



BIN001-1 User Manual

Specifications, device installation, compliance and safety information

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Revision History

Name	Date	Description	Version
MARIA	2025/01/14	Create document	1.0

Introduction

The BIN001 system is a smart solution for inventory and stock management. It uses BLE and NFC technologies to track items efficiently and accurately, with a range of up to 80 meters.

This document provides the necessary steps to set up, use, and maintain BIN001, ensuring smooth operation and integration into your workflow.

Specifications

RF specification operating frequency	2402-2480MHz
Type of modulation	GFSK
Antenna type	Internal Antenna
Antenna gain	3.2dBi
Specialty	Bluetooth Low Energy
Function	Bluetooth Low Energy
Power supply	N/A
Power cord	N/A
Battery	A CR2477 lithium metal cell batteries rated at 1000mAh
Size:	1.1"L x 5.5"W x 0.87"H (30.mmL x 140.mmW x 22mmH)
Lifetime	3 years
Temperature Range:	-20°C to +40°C
IP Rating	IPX0
Weight	15 grams
Bluetooth Sensitivity:	-95dBm
Transportation:	Meets IATA Dangerous Goods Regulations 2015-2016 Edition (UN3091) Exemption Requirements PI 970 Section 2. Less than 4 lithium metal cells encased in equipment. No declaration required.
Power Consumption - Max:	TBD
Power Consumption - Sleep:	TBD

Compliance

FCC 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 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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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.

RF Exposure Information

The device has been evaluated to meet general RF exposure requirement.

The device can be used in 0mm exposure condition, compliance with exposure requirements.

Only in the stated conditions, the device is shown to fully comply with the FCC RF Exposure requirements of KDB 447498.

Operating Instructions

Please review [safety information](#) before installation to avoid injury to yourself or others.

The BIN001 system is embedded within the TwinBin case to enhance stock management efficiency. The TwinBin operates by visually indicating stock levels through its two-compartment design: the upper section holds reserves backup stock the active stock, while the lower section the active stock. Once the active stock is depleted, users can easily access the reserve stock by sliding it down. This system ensures that inventory levels are always visible, making it easier to monitor and refill as needed. BIN001 seamlessly integrates into this process by providing real-time tracking and management capabilities, improving accuracy and reducing manual effort.

Installation:

- [Prepare the TwinBin Case](#)

Ensure the TwinBin case is clean and fully assembled. Verify that the compartments for both active and reserve stock are securely in place and functioning properly.

- [Install the BIN001 System](#)

Insert the BIN001 module into its designated slot within the TwinBin case. Make sure it fits snugly and is firmly seated to prevent any movement during operation.

- [Power On and Configure](#)

Remove the battery tab to power on the device. The LED will begin blinking blue, followed by either green or red, depending on the system state.

Follow the setup instructions to pair the BIN001 system with your management software or network using Bluetooth or NFC.

- [Operation](#)

Once the TwinBin is filled with material, the flag remains down and a green LED will blink every minute, indicating normal operation.

When the active stock is depleted, pull the divider to release the backup material. This will raise the flag and the red LED will start blinking, signalling the need for replenishment.

The operator should then scan the tag using NFC to assign the material that will be replenished. The blue LED will blink, indicating the process is underway.

After the bins have been replenished and the operator lowers the flag/tag, the LED will return to green blinking, confirming normal status.

Usage

The BIN001 system is designed to simplify and enhance inventory management by seamlessly integrating with the TwinBin case. It monitors stock levels in real-time, using BLE and NFC technologies to ensure accurate tracking of active and reserve stock compartments. As stock is consumed, BIN001 updates the system, providing alerts when it's time to replenish. This reduces

manual checks, minimizes errors, and streamlines stock management workflows, making BIN001 an essential tool for maintaining efficient operations.