WF-2000 series FAQ

APPLICATION

ICP DAS Co., Ltd. Ver.1.2.0 2020/12/2



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問題 1: 如何延長無線通訊距離?

回覆1:我們建議更換大功率天線,來延長通訊距離,例如ANT-8/ANT-15/ANT-18 等。 ANT-8(<u>https://www.icpdas.com/en/product/ANT-8</u>) ANT-15(<u>https://www.icpdas.com/en/product/ANT-15</u>) ANT-18(<u>https://www.icpdas.com/en/product/ANT-15</u>)

問題 2: 如何與智慧型手機建立連線?

回覆2:

- A. 智慧型手機支援Ad Hoc連線方式
 - a. WF-2000 Wi-Fi 網路設定(CONFIGURATOIN)

a1. Wi-Fi Mode 設定為 "Ad-Hoc", 其餘皆為保留出廠預設值

letwork					Wi-Fi			General	
Net ID	1			•	Wi-Fi Modes	Ad-Hoc	-	F/W Version	1.3
DHCP Enab	le				SSID Auto	Search Se	arch	Date Created	2013/11/5
IP Address	192	168	255	1	SSID	WF-20	88	Auto Disconn	ect
Subnet Mask	255	255	255	0	Encryption	NONE	•	Comm. Net ID	1 •
Gateway	192	168	255	254	Wireless Key			RS-232	- COM3 -
MAC Address	00-1	D-C9-	01-99	-99	Wireless CH	2	-	Write	Read

b. 智慧型手機Wi-Fi 連線設定

b1. 開啟智慧型手機Wi-Fi 界面,選擇WF-20xx 裝置,並確認加入網路

Vi-Fi	53% 🗖 🔿	↔•••• ✓ Wi-Fi	53% 🖚	 3G Wi-Fi 	53% 🗖 🔿
Wi-Fi	▲ ? ()	Wi-Fi	● ♥ (1)	Wi-Fi	~ (ĵ
елев 🦓 Рако	₽ ≎ (j	WF-20 " Is Not to the Inte Are you sure you wa	t Connected ernet		₽ \$ (j
DEVICES		Join Anyway	2	P580	•
WF-20	হ 🚺	WF-20	∻ (j)		

c. 智慧型手機網路IP 位址與子網路遮罩設定

c1. IP 位址設定為"192.168.255.x", 其中"x"是一個介於1 和254 之間的數字,除了WF-2000 已使用的IP 位址。

c2. 子網路遮罩設定為"255.255.255.0"

••••• • • • • • • •	79338	53% 🔳
K Wi-Fi	WF-20	0
52A.MB3	*	
自動加入		Ø
IP Address		
DHCP	BootP	Static
IP Addreess		192.168.255.6
Subnet Mask		255.255.255.0

d. 完成後即可使用智慧型手機連線至IP 位址"192.168.255.1"與WF-2000 通訊

B. 智慧型手機"不"支援Ad Hoc連線方式(需搭配無線AP使用)

a. 無線AP 設定

a1. SSID 設為"ICPDAS"(可隨意設定)

a2.	加密模式設定為"WPA2-PSK(AES) ",	金鑰設為"12345678"(若不需加密請取消此設
定)		

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Wireless	vvireless
Basic Advanced Security Access WUDS	Rusic Advanced Security Access wins
This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless	This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.
network parameters.	Authentication type: Open System OShared Key @ Auto
Disable Wireless LAN Interface	Security: WPA2 Set WEP Key
Band: 802 11b/g 💌	Ulco 2003 1x Authoritication
Mode: Access Point	WPA Authentication Mode: Contempore (PADULE) Descental(Dro Shared Key)
ICEDAS	WPA Cinber Suite:
ESSID: ICPDAS	WDA2 Ciphor Suite:
Channel Number: 11 💌	WPAZ Cipitel Suite. ALS
Associated Clients: Show Active Clients	Pre-Shared Key Format: ASCII (8-63 characters)
	Pre-Shared Key: 12345678
Apply Cancel	Pre-Shared Key Format Pre-

- b. WF-2000 Wi-Fi 網路設定(CONFIGURATOIN)
 - b1. 請勾選"DHCP Enable"
 - b2. Wi-Fi Mode 設定為"AP"
 - b3.SSID 設定為"ICPDAS"
 - b4. 加密模式設定為"WPA2",金鑰設為"12345678"(若不需加密請取消此設定)
 - b5. 其餘皆為保留出廠預設值

letwork					Wi-Fi			General	
Net ID	1			•	Wi-Fi Modes	AP	-	F/W Version	1.0
DHCP Enab	le				SSID Auto S	Search	Search	Date Created	2013/11/12
IP Address	192	168	255	1	SSID	ICI	PDAS	Auto Disconn	ect
Subnet Mask	255	255	255	0	Encryption	WPA2	•	Comm. Net ID	1 •
Gateway	192	168	255	254	Wireless Key	1234	15678	RS-232	• СОМЗ •
MAC Address	00-11	D-C9-I	01-99	-99	Wireless CH	2	-	Write	Read

c. 智慧型手機Wi-Fi 連線設定

c1. 開啟智慧型手機Wi-Fi 界面,選擇"ICPDAS"網路,金鑰設為"12345678",並確認加入網路

***** * K Wi-Fi	62% 🖚	••••		62% 🛋 🔿	••••• Vi-Fi	62% 🗖 🔿
		8.8	Input Passwor	d 🔼		
Wi-Fi					Wi-Fi	
KOPDAS-EE	ê 🕈 🚺	Password	•••••	·J	ICPDAS	€ ≑ (j
ICPDAS	₽ ╤ (j					
P680	₽ \$ (j				P680	₽ ╤ (j)
其他					其他	
		1 2 3	4 5 6	7890		
		-/:	;()	\$ & @ "		
		#+= .	, ?	! ' 🛛		
		ABC	space	Join		

- d. 智慧型手機網路設定
 - d1. 請設定為"DHCP"模式

••••• ••••	2.91138	67% 💼 🗲
🗙 Wi-Fi	ICPDAS	
IP 位址		
DHCP	BootP	E1
DHCP IP Addreess	BootP 19	2.168.0.142

- e. 搜尋WF-2000 IP 位址
 - e1. 請將電腦連線至無線AP
 - e2. 開始無線介面,選擇"ICPDAS"裝置,並輸入金鑰"12345678"進行連線

Currently connected to: Network 2 Internet access	* *	Connect to a Net	twork		Currently connected Network 2 Internet acces	to: ss	49
No network access		Type the netw	ork security key		No Internet a	ccess	
Wireless Network Connection	~				Wireless Network Co	nnection	^
ICPDAS-EE	-11	Security key:	12345678		ICPDAS	Connected	.al
ICPDAS	Ine				ICPDAS-EE		.11
Connect automatically	ect				P880		
P880	100				lilyhome		III
lilyhome	.atl			OK Cancel	874-4401		.dl
STECO	- line	·			0900617912		.1
Open Network and Sharing Cen	ter				Open Network	and Sharing Center	

- e4. 開啟"WF-2000 Utility v2.0"
- e5. 按"Search"按鈕進行WF-2000 模組搜尋,取得模組IP 位址

le De	evice							
Jean	Name	Alias	ID	Mask	Gateway	MAC	Net ID	DHCP
	¥F-20	18_Baircoal_Al	192.168.0.248	255.255.0.0	192.168.0.254	00:1D:C9:01:99:99	1	1

f. 完成後即可使用智慧型手機連線至IP 位址"192.168.0.248"與WF-2000 通訊

問題 3 如何與電腦建立連線?

回覆3:

A. 檢視電腦上的可用無線網絡,使用者可以看到"WF-20XX"裝置在無線網絡列表中。選擇 "WF-20XX",然後按"連接"按鈕。



B.等待一段時間後,會出現連接成功的畫面。

	(19) Wireless Network Connec	tion 🔀
	Network Tasks	Choose a wireless network Cick an item in the list below to connect to a yieless network in range or to get more information.
	Set up a wireless network for a home or small office	WF-20: Connected 🔅 🛆 Unsecured computer-to-computer network and
	Related Tasks	You are currently connected to this network. To disconnect from this network, dick Disconnect.
	Change the order of preferred networks	((p)) 0900613139 Constitution of the state
Wireless Network Connection	settings	((Q)) STECO
You are connecting to the uncertained potypork "WE-20EE" Information		Security-enabled wireless network Bita2515
sent over this network is not encrypted and might be visible to other people.		Security-enabled wireless network (WPA2)
Connect Anyway Cancel		((p)) LP DAS

問題 4: 如何將 WF-2000 DI/DO 系列產品設定成 Pair Connection 連線模式?

回覆4: 使用兩台WF-2055 做操作範例

- A. 第一台WF-2055 設定內容
 - a. CONFIGURATOIN 設定
 - a1. Local IP 設定為 "192.168.255.1", 其餘設定皆為保留出廠預設值
 - a2. 按"Write Para."按鈕,寫入設定值

Network					Wi-Fi			General	
Net ID	1			•	Wi-Fi Modes	Ad-Hoc		F/W Version	1.3
DHCP Enab	le				SSID Auto S	Search Se	arch	Date Created	2013/11/5
IP Address	192	168	255	1	SSID	WF-20	88	🗹 Auto Disconn	ect
Subnet Mask	255	255	255	0	Encryption	NONE	•	Comm. Net ID	1 •
Gateway	192	168	255	254	Wireless Key			RS-232	сомз 🗸
MAC Address	00-1D-C9-01-99-99			-99	Wireless CH	2	•	Write	Read

- b. PAIR CONNECTION 設定
 - b1. Remote IP Address 設定為 "192.168.255.2"
 - b2. I/O Count 設定為 "8"
 - b3. 勾選啟用 "I/O Pair Connection"
 - b4. 其餘設定皆為保留出廠預設值

b5. 按"Write Para."按鈕,寫入設定值

PAIR CONNECTION	
Remote IP Address	Remote Port Number
Remote Net ID	Scan Time (ms) 500
Local DO Base Address	Remote DI Base Address
V/O Count	Communication Timeout (ms) 30000
Active	Read Para.
Parameter Upload Interface RS-232 T COM5 T	Write Para.
Status Bar	EXIT

B. 第二台WF-2055 設定內容

a. CONFIGURATOIN 設定

a1. Local IP 設定為 "192.168.255.2",其餘設定皆為保留出廠預設值。

a2. 按"Write Para."按鈕,寫入設定值

Network			Wi-Fi			General	
Net ID	1	•	Wi-Fi Modes	Ad-Hoc	•	F/W Version	1.3
DHCP Enal	ble		SSID Auto S	iearch Sea	rch	Date Created	2013/11/5
IP Address	192 168 25	55 2	SSID	WF-20	8	Auto Disconn	iect
Subnet Mask	255 255 25	55 0	Encryption	NONE	•	Comm. Net ID	1
Gateway	192 168 25	55 254	Wireless Key			RS-232	сомз
MAC Address	00-1D-C9-01-	99-99	Wireless CH	2	•	Write	Read

- b. PAIR CONNECTION 設定
 - b1. Remote IP Address 設定為 "192.168.255.1"
 - b2. I/O Count 設定為 "8"
 - b3. 勾選啟用 "I/O Pair Connection"
 - b4. 其餘設定皆為保留出廠預設值

b5. 按"Write Para."按鈕,寫入設定值

PAIR CONNECTION	-
Remote IP Address	Remote Port Number
Remote Net ID	Scan Time (ms)
Local DO Base Address	Remote DI Base Address
WO Count 8	Communication Timeout (ms) 30000
Active	Read Para.
Parameter Upload Interface RS-232 COM5	Write Para.
Status Bar	EXIT

C. Pair Connection 連線測試

- c1. 完成上述設置後,請將兩台WF-2055 重新上電
- c2. 等待約10 秒鐘後自動建立連線
- c3. 任何一台WF-2055 的DI 點被觸發,則另一台WF-2055 相對應的DO 點會自動輸出

問題 5: 我該怎麼讓 Wi-Fi 的通訊距離大於 1 公里?

回覆5: 需要外接天線及放大器。測試時我們選用了 ANT-15 及 ALFA APAG05-PoE放大器。 測試架構如下,分別使用了兩台 WF-2571 對兩台筆電進行遠端桌面連線,測試環境為 LOS 。 NB1 + WF-2571 + PA + ANT-15 <----- Ad-Hoc -----> ANT-15 + PA + WF-2571 + NB2 (NB: 筆電)

連線測試在 2020m 時失敗,測試結果大於預期的 1km。

ALFA APAG05-PoE:

https://www.alfa.com.tw/products/apag05-poe?variant=36473964003400

ANT-15:

https://www.icpdas.com/en/product/ANT-15