Datasheet

T-TAG

Version 1.0

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Revision History

Revision	Date	Change Description
1.0	Mar-2023	Preliminary version

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1. Introduction

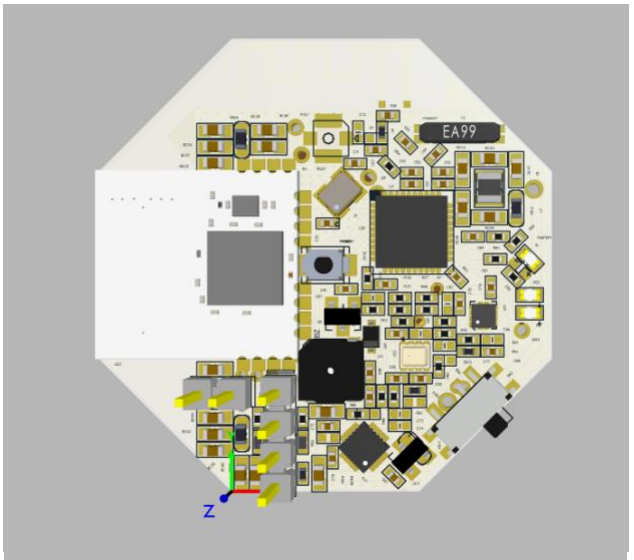
TrueSense T-Tag platform supports the finder, point to point triggering, and eventually tracking applications. The T-Tag platform can be used together with Vulkano Evaluation Kit for RTLS application.

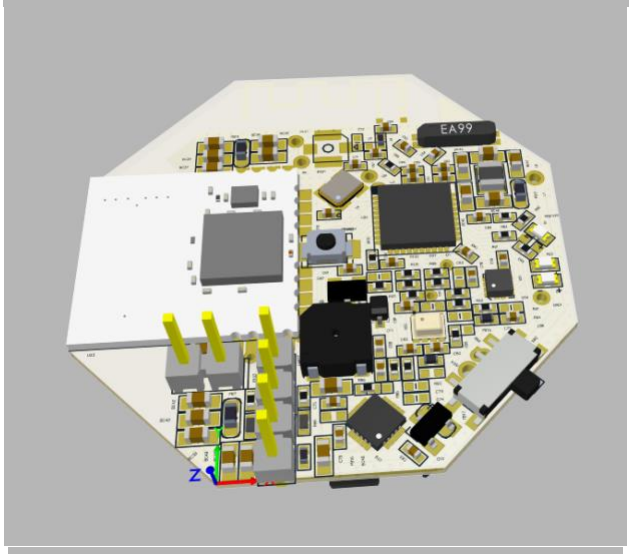
2. T-TAG Contents

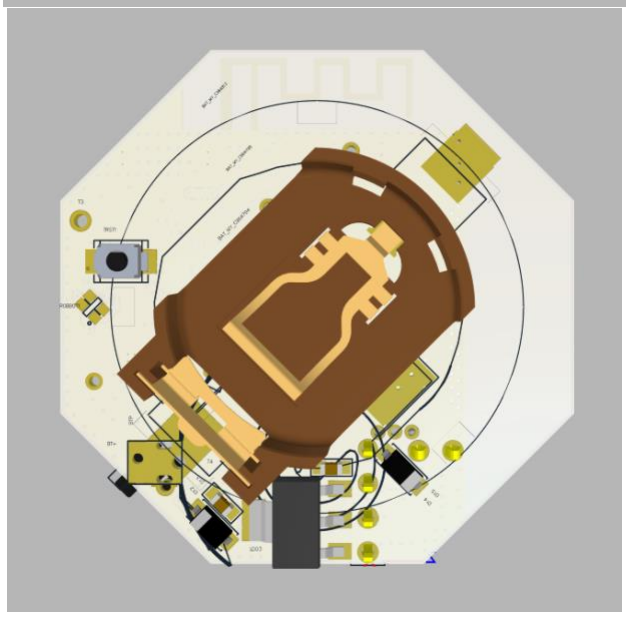
T-TAG Board comprises:

- Bluetooth LE MCU QN9090;
- The DCU040 UWB Module;
- On-board PCB antenna for Bluetooth LE;
- LEDx3, Red/Green/Blue color, for working status indication;
- CR2032 battery connector so that the TAG can work with a CR2032 button battery;
- Toggle switch for battery power on/off;
- Acceleration sensor IC, Silan SC7A20, ±2g, ±4g, ±8g, ±16g 3-axis;
- Digital pressure sensor, Goertek SPL006-01;
- Plug & Trust Secure Element, SE051;
- A Reset Button (optional) for QN9090;
- Buzzer (80dBm min);
- 4xpin header for UART and external 5V power input for TAG.

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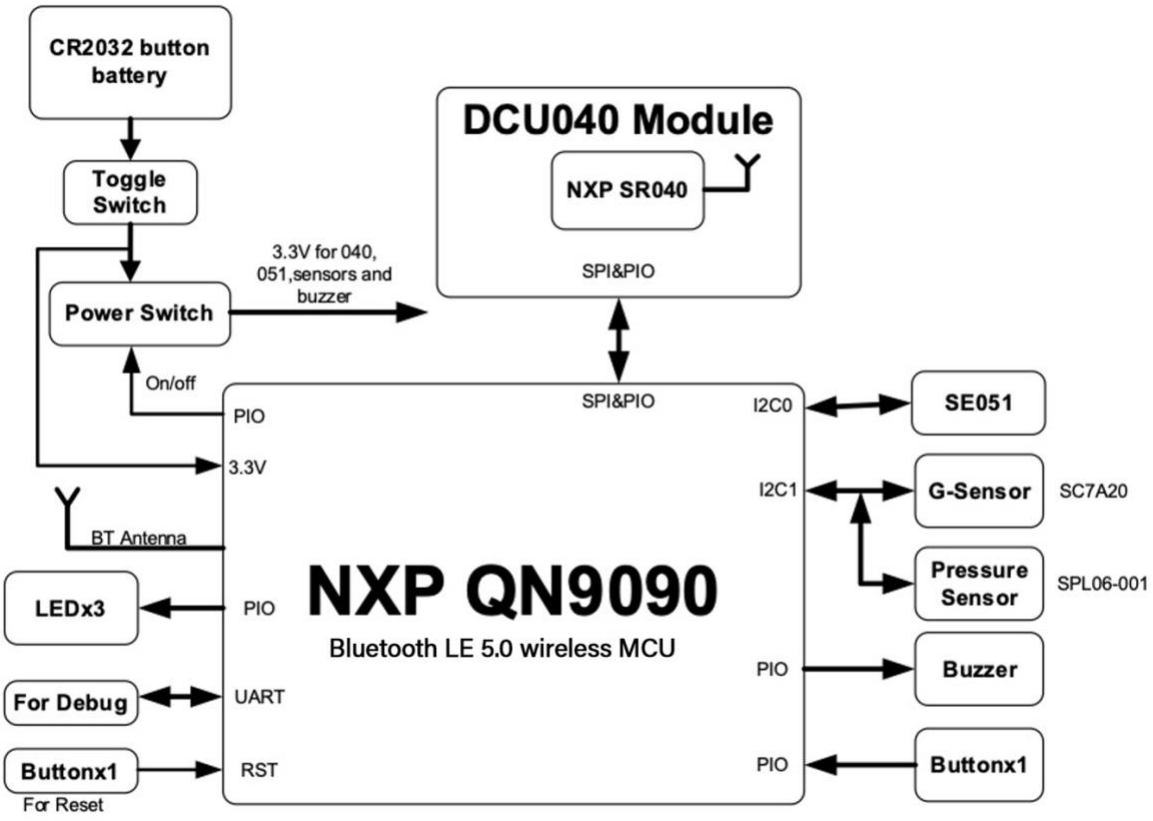






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3. Block Diagram



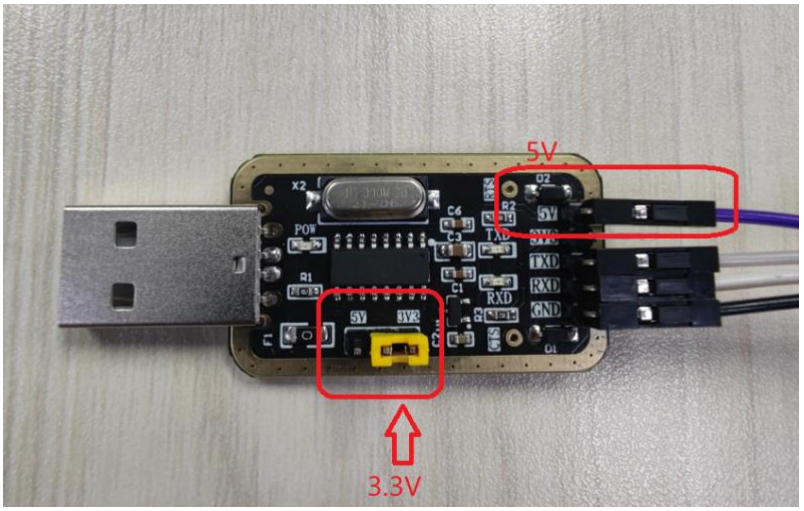
4. Power the T-TAG

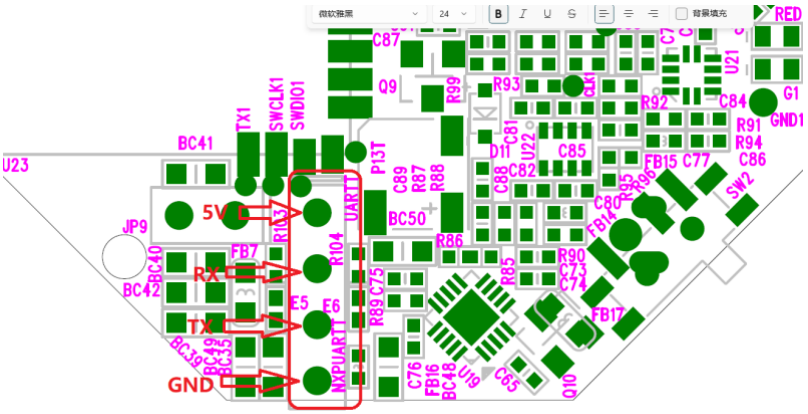
To power the T-TAG you could use either use:

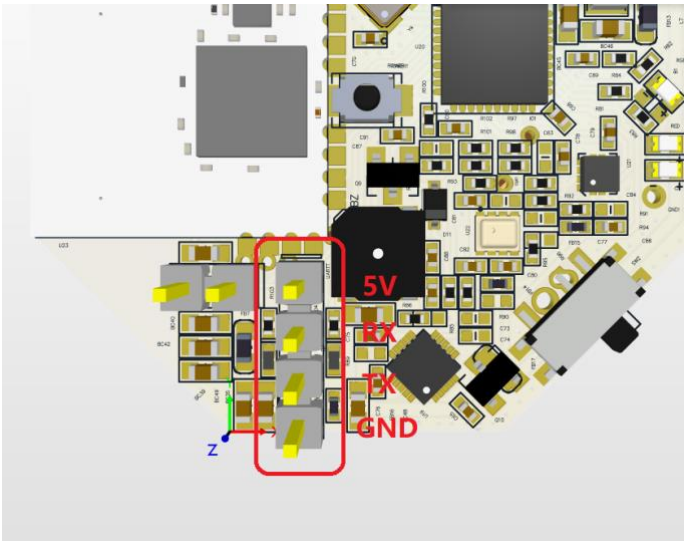
a. the CR2032 coin battery to with 3.3V power (in this case the side toggle switch must be switched to 'on');

b. the external 5V power supply from the USB to UART daughterboard. In this case be careful since the cable should plug to 5V, but the signal level of QN9090 UART TXD&RXD are 3.3V, so double-confirm the Jumper is set to 3.3V before plug the 4pin cable to T-TAG for power supply, ISP programming and also debugging etc.

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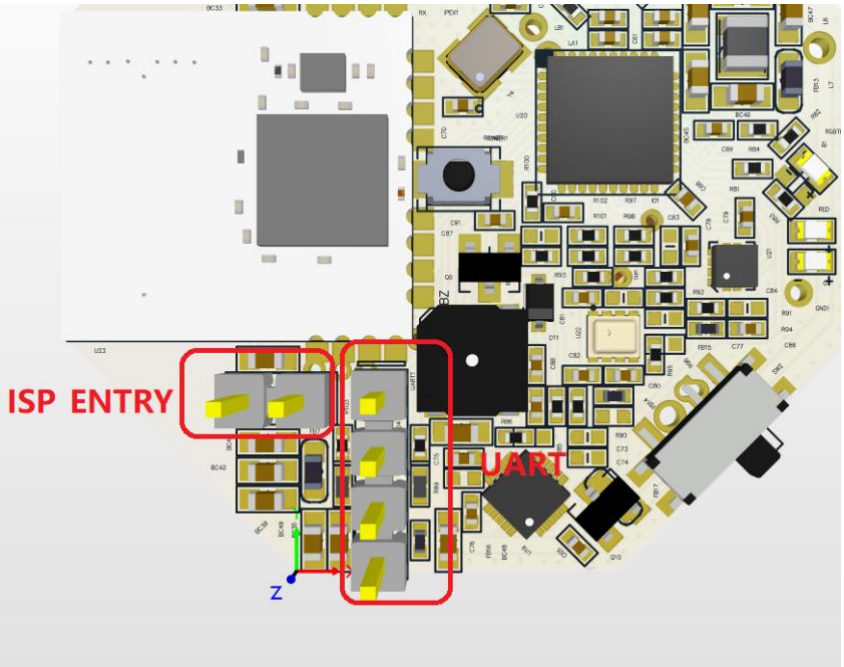




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5. Appendix

5.1. Pin headers' illustration



4pin header for UART0&TAG040 power supply

UART0 is used for programming.
This UART port signal level is 3.3V only, and the power supply is 5V.Please check also above point 4 .

2pin header for ISP_ENTRY

This 2pin header is used for In-System Programming Mode Selection.
In ISP mode, set a jumper to this position, and remove the jumper at normal working mode.

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