



# ZETA<sup>®</sup> Low-Power Wide Area Networks

**ZETA Mote**

**Copyright Statement**

**ZiFiSense owns the copyright on this specification. No part of this specification may be reproduced in any form or means, without the prior written consent of ZiFiSense.**

**Disclaimer**

**This specification is preliminary and is subject to change at any time without prior notice. ZiFiSense assumes no responsibility for any errors contained herein. ZiFiSense is not responsible for any patent infringement of third party on its use or as a result of its uses. Other products/services not certified by the patent license, shall be deemed within patent ownership of ZiFiSense.**

Table of Contents

1. Product Description.....	4
2. Applications.....	4
3. Features.....	4
4. Appearance and size.....	5
5. Product parameters.....	7
6. Packing List.....	7
7. Installation.....	8
7.1. Wall mounting.....	8
7.2. Hoop installation.....	9
8. Battery replacement.....	10
9. Operating Instructions.....	11
9.1. Platform login.....	11
9.2. Device configuration.....	11
9.3. Check Status.....	12
10. Common faults and handling.....	13
11. Safety instructions.....	13
12. Revision.....	14

## **1. Product Description**

ZETA Mote is a low power mesh layer relay which can build up to four layers of tree type networking, effectively increasing single-station coverage, with signal blind area coverage, preventing data congestion, etc. Two-way communication, ultra-wide coverage, multiple security, ultra-low power consumption, battery-powered, easy installation and support for null port upgrade. The product complies with IEC 60079 intrinsically safe explosion-proof standard, the explosion-proof mark is Ex ia IIC T4 Ga, and the operating environment temperature is -20°C~+60°C. Suitable for industrial and chemical scenarios.

## **2. Applications**

ZETA network device, connect other ZETA modules to the ZETA AP, increasing single AP coverage area.

## **3. Features**

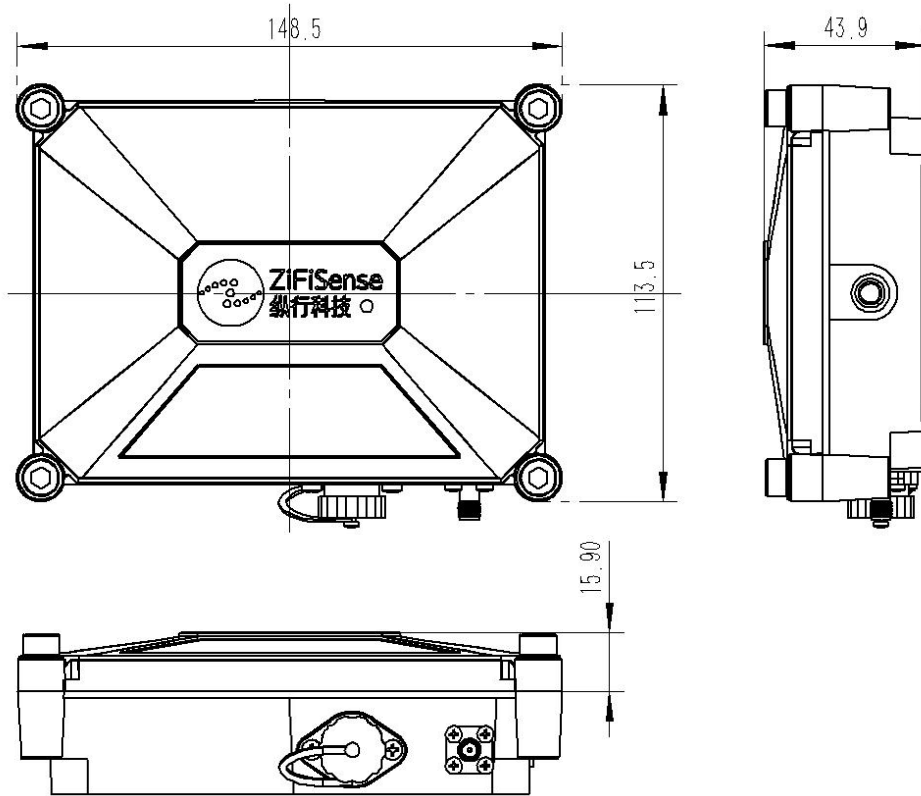
- ✓ Two-way communication, super wide coverage
- ✓ Extreme capacity, multiple safety
- ✓ Multi-hop networking, multiple protocols
- ✓ Battery powered, low power consumption
- ✓ Adjustable bandwidth and spectrum

#### 4. Appearance and size



L148.5mm \* W113.5mm \* Th43.9mm  
(Excluding mounting bracket dimensions)

# MTZT-IN01



**5. Product parameters**

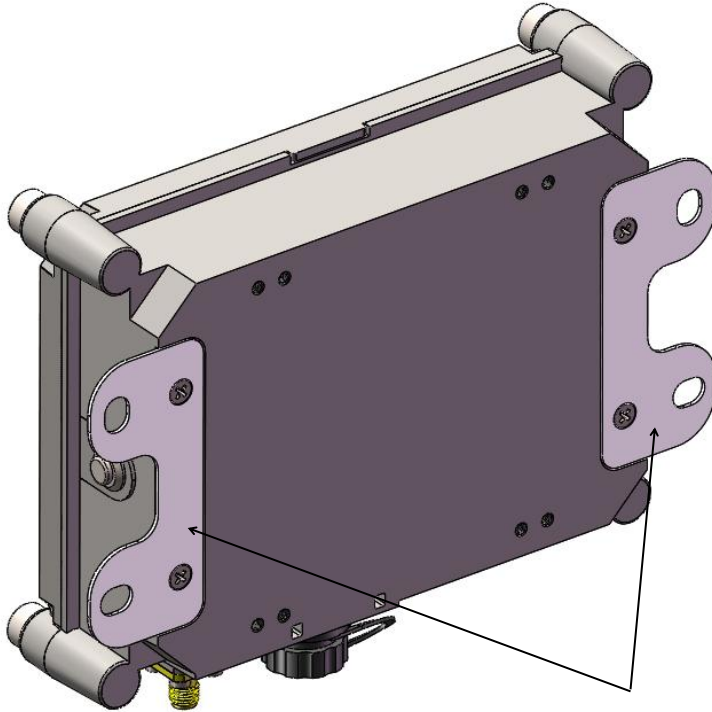
Product No.	MTZT-IN01	
Electrical Features	Power supply	DC 5V / Battery:2*ER34615
	Battery capacity	2*19000 mAh
	Stand-by current	≤ 10 μA
	Working current	≤ 70 mA
Physical Features	Weight	0.6kg
	Size	148.5*113.5*43.9mm
	Enclosure material	ADC12 Aluminum alloy
	Antenna	FRP Antenna
Environment Specification	Operating temperature	-20℃ ~+60℃
	Storage temperature	-30℃ ~+85℃
	Ingress protection	IP65
	Hazardous environment	Ex ia IIC T4 Ga

**6. Packing List**

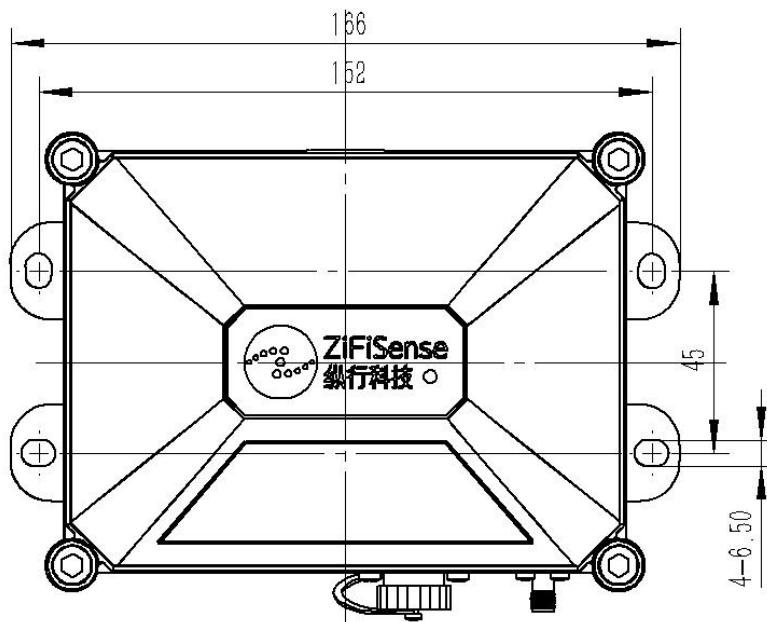
ZETA Mote	1
0.4m FRP Antenna	1

## 7. Installation

### 7.1. Wall mounting

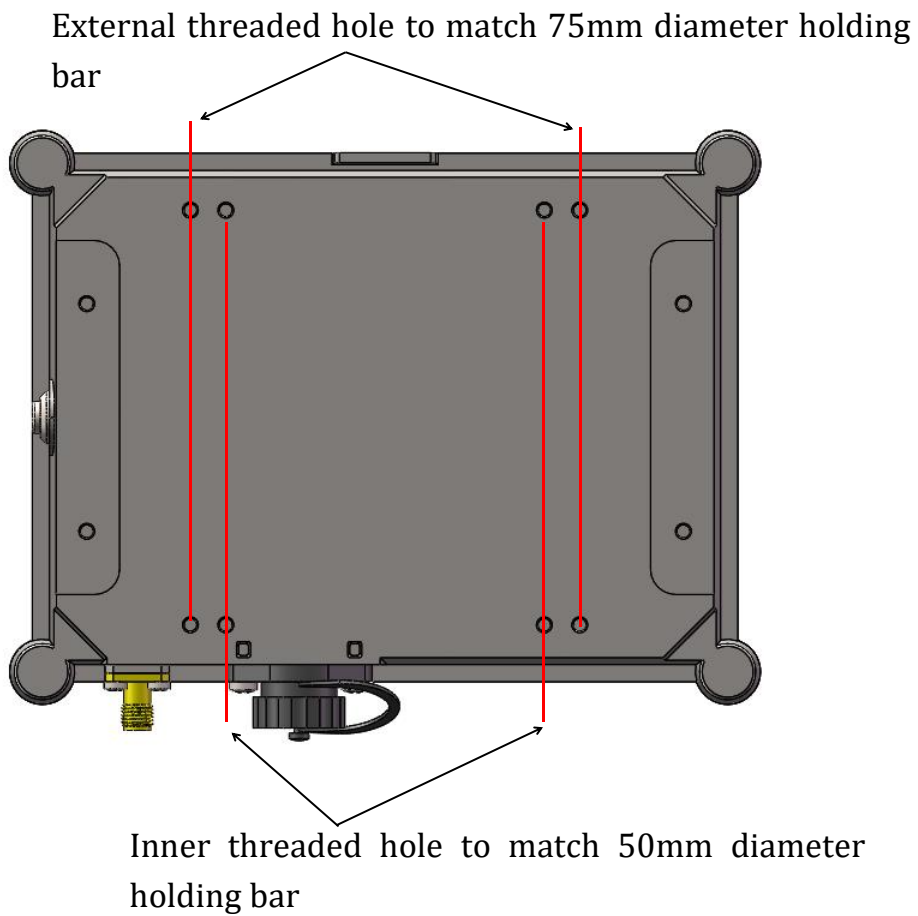
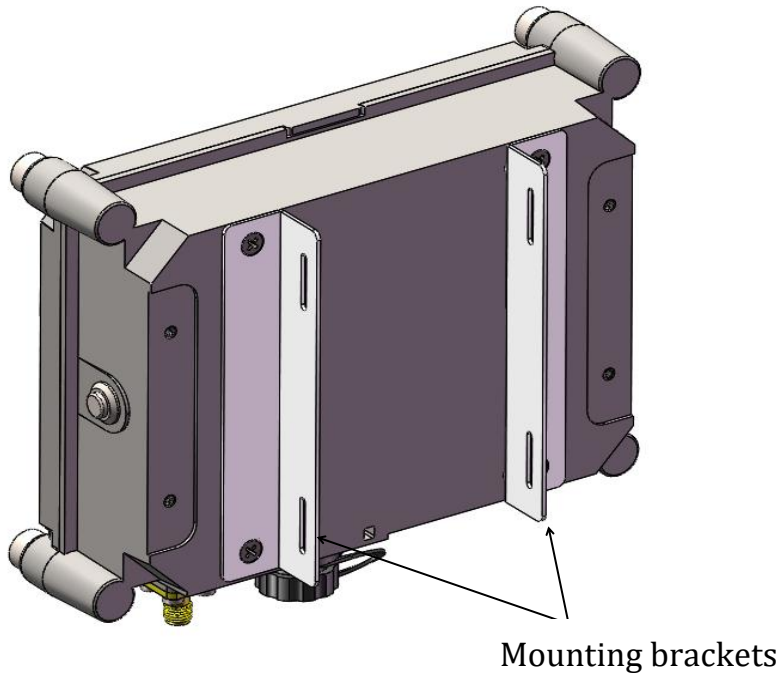


Mounting brackets



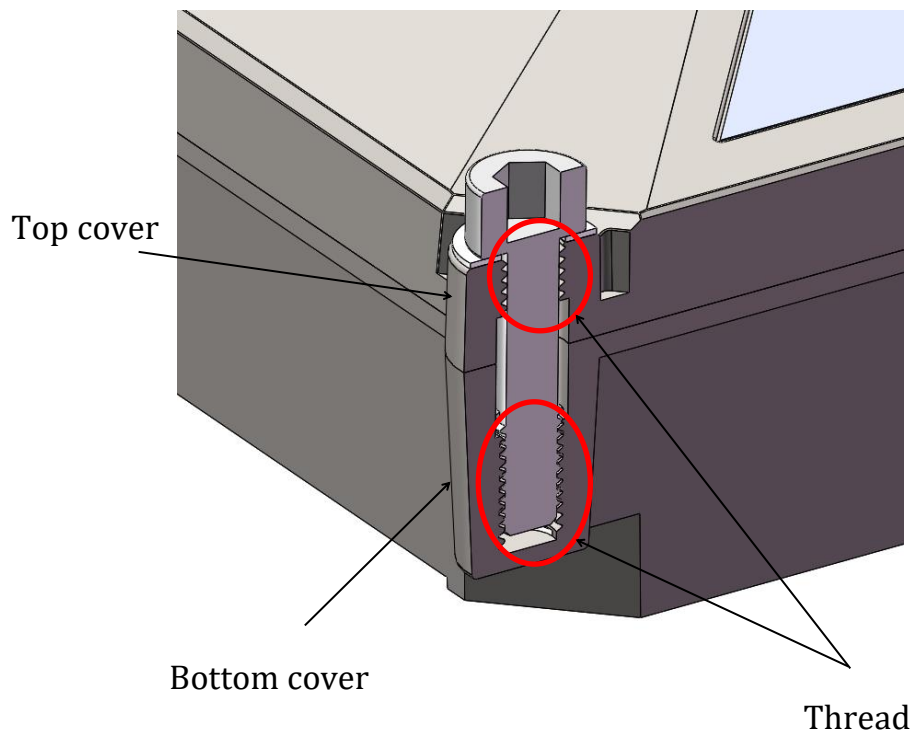
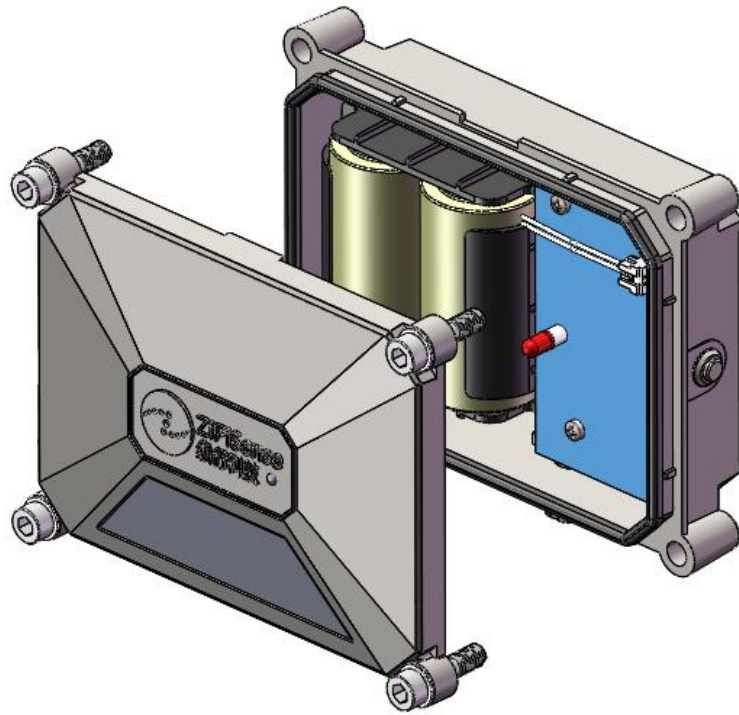


## 7.2. Hoop installation



## 8. Battery replacement

Loosen the 4 M6 socket head cap screws (Lanyard) and open the top cover.



## 9. Operating Instructions

### 9.1. Platform login

Log in to ZETA network management platform, platform address <https://platforms.zifisense.com/network/#/login>

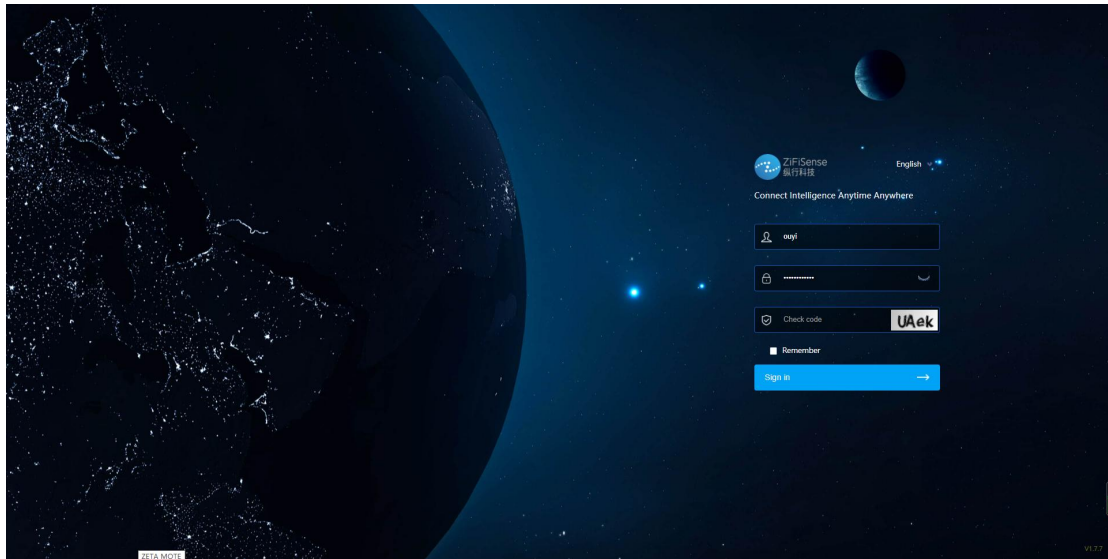
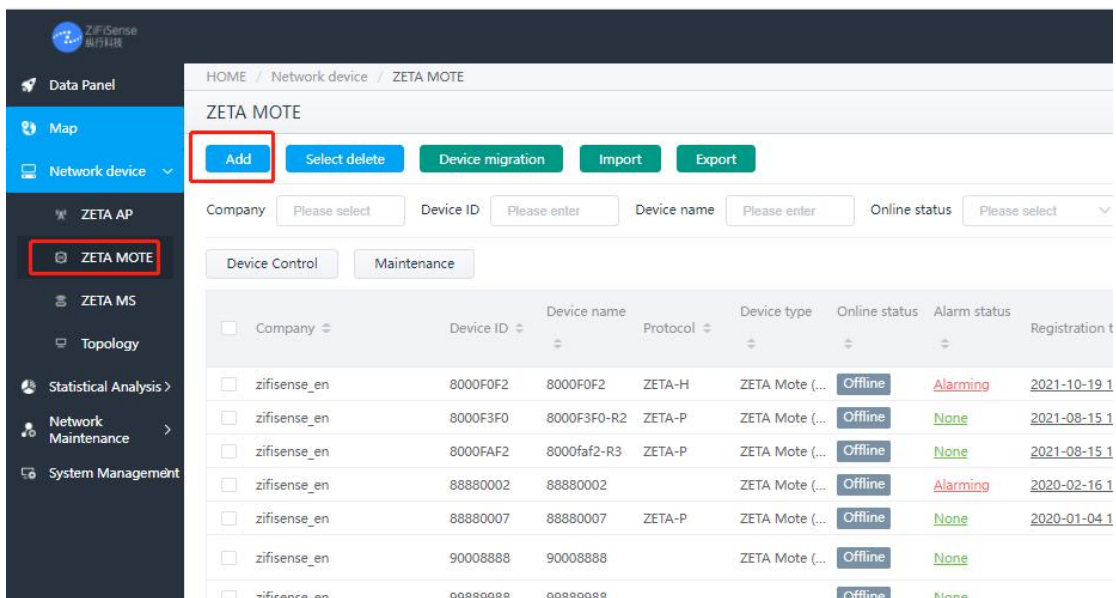


Figure: Platform login

### 9.2. Device configuration

After logging in, go to the Network Device - ZETA Mote page and click the Add button to add a new device.

And add the Mote information in the pop-up window (see the actual device nameplate information for details).



Add ✕

**\* Company**

Please select

Please fill in

**\* Device ID**

Please enter

Please fill in

**Device name**

Please enter

**Location**

select

**\* Device type**

Please select ▾

**\* Sensor version**

1

**\* Condition**

Normal ▾

**\* Alarm level**

General alarm ▾

**Authentication key**

Please enter

**Encryption key**

Please enter

Confirm

### 9.3. Check Status

After the device is added, you can view the data of the added device in the list. When the device is powered on, the online status will change from "offline" to "online", and the startup time, registration time and heartbeat time are updated.

Device ID	Device name	Protocol	Device type	Online status	Alarm status	Registration time	Heartbeat time	Uplink time	Downlink time	Power	Uplink RSSI	Downlink RSSI	AP ID	Parent MOTE	EuiID	Connected devices	Topology	Operation
FE0099A	FE0099A	ZETA-P	ZETA Mote	Online	None	2021-03-08 13:17:30			2022-05-09 17:48:26				FFFF00E3	00000000	0100	0	View	🔍 🗑️
FE0078D	FE0078D	ZETA-S	ZETA Mote	Online	None	2022-06-01 10:52:03			2022-05-30 09:30:01	3.02	-129	-118	FFFF34DC	00000000	0001	1	View	🔍 🗑️
FE0045E	FE0045E	ZETA-P	ZETA Mote	Online	None	2022-04-01 08:27:38			2021-12-13 15:55:56	3.33	-71	-73	FFFF0149	00000000	0100	5	View	🔍 🗑️
FE00736	testtcp19	ZETA-P	ZETA Mote	Online	None	2022-05-21 11:45:13			2022-05-11 20:44:38	3.11	-58	-55	FFFF3585	00000000	0C00	0	View	🔍 🗑️
FE00738	testtcp8	ZETA-P	ZETA Mote	Online	Alarm	2022-04-30 16:20:20			2022-05-11 20:54:28	3.15	-55	-55	FFFF3585	00000000	0A00	0	View	🔍 🗑️
FE007C9	InPelleWay7 CP	ZETA-P	ZETA Mote	Online	None	2022-05-23 16:19:48			2022-02-16 10:56:11	3.13	-57	-58	FFFF3585	00000000	0F00	2	View	🔍 🗑️
FE00738	testtcp6	ZETA-P	ZETA Mote	Online	None	2022-04-30 16:26:28			2022-05-01 10:38:46	3.15	-61	-61	FFFF3585	00000000	0700	0	View	🔍 🗑️
FE0073F	DuPelleWay TCP	ZETA-P	ZETA Mote	Online	None	2022-05-23 16:32:43			2022-02-16 10:55:26	3.05	-76	-82	FFFF3585	00000000	0E00	0	View	🔍 🗑️
FE00741	testtcp17	ZETA-P	ZETA Mote	Online	None	2022-05-23 11:22:06			2022-05-11 20:42:18	3.02	-41	-36	FFFF3585	00000000	0800	0	View	🔍 🗑️
FE00748	WuqCasTCP	ZETA-P	ZETA Mote	Online	None	2022-05-14 11:33:50			2022-02-16 10:55:41	3.14	-69	-65	FFFF3585	00000000	0500	0	View	🔍 🗑️
FE00749	testtcp18	ZETA-P	ZETA Mote	Online	None	2022-05-23 16:38:53			2022-05-11 20:42:39	3.09	-64	-66	FFFF3585	00000000	1000	0	View	🔍 🗑️
FE0074F	FE0074F	ZETA-S	ZETA Mote	Online	None	2022-05-25 15:34:25			2022-02-28 11:03:33	3.22	-104	-102	FFFF0481	00000000	0301	2	View	🔍 🗑️
FE0074C	testtcp6	ZETA-P	ZETA Mote	Online	None	2022-04-27 11:36:14			2022-05-01 09:39:02	3.54	-99	-104	FFFF3C46	00000000	0200	1	View	🔍 🗑️
FE0074B3	ZETA-P	ZETA Mote	Online	None	None	2022-04-11 16:36:35			2022-05-01 10:21:26	3.02	-112	-114	FFFF3C46	00000000	0900	1	View	🔍 🗑️
FE0074B8	ZETA-P	ZETA Mote	Online	None	None	2021-12-20 18:38:22			2022-05-01 06:52:04	3.23	-116	-117	FFFF3C46	FE0074B8	0120	1	View	🔍 🗑️
FE0074BD	ZETA-P	ZETA Mote	Online	None	None	2021-11-19 07:09:49			2021-03-24 18:02:39	3.43	-108	-107	FFFF3C46	00000000	0100	1	View	🔍 🗑️
FE0074B9	TestMote	ZETA-P	ZETA Mote	Online	Alarm	2022-06-01 10:45:05			2021-12-18 15:53:24	3.42	-95	-99	FFFF3585	00000000	0600	2	View	🔍 🗑️
FE007AAA	HQ1-M02	ZETA-P	ZETA Mote	Online	Alarm	2022-06-01 00:31:26			2021-12-25 15:52:41	3.29	-103	-104	FFFF3585	00000000	0600	4	View	🔍 🗑️
FE007A8B	HQ1-M04	ZETA-P	ZETA Mote	Online	Alarm	2022-06-01 07:19:39			2021-11-24 15:11:39	3.46	-94	-93	FFFF00AA	FE007ACA	0230	0	View	🔍 🗑️
FE007AC6	HQ1-M01	ZETA-P	ZETA Mote	Online	Alarm	2022-05-31 21:20:00			2021-11-24 14:40:33	3.48	-121	-123	FFFF3C41	00000000	0100	0	View	🔍 🗑️

## **10. Common faults and handling**

- Ensure ZETA signal coverage
- Check the power supply to ensure that the power supply is normal
- Check the antenna to see if the antenna is connected and the antenna interface is properly tightened.
- Check the device power, check whether the device is in low power state in the platform list data, or use the tool to measure whether the voltage is low or low.
- Please contact ZifiSense for additional help.

## **11. Safety instructions**

1. Avoid an ignition hazard due to impact or friction.
2. Potential electrostatic charging hazard: clean the antenna only with a damp cloth.
3. Only ER34615 lithium thionyl chloride battery produced by EVE Energy Co., Ltd. is allowed to be used as the power supply. Do not charge the battery. Do not replace battery when an explosive atmosphere is present.

## **12. Revision**

<b>Version</b>	<b>File name</b>	<b>Revised by</b>	<b>Date</b>	<b>Description</b>
V1.0.0	ZETA Mote User Manual	OUYI	2021.12.20	First edition
V1.0.1	ZETA Mote User Manual	OUYI	2022.6.1	Add Operation instruction part

**FCC Statement:**

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.

---

Shanghai, China

Room B, 20th Floor, No. 1098  
Dongdaming Road (Pujiang  
International Financial Plaza),  
Hongkou District, Shanghai  
+86 (0) 21-61320820

Xiamen, China

Room 803, Building A-05,  
Software Park Phase III, Jimei  
Distric, Xiamen, P.R. China  
+86 (0) 592 6070310

Cambridge, UK

3 Charles Babbage Road,  
Cambridge, CB3 0GT  
United Kingdom  
+44(0) 1223 491 099