

Manual

Product Overview

Model: F24A2

FCC ID: 2BSP4-F24A20000001

Date: March 30, 2026

Description: A lightweight hardware device designed for quick item finding. The device connects via TCP wired connection and uses proprietary protocol with 2.4GHz wireless communication to control light and sound strip labels.

FCC Compliance Information

FCC Statement

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This equipment 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.

Caution : Any changes or modifications not expressly approved by the party responsible for compliance with the FCC rules could void the user's authority to operate the equipment under the FCC rules.

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 :

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must be operated with the designated antenna and at a separation distance of at least 20cm from the body of all persons to ensure compliance.

Industry Canada (IC) Compliance :

This device complies with Industry Canada license-exempt RSS

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

Technical Specifications

Radio Frequency Parameters

Parameter	Value
Operating Frequency	2.41 – 2.48 GHz
Modulation Type	GFSK
Channel Bandwidth	1 MHz
Maximum Output Power	17.62 dBm
Antenna Type	External rod antenna
Antenna Gain	2.08 dBi
Minimum Separation Distance	20 cm from body

Environmental Parameters

Parameter	Value
Operating Temperature	-20° C to +65° C
Storage Temperature	-20° C to +85° C
Operating Humidity	10% to 90% RH
Storage Humidity	10% to 90% RH

Network Operation Modes

TCP Network Connection Mode

- 1.**Discovery:** Responds to UDP broadcast from host computer
- 2.**Connection:** Establishes TCP connection with host
- 3.**Execution:** Executes instructions issued by host

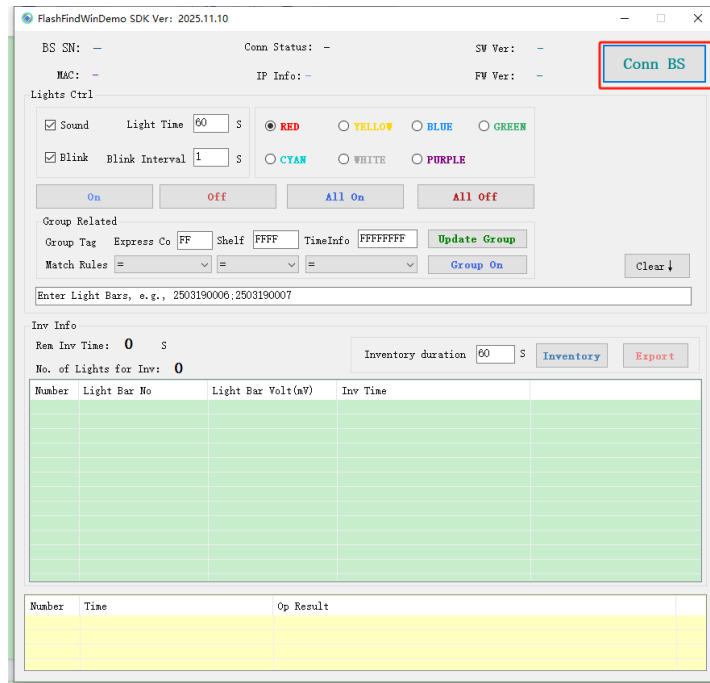
MQTT Network Connection Mode

- 1.**Information Retrieval:** Obtains HTTP address of upstream computer and MQTT broker connection information
- 2.**Connection & Subscription:** Connects to MQTT broker and subscribes to relevant topics
- 3.**Execution:** Executes instructions issued by upstream computer

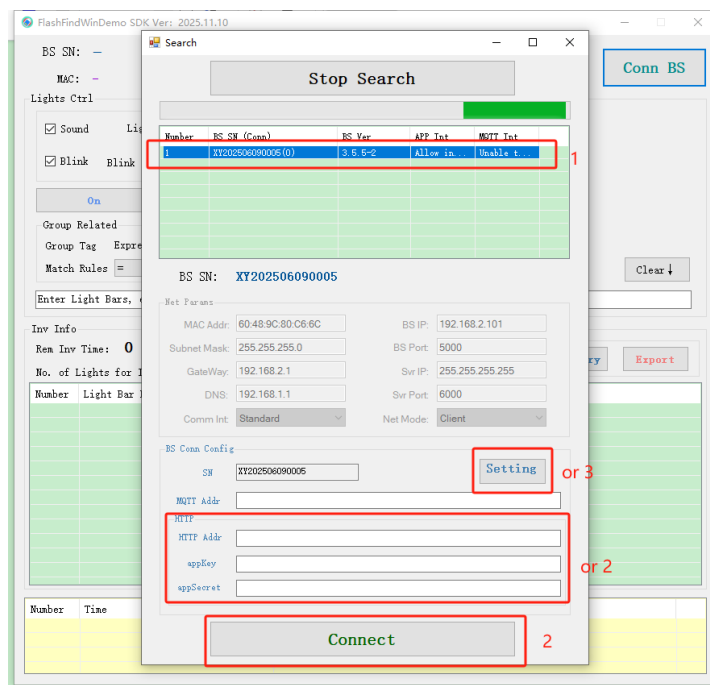
Installation and Operating Instructions

1.**installation:** Insert the DC connector of the adapter into the device. Insert the network cable into the network port of the device. Rotate the matching antenna into the antenna interface of the equipment.

2.**Operating Instructions:** Open our demo tool, On the main interface(Figure 1), click the "Conn BS" button to enter the device search interface.



Enter the search interface, after clicking on the "Select Device" option, you can configure the connection parameters for HTTP, MQTT, or directly select the "Connect" button to establish a TCP connection with the device.



After the equipment is connected, you can view the relevant parameters of the

equipment and operate the light strips.

[illegible]

The configuration can include whether the light strips should flash, make sounds, have specific lighting colors, be activated individually or all at once, and be stopped individually or all at once.

[illegible]

[illegible]

1. **RF Exposure:** Maintain a minimum distance of 20cm between the device antenna and human body during operation

3. **Antenna Use:** Only use the designated external rod antenna
with 2.08 dBi gain

4. **Modifications:** Unauthorized modifications to the device may void the user's authority to operate the equipment