UT33 User Manual

version number： V1.0

product name: UT33 Tag

Mine Site Technologies Pty Ltd

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Statement

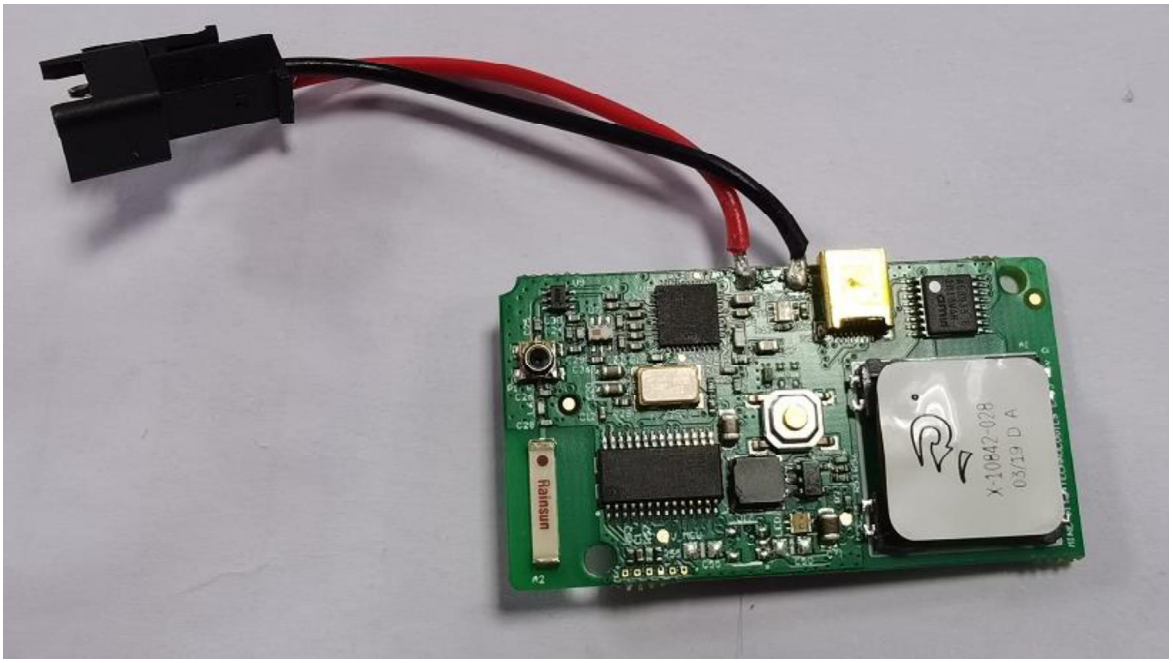
Thank you for using this electronic product of our company. In order to let you experience the product swimmingly, detailed instruction is provided which you can find the product's introduction, usage and other information. Before using this product, please read the manual carefully, so that you can correctly use it. In case of any printing or translation error, we apologize for the inconvenience. As for the content change, we are sorry for no further notice.

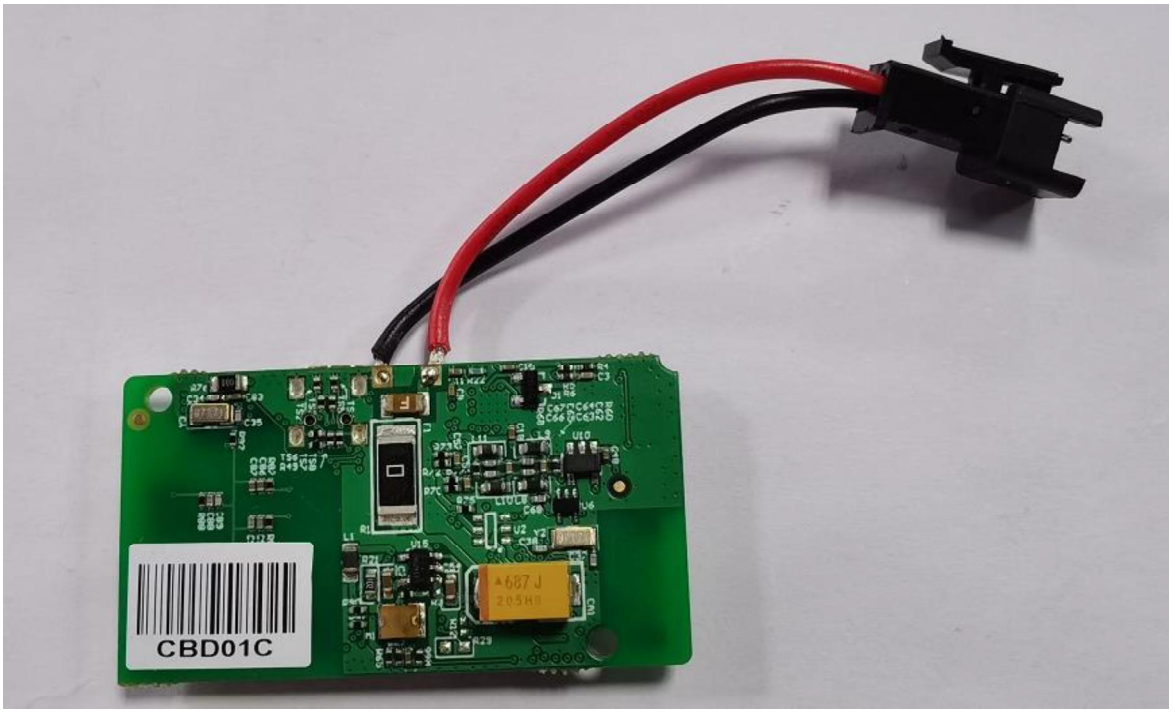
General Information

The Mine Site Technologies model UT33 tag is a radio frequency indentification module operating at 2.4GHz. The AL2236 IC of Airoha Technologu Corp and MSP430 microcontroller unit are working together, realizing the carrier arising,signal amplify,data modulation,demodulation and decoding. Radio-frequency mode in the reader and UT33 tag no contact between the bidirectional data transmission, in order to achieve target recognition and data exchange. And the tradition of code, magnetic and IC card, compared with non-contact, RF card reading speed, wear, not by environmental impact, long life, easy to use and has the characteristics of anti-collision function. Model UT33 tags are mainly used for container port, personnel to wear or other mining equipment, such as cap lamps, personnel tags, vehicle tags and equipment tags, etc.

Physical map

Model UT33 Tag physical map as follows.





Component function

- LED light：After press button and low voltage alarm.
- Button：Alarm.

Performance index

Mechanical Structure Index		
Item	Name	Specific parameters
1	Size	46mm×25mm×15mm
2	Weight	＜10g
Electrical Performance Index		
Item	Name	Specific parameters
1	Power supply	Battery
2	Rated voltage	DC 3.0V ~ 4.2V
3	Working frequency	Transmitter frequency:2.4GHz; Receive frequency:125KHz
4	Communication protocol	IEEE 802.11b
5	Transmitter frequency	Adjust
6	Low voltage alarm	≤3.05V
Environment Index		
Item	Name	Specific parameters
1	Operating temperature.	-25℃ ~ +60℃
2	Anti-static grade	Air discharge： 8000V

Accessories

1. Tag.
2. A set of Use's Manual & warranty card.

General attention

1.Do not put tag on microwave oven or high-tension apparatus to avoid circuit damage and fire accident.

2.Do not use under flammable and explosive gas in case of malfunction or lighting a fire.

3.Do not put it on uneven or unstable surfaces to avoid falling off or breakdown.

4.Tag use disposable batteries.Can't recharge. You can replace if the battery capacity is insufficient. Use the battery appointed by the company. Other production may cause battery leakage, overheating, explosions and lighting a fire.

5.Tag is worn by belt clips and lanyard Around the waist.

2.2 List of applicable FCC rules
FCC Part 15.247, FCC Part 2.1093

2.3 Specific operational use conditions
This product is a Limited Single Modular transmitter; Use only the supplied or an approved antenna.

2.4 Limited module procedures
Mine Site Technologies Pty Ltd will retain control over the final installation of the modular such that compliance of the end product is assured. In such cases, an operating condition on the limit modular approval for the module must be only approved for use when installed in devices produced by a specific manufacturer. If any hardware modify or RF control software modify will be made by host manufacturer. C2PC or new certificate should be apply to get approval, if those change and modification made by host manufacturer not expressly approved by the party responsible for compliance ,then it is illegal.

2.6 RF exposure considerations
This module certified that complies with RF exposure requirement under 0mm to body.

2.8 Label and compliance information
FCC ID label on the final system must be labeled with "Contains FCC ID: N73-UT33" or "Contains transmitter module FCC ID: N73-UT33".

2.9 Information on test modes and additional testing requirements
Contact Mine Site Technologies Pty Ltd will provide stand-alone modular transmitter test mode. Additional testing and certification may be necessary when multiple modules are used in a host.

2.10 Additional testing, Part 15 Subpart B disclaimer
To ensure compliance with all non-transmitter functions the host manufacturer is responsible for ensuring compliance with the module(s) installed and fully operational. For example, if a host was previously authorized as an unintentional radiator under the Supplier's Declaration of Conformity procedure without a transmitter certified module and a module is added, the host manufacturer is responsible for ensuring that the after the module is installed and operational the host continues to be compliant with the Part 15B unintentional radiator requirements. Since this may depend on the details of how the module is integrated with the host, Mine Site Technologies Pty Ltd shall provide guidance to the host manufacturer for compliance with the Part 15B requirements.

FCC Warning

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 1: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement:

Note 1: This device meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health. The SAR limit of USA (FCC) is 1.6 W/kg averaged. Device types: UT33 Tag (FCC ID: N73-UT33) has also been tested against this SAR limit. SAR information on this and other pad can be viewed on - line at http://www.fcc.gov/oet/ea/fccid/. Please use the device FCC ID number for search. This device was tested simulation typical 10mm to body. To maintain compliance with FCC RF exposure requirements, use accessories should maintain a separation distance between the user's bodies mentioned above, the use of belt clips, holsters and similar accessories should not contair metallic components in its assembly. the use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

Note 2: Any modifications made to the module will void the Grant of Certification, this module is limited to OEM installation only and must not be sold to end-users, end-user has no manual instructions to remove or install the device, only software or operating procedure shall be placed in the end-user operating manual of final products.

Note 3: Additional testing and certification may be necessary when multiple modules are used.

Note 4: The module may be operated only with the antenna with which it is authorized. Any antenna that is of the same type and of equal or less directional gain as an antenna that is authorized with the intentional radiator may be marketed with, and used with, that intentional radiator.

Note 5: For all products market in US, OEM has to limit the operation channels in CH1 to CH11 for 2.4G band by supplied firmware programming tool. OEM shall not supply any tool

or info to the end-user regarding to Regulatory Domain change.

IC WARNING

This device contains licence-exempt transmitter(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This module is limited to OEM installation only and must not be sold to end-users, end-user has no manual instructions to remove or install the device, only software or operating procedure shall be placed in the end-user operating manual of final products. Additional testing and certification may be necessary when multiple modules are used.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

The final end product must be labeled in a visible area with the following " Contains IC: 7449B-UT33 ".