CM-WIFI User Manual

Shenzhen Coolmay Technology Co., Ltd

Version 6.71

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CATALOG

CM-WIFI module, developed and produced by Shenzhen Coolmay Technology Co., Itd, is a compact and powerful integration of 802.11 b/g/n WIFI solution with low consumption. It has a Rs485 and a standard Rs232. Through CM-WIFI, traditional serial devices such as PLCs and meters can easily connect with wifi signal, thus realize the control and management of Internet of Things through transparent transmission. CM-WIFI adopts the embedded structure with the lowest consumption in the industry. Meanwhile, CM-WIFI professionally optimizes data transmission field which is low discharge and low frequency, such as intelligent housing system, smart power grids, handheld device, personal medical, industrial control.

• Support STA/AP/STA+AP

• Support Smart Link intelligent networking function(provide APP)

• Completely replace cables to realize the direct connection and networking between PLC and computer(upper computer)

• There is a built-in WIFI module, with transmitted power of 300MW, can easily cover the scene hundred meters and realize wireless programming, debugging, monitoring in any corner.

• Cross-regional connection, there is no need to set complicated parameters in long distant scene, plug and play. Conveniently control PLCs in long distance at home or office, avoid the boring business trip.

I. Hardware description

This chapter mainly introduce the appearance, wiring, parameters, installation and application area of CM-WIFI.



1.1 Model and appearance



Installation: standard 35mmDIN-Rail installation

1.2 Indicator light

Indicator lights in CM-WIFI, functions as below:

Indicator light	Function
PWR	Power
СОМ	After PLC connected with CM-WIFI, COM light will flicker when serial ports are communicating.
Leady	Normally work and remain ON after initialization.
Link	SAT successfully connected

1.3 parameters and Antenna

CM-WIFI power supply is DC 5-30V, the basic parameter is as below diagram:

Parameters	Value
Standard authentication	FCC/CE
Wireless standards	802.11 b/g/n
Frequency range	2.412GHz-2.484GHz
	802.11b: +16 +/-2dBm
Transmitted power	802.11g: +14 +/-2dBm
	802.11n: +13 +/-2dBm
	802.11b: -93 dBm
Receive sensitivity	802.11g: -85dBm
	802.11n: -82dBm
Data interferen	UART
Data interface	PWM, GPIO
Working voltage	5V-30V
Operating Temperature	-40℃~85℃
Storage temperature	-45℃~125℃
Dimension	90*32*60mm
Installation	Standard 35mm DIN-Rail installation
Wireless network type	STA/AP/STA+AP
Security regime	WEP/WPA-PSK/WPA2-PSK
Encryption type	WEP64/WEP128/TKIP/AES
Network protocol	IPv4, TCP/UDP/HTTP
User Configuration	Web Page

External antenna

If using external antenna, according to IEEE 802.11b/g/h standard requirement, CM-WIFI need to connect with 2.4G antenna.

Item	Parameters
Frequency range	2.4~2.5GHz
Impedance	50 Ohm
VSWR	2 (Max)
Return Loss	-10dB(Max)
Connection type	I-pex or populate directly

1.4 Main Application Areas

CM-WIFI can be widely used in the following area.

- Remote device monitoring
- Internet of things application
- Industrial control
- Handheld device



II. Setting and user manual

2.1 Web page description

When first using CM-WIFI, some configurations need to be set. Users can connect AP port of CM-WIFI through PC and configurate through web page.

Network default Settings table:

Parameters	Default settings
SSID	USR-WIFI232-T
IP address	10.10.254
Subnet Mask	255.255.255.0
Username	admin
Password	admin

2.2 Open management webpage

Firstly, be used for PC wireless card connection USR-WIFI232-T, SIDD is USR-WIFI232-T. When connected well, open IE, type in <u>http://10.10.100.254</u> in the address bar, carriage returns. Type in user name admin and password admin in the popping up dialog box, and then "confirm".

Windows 安全	
位于 USER LC 警告: 此服务器 的基本认证)。	GIN 的服务器 10.10.100.254 要求用户名和密码。 要求以不安全的方式发送您的用户名和密码(没有安全连接
	admin ●●●●● ■ 记住我的凭据
	确定取消



Then the management webpage of USR-WIFI232-T will pop up.

Fast Setting	Scan Router
System	
STA Setting	
AP Setting	
Network	
UART Setting	
Other Setting	
Account	
Upgrade FW	
Restart	
Restore	
	Web Ver 1 2 3

The menu is divided to 11 webpages, they are "quick settings", "system information", STA setting AP setting, network setting, serial port setting, other setting, account management, firmware upgrade, restart, recover.

Note:

AP: namely wireless access point, is the creator of wireless network, is the center node of network. Usually the wireless router being used in home or office is a AP.
 STA station, every terminal connected to wireless network (such as laptop, PDA and other user device can be connected with internet) can be called a station.





2.3 Fast networking settings

In this page, fast networking can be realized through CM-WIFI.

				TX T English
Fast Setting		Scan Router		
System				
STA Setting				
AP Setting				
Network				
UART Setting				
Other Setting				
Account				
Upgrade FW				
Restart				
Restore				
		Web Ver.1.2.3		
				中文 En
	Site Survey			
ast Setting	Site Survey	BSSID	RSSI	Channel
ast Setting _{/stem}	Site Survey SSID SZ-GMplc	BSSID 8A:25:93:80:CC:8A	RSSI 100	Channel 6
a st Setting ystem TA Setting	Site Survey SSID SZ-GMplc TP-LINK_CA936A	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25	RSSI 100 94 76	Channel 6 6
a st Setting ystem TA Setting	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 MERCURY_29C796	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96	RSSI 100 94 76 40	Channel 6 6 6 6
a st Setting ystem TA Setting P Setting	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94	RSSI 100 94 76 40 78	Channel 6 6 6 6 6 9
a st Setting ystem TA Setting P Setting etwork	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO SINO=HERO xuedaiba	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46	RSSI 100 94 76 40 78 100	Channel 6 6 6 6 9 11
a st Setting ystem TA Setting P Setting etwork ART Setting	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61	RSSI 100 94 76 40 78 100 66	Channel 6 6 6 6 9 11 11
ast Setting ystem TA Setting P Setting etwork ART Setting ther Setting	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E	RSSI 100 94 76 40 78 100 66 100	Channel 6 6 6 6 9 11 11 11
ast Setting ystem TA Setting P Setting etwork ART Setting ther Setting ccount	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47	Channel 6 6 6 6 6 9 11 11 11 11 11
ast Setting ystem TA Setting P Setting etwork ART Setting ther Setting ccount	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47	Channel 6 6 6 9 11 11 11 11 11
ast Setting ystem TA Setting P Setting etwork ART Setting ther Setting ccount pgrade FW	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47	Channel 6 6 6 9 11 11 11 11 11
ast Setting ystem TA Setting P Setting etwork ART Setting ther Setting ccount pgrade FW estart	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47	Channel 6 6 6 9 11 11 11 11 11
ast Setting ystem TA Setting P Setting etwork ART Setting ther Setting ccount pgrade FW estart estore	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47 8 Refr	Channel 6 6 6 9 11 11 11 11 11
ast Setting ystem TA Setting P Setting etwork ART Setting ther Setting ccount pgrade FW estart estore	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47 Refr	Channel 6 6 6 9 11 11 11 11 11 11
ast Setting ystem TA Setting P Setting etwork ART Setting ther Setting ccount pgrade FW estart estore	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47 Refr	Channel 6 6 6 9 11 11 11 11 11 11 11
ast Setting ystem TA Setting > Setting etwork ART Setting ther Setting ccount pgrade FW estart estore	Site Survey SSID SZ-GMpIc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47 Refr	Channel 6 6 6 9 11 11 11 11 11
ast Setting ystem TA Setting P Setting etwork ART Setting ther Setting ccount pgrade FW estart estore	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47	Channel 6 6 6 9 11 11 11 11 11 11
ast Setting /stem FA Setting P Setting etwork ART Setting count ograde FW estart estore	Site Survey SSID SZ-GMplc TP-LINK_CA936A TP-LINK_DC25 MERCURY_29C796 SINO=HERO xuedaiba TP-SAIZJ-2.4G ACY-20160702YYMR 515	BSSID 8A:25:93:80:CC:8A 1C:FA:68:CA:93:6A B0:95:8E:46:DC:25 EC:88:8F:29:C7:96 D4:EE:7:20:75:94 42:53:49:D6:8C:46 F4:83:CD:AA:30:61 2:1E:64:DA:97:2E 24:5:F:16:D2:E3	RSSI 100 94 76 40 78 100 66 100 47	Channel 6 6 6 9 11 11 11 11 11 11 11



2.4 System information page

In system information page, users can achieve important state information of current device, including device serial number, Firmware Version, wireless networking information and related parameter setting. And can read strength indicator of wireless signal in STA mode.

V1.0.07 V1.2.13
V1.2.13
AP
181
/IFI232-G2
0.100.254
CBED99
2

Web Ver:1.2.3



2.5 STA setting page

In this page, users can click [search] to search wireless access point nearby automatically, and connect it by setting network parameters. Encryption information provided here must remain the same with the corresponding wireless access point that STA can be successfully connected.

	Mode Selecting	STA -
-ast Setting	Network Name(SSID) case sensitive	SZ-GMplc Scan
STA Setting	Encryption Method	WPA2PSK 👻
AP Setting	Encryption Algorithm	AES 👻
Network	Password	•••••
JART Setting		Show passwords
Other Setting	Obtain an IP address automatically	Enable 👻
ccount	IP Address	0.0.0.0
Jpgrade FW	Subnet Mask	0. 0. 0. 0
Restart	Gateway Address	0.0.0
Restore	DNS Server Address	10.10.100.254

Select "SZ-GMplc" (Note: "SZ-GMplc" is the Internal wireless network of Coolmay), the setting of wifi hotspot will be introduced briefly. Click "confirm" after being searched and selected: the original name is changed.

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Fast Setting

UART Setting Other Setting

Upgrade FW

Account

Restart Restore

System STA Setting AP Setting Network

		甲又一	Engl
	Mode Selecting	AP+STA 👻	
Fast Setting	Network Name(SSID) case sensitive	SZ-GMplc Scan	
STA Setting	Encryption Method	WPA2PSK -	
AP Setting	Encryption Algorithm	AES -	
Network	Password	•••••	
UART Setting		Show passwords	
Other Setting	Obtain an IP address automatically	Enable 👻	
Account	IP Address	0.0.0	
Upgrade FW	Subnet Mask	0. 0. 0. 0	
Restart	Gateway Address	0.0.0	
Postara		10 10 100 264	

Web Ver:1.2.3

SSID	BSSID	RSSI	Channel
703A	FE:83:CD:C6:1D:7A	57	1
TANG XIAO XIAO	8C:A6:DF:34:34:9E	45	1
ChinaNet-NaYP	70:A8:E3:5F:DF:64	42	2
wfy	C8:3A:35:3B:1C:8	35	4
TP-LINK_DC25	B0:95:8E:46:DC:25	86	6
TP-LINK_CA936A	1C:FA:68:CA:93:6A	88	6
SZ-GMplc	8A:25:93:80:CC:8A	100	6
MERCURY_29C796	EC:88:8F:29:C7:96	47	6
zzzs	B0:D5:9D:33:55:B5	49	6
SINO=HERO	D4:EE:7:20:75:94	86	9
xuedaiba	42:53:49:D6:8C:46	100	11
	m	10	

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Note:

When configurates module. It is more convenient to visit the management page of web server as AP mode. Thus set as AP+STA mode instead of STA mode. AP+STA is very practical networking mode: the model can be regard as AP, meanwhile it can be exist as a STA mode. For example, CM-WIFI as AP allows customer's cellphone or computer being accessed. Meanwhile CM-WIFI can be regard as a STA to uploading data by accessing to routers or host servers.

When successfully access to SZ-GMplc in AP mode, the below window will pop up, the signal strength is 100%.



STA webpage search user router interface



2.6 AP setting page

When AP or AP+STA mode is selected, wireless and network parameters need to be set. Most system support DHCP achieve IP automatically. It is suggested to set DHCP TYPE as "server", otherwise parameters of relevant STA need to be entered by hand.

	Wireless AP Setting	
Fast Setting	Mode Selecting	AP+STA 👻
System	Netw ork Mode	11bgn 👻
AD Setting	Netw ork Name(SSID)	USR-WIFI232-G2
Notwork	Module MACA ddress	A COF23CBED99
LIART Setting	Select Channel	2412MHz (channel 1) 👻
Other Setting	Wireless AP Security Setting Encryption Mode	Disable 🗸
Account Upgrade FW	Network Parameters Setting IPAddress(DHCPGateway Setting)	10.10.100.254
Restart	Subnet Mask	255. 255. 255. 0
Restore	DHCP Server	Enable 👻
		Save

Note:

Network name: can be changed arbitrary.

LAN parameter setting: can be modified to valid IP address (As own IP), if also as a client, it should not be in the same gateway with the server IP.



2.7 Network setting page

In this page, socket A and socket B can be set. Socket A can be set as TCP Server, TCP Client, UDP Server, UDP Client; socket B can be set as UDP Server, UDP Client, TCP Client, or forbidden socket B.

	SOCKE I_A Setting	
Past Setting	Protocol	TCP-Server -
STA Setting	Port ID	8899
AP Setting	Server Address	10.10.100.254
Network	TCP Time Out Setting	300
UART Setting	SOCKET_B Setting Enable/Disable	Disable 🗸
	Protocol	TCP-Client 👻
Upgrade FW	Port ID	
Restart	Server Address	
Restore	TCP Time Out Setting	300
		Save



2.8 Serial port setting page

In this page, serial port parameters can be set, baud rate 9600, data bits seven, parity bit Even, stop bit one is the parameter communicating with coolmay PLC.

			中文 Engl
	UART Setting		
Fast Setting	Baud Rate	9600	•
System	Data Bit	7	•
STA Setting	Parity Bit	Even	-
AP Setting	Stop Bit	1	Ŧ
UART Setting	CTS/RTS	Disable	-
Other Setting	RS485	Enable	•
Account		N:	Save
Upgrade FW			
Restart			
Restore			



2.9 Other setting page

In this page, D2D function can be set. D2D is a function of achieving remote control by server forwarding. Each device need to register a ID in coolmay server.

		中文 English
ast Setting	Mode of transmission LINK/DATA	Link 👻
ystem	D2D Setting Enable/Disable	Disable 🗸
P Setting	D2D ID	3
etwork	Report MAC Enable/Disable	Disable •
ART Setting	Format of data	ASCII 👻
ther Setting	WiFi Check	
ccount	Enable/Disable	Disable 🔻
pgrade FW	Check Period	30
estart estore	Register Enable/Disable	Disable •
	Data of register :	1234567812345678123456
	Pass Cloud	
	Enable/Disable	Disable 👻
	ID:	12345678001122334455
	Password:	Show passwords
		Save

Web Ver:1.2.3



2.10 Account management page

Fast Setting	et a New Account and Password		
System STA Setting	Current User Name	admin	
AP Setting	Current Password	admin	
Network UART Setting	New User Name		
Other Setting			
Account		2000-00-00-00-00-00-00-00-00-00-00-00-00	<u></u>
Jpgrade FW		0.000	
Restart		Save	
≺estore			

This page was used to set the user name and password of inside Web Server

2.11 Firmware upgrade page

		中文 English
U	ograde Software	
Fast Setting		
System	Current version	
STA Setting		224108
AP Setting		测页
Network		
UART Setting	Upload	
Other Setting		
Account		
Upgrade FW		
Restart		
Restore		
	Web Ver.	1.2.3



2.12 Restart page

Fast Setting System	
STA Setting AP Setting Network UART Setting Other Setting Account Upgrade FW	Important notice: After restart, you will need to re-login the configuration interface. It is recommended to restart after completing all configurations. Restart will interrupt the network for a very short period, are you sure to restart now?
Restart	
Restore	

After restarting, the newly saved parameters will start using.

2.13 Recover page

Restore to factory default settings, all the user configuration will be deleted. The module will automatically recover to AP mode. Users can configurate again.





III. Application

This chapter will describe specific usage through application case.

3.1 STA port connection debug

① Control requirement: PLC communicating with CM-WIFI. Remote download PLC program through PLC software in computer.

当前连接到:	÷7 -
SZ-GMplc 3 Internet 访问	=
USR-WIFI232-T 3 无 Internet 访问	
无线网络连接	^
USR-WIFI232-T	已连接,机
TP-LINK_47FF64	Inc
SZ-GMplc	Ine
!@#	Itee
TP-LINK_2FDF3E	Ine
TP-LINK_CA936A	Ite
打开网络和共享中心	18

② Open browser, type in the address <u>http://10.10.100.254</u>, carriage return. Enter user name and password into the popping up dialog box.

位于 USER L	OGIN 的服务器 10.10.100.254 要求用户名和密码。
警告:此服务	器要求以不安全的方式发送您的用户名和密码(没有安全连持
的基本认证)。	
	admin
	一 记住我的凭据
<u></u>	

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	MID	USR-WIFI232-G2
Fast Setting	Software Version	V1.0.07
System	Small Version	V1.2.13
STA Setting	WiFi Work Mode	AP
AP Setting	AP mode	
Network	SSID	USR-WIFI232-G2
JART Setting	IP Address	10.10.100.254
Other Setting	MAC Address	ACCF23CBED99
Account	STA Mode	
Ipgrade FW	Router SSID	
Postart	Signal Strength	
Restarc	IP Address	
restore	MAC Address	

Web Ver:1.2.3

③ Select STA mode, search the network which the device is in, this demo program connect with SZ-GMplc, please select Disable to achieve IP address automatically, set IP address, subnet mask, gateway address, DNS server address (Note: IP address, subnet mask, gateway address, DNS server address should be set according to the network segment which CM-WIFI is in)

Mode Selecting	STA -
Network Name(SSID) case sensitive	SZ-GMplc Scan
Encryption Method	WPA2PSK 👻
Encryption Algorithm	AES 👻
Password	••••••
	E Show passwords
Obtain an IP address automatically	Disable 👻
IP Address	192. 168. 1. 127
Subnet Mask	255. 255. 255. 0
Gateway Address	192. 168. 1. 1
 DNS Server Address	192, 168, 1, 1
	Network Name(SSID) case sensitive Encryption Method Encryption Algorithm Password Obtain an IP address automatically IP Address Subnet Mask Gateway Address DNS Server Address

④ Change network setting protocol to TCP-Client, set terminal port as 25565, serer address set as 120.76.116.193 or coolmay.wicp.net (copy), save as:

25565 120.76.116.193 300	Port ID Server Address
25565 120.76.116.193 300	Port ID Server Address
120.76.116.193 300	Server Address
300	
	TCP Time Out Setting
	SOCKET_B Setting
Disable	
TCP-Client 🔹	Protocol
	Port ID
	Server Address
300	TCP Time Out Setting
Save	
Save	
Save	
300	Port ID Server Address TCP Time Out Setting

⑤ Set serial port the same communicating parameters which PLC corresponding to, baud rate 9600; data bits 7, parity bit Even; stop bit one, save, will restart after all the above steps well set.

	UART Setting		
Fast Setting	Baud Rate	9600	-
System	Data Bit	7	-
AP Setting	Parity Bit	Even	-
Network	Stop Bit	1	-
UART Setting	CTS/RTS	Disable	•
Other Setting	RS485	Enable	•
Account		Sa	ve
Upgrade FW			
Restart			
Restore			

In other setting, select Link as mode of data transmission, D2D parameter select Enable,
 D2D ID according to the ID set in server (Note: please set D2D ID after consulting with
 Coolmay technicians), save:

		中文 Englis
Fast Setting	Mode of transmission LINK/DATA	Link
System	D2D Setting Enable/Disable	Enable 👻
AP Setting	D2D ID	64847
Network	Report MAC Enable/Disable	Disable 👻
JART Setting	Format of data	ASCII 👻
Account	WiFi Check Enable/Disable	Disable 👻
Jp <mark>grad</mark> e FW	Check Period	30
Restart Restore	Register Enable/Disable	Disable 🗸
	Data of register :	1234567812345678123456
	Pass Cloud Enable/Disable	Disable 🗸
	ID:	12345678001122334455
	Password:	•••••• Show passwords
		Save

3.2 AP port connection debug

Control requirements: PLC communicating with CM-WIFI. Using computer PLC software download PLC program remotely.

Application scenarios: PLC is stalled in control box or spots not convenient to connect with programming cable.



First step: CM - WIFI module communication configuration

① Open wireless network, search for USR-WIFI232-T, and then access to it.

当前连接到:	\$2	-
SZ-GMplc 3 Internet 访问		н
USR-WIFI232-T 3 无 Internet 访问		
无线网络连接	^	
USR-WIFI232-T	已连接,则	
TP-LINK_47FF64	lite.	
SZ-GMplc	liter.	
!@#	lite.	
TP-LINK_2FDF3E	Bee	
TP-LINK_CA936A	-10	Ŧ
打开网络和共享中心		

② Open browser, type in the address <u>http://10.10.100.254</u>, carriage return. Enter user name and password into the popping up dialog box.

Windows 安全 位于 USER LC	GIN 的服务器 10.10.100.254 要求用户名和密码。
警告:此服务器	要求以不安全的方式发送您的用户名和密码(没有安全连接
的基本认证)。	
	admin
	●●●●● 同 记住我的凭据
6	
	确定 取消

	MID	USR-WIFI232-G2
-ast Setting	Software Version	V1.0.07
System	Small Version	V1.2.13
STA Setting	WiFi Work Mode	AP
AP Setting	AP mode	
Network	SSID	USR-WIFI232-G2
JART Setting	IP Address	10.10.100.254
Other Setting	MAC Address	ACCF23CBED99
	STA Mode	
Account	Router SSID	
Jpgrade FVV	Signal Strength	
Restart	IP Address	
Restore	MAC Address	

③ AP setting: select AP mode, wireless access point security Settings is WPA2-PSK, select AES as WPA encryption algorithm, set 123456789 as the below picture, save:

ant Catting	wireless AP Setting	
ast Setting	Mode Selecting	AP 👻
System	Netw ork Mode	11bgn 👻
D Cotting	Network Name(SSID)	USR-WIFI232-G2
AP Setting	Module MACA ddress	A COF23CBED99
IELWOIK	Select Channel	2412MHz (channel 1) 👻
Ther Setting	Wireless AP Security Setting Encryption Mode	₩PA2-PSK ▼
Account	WPA Encryption	TKIP O AES O TKIPAES
Restart	Passw ord	12345676
Cestore -	Network Parameters Setting PAddress(DHCP Gateway Setting)	10.10.254
	Subnet Mask	255. 255. 255. 0
	DHCP Server	Enable 👻
		Save



④ In network mode, set protocol as TCP-Server, set terminal port 8899, save as:

		中文 English
	SOCKET_A Setting	
Fast Setting	Protocol	TCP-Server -
System	Port ID	8899
AP Setting	Server Address	10.10.254
Network	TCP Time Out Setting	300
UART Setting	SOCKET_B Setting Enable/Disable	Disable -
Account	Protocol	TCP-Client 👻
Upgrade FW	Port ID	
Restart	Server Address	
Restore	TCP Time Out Setting	300
		Save
	Wel	b Ver 1.2.3

⑤ Set serial port the same communicating parameters which PLC corresponding to, baud rate 9600; data bits 7, parity bit Even; stop bit 1, save, will restart after all the above steps well set.

Baud Pato			
Daug Rate		9600	-
Data Bit		7	-
Parity Bit		Even	-
Stop Bit		1	-
CTS/RTS		Disable	-
RS485		Enable	-
			Save
	Data Bit Parity Bit Stop Bit CTS/RTS RS485	Data Bit Parity Bit Stop Bit CTS/RTS RS485	Data Bit 7 Parity Bit Even Stop Bit 1 CTS/RTS Disable RS485 Enable



IV. Virtual serial port

This chapter mainly describes parameters and usage of virtual serial port.

4.1 Software parameters

Virtual serial port software can map TCP/IP, UDP, UDP broadcast to virtual COM port of this computer.

- Support TCP/IP, UDP data mapping to virtual COM port of this computer, at most 512-1024 virtual COM port can be built.
- Support Server, Client, UDP mode.

4.2 Virtual serial port software usage---STA port link debug setting

① Open wireless network, search for SZ-GMplc and access to it:



2 Build connection, create serial port:

_		
Virtual COM:	COM2	<u> </u>
Net Protocol:	TCP Client	•
Remote IP/a	ddr: 120.76.116.193	
Remote Port:	25565	
Local Port:	8233	
Remarks:		
Remarks:	Cancel	Advanced -
Remarks:	Cancel 7	Advanced -
Remarks: OK Vse D2D Register ID	Cancel 7	Advanced -
Remarks: OK Use D2D Register ID	Cancel	Advanced -
Remarks: OK Use D2D Register ID Use USR CLC Cloud ID	Cancel	Advanced -

Note: network protocol select TCP Client; target IP/ domain name select 120.76.116.193 or coolmay.wicp.net (standby) (note: IP/ Domain name is coolmay domain name, need to link with coolmay server); target port select 25565; register ID in advance select 43589 (note: please set register ID after consult with coolmay technician)

③ connect virtual port

< см-усо	M Virtual Ser	ial Port Serv	er V3.7.1.527									
Device(D)	Tools(T) O	ptions(O) (Chinese Help(I	H)								
Add COM	Del COM	Connect	Count Reset Count	Monitor S	Search Smart VC	ом	Juit					
Remarks	COM Name	Parameters	COM State	Net Protocol	Remote IP	Remote Port	Local Port	COM Received	Net Received	Net State	RegID	CloudID
	COM2		Not used	TCP Client	120.76.116.193	25565		0	0	Connected	43589	

④ Virtual port has been built, port NO. is COM1, link PLC programming software with COM1, thus wireless monitoring to PLC has been achieved. Customers can also download program to PLC and monitor HMI through HMI software.

传输设置			ZCP		1	x
PC I/F 重行	NET/G, 10(H) NET(II) 板 板	CC-Link 以: 板	大网 CPU 反 板	AF 板	SSC 网络 ▲	
COM COM1	传送速度 9.6Kbps					
PLC I/F	NET/G, 10(H) MNET(II) 模块 MELSOFT系	CC-Link 및 列 GX Developer	太网 C24	C4 模块	总线	
其他站指定 一 <mark>里</mark> 一 <u>不指定其他</u>		与FX2N(C)CPU连	妾成功了。	-	通信线路表 直接连接PLC设置	
超时(秒)	10		确定		通信测试	
网络 进信整经				I CPU 类型	PX2N(C)	
C24	NET/G, 10(H) NET(II) C	C-Link 以太网		详细	<u> </u>	
					系統图象	
不同网络 进信路径			1 2 3	4	TEL (FXCPU)	
C24 1	NET/G, 10(H) NET(II)	CC-Link 以太网	一目标СРИ		确认	
本地行政。	F•				关闭	

4.3 Virtual serial port software usage---AP port link debug setting

① Open wireless network, search for USR-WIFI232-T, access to it:



2 Build link, create serial port:

Virtual COM:	СОМ2 💌
Net Protocol:	TCP Client
Remote IP/add	dr: 10.10.100.254
Remote Port:	8899
Local Port:	8233
Remarks:	1

③ Connect virtual port, and change Synchronous baud rate to unchecked state.

√	AutoRun	
	Keep-Alive	•
	Run as tray icon	
	Synchronize baudrate(RFC2217 similar)	
	Run in background	
	VCOM Packet TimeOut(ms):1	
	Strict Baudrate	



④ Virtual port has been built, port NO. is COM2, link PLC programming software with COM2, thus wireless monitoring to PLC has been achieved. Note: PLC software version must be GX 8.52 or WORKS2.

