



# Temperature & Humidity Sensor User Guide (RD77762)

## User Guide

rev 1.0

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## 1.0 ABOUT THIS GUIDE

### 1.1 Becoming familiar with this User Guide

#### 1.1.1 Quick Reference

The Jetlun Temperature & Humidity Sensor (RD77762) User Guide describes the following:




**Table 1: Where to find information in this User Guide**

|  |                 |
|--|-----------------|
| Planning and Installing the Jetlun Temperature & Humidity Sensor | Chapter 2 and 3 |
|--|-----------------|

#### 1.1.2 Icon Descriptions

While reading through the User Guide, you may see various icons that call attention to specific items. Below is a description of these icons:

**Table 2: Icon descriptions**

|   |  |
|---|--|
|  | <b>NOTE:</b> This mark indicates that there is a note of interest and is something that you should pay attention to while using the product.         |
|  | <b>IMPORTANT:</b> This mark identifies an indication that you should watch for, or reiterates something that you should always keep in mind.         |
|  | <b>WARNING:</b> This exclamation point indicates that there is a caution or warning and may be something that could damage your property or project. |

### 1.2 Getting Additional Help

To get information or assistance for problems that you encounter, please contact Jetlun Technical Support by emailing [support@jetlun.com](mailto:support@jetlun.com).

Please always include with all inquiries the following information:

- Product name, model number, part number (if applicable) and serial number
- A description of the devices connected to your Gateway or a system configuration
- The circumstances surrounding the error or failure
- A detailed description of the problem and what has been done to try to resolve it

### 1.3 Sending Feedback regarding this Documentation

We welcome your feedback on Jetlun Gateway documentation. This includes feedback on the structure, content, accuracy, or completeness of our documents, and any other comments you may have. Please send your comments to [docs@jetlun.com](mailto:docs@jetlun.com).

## 2.0 PRODUCT OVERVIEW

Thank you for choosing the JIM Temperature & Humidity Sensor (RD77762). The Temperature & Humidity Sensor is a ZigBee® sensor designed to monitor the current temperature and humidity of the ambient environment. When used in conjunction with the Jetlun Gateway, temperature and humidity can be reported to you on a regular basis. You can even configure email or SMS alerts to be sent to you if the temperature or humidity reaches certain set points.

The JIM Temperature & Humidity Sensor has the following features:

- ZigBee Wireless enabled
- Reports temperature in Fahrenheit or Celsius
- Low battery indicator

## 2.1 Package Contents

When you first open the box, please check and confirm that the following items are all included:

- 1x Temperature & Humidity Sensor RD77762
- 1x Quick Installation Guide
- 1x Warranty Guide

Contact the retailer where you made your purchase if any of these parts are incorrect, missing or damaged. Keep the carton, including the original packaging materials in case you need to return the unit for repair.

## 2.2 Important Safety Information

Please read all documentation and retain documentation for future reference. Follow all warnings, alerts and instructions.

Important:

- **DO NOT** Use the RD77762 near water
- **DO NOT** Place the RD77762 near any heat source such as radiators, heaters, stoves, or other apparatus that produce heat
- **DO NOT** Open the device housing or alter the product in any way
- **DO NOT** Dispose of electrical appliances as unsorted municipal waste. Contact your local government for information regarding separate collection facilities

## 2.3 Front Panel

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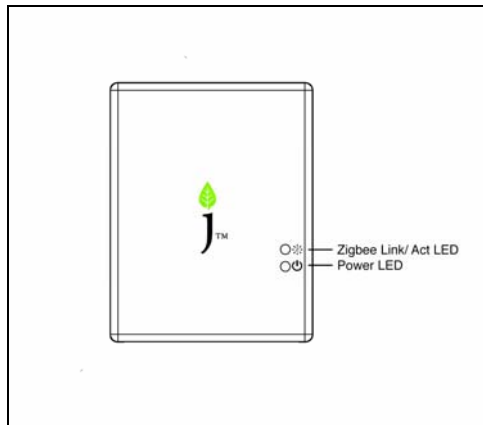


Figure 1: Front Panel of the Temperature & Humidity Sensor

Table 3: Front Panel LED Description

|  |   |
|--|---|
|  | The Power LED lights up RED when the battery volume is low.   |
|  | The Zigbee ACT LED blinks green when the temperature and humidity sensor receives/sends the data.<br>The Zigbee ACT LED is solid green for 300 seconds when the temperature and humidity sensor joins the zigbee network. |

2.4 Side Panel

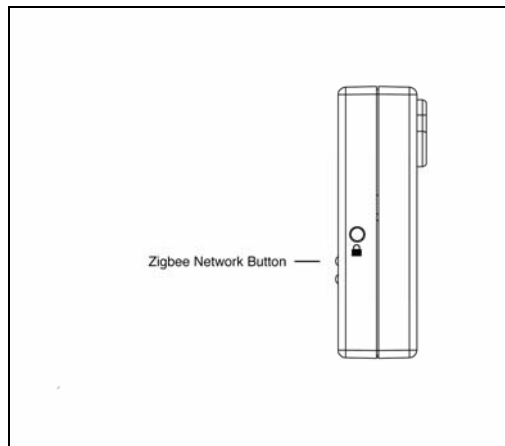


Figure 2: Side Panel of the applicne module

Table 4: Back Panel of the Temperature & Humidity Sensor Description

|  |  |
|--|--|
|  | The Zigbee Network button is applied for the Temperature & Humidity Sensor to join or leave the network.<br>Press the Zigbee Network button once to join the network if the sensor is not in the network.<br>To remove the sensor from the network, press the Zigbee Network button once to leave the network. |
|--|--|

### 3.0 INSTALLING THE JETLUN TEMPERATURE & HUMIDITY SENSOR

Follow these quick steps to install your Jetlun Temperature & Humidity Sensor.

#### 3.1 Install the Temperature & Humidity Sensor

##### 3.1.1 To Join the Network

- ➔ **STEP 1:** Press and release the Zigbee network button for 3-5 seconds and then release the button. The Zigbee ACT LED should be blinking.
- ➔ **STEP 2:** The Temperature & Humidity Sensor will join the network within 1 minute. The Zigbee ACT LED should be solid green for 300 seconds.



**NOTE:** If the Temperature & Humidity Sensor fails to join the ZigBee network, please enter the Gateway utility web interface and check the following items:

1. The Zigbee network is formed.
  2. The Zigbee network allows the Zigbee device to join the network.
  3. Retry Step 1
- 

##### 3.1.2 To Leave the network

- ➔ **STEP 1:** Press and hold the Zigbee network button for 8-10 seconds and then release the button. The ACT LED is blinking for about 3 seconds and then it is off.
- ➔ **STEP 2:** The Temperature & Humidity Sensor has left the network successfully when the ACT LED is off.

## 4.0 TROUBLESHOOTING

### **Q. The Temperature & Humidity Sensor fails to join the Zigbee network?**

A: Check the configuration of the Gateway or RD75613 and assure that the network is formed. Then refer to section 3.1.1 (To join the network) of the manual and follow all steps to retry join the network

### **Q. The Power LED is solid red or blinking red?**


A: The Red LED indicates low battery. Simply change out the old batteries with new ones and LED should automatically revert to green.

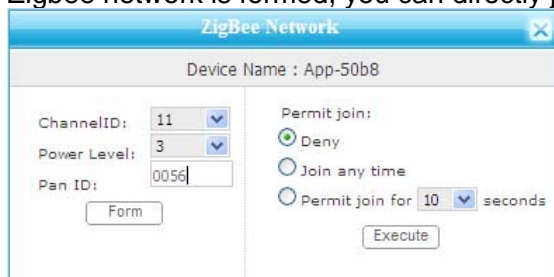
Change out battery procedure:

- ➔ **STEP 1:** Screw out the screw in the bottom panel using screwdriver
- ➔ **STEP 2:** Open the bottom panel.
- ➔ **STEP 3:** Use the new battery instead the old one
- ➔ **STEP 4:** Close the bottom panel and screw the screw.

### **Q: Join the Temperature & Humidity sensor to the Gateway Zigbee network through RD75613?**

A: The procedure is following:

- ➔ **STEP 1:** Form the Zigbee Network through the RD75613.
  1. Enter the Gateway utility web Home Area Network > Control interface
  2. Select the RD75613 (Appliance module) whose Zigbee network the temperature & humidity sensor will join and click the  button
  3. Enter the Zigbee network button, and enter the Chanel ID, Power Level and Pan ID. (If the Zigbee network is formed, you can directly jump to item 5.)



*Channel ID is digit from 11 to 26  
 Power Lever is digit from 1 to 3  
 Pan ID must be 4 bits Hex*

4. Click the Form button. When the network is formed, the name of Form button is changed to "Leave".
5. Select the Permit join choice and click Execute button.

Explain of permit join choices:

*Deny: No sensors can join the network*

*Join any time: All sensors can zigbee network at any time.*



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*Permit join for XX seconds: Sensors can join the network within XX seconds.*



**NOTE:** Permit join setting should be reset when the appliance module is rebooting.

➔ **STEP 2:** Temperature & Humidity sensor joins the network

1. Press and release the Zigbee network button for 3-5 seconds and then release the button. The Zigbee ACT LED should be blinking.
2. The Temperature & Humidity Sensor will join the network within 1 minute. The Zigbee ACT LED should be solid green for 300 seconds



**NOTE:** If the Temperature & Humidity Sensor fails to join the ZigBee network, please enter the Gateway utility web home area network > Control > Zigbee network interface (Refer the Step 1) and check the following items:

1. The Zigbee network is formed.
2. The Zigbee network allows the Zigbee device to join the network.
3. Retry Step 2

➔ **STEP 3:** Temperature & Humidity sensor leaves the network

1. Press and release the Zigbee network button for 8-10 seconds and then release the button. The ACT LED is blinking for about 3 seconds and then it is off.
2. The Temperature & Humidity Sensor has left the network successfully when the ACT LED is off.

## 5.0 TECHNICAL SPECIFICATIONS

|                                    |  |
|------------------------------------|--|
| Part Number                        | RD77762  |
| Product Name                       | Jetlun Zigbee Temperature and Humidity Sensor                              |
| Standard Compliance                | Zigbee Smart Energy or Home Automation Profile<br>IEEE 802.15.4 for Zigbee |
| Frequency Band                     | Zigbee: 2.4 GHz  |
| Transport Mode                     | Zigbee: Up to 200 kbps   |
| Range                              | Zigbee: Up to 100 ft (30 m)  |
| LEDs                               | Power, Zigbee Act/Link/Security LED  |
| Temperature Measurement Range      | -40°C to +100°C (-40°F to +212°F)  |
| Temperature Measurement Accuracy   | +/-0.5°C +/- 0.3°C@25°C (+/- 0.4°F)  |
| Temperature Measurement Resolution | 0.1°C (0.1°F)  |
| Humidity Measurement Range         | 10% to 95%   |
| Humidity Measurement Resolution    | +/- 1%   |
| Humidity Accuracy                  | 25°C: +/- 2%   |
| Operating Temp                     | -40°F to 212°F (-40°C to 100°C)  |
| Operating Humidity                 | 10 to 85% non-condensing   |
| Storage Temp                       | -40°F to 248°F (-40°C to 120°C)  |
| Storage Humidity                   | 0 to 80% non-condensing  |
| Dimensions                         | 72 x 55 x 20.5mm (L x W x H)   |
| Weight                             | 0.084 kg (0.185 lbs)   |
| <b>Operating Voltage</b>           | <b>3.6V battery</b>  |
| Safety and EMI                     | FCC/C-Tick/CE<br>Zigbee SE/HA certification                                |
| WEEE                               | RoHS Compliant   |

## Glossary

Zigbee is a low-speed, low powered 802.15.4 wireless mesh standard established by the Zigbee Alliance. The Zigbee Alliance is a non-profit Standard organization made up 300+ companies driving development of ZigBee wireless technology. For more information, visit [www.zigbee.org](http://www.zigbee.org). Zigbee is the only wireless technology standard that has been listed under NIST as 1 of the 13 Smart Grid interoperability standards. For more information about NIST, please visit [www.nist.gov](http://www.nist.gov).....6, 10, 11, 12

### ● FCC Notices

1. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.
2. This device complies with Part 15 of the FCC Rules. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
3. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

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.



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