

Humidity Monitoring Controller Datasheet

v1.0.0

Date: 2024/07/01

1 Product Introduction

1.1 Brief Introduction

This humidity monitoring controller is a specially designed product based on Bluetooth BLE 5.2(1M) technology, using ST17H78T core processor. This product has various advantages, such as high integration, low energy consumption, small size, and slave working mode. It can be widely used to detect the humidity of the surrounding environment.

1.2 Feature

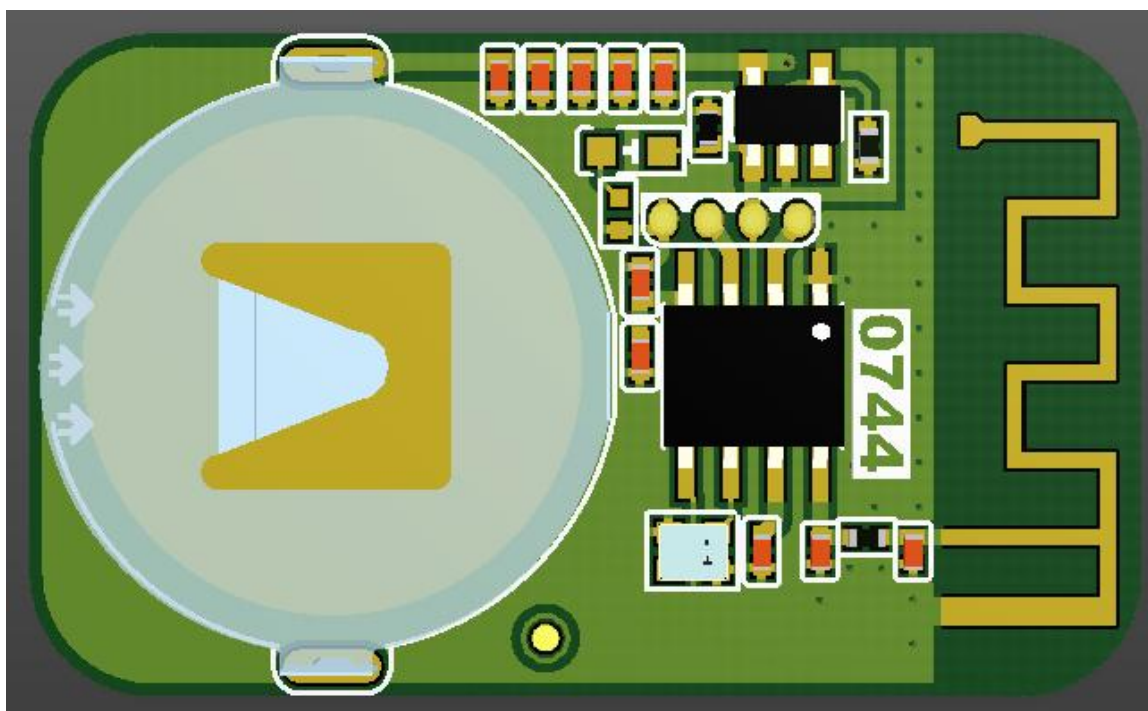
- (1) **Low Power Consumption:** Adopt BLE5.2(1M) technology, less than 0.1uA in sleep mode
- (2) **Power Supply:** 1pcs CR1620 coin battery
- (3) **Two-layer PCB Design:** Reliable quality, more guarantee

2 Usage

After the product is powered on, it will be in standby mode. When it contact with a humid environment, it will start sending BLE broadcast signals. When it leaves the humid environment, it will stop broadcasting and enter standby mode.

3 Specification

3.1 PCB Dimension



Length*width*thickness: 31.5*18.9*3.5 (unit:mm)

Precision: $\pm 0.1\text{mm}$

3.2 Technical Parameter

Item	Factory Setting
Product Name	Humidity monitoring controller
Working Role	Slave device
Working Mode	Default standby mode after power on
Broadcast Interval	100ms
Default RF Power	-6.0dBm

Item	Parameter
Bluetooth Version	Bluetooth V5.2(1M)
Modulation Mode	GFSK
Output Power	-6.0dBm(max)
Sensitivity	-96dBm
Frequency	2402-2480MHz
Antenna Impedance	50Ω
Working Voltage	1.8-3.3 V
Sleep Current	<1uA
Standby Current	10mA (broadcast interval: 100ms)
Working Temperature	-30 ~ +60℃

§15.19 Labeling requirements.

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.

§ 15.21 Information to user.

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

§ 15.105 Information to the user.

Note: 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.

RF Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.