

# EdgeSense

# Installation Manual

**Version 1.1 as of August 21<sup>st</sup>, 2024**



## Contents

<b>1.</b>	<b>Introduction</b>	<b>3</b>
<b>2.</b>	<b>Components</b>	<b>3</b>
<b>3.</b>	<b>Hardware Setup</b>	<b>6</b>
3.1.	Attach Rail Controller and End Cap.....	6
3.2.	Insert Power Unit .....	7
3.3.	Check Functionality.....	7
3.4.	Plugging in Displays.....	8
3.5.	Removing a Display .....	8
<b>4.</b>	<b>Safe Handling of Lithium Batteries</b>	<b>9</b>
<b>5.</b>	<b>Certifications</b>	<b>10</b>
5.1.	FCC .....	10

## 1. Introduction

The EdgeSense® is a plastic rail system based on a 3-wire bus for power supply and data transmission. Rail displays are using mechanical contacts to connect to the bus.

The ES-C Controller contains a radio component to receive data from and transmit data to an Access Point wireless. The radio is based on Bluetooth Low Energy (Bluetooth LE) technology and is operating in the 2.4 GHz ISM band. The protocol implementation is called "RAN2.0".

## 2. Components

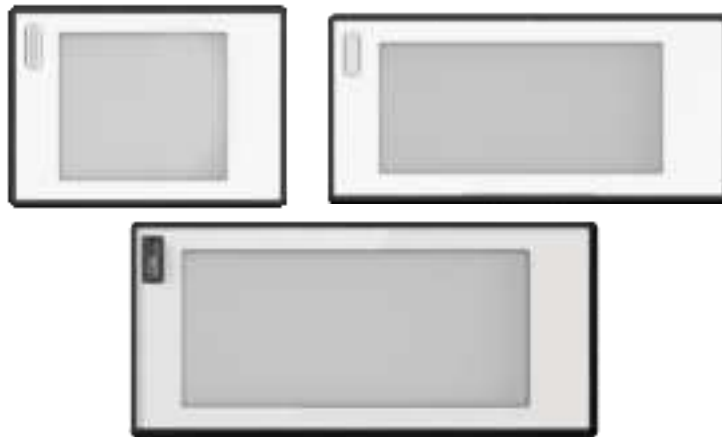
- Rail - plastic rail + 3-wire bus
- Rail Controller - "bridge" between radio and 3-wire bus of the rail
- Battery pack - non-rechargeable
- Rail Displays - E-ink displays
- Bluetooth LE Access Point - transmitter device



*Figure 1 - EndCap, Rail, Rail Controller, and Power Unit*



*Figure 2 - Assembled Rail*



*Figure 3 - 1.5", 2.1", and 2.6" Rail Displays*



*Figure 4 - Vusion Gate BLE*

### 3. Hardware Setup

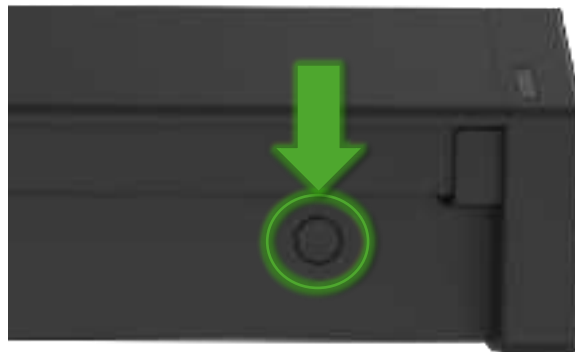
#### 3.1. Attach Rail Controller and End Cap

To attach the Rail Controller to the EdgeSense Rail, it must be fully slide in on the right side of the rail until the locking mechanism is snapped into place.



*Figure 5 - Slide in the Rail Controller into the Rail*

Proceed on with the EndCap on the opposite side of rail. To remove the Rail Controller or the Endcap, press the button with a plastic rod.



*Figure 6 - Removal of RailController or EndCap*

### 3.2. Insert Power Unit

To attach the ES-C Power EdgeSense Rail, make sure that the battery pack sits on the rail and move it towards the rail controller until it is fully slid in.



*Figure 7 - Slide in the EdgeSense Power Pack*

### 3.3. Check Functionality

When installing the Power Unit, the LED on the Rail Controller will start flashing 3 times in green (RC is powering on) or 3 times red (Battery voltage is low).



*Figure 8 - LED Status*

After the boot up, the LED will flash according to the following traffic light scheme:

- **Red** (=Dormant mode): device does not see any Access Point and is waiting for a wakeup package (WUP)
- **Yellow** (Advertising): Device has received a WUP and is advertising itself to the APs.
- **Green** (Onboarded): Device has been onboarded (will stop after 5 minutes).

Bus errors are indicated with red flashing.

Note: legacy patterns used green, yellow, blue instead of red, yellow, green.

### 3.4. Plugging in Displays

To attach a Rail Display to an EdgeSense Rail, it must be slide from the bottom into the rail until a clicking sound can be heard. Make sure that the display is sitting in the rail without any gaps and the bottom hooks are in the right position.



*Figure 9 - Insertion of Rail Display*

When the display is connected for the first time, the screen will show the initial bar code page. The LED will indicate the connection with

- 1 **green** flashing if the display is not known in Vusion Cloud
- 1 **blue** flashing if the display is known in the Vusion Cloud

### 3.5. Removing a Display

To remove a display from a rail, the button on the bottom of the display must be pressed to release the locking mechanism. Keep it pressed and slide the display to the bottom of the rail until it is fully removed.



*Figure 10 - Press the release button to unlock the display*



## 4. Safe Handling of Lithium Batteries

The EdgeSense® is powered by a lithium pouch cell battery, which can present certain risks if not handled properly.

- Lithium button batteries are flammable if not stored properly.
- Improper storage of your batteries above 130°C significantly increases the risk of your batteries igniting.
- Only use original EdgeSense Power Units for replacement.
- Do not open the EdgeSense Power unit and try to replace the included pouch cell of an on your own. Always use an original EdgeSense Power Unit and do not try to recharge it.
- If a battery is damaged, we advise you not to store it with other discharged batteries but to store them individually.

All used components had passed the test UN 37.3 and all other relevant safety standards. The EdgeSense Power Unit comes with an integrated battery overcharge / discharge protection circuit.

### WARNING

Battery may explode or catch fire if misused.

Do not disassemble, incinerate, or expose to high temperature above 212°F (100°C).

Keep away from children.

Read QR-Code-content for further use.



## 5. Certifications

### 5.1. FCC



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.

### **CAUTION TO USERS**

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