

# **Wireless Repeater with Solar Battery (Outdoor) Manual**

**Firmware:V1.0**

**Hardware:V2.0 and above**

## Version History

Date	Description	Version
2015-11-18	Initial draft	0.1
2015-11-20	Revise model name	0.1

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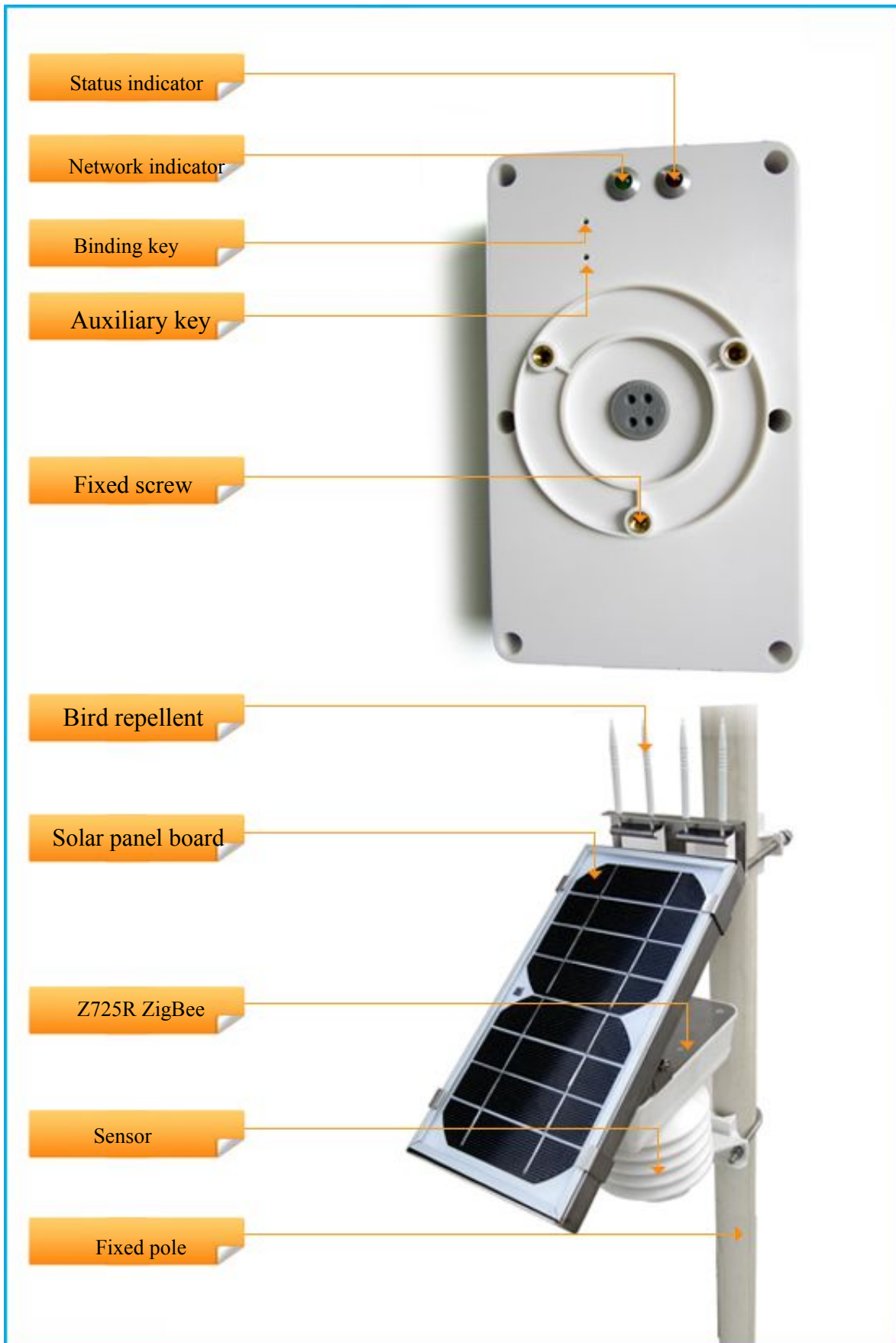
## 1. Introduction

Z725R is a dedicated range extender router.

### *What is ZigBee?*

ZigBee is a short range wireless transmission technology based on IEEE802.15.4 standard and supports multiple network topologies such as point-to-point, point-to-multipoint, and mesh networks. It is defined for a general-purpose, cost-effective, low-power-consumption, low-data-rate, and easy-to-install wireless solution for industrial control, embedded sensing, medical data collection, smoke and intruder warning, building automation and home automation, etc.

## 2. Product Appearance (Z725R and accessory)



## Specification

- Fully IEEE 802.15.4 compliant
- Utilizes 2.4GHz ISM band; up to 16 channels
- Power supply: solar panel solar battery
- Up to 600 meters wireless transmission range in non-obstacle space
- Easy installation and configuration

## 3. Installation

### 3-1. Join ZigBee Network

- (1) Open permit-join function of router or coordinator in the same channel with Z725R.
- (2) Load rechargeable batteries: power on device; network indicator flashes once. Z725R will search network and send join request.
- (3) Join completely: network indicator stays on.

### 3-2. Permit-join as a router

Press shortly binding key to permit-join (60 seconds). Network indicator flashes once per second for 60 times. Press shortly again to close permit-join function.

### 3-3. Low power alert

While battery power is lower than 2.3V (device is not able to work), device will send low power alert. Status indicator flashes once. Device will check power status once loading batteries; will check once every 10 minutes after and change into once per hour after detecting low voltage alert.

### 3-4. Recharge management

- (1) Z725R uses solar battery power (less than 5V).
- (2) While battery power is lower than 2.6V, it will start to recharge. Indicator flashes.
- (3) While battery power is over 2.8V, it will shut down recharging. Indicator will be off.
- (4) Check power once every 10 minutes.

### 3-5. Restore to Factory Setting

Before joining in a new network, device has to be restored to factory setting.

- (1) Power on Z725R
- (2) Press and hold both binding key and auxiliary key for 5 seconds; indicator flashes once.
- (3) Wait till status indicator flashes 20 times to show restore completely and start to search new network.

## 4. ZigBee HA Description

1.End Point(s): 0x01:

2.Device ID: HA Sample Sensor (0x0008)

3.Cluster ID EndPoint supports:

Server side	Client side
<b>Mandatory</b>	
Basic(0x0000)	
Identify(0x0003)	
Commission(0x0015)	
Diagnostics(0x0B05)	
<b>Optional</b>	
Power Configuration(0x0001)	<i>None</i>
Alarms(0x0009)	

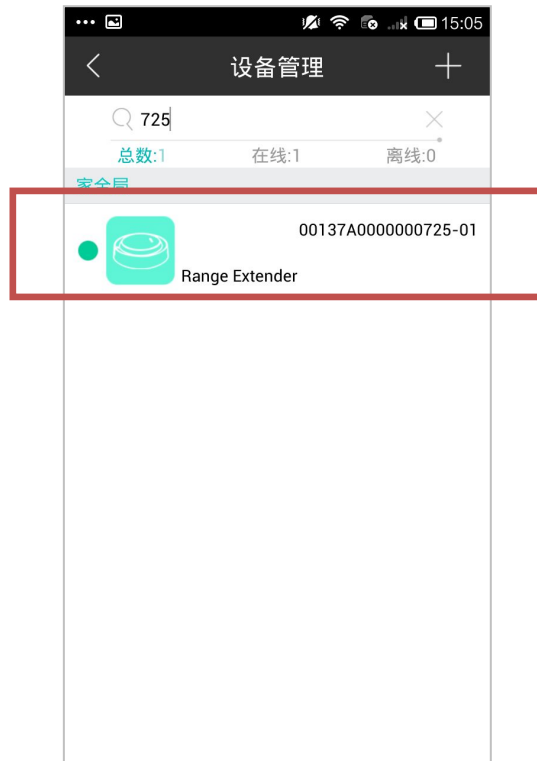
## 4. Related attributes

(1) Attributes of the Basic Device Information attribute set

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	<i>ZCLVersion</i>	8-bit Unsigned integer	0x00 –0xff	Read only	0x03	M
0x0001	<i>ApplicationVersion</i>	8-bit Unsigned integer	0x00 –0xff	Read only	0x32	O
0x0002	<i>StackVersion</i>	8-bit Unsigned integer	0x00 –0xff	Read only	0x35	O
0x0003	<i>HWVersion</i>	8-bit Unsigned integer	0x00 –0xff	Read only	0x04	O
0x0004	<i>ManufacturerName</i>	Character string	0 – 32 Bytes	Read only	netvox	O
0x0005	<i>ModelIdentifier</i>	Character string	0 – 32bytes	Read only	Z725CE3ED	O
0x0006	<i>DateCode</i>	Character string	0 – 16 bytes	Read only	20151023	O
0x0007	<i>PowerSource</i>	8-bit Enumeration	0x00 –0xff	Read only	0x01	M

## 5. Netvox App Control

1. Add device to App control system. EP information will show up in control management interface. Default EP type is Temperature Sensor as below:

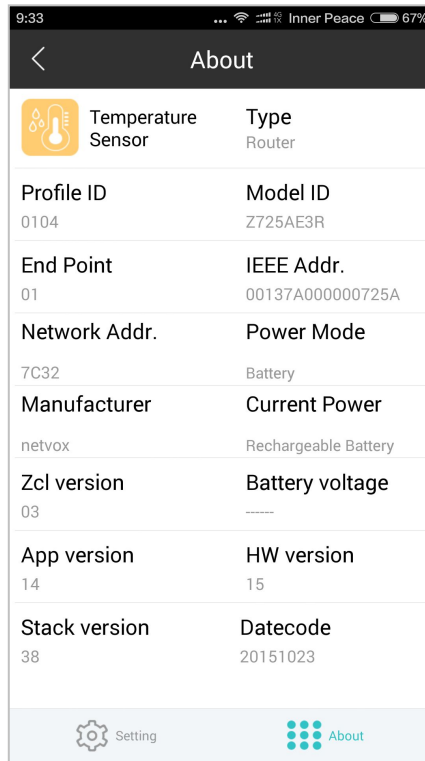


2. Users can edit the identity time, device name, group. It is suggested to set Z725R as outdoor device and click “save”.





3. Click “About device” to check device information:



## 6. Set up

1. Z725R is for outdoor usage and solar recharge. Please install it in sunny space.
2. Set the solar board toward the sun and maintain 45 degree with fixed pole.
3. Check if bird repellent and screws are fixed well.

Finalized installation:



## 7. Important Maintenance Instructions

- In cases of accidental liquid spills to a device, please leave the device dry properly before storing or using.
- Do not use or store the device in dusty or dirty areas.
- Do not use or store the device in extremely hot temperatures. High temperatures may damage the device or battery.
- Do not use or store the device in extremely cold temperatures. When the device warms to its normal temperature, moisture can form inside the device and damage the device or battery.
- Do not drop, knock, or shake the device. Rough handling would break it.
- Do not use strong chemicals or washing to clean the device.
- Do not paint the device. Paint would cause improper operation.

Handle your device, battery, and accessories with care. The suggestions above help you keep your device operational. For damaged device, please contact the authorized service center in your area.