# RISECOMM

## User Manual

## A/C Manager

## KTJK-M02J

## Preface About This Manual

# Table of Contents

# Safety and Regulatory Information

## Important Safety Instructions

When using your equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

» Read all of the instructions listed here and/or in the user manual before you operate this device. Give particular attention to all safety precautions. Retain the instructions for future reference.

» This device must be installed and used in strict accordance with manufacturer's instructions, as described in the user documentation that is included with the device.

» To prevent fire or shock hazard, do not expose this device to rain or moisture. The device must not be exposed to dripping or splashing. Do not place objects filled with liquids, such as vases, on the device.

» This device was qualified under test conditions that included the use of the supplied cables between system components. To ensure regulatory and safety compliance, use only the provided power and interface cables and install them properly.

» Installation of this device must be in accordance with national wiring codes and conform to local regulations.

» Operate this device only from the type of power source indicated on the device's marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.

» Do not overload outlets or extension cords, as this can result in a risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard.

» Place this device in a location that is close enough to an electrical outlet to accommodate the length of the power cord.

» Place the device to allow for easy access when disconnecting the power cord of the device from the AC wall outlet.

» Do not connect the plug into an extension cord, receptacle, or other outlet unless the plug can be fully inserted with no part of the blades exposed.

» Place this device on a stable surface.

» It is recommended that the customer install an AC surge protector in the AC outlet to which this device is connected. This is to avoid damaging the device by local lightning strikes and other electrical surges.

» Postpone installation until there is no risk of thunderstorm or lightning activity in the area.

» Do not cover the device or block the airflow to the device with any other objects. Keep the device away from excessive heat and humidity and keep the device free from vibration and dust.

» Wipe the device with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the device or use forced air to remove dust.

» Upon completion of any service or repairs to this device, ask the service technician to

perform safety checks to determine that the device is in safe operating condition.

» This device should not be used in an environment that exceeds 60 ⁰C.

## 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.

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

**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 environment. 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 device 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 device 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 Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with the FCC RF exposure compliance requirements, the separation distance between the antenna and any person' s body (including hands, wrists, feet, and ankles) must be at least 20 cm (8 inches).

# CHAPTER 1 Overview

## Package Contents

Your box should contain the following items:
» A/C Manager KTJK-M02J
» User Manual
» Warranty
If any parts are incorrect, missing, or damaged, contact your Risecomm reseller. Keep the carton and original packing materials, in case you need to return the product for repair.

## Introduction

A/C Manager (Air Conditioner Manager) KTJK-M02J is designed to monitor, record, control air conditioner. It is an important component of air conditioning centralized management and energy analysis system.
The A/C Manager collects and records the running status of the air conditioner and the environment data of the room, and transmits the data to Smart Router. The Smart Router processes the data and transmits the data to the control computer. Administrator communicates with the Smart Router through a wireless or wired LAN, to view running status of air conditioner and issue a directive to A/C Manager. The A/C Manager has 360 ° infrared transmitter function to ensure control air conditioner. So that Administrator can unify configuration, centralize management and remote control all air conditioners in the system.
The A/C Manager connects Smart Router through PLC (power line communication) and micro-power wireless communication dual-channel that guarantees a high success rate and high speed of communication.
The A/C Manager needs to be paired with a temperature sensor to work together. The A/C Manager communicates with temperature sensor at 2.4GHz wireless. Temperature sensor provides indoor temperature for the A/C Manager.

## Product Application and Functions

The A/C Manager KTJK-M02J is the terminal of the air conditioning centralized management and energy consumption analysis system. The application of the A/C Manager in air conditioning centralized management system is shown in Figure 1:
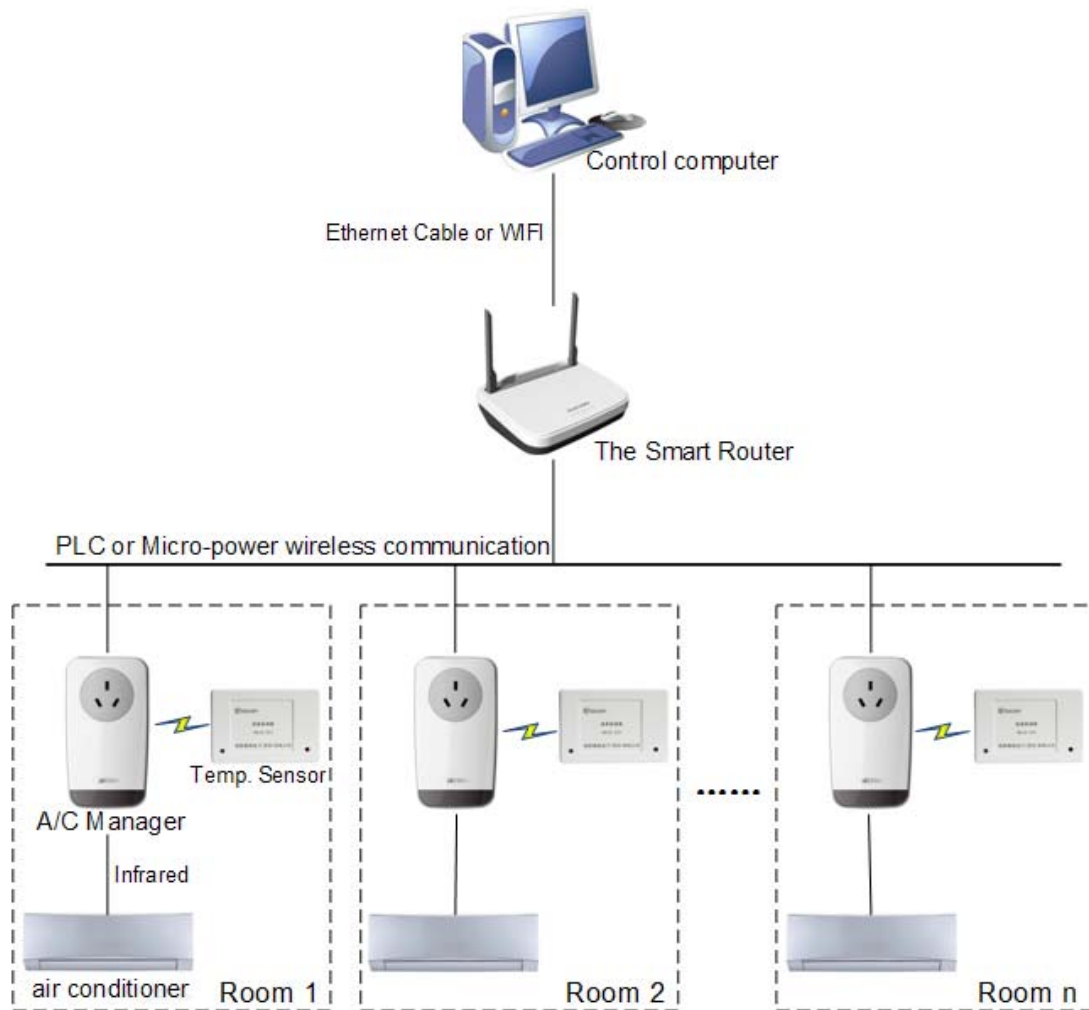
Figure 1 Air Conditioning Centralized Management System

In the system, A/C Manager KTJK-M02J has the following main functions:

» Records the running status of the air conditioners (such as turn up/down, compressor working condition, operation mode, setting temperature etc.). And measures the current air conditioners' voltage, current, power and other energy data.

» Collects and real-time reports air conditioner energy consumption data, and transmits the data to Smart Router.

» Gets the current indoor temperature by a temperature sensor.

» It has a 360 ° infrared transmitter function, so that it can control the air conditioner running status.

» Failure detection. When the air conditioner fails to work properly, such as cooling effect is not good, the A/C Manager automatically detects, takes the initiative to report and informs the master station for maintenance.

» Supports multiple types air conditioner, the type of air conditioner can be set by the master station.
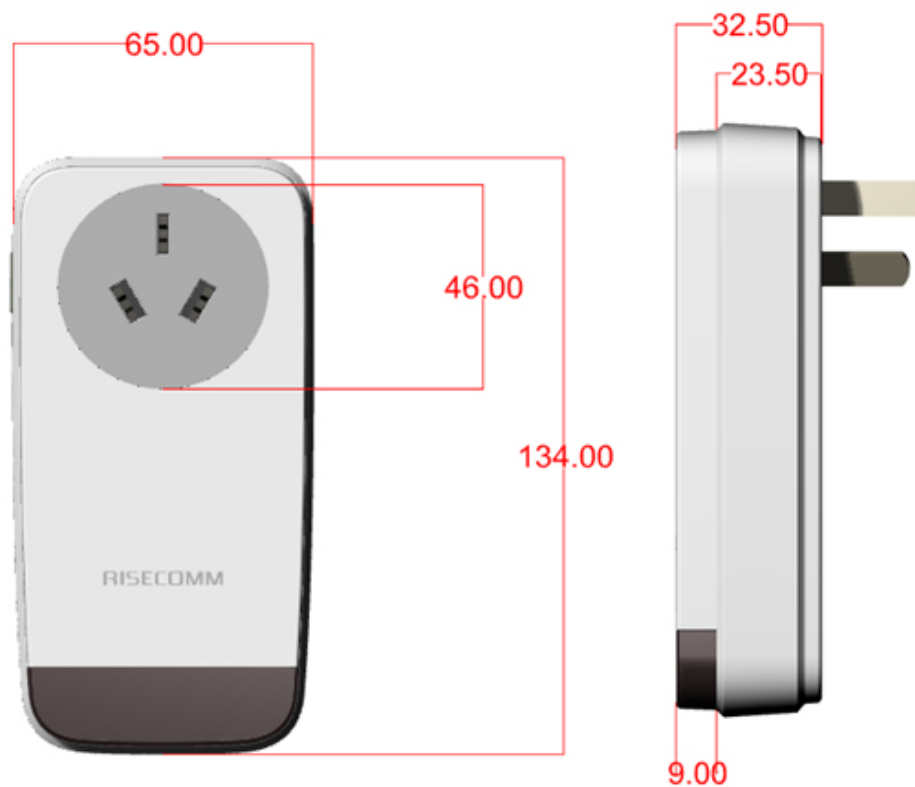
# CHAPTER 2 Hardware Features

Figure 2 Appearance and size

Size: L134.0*W65.0*H32.5mm

Before you install the A/C Manager, take a moment to become familiar with the connection and buttons. Pay particular attention to the button on the left side panel.
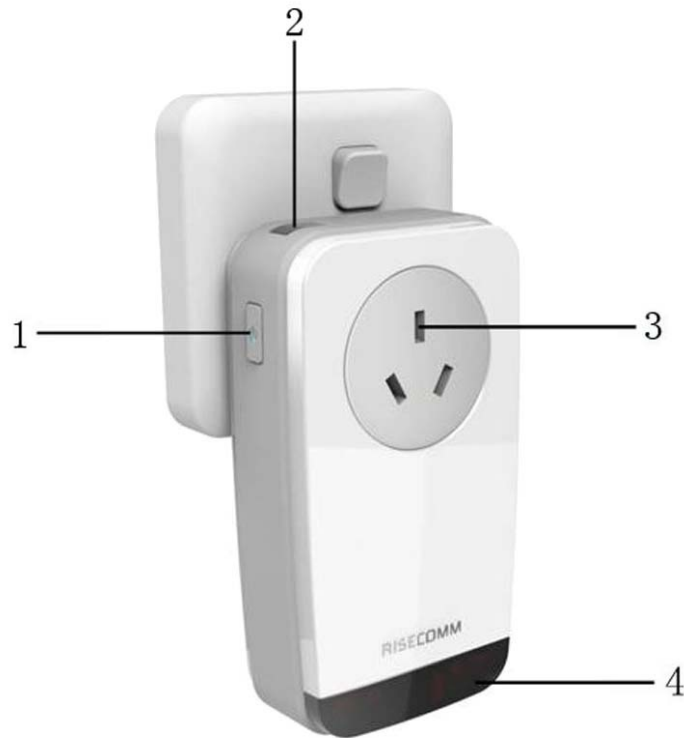
## Connection and Buttons

Figure 3 Connection and buttons

| No. | Connection and Buttons | Description |
|---|---|---|
| 1 | **Button** | Used to modify address, achieve A/C Manager and Temperature Sensor address pairing, relay switch control, delete hourly electricity and temperature records, data initialization. |
| 2 | **Infrared window** | The upper infrared emission. |
| 3 | **Socket** | Connect Air conditioner power plug. There are 10A and 16A two kinds of specifications. |
| 4 | **Infrared window** | Receiving infrared and left, right, right ahead infrared emission. |

## Button Operation

The button integrates five functions in one, in order to prevent conflict between the various functions, specifically using a fixed delay on power and long press short press to coordinate various functions.

» Power within one minute:

A. Long press button more than 3 seconds then release, to achieve modifying the address, the node address can be modified by master.

B. Long press button more than 10 seconds then release, to achieve the A/C Manager and Temperature Sensor address pairing. The A/C Manager and Temperature Sensor can achieve temperature exchange after successful pairing.

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» Power after one minute:

A. Press the button (pressed for less than 1 second), to achieve a relay switch control.

B. Press the button more than three seconds, clear the A/C Manager historic hour electricity and temperature data.

C. Press the button more than 10 seconds, the node data initialization, removes all data records.

# CHAPTER 3 Quick install guide

This part explains how to use A/C Manager.

## Connecting the A/C Manager

A/C Manager is in-line plug power supply. First plug A/C Manager into the electrical wall outlet side of the air conditioner directly to take power, and then plug the air conditioner power cord into A/C Manager Socket to take power. As shown in Figure 4:
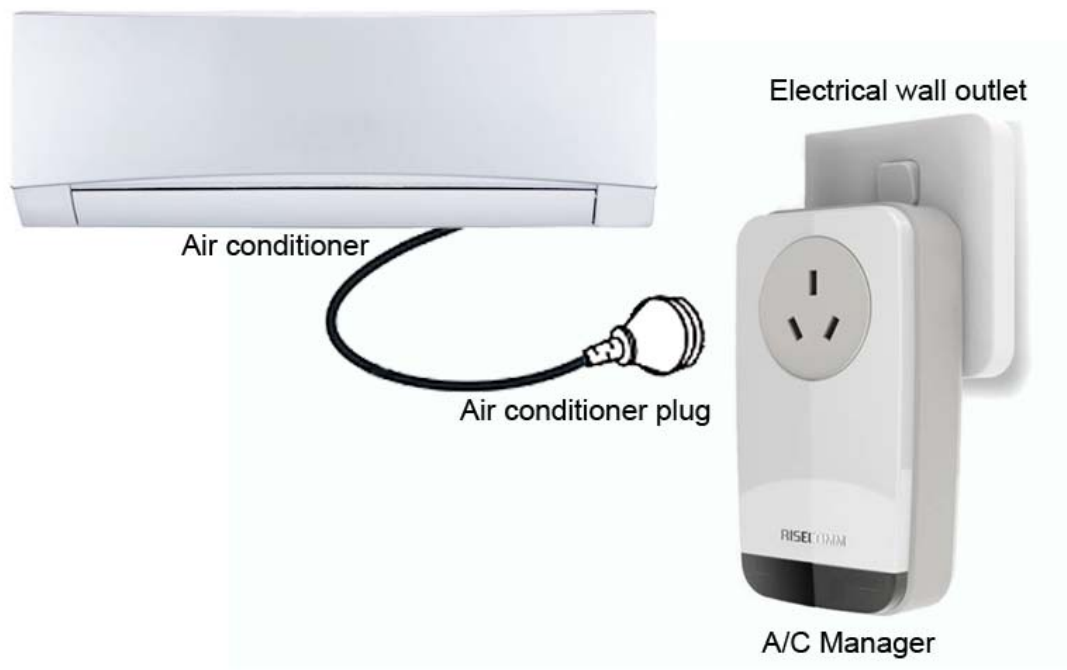


Figure 4 Connection

Check air conditioner power plug is 16A or 10A Specification, be sure to select the corresponding specifications of the A/C Manager prevent specification mismatch cannot insert the plug, cause poor contact, or the contact resistance is too large to burn the power cord.

## Paired with Temperature Sensor

The A/C Manager needs to be paired with a temperature sensor. Only the pairing is completed, the A/C Manager and Temperature Sensor can communicate with each other.

The specific pairing steps are as follows:

1. Power cycle the A/C Manager, power within one minute, long press the button for more than 10 seconds then release the button, A/C Manager enters the pairing phase.

2. Press the button of Temperature Sensor (press then release, do not need to press long time), the pairing LED of Temperature Sensor will be illuminated, and then the Temperature Sensor enters the pairing phase.

3. When both are in pairing phase, they will exchange data. Observe the LED light of Temperature Sensor, if the light lit and then extinguished on behalf of the pairing is successful. If the light extinguished after a few flashes on behalf of unsuccessful pairing or timeout, the pairing process is not completed.

When the pairing fails, the above steps 1, 2, 3 should be repeated.

Note: The step 1 long press the button for more than 10 seconds must ensure that the button is pressed longer than 10 seconds.

# CHAPTER 4 Product Specifications

| Feature | Description |
|---------|-------------|
| Input power | North America 105 to 125 VAC, 60 Hz<br>Outside North America 100 to 240 VAC, 50 to 60 Hz |
| Maximum current | 16A |
| Type | 10A and 16A |
| Measurement accuracy | 1grade |
| Static power consumption | <1.6W |
| PLC Frequency | 357KHz |
| Wireless Frequency | 470-510MHz, ISM/SRD,<br>2.4GHz, ISM |
| Infrared | Up and down, right and left, right ahead,All directions |
| Operating Temperature | -25℃~+60℃ |
| Storage Temperature | -40℃~+70℃ |
| Dimensions | L134.0*W 65.0*H32.5mm |

## Warranty

1-year limited warranty.

If you purchased this product directly from Risecomm or from an authorized Risecomm retail reseller, Risecomm warrants to you, the original end user customer, that the product, excluding software, will be free from defects in materials and workmanship under normal use，and for a period of one year from the date of purchase from Risecomm or from an authorized Risecomm reseller. Risecomm's sole and exclusive obligation under this

limited warranty for retail sales shall be to repair or replace any product or software that does not meet this limited warranty. All warranty claims must be made within the applicable warranty period.

If you did not purchase this product directly from Risecomm or from a Risecomm authorized retail reseller, Risecomm does not warrant this product to you, the end-user. A limited warranty for this product (including software) may have been provided to your service provider from whom you obtained the product. Please contact your service provider if you experience problems with this product.

General information. The warranties described in this section shall not apply:

    (i) To any product subjected to accident, misuse, neglect, alteration, acts of god, improper handling, improper transport, improper storage, improper use or application, improper installation, improper testing or unauthorized repair; or

    (ii) To cosmetic problems or defects which result from normal wear and tear under ordinary use, and do not affect the performance or use of the product.

Risecomm' s warranties apply only to a product that is manufactured by Risecomm and identified by Risecomm owned trademark, trade name or product identification logos affixed to the product. Risecomm does not warrant to you, the end user, or to anyone else that the software will perform error free or without bugs. Risecomm is not responsible for, and provides "as is" Any software supplied by 3rd parties. Except as expressly stated in this section ("warranty information"), there are no warranties of any kind relating to the product, express, implied or statutory, including but not limited to implied warranties of merchantability, fitness for a particular purpose, or the warranty against infringement provided in the uniform commercial code. Some states do not allow for the exclusion of implied warranties, so the above exclusion may not apply to you.

Risecomm is not responsible for problems or damage caused by the interaction of the product with any other software or hardware. All warranties are void if the product is opened, altered, and/or damaged.

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