Leedarson Arrival Sensor

Quick User Guide

Draft	Ver.	Description	Time
Fu	V1.0		2016.10.10
	V1.1		2017.06.02

1 Product Introduction

1.1 Basic Information

Arrival sensor integrated Z-Wave communication module to connect with Z-Wave gateway. By real-time communication to verify if the device in the communication range of gateway, system can automatically trigger some relative scenarios and send out messages to especial person.

1.2 System Diagram
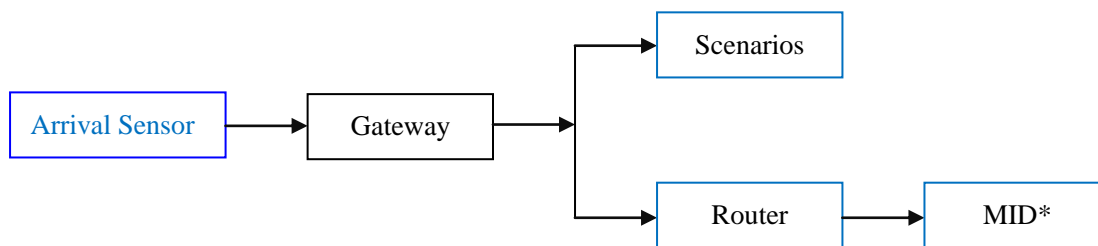
*MID: Mobile Internet Device

1.3 Functions

a）Particular design for low power consumption, battery charging cycle up to 45 days

b）　High performance RF design, visual communication distance up to 30m

c）Follow standard Z-Wave plus protocol

d）　Build-in an acceleration sensor to control device sleeping and awaking for power saving

e）Conveniently operations to connect and reset by a button inside back cover

f）LED indicator to show different status

1.4 Technical Parameter

1.4.1 Communication

Module name	6aB-SS-AG-C0
Protocol	Z-Wave
Frequency	908.42~916 MHz
Communication Distance	About 40m indoors (LOS)
Modulation Mode	FSK(BFSK/GFSK)

1.4.2 Power Supply

Operation Voltage	3.3Vdc
Current	37mA/3s

Max. Power Consumption	About 120mW
Standby Power	22uA in Average

1.4.3 Battery

Battery Type	150mAh Li-Poly
Charging Cycle	≤45 days

1.4.4 Condition

Storage environment:	-5-45℃, <90%, non-condensing
Operational temperature:	0-40℃

2 Hardware Specification

2.1 Structure

Dimensions: 43mm（H）*34mm（W）*16mm（D）
Weight: 30g
Material: PC

2.2 Functional Description

2.2.1 Total Introduction

1	Hanger
2	Charging Interface (Micro USB)
3	Reset Button
4	Charging Indicator
5	Connection Status Indicator

2.2.2 Reset Button

Reset and Connection button built-in back cover and used for connecting and removing with gateway. Operation mode as following:

Connection	Turn on researching function in APP, short press button to add in Z-Wave system.
Reset	Hold on pressing button for 5 seconds, device reset to factory

	mode.

2.2.3 LED Indicator

LED indicator embedded in internal PCBA and support red/yellow colors to display different status of devices.

Connecting	Red indicator quickly flash for 3 times, if successfully connected, red indicator hold on for 3 seconds.
Connected	Red indicator keep on for 3s.
Resetting	Red indicator slowly flash for 2 times.
Charging	Blue indicator quickly flash until full charged.
Low Power	Blue indicator slowly flash, about 2 minutes once

2.3 Product Operation

2.3.1 Product Charging

Open the soft cover inside product and plug in Micro USB interface and connect to power supply. If blue indicator quickly flash, the product turned into charging mode.

2.3.2 Connecting

Use APP or special button in gateway to turn on searching function. While gateway waiting for connection, short press Reset button to connect. Check the status of LED indicator as the sheet above.

2.3.3 Reset

Hold on pressing Reset button for 5 seconds and check the status of LED indicator as the sheet above.

2.3.4 Working Mechanism

1. Sleeping and awaking of arrival sensor is based on integrated acceleration detector. If acceleration detector had not triggered for 2.5 minutes, arrival sensor send out a package to gateway and go to sleep mode. While acceleration sensor triggered, arrival sensor wake up and communication with gateway immediately.

2. If arrival sensor send out a Heartbeat package and not get reply from gateway, system judge arrival sensor as user left to trigger relative scenarios and send out message.

3. If arrival sensor send out a Heartbeat package and get reply at once from gateway, system judge arrival sensor as user back to trigger relative scenarios and send out message.

2.3.5 Connection Logic
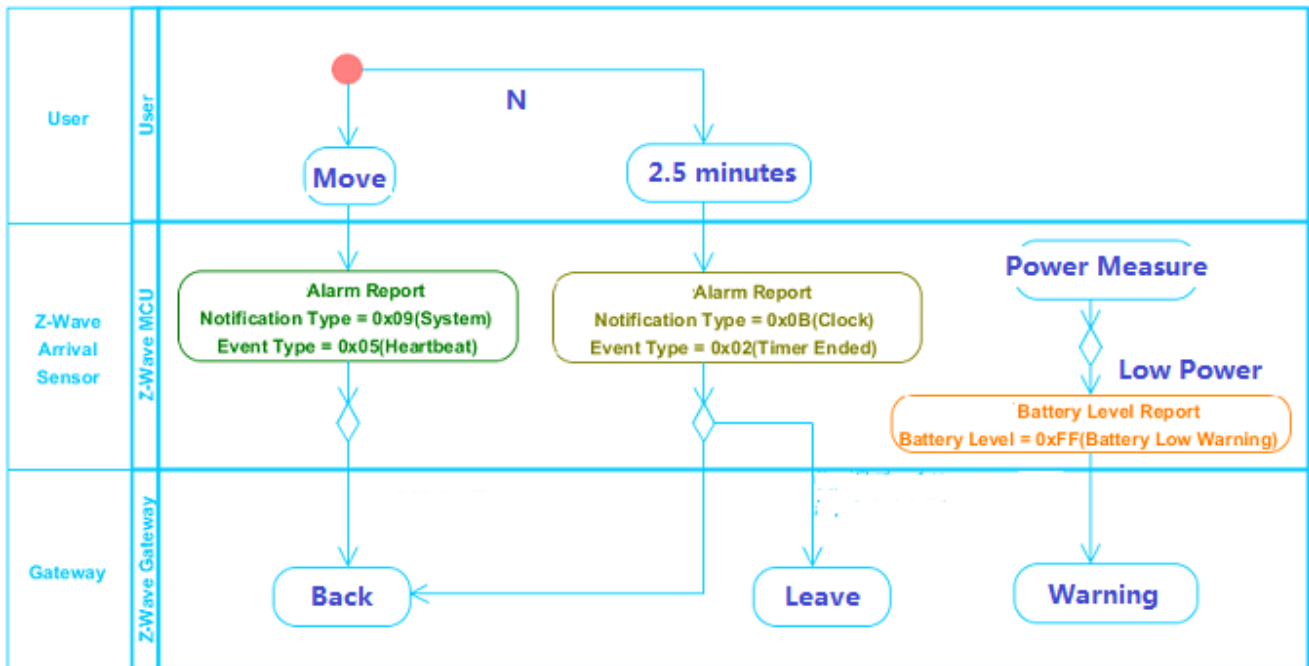
Caution:

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.

FCC Caution:

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

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."