

T-Echo-Lite_V1.0 Power Consumption Test Log

Date: 20241030 LastEditTime: 20241210

Test board: T-Echo-Lite_V1.0 (2024-9-26) Software name: Sleep_Wake_Up.ino Testing organization: LILYGO Laboratory

1. Test Environment Description

- 1.1 测试环境
- 1.1 Test environment

Test Tools	Sampling speed	Test Methodology	Input voltage	Test environment temperature
BLU939	100000 times/s	Battery Interface Measurement	+4.0V	25°C/77°F

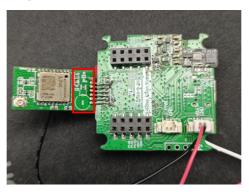
1.2 测试的器件型号

1.2 Test device model

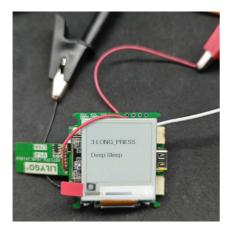
Test device	MCU	Screen	GPS	Lora	Flash	IMU	Power 3.3V
Corresponding model	nRF52840	GDEM0122T61	L76K	S68F(SX1262)	ZD25WQ32CEIGR	ICM20948	RT9080

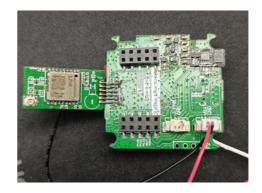
2. Modification Instructions

- 2.1 拆除GPS位置的备用电池 2.1 Remove the backup battery for the GPS location



3. Test Physical Object Image

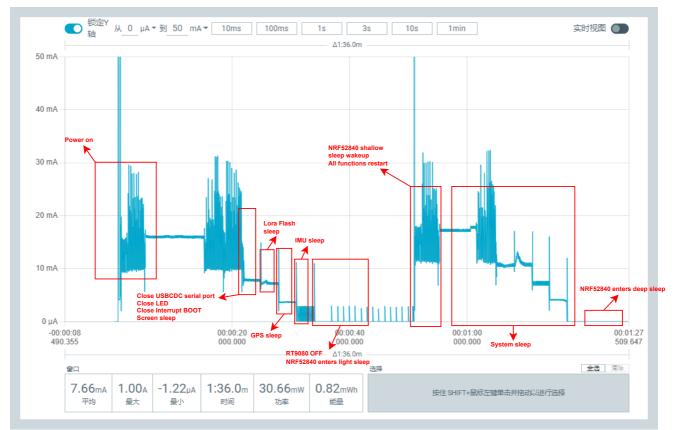






4. Power consumption testing

- 4.1 总电流变化测试图如下
- 4.1 The test chart depicting the variation of total current is as follows.



4.2 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	ON	ON	Sleep	ON	ON	ON	ON

Test result: average 16.00 mA





4.3 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	OFF	ON	Sleep	ON	ON	OFF	ON

Test result: average 7.80 mA



4.4 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	OFF	ON	Sleep	Sleep	Sleep	OFF	ON

Test result: average 7.18 mA

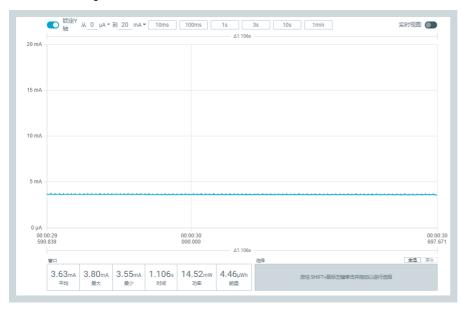




4.5 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	OFF	Sleep	Sleep	Sleep	Sleep	OFF	ON

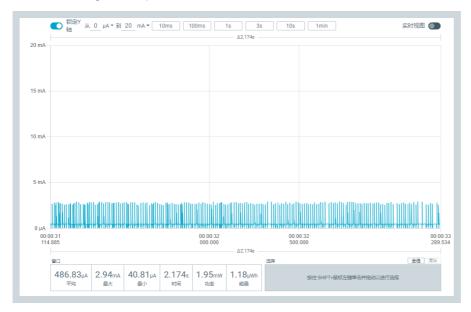
Test result: average 3.63 mA



4.6 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	OFF	Sleep	Sleep	Sleep	Sleep	OFF	Sleep

Test result: average 486.83 µA





4.7 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON Light Sleep	OFF	OFF	Sleep	OFF	OFF	OFF	OFF	OFF

Test result: average 7.02 μA



4.8 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~3	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System OFF Deep Sleep	OFF	OFF	Sleep	OFF	OFF	OFF	OFF	OFF

Test result: average 2.54 µA

