User Manual

Combined Interface
Model: Z108A

Firmware： V4.3-4.8
Hardware： V1.1

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1. Introduction

Netvox Z108A, a ZigBee USB Dongle, acts as a coordinator or a router in ZigBee network. It is designed for a computer or a gateway to communicate with ZigBee network. Users can search devices, send commands, control devices, or perform customized scheduling using ZigBee applications.

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

3. Specification

- Fully IEEE 802.15.4 compliant

- Utilizes 2.4GHz ISM band; up to 16 channels

- Power supply: USB port

- Up to 300 meters wireless transmission range in non-obstacle space

- Easy installation and configuration

4. Installation

- Plug Z108A into the USB port of a computer or a laptop.

5. Setting up Z108A

5-1. Join the ZigBee Network

Z108A can act as:
   A. Coordinator: After Z108A is powered on, it will create a ZigBee network. After the ZigBee network is built up, the indicator will stay ON. To build a new network, please restore Z108A to factory setting.
   B. Router: Z108A will search and try to join a ZigBee network after it is powered on. The indicator will flash **once** when it finds out a network to join. After Z108A joined a network, the indicator would stay ON. Otherwise, the indicator will be OFF.

5-2. Permit-Join

Z108A is designed to work as a coordinator or a router. To allow other devices to join the ZigBee network, users could enable the Permit-Join feature using ZigBee application. While Permit-Join feature is turned on, the indicator would flash per second.

5-3. Switch Transmission Mode

Z108A performs two transmission modes: the data-transmission mode (default) and the

command-transmission mode.

To switch the modes, please use this command format:

02	Cmd=0x0FFE	Len=0x11	Data	CRC

The command to switch to data-transmission mode
"020FFE117777772E6E6574766F782E636F6D2E636ECB"
It is actually "www.netvox.com.cn"
After it switches to data-transmission mode successfully, the stream "021FFE0100E0" is returned.
In data transmission, Z108A broadcasts data wirelessly. Raw data '010203', for example, can be entered and transmitted directly. Raw data can also be received wirelessly without any need of conversion. The data received can be ported to serial connection of, for example, a PC.

The command to switch to command-transmission mode
"020FFE115757572E4E4554564F582E434F4D2E434ECB"
It is actually "WWW.NETVOX.COM.CN"

After it switches command-transmission mode successfully, the stream "021FFE0100E0" is returned.
The module strictly follows Profile Command to sent and receive control commands.

5-4. Restore to Factory Setting

Z108A carries functions of saving history data. To join a new network, Z108A needs to be be restored to factory

setting. Users can restore Z108A to factory setting through Z108Tool Z108tool.rar (Please contact our sales

team for file.) and restart the device. After restarting, the device can be joined to a new network.

6. Home Automation Clusters for Z108A

A cluster is a set of related attributes and commands which are grouped together to provide a specific function. A simple example of a cluster would be the On/Off cluster which defines how an on/off switch behaves. This table lists the clusters which are supported by Z108A.

1.End Point(s)：0x0A

2.Device ID：Combined Interface（0x0007）

3.EndPoint Cluster ID

Server side	Client side
Mandatory	
Basic(0x0000)	
Identify(0x0003)	
Commissioning(0x0015)	
Diagnostics(0x0B05)	
Optional	

Attributes of the Basic Information

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	*ZCLVersion*	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x03	M
0x0001	*ApplicationVersion*	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x30	O
0x0002	*StackVersion*	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x35	O
0x0003	*HWVersion*	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x0B	O
0x0004	*ManufacturerName*	Character string	0 – 32 bytes	Read only	netvox	O
0x0005	*ModelIdentifier*	Character string	0 – 32 bytes	Read only	Z108AE3C/ Z108AE3R	O
0x0006	*DateCode*	Character string	0 – 16 bytes	Read only	20151126	O

0x0007	*PowerSource*	8-bit Enumeration	0x00 – 0xff	Read only	0x04	M
0x0010	*LocationDescription*	Character string	0 – 16 bytes	Read/write		O
0x0011	*PhysicalEnvironment*	8-bit Enumeration	0x00 – 0xff	Read/write	0x00	O
0x0012	*DeviceEnabled*	Boolean	0x00 – 0x01	Read/write	0x01	M

（2）Attributes of the Identify Information

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	*IdentifyTime*	Unsigned 16-bit integer	0x0000 – 0xffff	Read / write	0x0000	M

7. Important Maintenance Instructions

- Please keep the device in a dry place. Precipitation, humidity, and all types of liquids or moisture can contain minerals that corrode electronic circuits. 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.