

U27 BTW 11

Technical and User information

Product:	
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Confidentiality:	

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I. RADIO MODULES

❖ Wi-Fi: ESP32-WROOM-32E

- FCCID: 2AC7Z-ESP32WROOM32E
- CE CERTIFICATION NO.: B22030318
- Antenna:
 - Type: integrated PCB Antenna Meandered Inverted F Antenna (MIFA)
 - Gain: 3.4 dBi
 - Frequency Band (MHz): 2400
 - Polarization: Linear

❖ THE BT IS NOT IMPLEMENTED BY FIRMWARE.

❖ Bluetooth: BGM13S

- FCCID: Q0Q13
- Antenna:
 - Type: Integrated dipole
 - Gain: 1 dBi

II. RFID ANTENNA

❖ RFID: ISMP.915.35.6.A.02

- Ceramic Patch Antenna
- Frequency: 915 MHz
- Peak Gain: 2,51 dBi
- Polarization: RHCP (right-handed circular polarization)

III. TECHNICAL FEATURES

- ❖ RADIO MODULE Frequency:
 - RFID: 915 MHz
 - BLE: 2402 ÷ 2480 MHz (ass. band 2400 ÷ 2483.5 MHz)
 - WiFi: 2412 ÷ 2472 MHz, 2422 ÷ 2462 MHz (ass. band 2400 ÷ 2483.5 MHz)
- ❖ Battery: integrated 2000mAh LiPo battery
- ❖ Battery charging: 5V with micro-USB connector
- ❖ Display: OLED
- ❖ Memory: 8MB Flash memory
- ❖ MAX CPU Frequency: 240 MHz
- ❖ RF Power: 100mW (20dBm) [0dBm ÷ -19dBm attenuation software settable]
- ❖ Compliant Standard: ISO 18000 – 6 A/B/C, EPC Class 1 Gen 2, Philips UCODE
- ❖ **Modulation:**
 - RFID: FSK
 - BLE: GFSK
 - WiFi: DSSS, OFDM

Channel spacing: 2 MHz (BLE)

Duty cycle < 1% (RFID)

- ❖ **RF power:**
 - RFID: max 25 mW (14 dBm) e.i.r.p. (measured 13.10 dBm)
 - BLE: max 19.8 dBm e.i.r.p. (measured 5.46 dBm)
 - WiFi: max (@802.11g) 19.68 dBm e.i.r.p. (measured 7.33 dBm)

IV. IMAGE



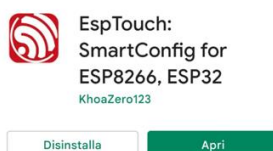
V. INSTALLATION AND USE

This device is a RFID reader fully manageable remotely by connecting to the Wi-Fi network.

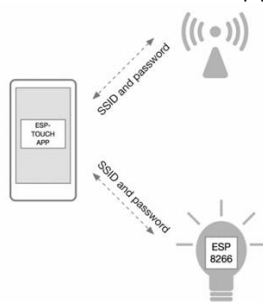
The main button has two different uses depending on how long it is pressed. It's possible turn on and off the device if it's pressed for a couple of second and to start or stop reading the tags reading.

V.I Smartphone application to use

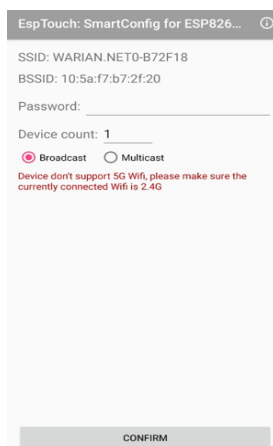
To connect the U27BTW11 device to Wi-Fi network you need to download the EspTouch application on your smartphone.



Once the application is installed, you must connect the smartphone to the same Wi-Fi network on which you want to connect the device and start the application.



On the password tab you must enter the password of the Wi-Fi network chosen. Once the device has been set up to receive the network configuration (see next paragraph), press the "CONFIRM" button.



V.II Device Configuration

On the device side by simultaneously pressing the two upper keys, the configuration menu appears and at this point you need to move to the *CONFIG* tab and press the confirmation key.



When the device connects to the network, the icon stops blinking and a message appears on the screen with the information of the network.



V.III How to use

The device operates in six modalities, and it is possible to switch modalities with the upper right key.

- Scanning MODE

The device shows the EPC value of the last tag read on the display.



- Write MODE

Allows to change the EPC Value from the Cloud.



- Inventory MODE

Shows the number of tags read.



- Find MODE

Find a list of tags sent from the Cloud.



- Radar MODE

Estimate the distance of the tag you're looking for.



- Info MODE

Shows ID number, MAC address and firmware version of the device.



VI. PACKAGING

The U27 BTW 11 will be delivered in a custom-made white box, to be safe for accidental damages during the transportation.



in case of failure or malfunction of the device, the end user must send it back to the manufacturer for repair or replacement.

VII. SAFETY WARNINGS

SAFETY AND THAT OF OTHERS IS PARAMOUNT

This manual and the appliance itself provide important safety warnings, to be read and always observed.

All safety warnings give specific details of the potential danger/warning present and indicate how to reduce risk of injury, damage resulting from improper use of the appliance.

Carefully observe the following instructions:

- Installation and maintenance must be carried out by a qualified technician, in compliance with the manufacturer's instructions and local safety regulations.

Do not repair or replace any part of the appliance unless specifically stated in the user manual.

- The electrical components must not be accessible to the user.

- Do not touch the appliance with any wet part of the body.

- The appliance is not intended for use by persons (including children) with any physical, sensory, or mental impairment, or without experience and knowledge of the appliance, unless supervised or previously instructed in its use by those responsible for their safety.

- Do not repair or replace any part of the appliance unless specifically indicated in the manual.

All other maintenance services must be carried out by a specialised technician.

- Children must be supervised to ensure they do not play with the appliance.

- The manufacturer rejects all responsibilities for any damage caused by improper use or wrong settings.

"WARNING: Do not expose the device to temperatures above 60 °C".

"WARNING: do not expose the device to low pressures at high altitude".

"WARNING: battery is not replaceable by the end user. Do not try to replace battery".

"WARNING: do not throw the device into the fire or a hot oven, do not crush or cut it, risk of explosion".

"WARNING: do not leave the device in an extremely hot environment, risk of explosion or leakage of flammable gas or liquid".

"WARNING: do not expose the device to extremely low pressures, risk of explosion or leakage of flammable gas or liquid".

"Only use a compatible charger"

Indicate not to exceed 35 degrees ambient temperature in case of prolonged use of the device.

VIII. GENERAL RECOMMENDATIONS

Before use

Remove cardboard protection pieces, protective film, and adhesive labels from accessories.

Check the appliance for any transport damage.

During use

To avoid any damage do not place any weights on the appliance.

Do not expose the appliance to atmospheric agents.

Scrapping of appliances

- For further information on the treatment, recovery, and recycling of this electrical appliances, contact your competent local authority, the collection service for household waste or the store where you purchased the appliance.

KEEP THIS BOOKLET FOR FUTURE CONSULTATION.

IX. Federal Communications Commission (FCC)

9.1 Part 15.19

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.

9.2 Part 15.21

Any changes or modifications to this equipment not expressly approved by Sensor ID may cause harmful

interference and void the user's authority to operate this equipment.

9.3 Part 15.105

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.

9.4 RF Radiation Exposure statement

This product complies with FCC and ISED radiation exposure limits set forth for an uncontrolled environment.