network settings are correct, this will immediately establish a connection.
  - c. You can do the DO output control or DI / DO monitoring in this operation interface.

le <u>C</u> onfiguratio	n <u>A</u> bout								
-Connection Client					Por	Number	- 1 [	Net ID	_ 1
Connect	to V	VF-2000: 1	92 . 168 . 2	55.1		502		1	-
-						Clear Message		Close Socket	
System Message WF-2055 (192.16) WF-2055 (192.16)	8.255.1)> 8.255.1)>	READ READ		+	RS	nal Strength — SI 49		• • •	
DO/DI Status									
	CHO	CH1	CH2	CH3	CH4	CH5	CH6	CH7	
DO	•	۲	۲	۲	۲	۲	۲	۲	
DI	•	•	•	•	•	۲	۲	٠	
DO Activate	Γ	Г	Г	Г	Γ	Г	Г	Γ	
Counter Status									
	CHO	CH1	CH2	CH3	CH4	CH5	CH6	CH7	
Counter	0	0	0	0	0	0	0	0	
	Reset	Reset	Reset	Reset	Reset	Reset	Reset	Reset	
odule Name: WF-	2055							ICP DAS C	o Itd

Figure 13: Connection successful interface

- $02 \sim Connection test \ II: Connection with Modbus TCP utility$ 
  - a. Open Modbus TCP utility and key in the IP address as "192.168.255.1", Port as "502". Finally, press the "Connect" button.
  - b. If the network settings are correct, this will immediately establish a connection.
  - c. Use the function code "0x0F", and set the reference number as "0x00" to do the DO output control.

B MBTCP Ver. 1.1.4		×				
ModbusTCP	Protocol Description					
192 168 255 1	FC1 Read multiple coils status (0xxxx) for D0	•				
	[Prefixed 6 bytes of Modbus/TCP protocol]	<u>^</u>				
Port :  502	Byte 0: Transaction identifier - copied by server - usually 0 Byte 1: Transaction identifier - copied by server - usually 0					
Connect Disconnect	Byte 2: Protocol identifier=0					
	Byte 3: Protocol identifier=0 Byte 4: Lenoth field (upper byte)=0					
) Data Log						
Polling Mode (no wait)	Statistic	Clear Statistic				
Start Stop	Command Quantity Response					
	Total Packet bytes 126 Difference Total Packet bytes	108				
T: 1.47 1.5 B	Packet Quantity sent 9 Packet Quantity red	ceived 9				
I imer mode (rixed period)	Dellar es Tinuarde (Dela Tina) Della et de Tina	- ()				
Interval 100 ms Set	Start time Start Time Max 0	g (ms)				
Start Shop	Stop time Min 1000					
	Stop Time	1 000				
(Rute()) [Rute()] [Rute()] [Rute()] [Rute()]						
120008 1 F 0 0 0 82FF		Send Command				
[Byte0] [Byte1] [Byte2] [Byte3] [Byte4] [Byt	[Byte0] [Byte1] [Byte2] [Byte3] [Byte4] [Byte5] [Byte6] [Byte7] [Byte0] [Byte1] [Byte2] [Byte3] [Byte4] [Byte5]					
01 02 00 00 00 08> 01 0F 00 00 00 08 02 F	F 01 02 00 00 00 06> 01 0F 00 00 08					
01 02 00 00 00 08> 01 0F 00 00 00 08 02 F 01 02 00 00 00 08> 01 0F 00 00 00 08 02 F	F 01 02 00 00 00 06> 01 0F 00 00 00 08					
01 02 00 00 00 08> 01 0F 00 00 00 08 02 F	F 01 02 00 00 00 06> 01 0F 00 00 00 08					
01 02 00 00 00 08 -> 01 0F 00 00 00 08 02 F	F 01 02 00 00 00 06 -> 01 0F 00 00 08					
FUT UZ UU 00 00 08 -> 01 UF 00 00 00 08 02 F						
Clear	Lists EXIT F	Program				

Figure 14: DO output control interface

d. Use the function code "0x01", and set the reference number as "0x00" to get the DO output monitor data.

B MBTCP Ver. 1.1.4	
ModbusTCP           IP:         192.168.255.1           Port:         502           Connect         Disconnect           IF         Data Log	Protocol Description FC1 Read multiple coils status (0xxxx) for D0 (Request] Byte 0: Net ID (Station number) Byte 1: FC=01 Byte 2-3: Reference number Byte 4-5: Bit count v
Polling Mode (no wait)       Start     Stop       Timer mode (fixed period)       Interval     1000 ms       Start     Stop	Statistic     Packet     Clear Statistic       Command     Quantity     Response       Total Packet Quantity     Difference     Total Packet bytes     3575       Packet Quantity sent     298     4     Packet Quantity received     294       Polling or Timer mode (Date/Time)     Polling Mode Timing (ms)     Average       Start time     下午 02:25:53     Max     0     Average       Stop time     Stop Time     Min     1000     000
Byte0]         [Byte1]         [Byte2]         [Byte3]         [Byte4]         [Byt           1         0         0         8         [Byte0]         [Byte1]         [Byte2]         [Byte3]         [Byte4]         [Byt           0	e5]
Clear	Lists EXIT Program

Figure 15: DO output monitor interface

e. Use the function code "0x02", and set the reference number as "0x00" to get the DI input monitor data.

B MBTCP Ver. 1.1.4				
ModbusTCP Protocol Description				
IP: 192.168.255.1	Request			
Port : 502	Byte 0: Net ID (Station number)			
Connect Disconnect	Byte 1: FC=02 Byte 2-3: Reference number Byte 4-5: Bit count			
Polling Mode (no wait)	Statistic Clear Statistic			
Start Stop	Command Quantity Response			
	Total Packet bytes 17402 Difference Total Packet bytes 14109			
Timer mode (fixed period)	Packet Quantity sent 1401 5.14 % Packet Quantity received 1329			
	Polling or Timer mode (Date/Time) Polling Mode Timing (ms)			
intervai 1000 ms Set	Start time 下午 02:44:05 Max 0 Average			
Start Stop	Stop time Stop Time 000			
(Butef) (Bute1) (Bute2) (Bute3) (Bute4) (But	5			
120006 1 2 0 0 0 8	Send Command			
[Byte0] [Byte1] [Byte2] [Byte3] [Byte4] [Byte	5] [Byte0] [Byte1] [Byte2] [Byte3]			
01 02 00 00 00 06 -> 01 02 00 00 00 08	01 02 00 00 00 04 -> 01 02 01 FF			
01 02 00 00 00 06 -> 01 02 00 00 00 08	01 02 00 00 04 -> 01 02 01 FF			
01 02 00 00 00 06> 01 02 00 00 00 08 01 02 00 00 00 06> 01 02 00 00 00 08	≡ 01 02 00 00 00 04> 01 02 01 FF 01 02 00 00 00 04> 01 02 01 FF ≡			
01 02 00 00 00 06> 01 02 00 00 00 08	01 02 00 00 00 04 -> 01 02 01 FF			
Clear I	ists EXIT Program			

Figure 16: DI input monitor interface

f. Use the function code "0x04", and set the reference number as "0x32" to get the Counter monitor data.

B MBTCP Ver. 1.1.4		
ModbusTCP IP: 192.168.255.1 Port: 502 Connect Disconnect T Data Log	Protocol Description FC4 Read multiple input registers (3xxxx) for Al (Request) Byte 0: Net D (Station number) Byte 1: FC=04 Byte 2-3: Reference number Byte 4-5: Word count	
Polling Mode (no wait)           Start         Stop           Timer mode (fixed period)         Interval         1000         ms         Set           Start         Stop         St	Statistic     Clear Statistic       Command     Quantity       Total Packet Quantity     Difference       Packet Quantity sent     10       Poling or Timer mode (Date/Time)     Poling Mode Timing (ms)       Start time     下午 02:54:14       Stop time     Stop Time	
[Byte0] [Byte1] [Byte2] [Byte3] [Byte4] [Byt 1 2 0 0 0 6 1 4 0 32 0 10 [Byte0] [Byte1] [Byte2] [Byte3] [Byte4] [Byt 01 02 00 00 00 05 → 01 04 00 32 00 10 01 02 00 00 00 05 → 01 04 00 32 00 10 01 02 00 00 00 05 → 01 04 00 32 00 10 01 02 00 00 00 05 → 01 04 00 32 00 10 01 02 00 00 00 05 → 01 04 00 32 00 10	e5] Send Command e5] [Byte0] [Byte1] [Byte2] [Byte3] 01 02 00 00 02 23 -> 01 04 20 00 36 00 00 00 1F 00 00 00 16 00 00 00 10 00 00 00 00 00 00 00 00 10 00 00 00 00 00 00 00 00 00 00 10 00 00 00 00 00 00 00 00 00 10 00 00 00 00 00 00 00 00 00 10 00 00 00 00 00 00 Exits EXIT Program	

Figure 17: Counter monitor interface

### Pair Connection Test (Another WF-2055 set to pair connection mode)

### Module Configuration setting

- 01 Set the Local IP as "192.168.255.2".
- 02 Set the Net ID as "1".
- 03 · Set the same Port Number as "502".
- 04 Set the same Gateway as "192.168.255.254".
- 05 Set the same Net Mask as "255.255.255.0".
- 06 Set the same Wi-Fi Mode as "Ad-Hoc" mode.
- 07 Set the same SSID as "WF-2055".
- 08  ${\scriptstyle \sim}$  Set the same WLK, here does not have the setting.
- 09 · Set the same WLCH as "2".
- 10 Set the same Encryption, here set "NONE" (without encryption)
- 11 . Finally, click the "Write Para." button to take the parameters effect.

Net ID Port Number	Wi-Fi Mode		F/W Version:
1 • 502	Ad-Hoc	•	1.0
Local IP	SSID		Date Created:
192 . 168 . 255 . 🙎	W	-2055	2012/08/08
Gateway	WLK		
192 . 168 . 255 . 254			
Net Mask	WLCH	Encryption	
255 . 255 . 255 . 0	2 🔹	NONE	Read para
MAC Address	Parameter Uploa	id Interface	-
00:1D:C9:80:12:03	RS-232 🔹	СОМ5 🚽	Write para
Status Bar		]	-
			EXIT

Figure 18: Module configuration interface

Pair connection setting

- 01 Set the Remote IP as "192.168.255.1".
- 02 Set the Remote Port Number as "502".
- 03 . Set the Remote Net ID as "1".
- 04  ${\scriptstyle \sim}$  Set the Scan Time as "500" ms.
- 05 Set the Local DO Base address as "0".
- 06 Set the Remote DI Base address as "0".
- 07 . Set the I/O count as "8".
- $08 \cdot$  Set the communication Timeout as "3000" ms.
- 09 Set the I/O Pair Connection to "Enable".
- 11 . Finally, click the "Write Para." button to take the parameters effect.

Remote IP Address	Remote Port Number
192 . 168 . 255 . 1	502
Remote Net ID	- Scan Time (ms)
1	500
Local DO Base Address	Remote DI Base Address
0	0
I/O Count	Communication Timeout (ms
8	3000
Active	
V I/O Pair Connection	Read Para.
Parameter Upload Interface	
Wireless V COM1 V	Write Para.
Status Bar	
	EXIT

Figure 19: Pair connection setting interface

### Pair connection test

- 01 After completion of the above settings, re-power on the two sets of WF-2055.
- 02 The connection will established automatically after about 10 seconds.
- 03 If the DI of WF-2055 have been triggered, then the DO of another WF-2055 will automatically output.

Image: Service of the service of th	Net ID         Port Number         Wi-Fi Mode           I         502         Wi-Fi Mode           I         192         160         255         1           I         192         160         255         2         I           I         192         160         255         2         I         WI-2055           Gateway         WLK         I         192         160         255         25         I	F/W Versi F/W Versi F/W Versi F/W Versi Date Cree Control Content of the content	reated: reated: R/08 d para te para SXIT ts	
Image: Instant State       Image: Instant State         Image: Instant State       Image: Instant         Image: Instate	Image: solution of the	Dete Cree 5 Dete	reated: B/08 d para te para SAT	
Use IP       SSD       Urgender         III2 - 108 - 255 - 1       WK       Urgender         III2 - 108 - 255 - 0       VI.Cl       Encryption       Read para         Not. Address       Parameter Upged Interface       Wite para       Dott         Status       Distribution       Forty       Distribution       Forty         VI.FI       Distribution       Forty       Forty       Forty         VI.FI       Distribution       Forty       Forty       Forty         VI.FI       Mode       Forty       Forty       Forty         VI.FI       Distribution       Forty       Forty       Forty         VI.FI       Mode       Forty       Forty       Forty       Forty         VI.FI       Mode       Forty       Forty       Forty       Forty       Forty         IIII       Forty       Forty       Forty       Forty       Forty       Forty       Forty         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Local IP         SSID           192 . 168 . 255 . 1         WF.2055           Gateway         WLK           192 . 168 . 255 . 254         WLK           255 . 255 . 0         Parameter Upload Inte           00:10:03:80:12:03         F8-232           Status Bar         Status Bar	Dete Crea	reated: B/08 Id para Ite para SAT SAT	
Port Number       VML Head pars         VICH       Excerption	Port Number         Wi-Fi Mode         Image: F/W Version:           Port Number         Wi-Fi Mode         Image: F/W Version:	5 Control of a con	d para te para XaT	
Image: Status Bir       Prameter Uplask Interface         Image: Status Bir       Post         Image: Status Bir       Post <td>Sateway       WLK         192.168.255.254       WLK         255.255.0       YLCH         0:10:03:80:12:03       Parameter Upload Inte         00:10:03:80:12:03       FB-232         Status Bar       Status Bar         Status Bar       WLFI Mode         0:10:03:80:12:03       Parameter Upload Inte         9:10:03:03       Parameter Upload Inte         9:10:03:03       Parameter Upload Inte         9:10:03:03       Parameter Upload Inte         9:10:04:04:04:04:05       Parameter Upload Inte         9:10:03:03       Parameter Upload Inte         9:10:04:04:04:05       Parameter Upload Inte         9:10:04:05:05:05:05:05:05:05:05:05:05:05:05:05:</td> <td>neryption IONE erface OM5 EXT</td> <td>d para te para XAT</td> <td></td>	Sateway       WLK         192.168.255.254       WLK         255.255.0       YLCH         0:10:03:80:12:03       Parameter Upload Inte         00:10:03:80:12:03       FB-232         Status Bar       Status Bar         Status Bar       WLFI Mode         0:10:03:80:12:03       Parameter Upload Inte         9:10:03:03       Parameter Upload Inte         9:10:03:03       Parameter Upload Inte         9:10:03:03       Parameter Upload Inte         9:10:04:04:04:04:05       Parameter Upload Inte         9:10:03:03       Parameter Upload Inte         9:10:04:04:04:05       Parameter Upload Inte         9:10:04:05:05:05:05:05:05:05:05:05:05:05:05:05:	neryption IONE erface OM5 EXT	d para te para XAT	
Image: Parameter Upland Interface	192.158.255.254         Net Mask         255.255.0         2         MAC Address         00:1D:C9:80:12:03         FB-232         Status Bar	Incryption IONE  IRead p erface IM5 IREAD INFO INFO INFO INFO INFO INFO INFO INFO	nd para te para :XIT	
Wet Mark       WLCH       Decryption       Read pars         With States       Parameter Upload Interface       Write para         Bis 22 22 1       Dott       Diff         Diff       Diff       Di	Net Mask       WLCH       En         255 . 255 . 0       Parameter Upload Inte         00:1D:C9:80:12:83       FIS-232         Status Bar             Digital Outputs         Image: Comparison of the state of t	ncryption IONE  Read p erface OM5 EXT EXT EXT EXT EXT	d para te para EXIT	
225       225       225       Parameter Upbaal Interface         Bitters Bit       DSI         Digital Outputs       Parameter Upbaal         Digital Outputs       Parameter Upbaal         Vicit       Parameter Upbaal         Bitters       Date	255 - 255 . 0       2       N         MAC Address       Parameter Upload Inte         00:1D:C3:80:12:03       RS-232       I         Status Bar       Status Bar       I         Digital Outputs       I       I         Image: Status Bar       Image: Status Bar       Image: Status Bar         Digital Outputs       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar	IONE    Read p  rface  OM5	ite para ExtT its its its its its its its its	
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Image: Status Dar       Image: Status Dar         Image: Status Dar       Ext         Image: Status Dar       Ext         Image: Status Dar       Image: Status Dar         Ima	Oprior Summer       Provide Summer         Oprior Status Bar       Image: Status Bar         Status Bar       Image: Status Bar         Image: Status Bar       Image: Status Bar	Digital Inputs	te para	
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Status Bar       Ext         Digital Outputs       Digital Inputs         Digital Outputs       Digital Inputs         View       Part Contraction         Part Number       Part Contraction         Digital Outputs       Part Contraction         Port Number       Part Number         502       Bible         Sibil       Wr-2055         Dida Created       Dida Created         Sibil       Wr-2055         View       Read pres         Status Parteret Upload Interface       With para	Status Bar	Ext		
Digital Outputs       Digital Dougles         Digital Outputs       Digital Inputs         Digital Outputs       VIEFS         VIEFS	Port Number VFFi Mode AtHac SSID Patr Contection: F/W Version: 1.0 Det Created: neutronic filter of the context of the	Digital Inputs		
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Figure 20: Pair connection architecture and setting interface

ltem	Problem Description	Solution
1	Power Failure (PWR LED Off)	1. Please return to the ICP DAS for inspection and repair
2	WLAN connection can not be established	<ol> <li>Make sure that the service set identifier device (SSID) settings are the same.</li> <li>Make sure Wi-Fi transmission Channel settings are the same.</li> <li>Make sure encryption is set, encryption keys are the same way</li> <li>Make sure antenna is good</li> <li>Make sure the connection is too far away, resulting in poor signal quality.</li> <li>Please confirm whether there are barriers on the scene. That could result in poor signal quality.</li> </ol>
3	TCP connection can not be established	<ol> <li>Make sure WLAN connection is established successfully</li> <li>Make sure the network configuration is good (TCP / IP Port, Local IP, Remote IP, Gateway, Net Mask)</li> </ol>
4	How to restore factory default Step1 Step2 Step3 Step4	<ol> <li>Power on the WF-2000 series I/O module</li> <li>Change the Dip-Switch position of the WF-2000 series and to complete the following steps in 5 seconds.</li> <li>Step1. From "OP" to "FW" position.</li> <li>Step2. From "FW" to "OP" position.</li> <li>Step3. From "OP" to "FW" position.</li> <li>Step4. From "FW" to "OP" position.</li> <li>When the correct implementation of the above steps, the Signal Strength LEDs and PWR/Wi-Fi LEDS of the WF-2000 series should be turn on, and that should be turn off after 500 ms later.</li> <li>Reset the power the WF-2000 series would back to factory defaults.</li> </ol>

### Troubleshooting

## Technical Support

If you have problems about using the WF-2000 series I/O module, please contact ICP DAS Product Support.

Email: service@icpdas.com