



ZM-24

2.4GHz Zigbee® Transceiver Module

Reference Guide



The ZM-24 2.4GHz Zigbee® Transceiver Module is capable of more than just receiving signals - it can transmit signals as well. This creates a bi-directional communication link between certain RTI control processors and wireless interfaces. Only one module needs to be hard-wired to the control processor, while additional "repeater" modules can be added by powering them from any electrical outlet within communication range of other modules.

Key Features

The ZM-24 provides superior quality and reliability as well as these specific features:

- Enables bi-directional communication between ZigBee® enabled RTI remote controls and processors.
- Wireless ZigBee® communication range between compatible devices up to 100 feet (30m).
- Can be used in "coordinator" mode, or create a Zigbee network by adding modules configured in "repeater" mode.
- Utilizes IEEE802.15.4 wireless Zigbee® communication at 2.4GHZ.
- Durable plastic enclosure and adjustable antenna.
- Receives power from an RTI control processor or from the included power supply.
- Easy mounting with a detachable wall bracket.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

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 the 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.

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.
2. This device must accept any interference received including interference that may cause undesired operation.

Industry Canada Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received including interference that may cause undesired operation.

Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). Son fonctionnement est soumis aux deux conditions suivantes:

1. Ce dispositif ne peut causer des interférences nuisibles.
2. Cet appareil doit accepter toute interférence reçue y compris des interférences qui peuvent provoquer un fonctionnement indésirable.



DECLARATION OF CONFORMITY (DOC)

The Declaration of Conformity for this product can be found on the RTI website. (www.rticontrol.com/declaration-of-conformity)

Safety Suggestions

Read and Follow Instructions. Read all safety and operating instructions before operating the unit.

Retain Instructions. Keep the safety and operating instructions for future reference.

Heed Warnings. Adhere to all warnings on the unit and in the operating instructions.

Heat. Keep the unit away from heat sources such as radiators, heat registers, stoves, etc., including amplifiers that produce heat.

Power Sources. Use only power sources of the type described in the operating instructions, or as marked on the unit.

Water and Moisture. Do not use the unit near water—for example, near a sink, in a wet basement, near a swimming pool, near an open window, etc.

Object and Liquid Entry. Do not allow objects to fall or liquids to be spilled into the enclosure through openings.

Servicing. Do not attempt any service beyond that described in the operating instructions. Refer all other service needs to qualified service personnel.

Damage Requiring Service. The unit should be serviced by qualified service personnel when:

- Objects have fallen or liquid has been spilled into the unit.
- The unit has been exposed to rain.
- The unit does not appear to operate normally or exhibits a marked change in performance.
- The unit has been dropped or the enclosure has been damaged.

Limited Warranty

RTI warrants its products for a period of three (3) years (one year for included battery packs); or for a period of time compliant with local laws when applicable from the date of purchase from RTI or an authorized RTI distributor.

This warranty may be enforced by the original purchaser and subsequent owners during the warranty period, so long as the original dated sales receipt or other proof of warranty coverage is presented when warranty service is required.

Except as specified below, this warranty covers all defects in material and workmanship in this product. The following are not covered by the warranty:

Damage resulting from:

1. Accident, misuse, abuse, or neglect.
2. Failure to follow instructions contained in this Guide.
3. Repair or attempted repair by anyone other than Remote Technologies Incorporated.
4. Failure to perform recommended periodic maintenance.
5. Causes other than product defects, including lack of skill, competence or experience of user.
6. Shipment of this product (claims must be made to the carrier).
7. Being altered or which the serial number has been defaced, modified or removed.

Contacting RTI

For news about the latest updates, new product information, and new accessories, please visit our web site at: www.rticorp.com

For general information, contact RTI at:
Remote Technologies Incorporated
5775 12th Ave. E Suite 180
Shakopee, MN 55379
Tel. (952) 253-3100
info@rticontrol.com

Service & Support

If you are encountering any problems or have a question about your RTI product, please contact RTI Technical Support for assistance (see the Contacting RTI section of this guide for contact details).

RTI provides technical support by telephone or e-mail. For the highest quality service, please have the following information ready, or provide it in your e-mail.

- Your Name
- Company Name
- Telephone Number
- E-mail Address
- Product model and serial number (if applicable)

If you are having a problem with hardware, please note the equipment in your system, a description of the problem, and any troubleshooting you have already tried.

Please do not return products to RTI without a return authorization.

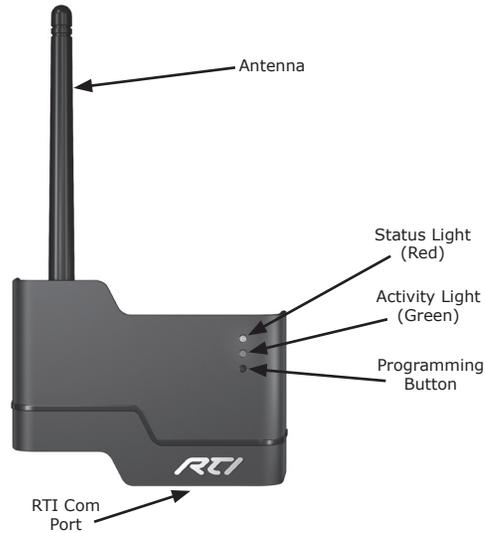
Product Contents

Contents within the box include the following items:

- One (1) ZM-24 2.4 GHz Transceiver Module
- One (1) ZM-24 mounting bracket
- Two (2) 6 - 32 x 3 inch flathead mounting screws
- One (1) Foldable antenna
- One (1) 6 ft. (2m) Cat 5 cable with RJ45 ends
- One (1) Reference guide
- One (1) Power supply, 12V 1A

Installation & Operation

ZM-24 REFERENCE



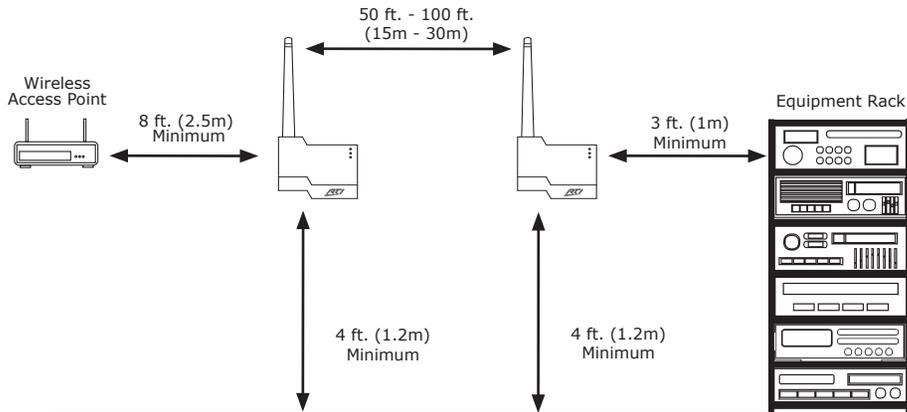
MOUNTING

The ZM-24 can be mounted on a shelf, wall, or cabinet. See below for recommended positioning. To extend the coverage area, additional ZM-24 modules may be installed 50-100 feet (15-30m) away from another ZM-24 module.

INSTALLATION

IMPORTANT INSTALLATION NOTES:

- The power supply that comes with the ZM-24 should only be used to power the ZM-24 when it is being used as a "repeater". Do not plug the power supply into a ZM-24 that is wired directly to a control processor.
- Some RTI Control Processors may require a ZM-24 module for two-way Zigbee® communication. Check corresponding reference guides for compatibility and connection instructions.
- No Ethernet networking components (routers, hubs, switches) should be used for extending wiring from control processor to ZM-24.
- ZM-24 modules should be placed at least 3 feet (1m) from electronic components and at least 8 feet (2.5m) from 2.4GHz wireless access points or cordless phone systems.
- If additional ZM-24 modules are used to extend range, a slow down in network performance may occur.



Programming

The ZM-24 connected to an RTI control processor will become the "coordinator" module and no additional programming is required. Additional ZM-24 modules may be used in "repeater" mode, creating a bi-directional network to extend wireless coverage. ZM-24 modules used in "repeater" mode must be programmed using a ZB-Pro Professional 2.4GHz Network Management Tool.

Programming a ZM-24 for "repeater" mode:

- Plug in and attach the ZM-24 power supply.
- Open the Integration Designer programming software and system file.
- Open the "Communications" menu and click on "Configure ZM-24 Wireless Repeater".
- Follow the steps of the ZM-24 update wizard.

PROGRAMMING NOTES:

- Please refer to the ZB-Pro operation guide for instructions on its use.
- ZM-24 must be within 10 feet (3m) of a ZB-Pro for an update to occur.
- The ZM-24 update process requires the programming button to be pressed.

Connections

Installations with more than one processor must have ZM-24 modules plugged into each processor. As long as the ZM-24 modules are within communication range of each other, a wireless network will be established. Additional ZM-24 modules may be used in "repeater" mode to extend wireless coverage.

