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RODSUMWIRELESS AC-RW-R120 Aroco WiFi Bridging Device User Manual

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RODSUMWIRELESS AC-RW-R120 Aroco WiFi Bridging Device

Instructions

AC-BW-R120 is WIFI client bridging device for receiving RF Beacon information. The device will send the beacons information to application server through the existing WIFI network. User can build own server to receive MQTT protocol data, or use existing Rodsum server with web interface.

Purpose

This document will introduce the Device, provide the Specification, Functional, and WiFi reporting configuration method. MQTT protocol will not be included in this document. Please go to our website to download: **https://www.rodsum.com/downloads** to download protocol manual.

Specification

| Mechanics Data	
Size	Approx. 97.9 x 55.7 x 25.5 mm
Weight	Approx. 69 grams
Casing	PC/ABS Case
Electrics Data	
Bluetooth Chip	Nordic nRF52840
Bluetooth Frequency	2.4GHz
Memory	256kB Ram, 1MB Flash
BLE Version	Bluetooth 5 compatible iBeacon compatible BT4.2 Advertise Mode supported Long Range (PHY Coded) Mode supported
BLE Transmission Range	Up to 200m (with Long Range PHY Coded Mode)
WiFi Transmission	802.11 bgn
WiFi Frequency	2.4GHz
Power Input	5VDC Input (with 1.1 meters USB Cable) 9-36VDC Input Port Reserved
Environmental Conditions	
Operating Temperature	-25°C to +75°C
Waterproof Rating	IP68
Material Resistance	UV resistance

Function

AC-BW-R120 Device will scan bluetooth normal or Coded PHY data, and report to server by MQTT protocol with ibeacon format or all type raw data, according device setting.
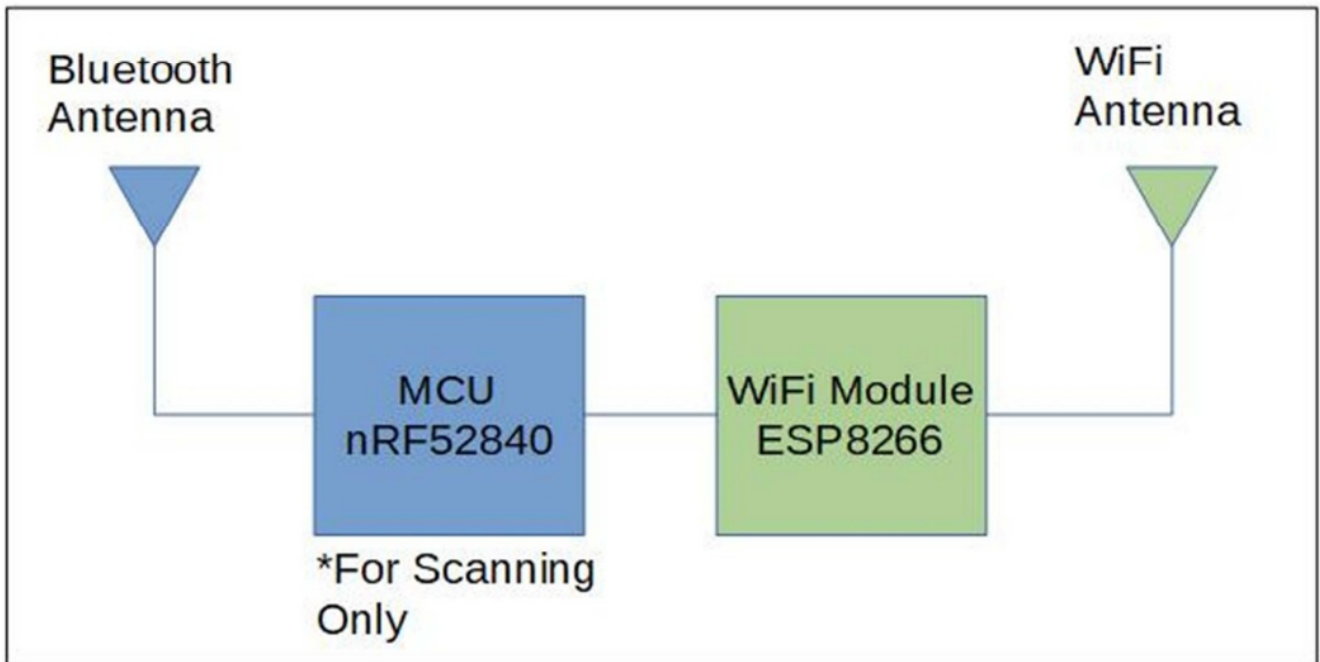
AC-RW-R120

User can use the existing USB Cable Type A Connector to connect PC/ notebook or other 5VDC power supplier for device Power Input. 5V500mA or higher current supplier is recommended. Device has 3 LED indicators in the case to show the current working status.

Green Circle: LED Indicators (LED 3, LED 2, LED 1)
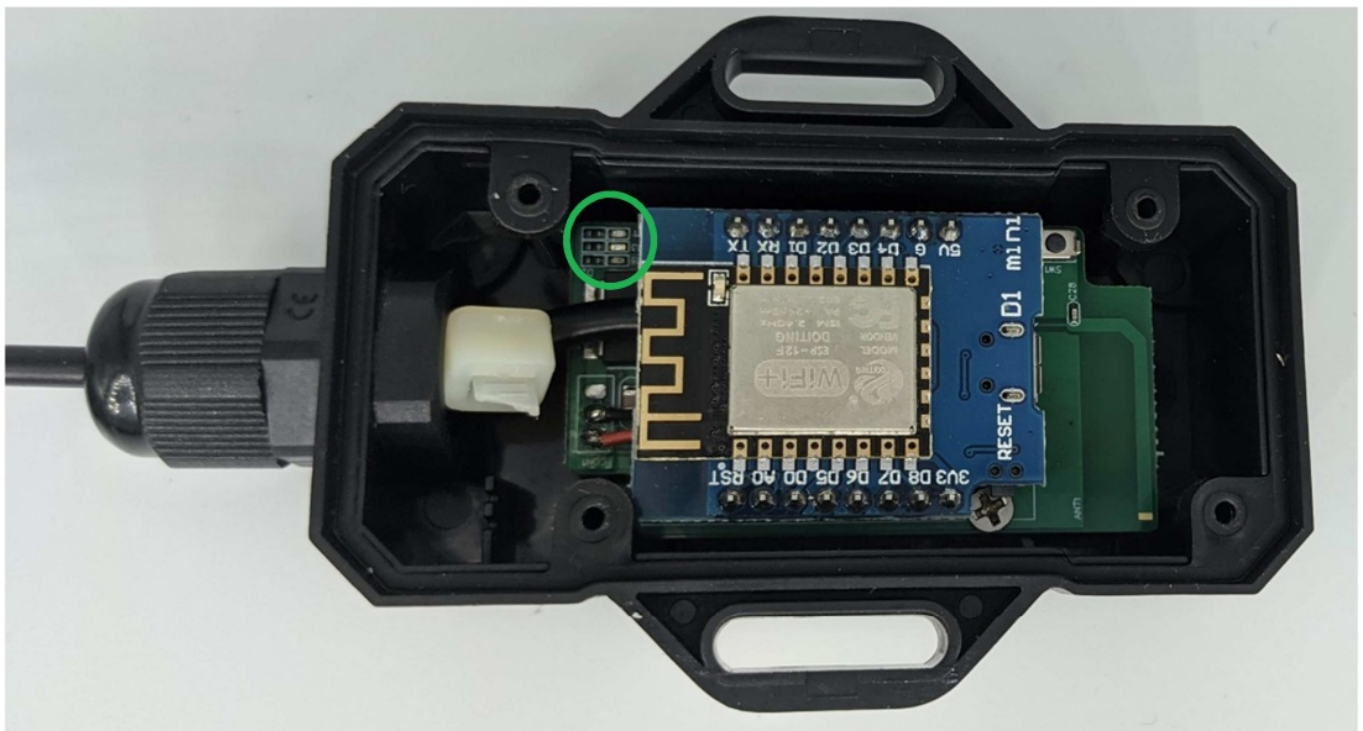

Indicator LED Description

LED	Description	Flashing 100ms On 400ms Off)	Flashing 50ms On 450ms Off	Flashing 150ms On 350ms Off	Flashing 100ms On 900ms Off
LED1 (Red)	Bluetooth Status	Bluetooth Scanning	–		
LED2 (Green)	WiFi Connection	–	No Connection	Connecting	Connected
LED3 (Blue)	Server Connection	–	No Connection	Connecting	Connected

Enter Configuring Mode

- Unscrew the screw by Philips screwdriver. Open the cover

- Power On Device
- Press and Hold the Config button SW1 while the device Power On until LED 1 and LED 2 Flashing intermittently
- Use Mobile/PC to enable WiFi Network. SSID "ABW_xxxxxxxxxxxx" will be shown on the current searching list (xxxxxxxxxxxx is the WiFi Module MAC Address).
- Connect the WiFi. Password: 12345678
- After the WiFi network connected, use the web browser to 192.168.4.1 to the Configuring page
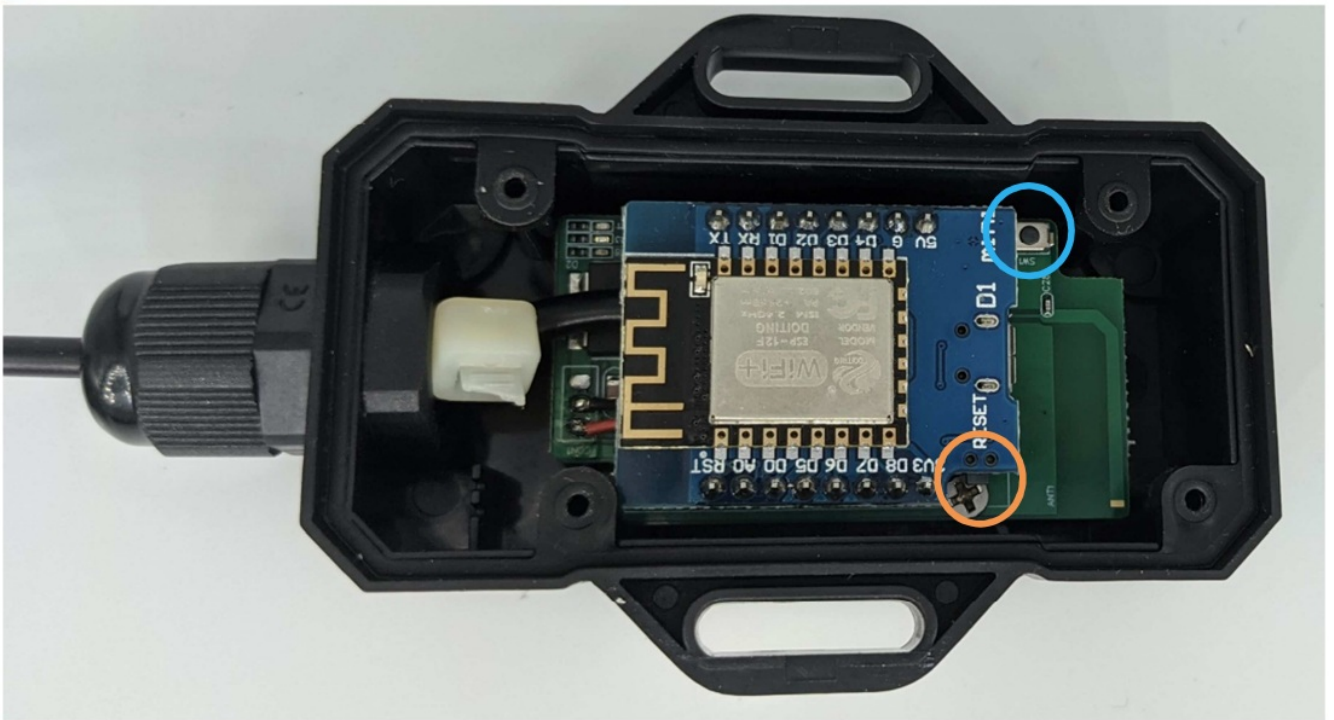
- ○ Blue Circle: SW1 Config Button
- ○ Orange Circle: Reset Button
- Device only can enter configuring mode when power just On. User might need to press "RESET" button to reset the device and press and Hold SW1 buttonimmediately.
- Mobile Connected Mobile Network might stop the configuring page access.

WiFi Configuration

- WiFi SSID (6-31 chars)
- If new SSID length not in the range, the notice will be shown as below after press
- "Submit" button. SSID parameter cannot be updated. "Setting saved" notice will be shown if there is any other item updated correctly at the same time.

SSID length incorrect

- Default: "wifissid"
- WiFi PSK: WiFi Password (8-31 chars)
- If new WiFi PSK length not in the range, the notice will be shown as below after press
- "Submit" button. WiFi PSK parameter cannot be updated. "Setting saved" notice will be shown if there is any other item updated correctly at the same time.

PSK length incorrect

- Device cannot connect WiFi Network and report data to server if SSID or/and PSK parameter is incorrect
- Default: "12345678"
- MQTT Server: Report Server IP/domain (5-63 chars)
- If new MQTT Server length not in the range, the notice will be shown as below after press "Submit" button. MQTT Server parameter cannot be updated. "Setting saved" notice will be shown if there is any other item updated correctly at the same time.

SRV length incorrect

- Default: "enter-your.server.com"
- MQTT Port: Report Server Port (1-65535)
- Server & Port cannot be empty
- If new MQTT Server value in the range, the notice will be shown as below after press
- "Submit" button. MQTT Server parameter cannot be updated. "Setting saved" notice will be shown if there is any other item updated correctly at the same time.

Port must be 1-65535

- Default: "1883"
- Username: Data User name (0-31 chars)
- Default: empty
- Device will cut off to 31 chars and saved data if the new data user name length over 31 chars
- Password: Data Password (0-31 chars)
- Default: empty
- Device will cut off to 31 chars and saved data if the new data password length over 31 chars
- Report Topic: Data Topic (3-31 chars)
- If new Report Topic length not in the range, the notice will be shown as below after press "Submit" button. Report Topic parameter cannot be updated. "Setting saved" notice will be shown if there is any other item updated correctly at the same time.

Topic length incorrect

- Default: "iotdata"
- Device ID: WiFi bridging Device ID (6-31 chars)
- If new Device ID length not in the range, the notice will be shown as below after press "Submit" button. Device ID parameter cannot be updated. "Setting saved" notice will be shown if there is any other item updated correctly at the same time.

DEV.ID length incorrect

- Default: 16 chars Wifi bridge MAC address
- NTP SRV: Network Time Protocol Server for Device report data time (empty or max 5-63 chars)
- If new NTP Server length not in the range, the notice will be shown as below after press "Submit" button. NTP Server parameter cannot be updated. "Setting saved" notice will be shown if there is any other item updated

correctly at the same time.

NTP length incorrect

- Default: "pool.ntp.org"
- Expire Interval(s): Data Expiry Interval (3-604800)
- If new Expire Interval value not in the range, the notice will be shown as below after press "Submit" button. Expire Interval parameter cannot be updated. "Setting saved" notice will be shown if there is any other item updated correctly at the same time.

Exp(s) not correct

- Device will not report new scanned data to server if new data packet include MAC address, UUID, Major, Minor, battery level is scanned within the pre-set expiry interval (default: 5s).
- Adv. report mode: Report Mode Check Box.
- Device will report all scanned data to server without expiry filter checking when this function Enable.
- Adv. raw data: Raw Mode Check Box.
- Device will report all RAW data to server when this function is Enable
- Device will not report non iBeacon data to server when RAW function is Disable
- Use Coded PHY: Coded PHY check Box
- Device will scan Coded PHY (Long Range) data only when this function is Enable
- Device will scan BT4.2 Advertise data only when this function is Disable
- Submit: Submit button to update the configuration.
- Device will check all the setting
- "Setting saved" notice will be shown if there is any item updated correctly.

Settings saved

- Parameter will be updated individually and shown related notice if any new parameter is not correct
- Default: Default button to set all configurations to default value.
- Device will set all configurations to default and reboot immediately. "REBOOT IN
- PROGRESS" message will be shown
- Reboot: Reboot button to reboot device back to normal operation
- Device will reboot immediately. "REBOOT IN PROGRESS" message will be shown

Leave Configuring Mode
Press Reboot Button on the configuration page to reboot the device after all parameters set. Device will restart as normal mode to function.

Documents / Resources

RODSUMWIRELESS AC-RW-R120 Aroco WiFi Bridging Device [pdf] User Manual
AC-RW-R120, Aroco WiFi Bridging Device, WiFi Bridging Device, WiFi Bridging, AC-RW-R120, Bridging Device

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