



V-Mark Zigbee HA1.2 Temp tag User Guide

1、Introduction

This temp tag is a new device based on ZigBee technologies that measure the temperature of the ambient. The part number of this device is VTS03W02. The temp tag is compliant with the ZHA Profile 1.2, and can be used in any ZigBee HA or ZigBee 3.0 protocol network. It can report ambient temperature readings periodically

2、Function Feature

- Compliant with the ZHA Profile
- Measurements: -40°F to $176^{\circ}\text{F} \pm 0.9^{\circ}\text{F}$
- Network range: Approx. 15m to 20m (50ft. to 70ft.)

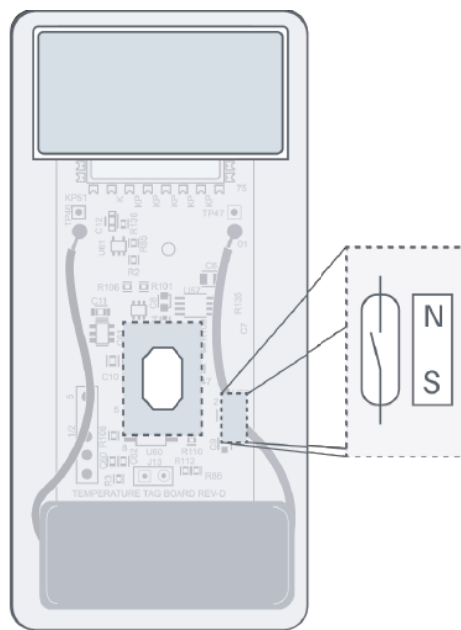
3、LED Indicator

Table LED indicator state

Action	LED Flashing Count
Sleep	Frequency: 2Hz, Flash count: 4
Factory new reset	LED keeps on 5 seconds
Joining network	Frequency: 2Hz, Max Flashing Count: 30 (about 30 seconds). The device keeps flashing until it joins in the network, otherwise, it is going to sleep.
Joined Network	Frequency: 4Hz, Flash count: 10
Identified	LED keeps on identify Time
Report Temperature	Flash count: 1(about 50ms)

4、User Guide

The image below illustrates the temp tag and the location of the LED indicator that is depicted with a white octagon on the center of the device. It also marks the location where the magnetic switch is marked by the smaller rectangle to the right of the LED.



Out of the box

The Temp Tag comes in a deep sleep state to extend battery life, at this point it can only be triggered by placing a magnet over its magnetic switch. This device should join a network to be able to interact with other ones via ZigBee commands.

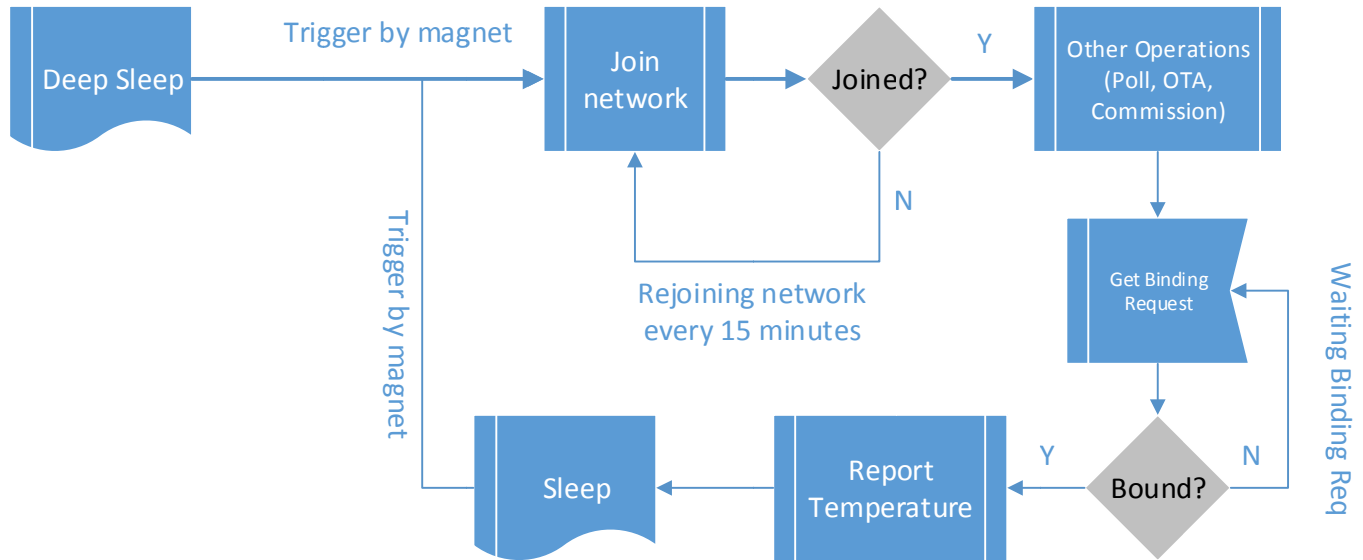
Operation

The Temp Tag comes with a built-in LED indicator and a previously mentioned switch that issued to trigger different actions with the use of a magnet. The following table shows for how long the switch has to be triggered for the device to perform each action:

Temp tag current state	Hold	LED	Action
/	>5 seconds	Keep on 5 seconds, then flash 4 times	Reset to factory new, then go to deep sleep
Deep Sleep	About 1 second	Joining network indicator. Keep flashing.	Temp tag goes into work state. Run a ZigBee network joining
Work State.	About 1 second	Joining network indicator, keep flashing	Reboot



Work Flow



5、Working Parameter

Parameter	Time(seconds)
Joining network time	30
Rejoining network interval	900
Interval of poll	60
OTA Service Discovery interval	3600
OTA Query Next Image interval	3600
Temperature report interval	Default is 60s. You can set the value by Configure Reporting Command.
Battery alarm report interval	Default is 600s. It can be set by by Configure Reporting Command.
Auth time	15

Binding table information

Attribution	Value
Maximum number of entries in the Binding table	8
Maximum number of cluster IDs for each binding table entry	4

6、Cluster and Attribute

a) End Point

All Clusters are run at the end point 0x08.



b) Basic Cluster

Basic cluster attributes

ID	Name
0x0000	ZCL Version
0x0003	HW Version
0x0004	Manufacturer Name
0x0005	Mode Identifier
0x0006	Date Code
0x0007	Power Source
0x0010	Location Description
0x0011	Physical Environment

c) Power configuration Cluster

Power configuration cluster attributes

ID	Name
0x0020	Battery Voltage
0x0035	Battery Alarm Mask

d) Identify Cluster

Identify Cluster attributes

ID	Name
0x0000	Identify Time

e) Temperature Measurement Cluster

Temperature Measurement Cluster attributes

ID	Name
0x0000	Measured Value
0x0001	MinMeasured Value
0x0002	MaxMeasured Value

f) OTA Cluster

OTA Cluster Commands

ID	Name	Support or not
0x00	Image Notify	Y
0x01	Query Next Image Request	Y
0x02	Query Next Image Response	Y
0x03	Image Block Request	Y
0x05	Image Block Response	Y
0x06	Upgrade End Request	Y
0x07	Upgrade End Response	Y



g) Commissioning cluster

Commissioning Commands

Id	Name	Support or not
0x00	Restart Device	Y
0x01	Save Startup Parameters	Y
0x02	Restore Startup Parameters	Y
0x03	Reset Startup Parameters	Y
0x00	Restart Device Response	Y
0x01	Save Startup Parameters Response	Y
0x02	Restore Startup Parameters Response	Y
0x03	Reset Startup Parameters Response	Y

Commissioning Attributes

ID	Name
0x0001	ExtendedPANId
0x0003	Channelmask
0x0006	StartupControl
0x0012	NetworkKey

Note : The temp tag can save one set startup parameters, The save SAS command / restore SAS command with index 1;

FCC Requirement :

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.

Note: 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



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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.