

SolaCom Wifi Controller Manual

Brief Introduction

SolaCom Wifi Controller (WFCTR-22) is a type of smart gateway, connect Lan to the internet. It is integrated with Lan and RF (Radio Frequency) function, import MCU chip are used as main controller, internal integrated with TCP/IP protocol stack and the communication protocol of background server. RF part support OOK & ASK modulation, RF module have the advantages of high level of integration, good confidentiality, long distance reception etc. Distribution network is not needed, the gateway could be connected to the router and internet stably by reticle connection, then check the data and control the device through mobile phone side software.

It provide abundant choice for serial port speed, adopt the FEC (Forward Error correcting code), could certainly recover disturbed data, and provide more channel selection, multiple low power consumption for operation pattern and quick wake-up mechanism.

WFCTR-22 adopt the mostly used Micro USB DC 5v to supply power, normal operation current 160mA, when send and collect date, peak current will not excess 500mA.

Product features

- Strong anti-jamming ability, more suitable for complicated disturbing environment.
- Receiving sensitivity: -120dBm 500bps 434MHz
- Emission work current: 70mA +20dbm 43MHz
- Receiving work current: 8.8mA 434MHz
- Deep sleeping current: $\leq 1.65\mu A$
- When the device is disconnected with the internet, data could be stored in the internal memory, and resend to the server when network back up to avoid data loss.
- Set multi-channel, GFSK modulation.
- Max transmit power: +20dbm, min transmit power: -10dbm
- Definable low power consumption operation mode.
- 700m transmission distance (300bps)
- Support large data transfer.

Application range

- Automatic meter reading system
- Furniture security & building automation
- Wireless sensor node & industrial monitoring
- Wireless alarming & security system
- Environmental monitoring
- The internet of things

Characters

- high stability

- high level of intergration
- supporting mobile phone APP remote connection

- built-in watchdog
- 5v power supply

Equipment RF electric parameter

parameter	Symbol	status	Min value	Typical value	Max value	unit
Work frequency	Fc	RFM380F32-433S2	426		442	MHz
		RFM380F32-868S2	860		876	MHz
		RFM380F32-915S2	907		923	MHz
Mode pattern	MOD			GFSK		
Receiving sensitivity	S	434MHz 1 kbps		-120		dBm
		868MHz kbps		-116		dBm
		915MHz kbps		-116		dBm
Data rate of Serial port	DR		0.3	9.6	256	Kbps3.3
Work voltage	V00		1.8	3.3	3.6	V
Receiving work current	IRX	434MHZ		9	10	mA
		868MHZ		9.6	10	mA
		915MHZ		9.6	10	mA
Emission work current	ITX	434MHZ +20dbm		70	80	mA
		868NHZ +20dbm		80	95	mA
		915MHZ +20dbm		82	95	mA
Sleeping current	Isleep				1.68	uA
Image Rejection	IMR			33		dB
Work temperature	Top		-40		+85	C

Product instruction

- WFCTR-22 have two internet indicator , and a RF indicator light
 - The left light will turn red when internet is not connected , will turn blue if the internet connected .
 - When the left light turn to red and quick flashed , the equipment will receive the RF signal and start the resolutions

- The device have a Lan port ,plug the reticle , equipment will be connected to the internet.,

- WFCTR-22 have a their own APP software (solaCom) , the gateway and device are easily be added , have certain features , for example easy and simple network connection , and quick adding way .

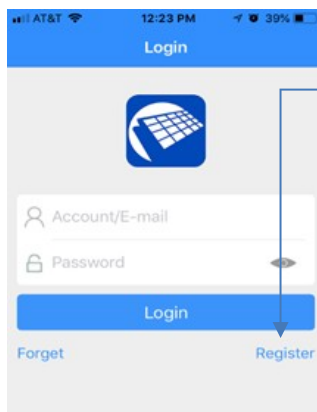
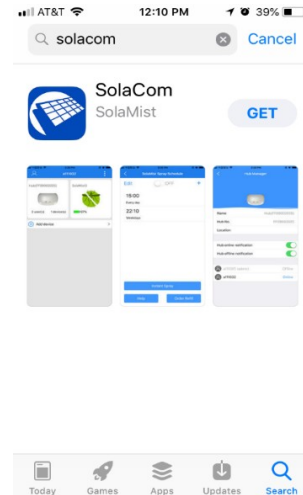
To set up the network.



Start with connecting the Hub to your internet router using the provided cable and power. When it is properly connected, power indicator light and internet connection light should stay steady bright blue. If one of them is flashing red, unplug the power of your router and controller, wait for 10 seconds and plug them back in to help bypass the firewall.

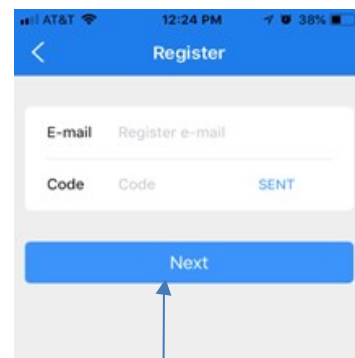
Download the APP on your smartphone from either iTunes, or Google Play.

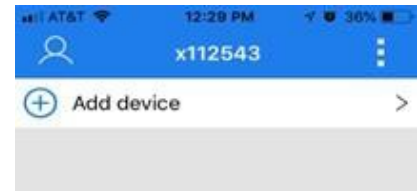
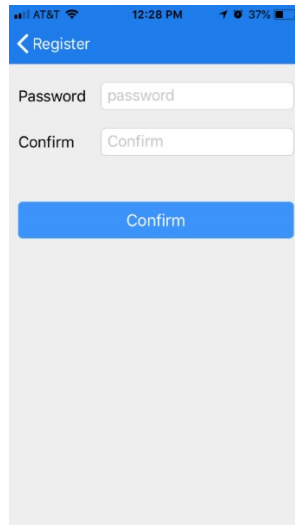
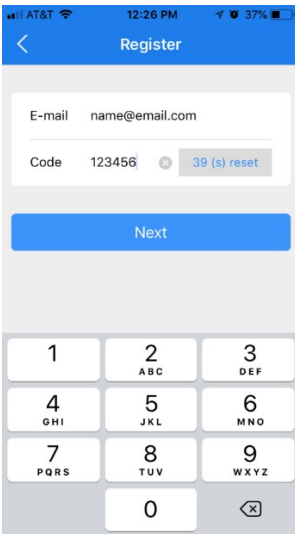
Search for “SolaCom”



After you download the app, the first time you open it, “register” your account first.

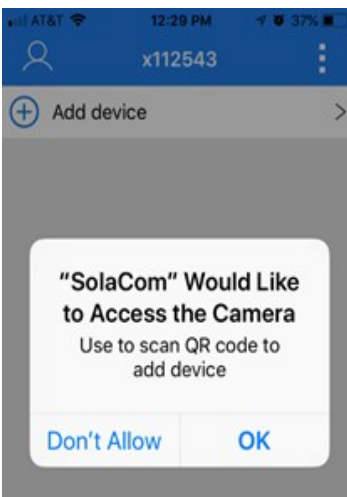
To register, you will need to enter your email address and then click “Sent”. You will get an authentication code sent to the email you put in. Type in the code and click “Next”



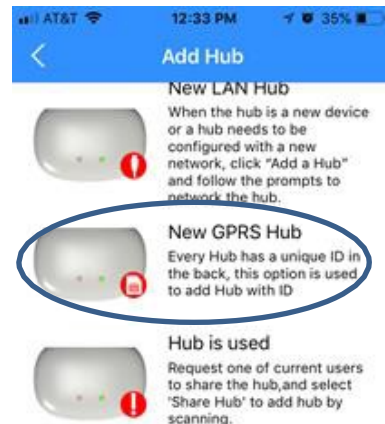


Set your password and “Confirm”. You will see this screen.

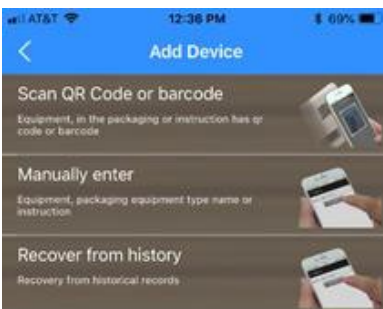
Click “OK” to activate the QR scanner in the app.



This the next screen you will see, **click** “Add device”, a scanner view window will open, scan the QR code on the back of your hub.



You can add the hub by either scan the QR code, or, select “New GPRS Hub” then type in the serial number below QR code.





Contact support@remingtonsolar.com with any questions.

If you need video instructions, go to <https://youtu.be/Ou6aYfCsflw> and watch the video. It's the same Wi-Fi installation, but for another one of our products.

Lable

Trade Name: SolaCom Wifi Controller Model
number: WFCTR-22

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution!

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.