



# **AA2321 Borda Asset Tag**

## **User Manual**

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## Borda AA2321 Asset Tag

Read this guide carefully before using the AA2321 Asset tag.

### General Description



The Borda AA2321 Asset tag is compatible with the Borda RTLS solution. The Borda RTLS solution allows you to locate and track any objects in an environment equipped with Borda Locators and BLE-supported access points. The tag triggers a tamper alert mechanism when removed from the assigned asset. It is fixed on assets with double-sided tape and designed for use in indoor environments.

### Work Principles

The Borda AA2321 Asset Tag uses iBeacon, connectable advertisements, and Bluetooth 5.1 compatible packets with CTE extension to broadcast its location in real time. Borda Locators and BLE-supported access points receive and process these broadcast packets. The tag has two operational states, transport and active, to increase battery life. LocX Management Studio, Borda's device management tool, allows you to monitor the device and change the tag's state.

#### Asset Tag in Transport State

The transport state of an asset tag is a low-power mode that conserves battery life. In this state, all features are disabled

#### Asset Tag in Active State

All features are completely available in the active state of the asset tag.

## Using the Product

This section provides information on how to use the AA2321 Asset Tag with Borda User Panel software application.

### Borda User Panel

Borda User Panel is a software tool that enables users to view assets, patients, and staff, and manage RTLS on Android mobile phones or desktops.

#### 1. Tag Registration on The User Panel

The Borda AA2321 Asset tag must be registered to the Borda Lighthouse software using the Mobile Installation tool or the Lighthouse Desktop Software in order to assign the tag to any asset.

The tags to be used are registered by reading the QR code of the tags on the registration screen in the Android-based Lighthouse Mobile Application.

The tags can also be registered on the Lighthouse Desktop Application by saving the Mac information of the tags to Excel.

#### 2. Tag Registration on Middleware

The Borda AA2321 Asset tag must be registered before it can be assigned to an asset. If the tag is not registered, its tracking data will not be visible in the middleware.

#### 3. Activating the Asset Tag

The state of the tag must be changed to active mode on the Locx Management Studio before assigning it to any asset. If the state of the tag is not changed to active mode before tag assignment, the tag's tracking data may not be monitored instantly because the package interval of the tag will be different.

#### 4. Tag Assignment

The Borda Lighthouse Mobile software application can be used to assign any asset using an Android mobile phone before activating the tag. The application allows users to click the "QR code" button and select the asset they would like to assign.

#### 5. Installation

The Borda AA2321 Asset tag is designed to be portable and can be easily attached to a wide range of assets using the double-sided adhesive tape provided. This makes it ideal for tracking assets that are frequently moved or transported, such as medical equipment in hospitals or production machinery in factories. Additionally, the asset tag can be used in other industries, such as hotels or warehouses, to help manage inventory and track the location of essential items.

**Recommended Installation Environment:** The material surface should be Aluminum, galvanized steel, enamel steel, stainless steel, ceramic, glass/epoxy resin, acrylic, PBT, ABS, PC, hard PVC, etc. It is not recommended to paste the default double-sided tape on walls (cement, etc.) with gray texture, incomplete drying, aging, and humidity, etc. Due to the risk of falling off.

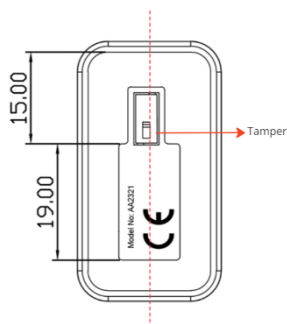
**Requirements:** No dust on the material surface, and clean it before installation. Before pasting, increase the viscosity of the double-sided paste with a hairdryer first, and then press for seconds sequentially and stick over half-hour; or leave the device over 24 hours after pasting for better stability.

## Product Information/Features

### Connectivity

- Protocol:
  - Bluetooth 5.1,
  - iBeacon Ch: 37-38-39,
  - Connectable Advertisement Ch: 37-38-39
- Frequency: 2400-2480 MHz
- TX Power (Max): 0 dBm
- Sensitivity: -96,6 dBm
- Range (Max): 30 m (indoor)

### Product Characteristics



- Dimensions: 42.5x23.5x5.3 mm
- Weight: 6.4 gr
- Material: ABS
- Protection Class: IP65
- Indicators: LED

### Electrical Specifications

- Battery Voltage: 3V
- Battery Life: At least 2 years and up to 5 years, depending on the configuration
- Battery type: CR2032, non-replaceable
- Antenna: PCB Trace Antenna

### Environmental Conditions

- Operating Temperature: -20°C - 60°C
- Humidity: 0 to 90%

## Default Configuration

Borda AA2321 Asset tag has 2 different states; these are active and transport states.

### Active State

Standby Mode		Triggered Mode	
Packet Type	Period	Packet Type	Period
BLE 5.1 CTE	300 s	BLE 5.1 CTE	0.25 s
iBeacon	300 s	iBeacon	2 s
Connectable Advertisement	600 s	Connectable Advertisement	2 s

### Transport State

Standby Mode		Triggered Mode	
Packet Type	Period	Packet Type	Period
BLE 5.1 CTE	300 s	BLE 5.1 CTE	0.5 s
Connectable Advertisement	300 s	Connectable Advertisement	0.5 s

\*\*triggered: when the tag activity rises above the threshold

\*\*standby: when the tag activity rises below the threshold

## Regularity Statement

CE/RED, FCC, REACH, RoHS, WEEE

## Care, Maintenance, and Storage

### Packaging

The packing for the beacon tag is designed to protect the device during shipping and storage. Please follow these guidelines when handling the packaging:

### Unpacking

- When unpacking the device, inspect the packaging for any damage.
- If the packaging appears damaged, wait to use the device and contact the manufacturer immediately.

### Storage

- Store the device in the original packaging or a similar protective container.
- Avoid exposing the device to extreme temperatures, humidity, or direct sunlight.
- Keep the device out of reach of children and pets.

### Disposal

- Dispose of the packaging under local regulations.
- Do not dispose of the packaging in the trash unless permitted to do so by local regulations.

## Maintenance and Cleaning

- Clean the device with a soft, dry cloth.
- Do not use harsh chemicals or abrasive materials to clean the device.
- If the device becomes damaged or malfunctions, please contact the manufacturer for assistance.

## Care and Maintenance

To ensure the safe and effective operation of the asset tag, it is essential to clean and maintain the device properly. When cleaning the device, use a soft, dry cloth to remove any dirt or debris. Avoid using harsh chemicals or abrasive materials, as they may damage the device or interfere with its performance.

If the device becomes damaged or malfunctions, do not attempt to repair it yourself. Instead, contact the manufacturer for assistance. Attempting to repair the device on your own may cause further damage or void the device's warranty. It is essential to promptly address any issues with the device promptly to ensure its continued safe and effective use.

## Breakdown

If a malfunctioning problem and/or an error has occurred, contact your nearest support personnel.

## Safety Information

### Battery Safety:

- Only use the battery specified for this device.
- Do not expose the battery to high temperatures or puncture it.
- Do not dispose of the battery in the trash. Please dispose of the battery in accordance with local regulations.

### RF Exposure:

- This device emits radiofrequency (RF) signals that may harm to human health.
- Maintain a safe distance from the device when it is transmitting.
- Do not use the device in areas where RF exposure is restricted or prohibited.

### Environmental Hazards:

- This device is not waterproof. Do not expose the device to water or use it in wet or humid conditions.
- Do not expose the device to extreme temperatures.

### Proper Use:

- Use the device only for its intended purpose.
- Follow all instructions in the user manual carefully.
- Please do not modify the device or attempt to repair it yourself.

### Restrictions:

- The use of this device may be subject to local regulations or require permits or authorization. Please comply with all applicable laws and regulations.
- Please do not use the device in areas where its use is prohibited.

## Recycling and Disposal

Electronic products, batteries, packages, and materials used at all times should be collected. These accumulated materials should not be left uncontrolled or thrown away. Materials should be given to the nearest support personnel for recycling.



### Waste Electrical and Electronic Equipment (WEEE)

The crossed-out wheeled bin symbol indicates that the product should not be treated as household waste. All expired products must be returned to Borda. To get information about how to return the products, it is necessary to send an e-mail to [support@bordatech.com](mailto:support@bordatech.com)



### Recycling

The symbol on the side shows that the container produced on the circuit is made of recyclable material. Products should not be thrown away but should be returned for recycling. To get information about how to return the products, it is necessary to send an e-mail to [support@bordatech.com](mailto:support@bordatech.com).



### CE Mark

The CE mark declares that it is in compliance with the following directives. You can send an e-mail to [support@bordatech.com](mailto:support@bordatech.com) to access the CE declaration of conformity document. Compliant directives; 2014/30/EU, 2014/35/EU, 2014/53/EU, 2011/65/EU

## Contact and Support

If you have questions about the installation and use of the device, please contact the support personnel closest to you. For the complete Borda Technology hardware product warranty statement, e-mail to [support@bordatech.com](mailto:support@bordatech.com).

## FCC Caution/FCC Warning

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the 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. 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, under part 15 of the FCC Rules. These limits are designed to protect reasonably against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used by following per under the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Suppose this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, In that case, 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 to an outlet on a circuit different from receivers.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator & your body.



Healthcare,  
operationally aware.



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