



WiFi LoRa 32 V4

Expansion Kit



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Documents

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Heltec Automation © Limited standard files



Document version

Version	Time	Description	Remark
V1.0.0	2025-10-29	Internal beta version	Ashely



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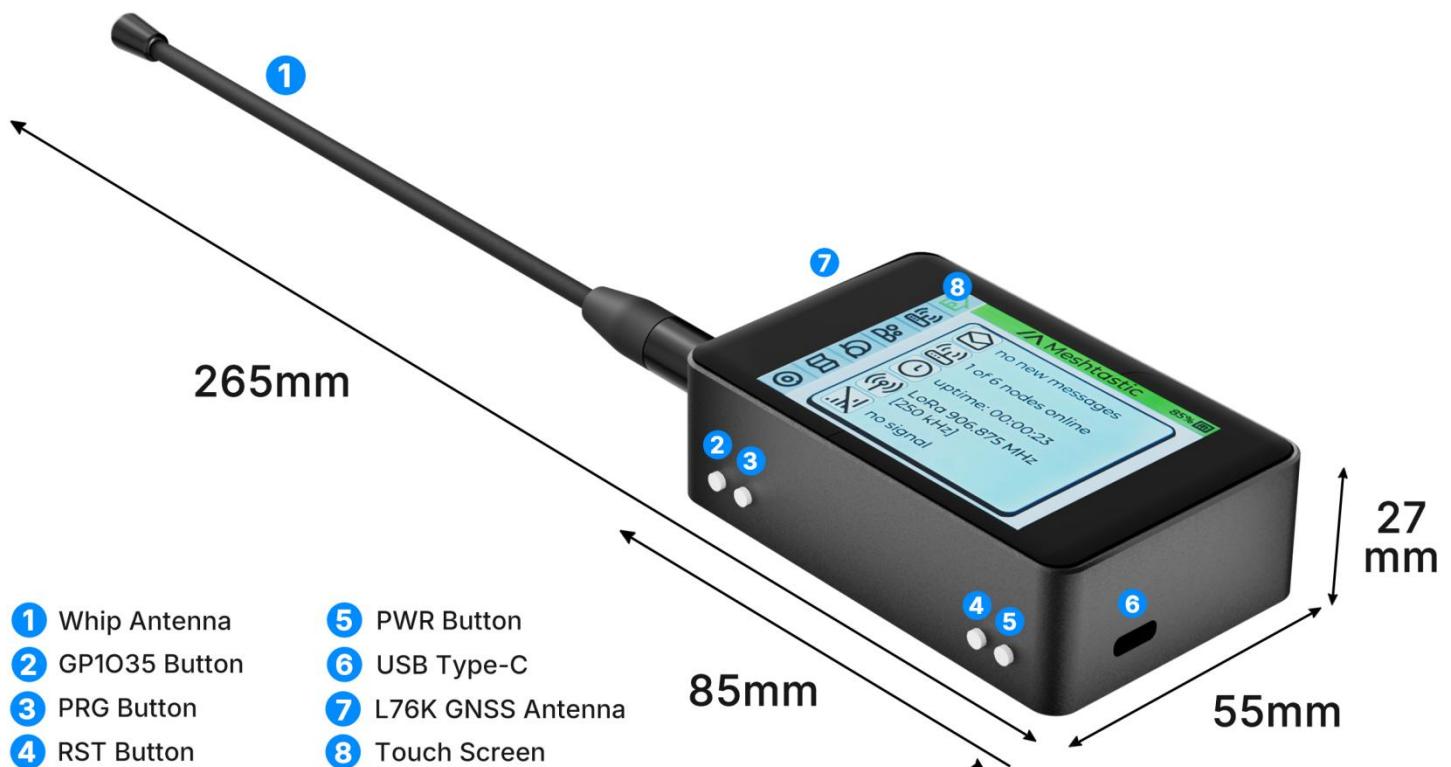
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1. Description

1.1 Introduction

The WiFi LoRa 32 Expansion Kit is a comprehensive set specifically designed for the WiFi LoRa 32 series, including protective cases, expansion carrier boards, sensor modules, and more. It is fully compatible with both V4 boards. You can view 3D models and customize product parameters on the [MQB platform](#) to assemble a kit that meets your needs.



- Physical Pin
- Power
- GND
- GPIO
- ADC/DAC
- Serial SPI I2C
- Connected
- Other
- Pull Up/Down





2.2 Pin Description

2.2.1 Header J1

Table 2.2.1: Pin description

No.	Name	Type			Function
27	CHP_PU	I/O		IO MUX	CHP_PU
25	GPIO45	I/O		IO MUX	
23	GPIO42	I/O		IO MUX	MTMS, GPS_RST
21	GPIO39	I/O		IO MUX	MTCK, GPS_TX
19	GPIO3	I/O		IO MUX	ADC1_CH2, TOUCH3
17	GPIO4	I/O		IO MUX	ADC1_CH3, TOUCH4
15	GPIO5	I/O		IO MUX	ADC1_CH4, TOUCH5
13	GPIO43	I/O		IO MUX	U0TXD
11	GPIO16	I/O		IO MUX	
9	GPIO35	I/O		IO MUX	SPIIO6, FSPID, SUBSPID, LED
7	GPIO33	I/O		IO MUX	SPIIO4, FSPIHD, SUBSPIHD
5	GPIO48	I/O		IO MUX	
3	GND	P			Ground
1	VUSB	P			5V Power Supply

2.2.2 Header J3

Table 2.2.2: Pin description

No.	Name	Type			Function
28	3V3	P			3.3V Power Supply
26	GPIO41	I/O		IO MUX	MTDI, GNSS_PPS
24	GPIO40	I/O		IO MUX	MTDO, GNSS_Wakeup
22	GPIO37	I/O		IO MUX	SPIDQS, FSPIQ, SUBSPIQ, ADC Ctrl
20	GPIO38	I/O		IO MUX	FSPIWP, SUBSPIWP, GNSS_RX
18	GPIO6	I/O		IO MUX	ADC1_CH5, TOUCH6
16	GPIO15	I/O		IO MUX	
14	GPIO21	I/O		IO MUX	OLED RST
12	GPIO34	I/O		IO MUX	SPIIO5,FSPICS0,SUBSPICS0,VGNSS_Ctrl
10	GPIO44	I/O		IO MUX	U0RXD
8	GPIO36	I/O		IO MUX	SPIIO7,FSPICLK,SUBSPICLK,Vext_Ctrl
6	GPIO47	I/O		IO MUX	
4	GND	P			Ground
2	Ve	P			3.3V Power Supply



3.Specifications

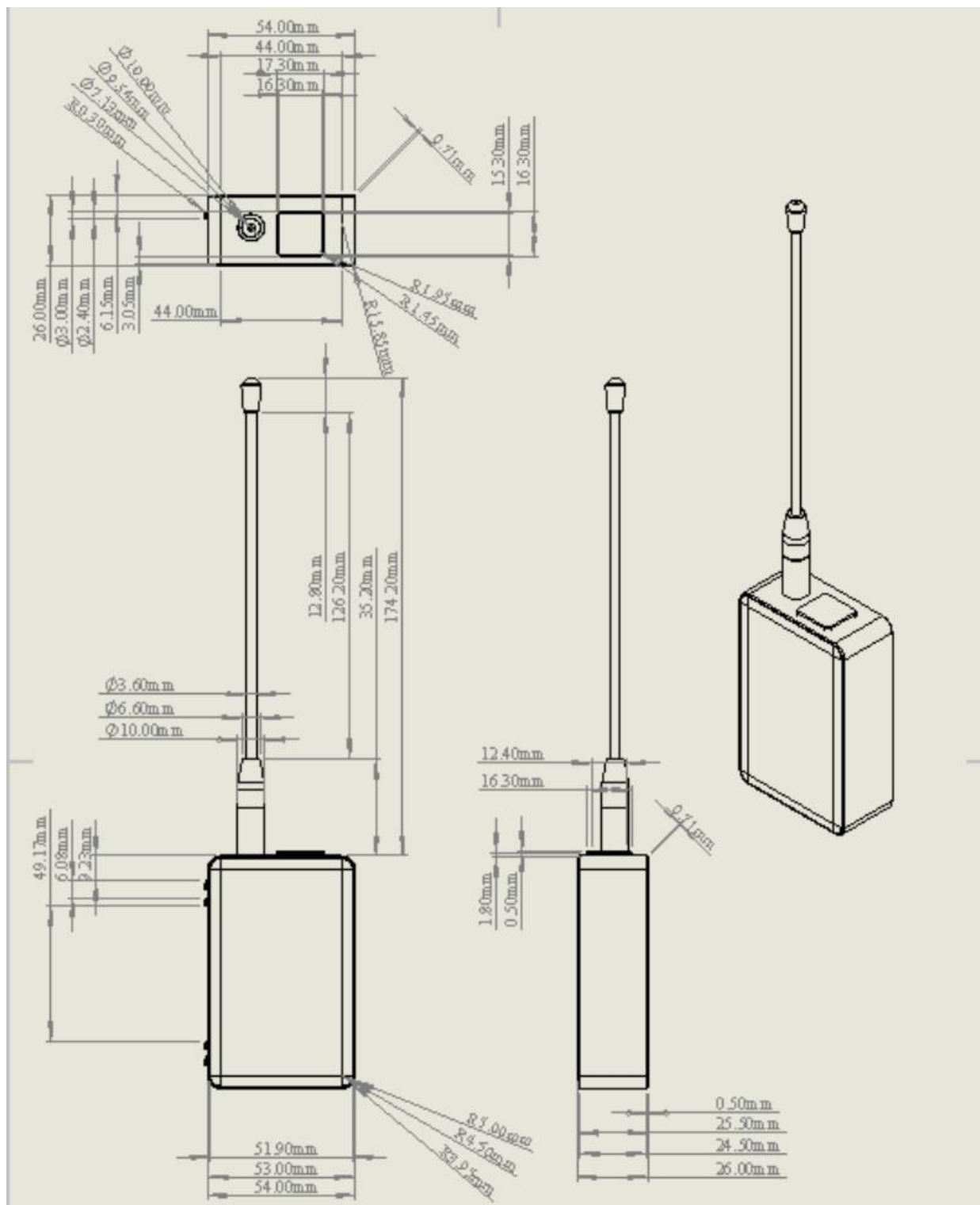
3.1 General specifications

Table 3.1: General specifications

Parameters	Description
Enclosure Material	Front Cover: Tempered Glass / Touch Screen; Side Cover: Aluminum Alloy; Rear Cover: Polycarbonate (PC)
Battery	2800mAh 18650 Li-Ion Battery (Selecting "With Battery" will incur additional shipping costs)
GNSS Module(Optional)	Quectel L76K
Triaxial Accelerometer	DA217
Dimensions	52×52×15mm
Weight	200g (excluding battery)
Expansion Socket	B2B Female
Antenna Socket	SMA Female
Development Board	WiFi LoRa 32 V4



4. Mechanical Dimensions





5. Resource

5.1 Relevant Resource

- [Main board schematic diagram](#)
- [L76K GNSS Module User Manual](#)

5.2 Contact Information

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