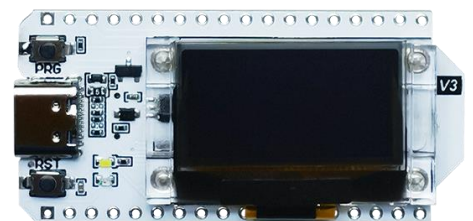




=u@ ‡ " †

-oh ') 'M



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# 1. Description

## 1.1 \

Wi Fi Kit 32 - b o a a d c l a s s i g n e d o t a u t o m a t i c e o d n b ( y T M H ) e  
i t ' s a h i g h l y i n t e g r a t e d - F i r o a d n u d e P t o L b a s t e d i o n  
m a n a g e m e n t s y s t e m , 0 . 9 6 " O L E D a r e a l s o i n c l  
s m a r t f a r m s , s m a r t h o m e , a n d I o T m a k e r s .  
O n t h i s b v a e s r i s s i , o n t h e a s v 3 b e e n u p g r a d e d a s f o l l o

Tab l l : V e 1 s i o n c o m p a r i s o

	‡ 7 M ' † †	‡ 7 M ' † †
U # y	ES P 3 2 0	ES P 3 2 B
y o " o	M i c r o U S B	T y p e C
O	8 0 0 u A	< 1 0 u A

## 1.2 h

- M i c r o p r o c e s s 3 2 F o r M 8 e ( E S - P 3 2 B X 7 d u a l c o r e p r o c e  
p i p e l i n e r a c k S t r u c t u r e , m a i n f r e q u e n c y u  
➤ T y p e U S B i n t e r f a c e w i t h a c o m p l e t e v o l t a g e  
c i r c u i t p r o t e c t i o n , R F s h i e l d i n g , a n d o t h  
➤ O n b o a r d S H 1 . 2 a 5 t t e r y i n t e r f a c e , i n t e g r a t e d l  
s y s t e m ( c h a r g e a n d d i s c h a r g e m a n a g e m e n t ,  
d e t e c t i o n , U S B / b a t t e r y p o w e r a u t o m a t i c

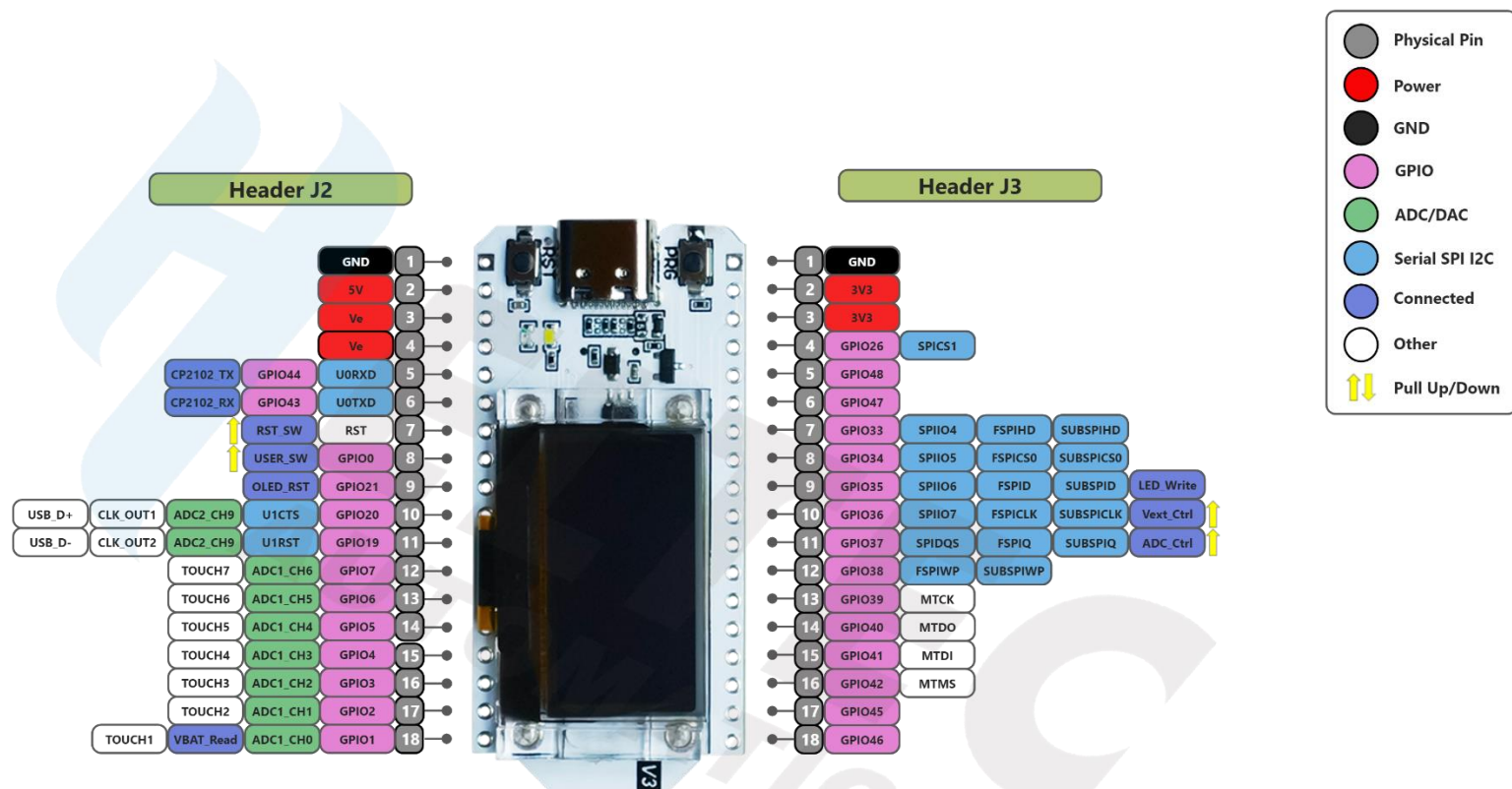
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- Onboard , WiBluetooth 2.4GHz PCB antenna ;
- Onboard 0.9128 \* 64 dot matrix OLED display debugging information, battery power, and
- Integrated CP2102 USB to serial port chip debugging information printing ;
- Compatible with [Arduino development environment](#)

## 2. Pin Definition

### 2.1 Header



HT-WB32\_V3 Pin map



$$\bullet = \mathbb{K}$$

Table 2.1: Pin description

V	V	u	7
	G N D	P	Gr o u n d .
	5V	P	5 V P o w e r S u p p l y .
	Ve	P	O u t p u t 3 . 3 V , p o w e r s u p p
	Ve	P	O u t p u t 3 . 3 V , p o w e r s u p p
	R X	I/ O	G P I O 4 4 , c o m m o n R X D , e d t o C P 2 1
	T X	I/ O	G P I O 4 3 , U 0 R X D , c o n n e c t e
	R S T	I	C H I P _ P U . C o n n e c t t o R S T
	0	I/ O	G P I O 0 , c o n n e c t t o P R G s v
	21	I/ O	G P I O 2 1 , O L E D R S T .
	20	I/ O	G P I O 2 0 , U 1 C T S , A D C 2 _ 1 C H 9
	19	I/ O	G P I O 1 9 , U 1 R T S , A D C 2 _ 2 C H 8
	7	I/ O	G P I O 7 , A D C 1 _ C H 6 , T O U C H 7
	6	I/ O	G P I O 6 , A D C 1 _ C H 5 , T O U C H 6
	5	I/ O	G P I O 5 , A D C 1 _ C H 4 , T O U C H 5
	4	I/ O	G P I O 4 , A D C 1 _ C H 3 , T O U C H 4
	3	I/ O	G P I O 3 , A D C 1 _ C H 2 , T O U C H 3
	2	I/ O	G P I O 2 , A D C 1 _ C H 1 , T O U C H 2

<sup>1</sup> DP pin connectable to USB socket, solder R29

<sup>2</sup> DN pin connectable to USB socket, solder R3



	1	I/ O	G P I O 1 ,    A D C 1 _ C H 0 ,    B A T O V 6 H 1
--	---	------	---

= 'K

Ta b 2.22: P i n   d e s c r i p t i o n

V	V	u	7
	G N D	P	G r o u n d .
	3V 3	P	3 . 3 V   P o w e r   S u p p l y .
	3V 3	P	3 . 3 V   P o w e r   S u p p l y .
	26	I/ O	G P I O 2 6 ,    S P I C S 1 .
	48	I/ O	G P I O 4 8 ,    S P I C L K _ N _ D I F F ,
	47	I/ O	G P I O 4 7 ,    S P I C L K _ P _ D I F F ,
	33	I/ O	G P I O 3 3 ,    S P I I O 4 ,    F S P I H D ,
	34	I/ O	G P I O 3 4 ,    S P I I O 5 ,    F S P I C S 0
	35	I/ O	G P I O 3 5 ,    S P I I O 6 ,    F S P I D ,
	36	I/ O	G P I O 3 6 ,    S P I I O 7 ,    F S P I C L K
	37	I/ O	G P I O 3 7 ,    S P I D Q S ,    F S P I Q ,
	38	I/ O	G P I O 3 8 ,    F S P I W P ,    S U B S P I W
	39	I/ O	G P I O 3 9 ,    M T C K .
	40	I/ O	G P I O 4 0 ,    M T D O .
	41	I/ O	G P I O 4 1 ,    M T D I .
	42	I/ O	G P I O 4 2 ,    M T M S .

<sup>3</sup> A D C 1 \_ C H 0   i s   u s e d   t o   r e a d   t h e   l i t h i u m   b a t t e r y   v o l t a g e ,   t h

$$V_{BAT} = 100 / (100+390) * V_{ADC\_IN1}$$

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	45	I/ O	G P I 50 4
	46	I/ O	G P I O 4 6 .

### 3. Specifications

#### 3.1 8

Table 1 General specifications

h	)
U #	E S P - 3 2 F 1 8 0 ( n s - b a i ® t 3 2 l x 7 d u a l ) c
yo" ' o #	C P 2 1 0 2
‡ 7	80 2 . 1 1 b / g / n , u p t o 1 5 0 M
"	B l u e t o o t h t e t h e t 5 , o t h m e s
= ' k	7 * A D C 1 + 2 * A D C 2 ; 7 * T o u c h ; e
U	3 8 4 K B R O M ; 5 1 2 K B S R A M ; F l a s h
@	T y p e U S B ; 2 * 1 . 2 5 l i t h 8 * u 2 m H e a d e r P i n
"	3 . 7 V l i t h i u m b a t t e r y p o w
h	D e e p s l e e p 1 0 u A
\	- 2 0 ~ ° 7 0
)	5 0 . 2 * 1 0 2 m s . 5 *

Except when USB or 5V Pin is connected separately to charge it. In other cases, only a single

h	U	u	U	#
u #yo"	4 . 7	5	6	V
O	3 . 3	3 . 7	4 . 2	V
†	4 . 7	5	6	V
†	2 . 7	3 . 3	3 . 5	V

\      h	U	u	U	#
ʈ h			5 0 0	m A
ʈ h    ʰyoʰ h      ʰ			5 0 0	m A
ʈ    h			3 5 0	m A

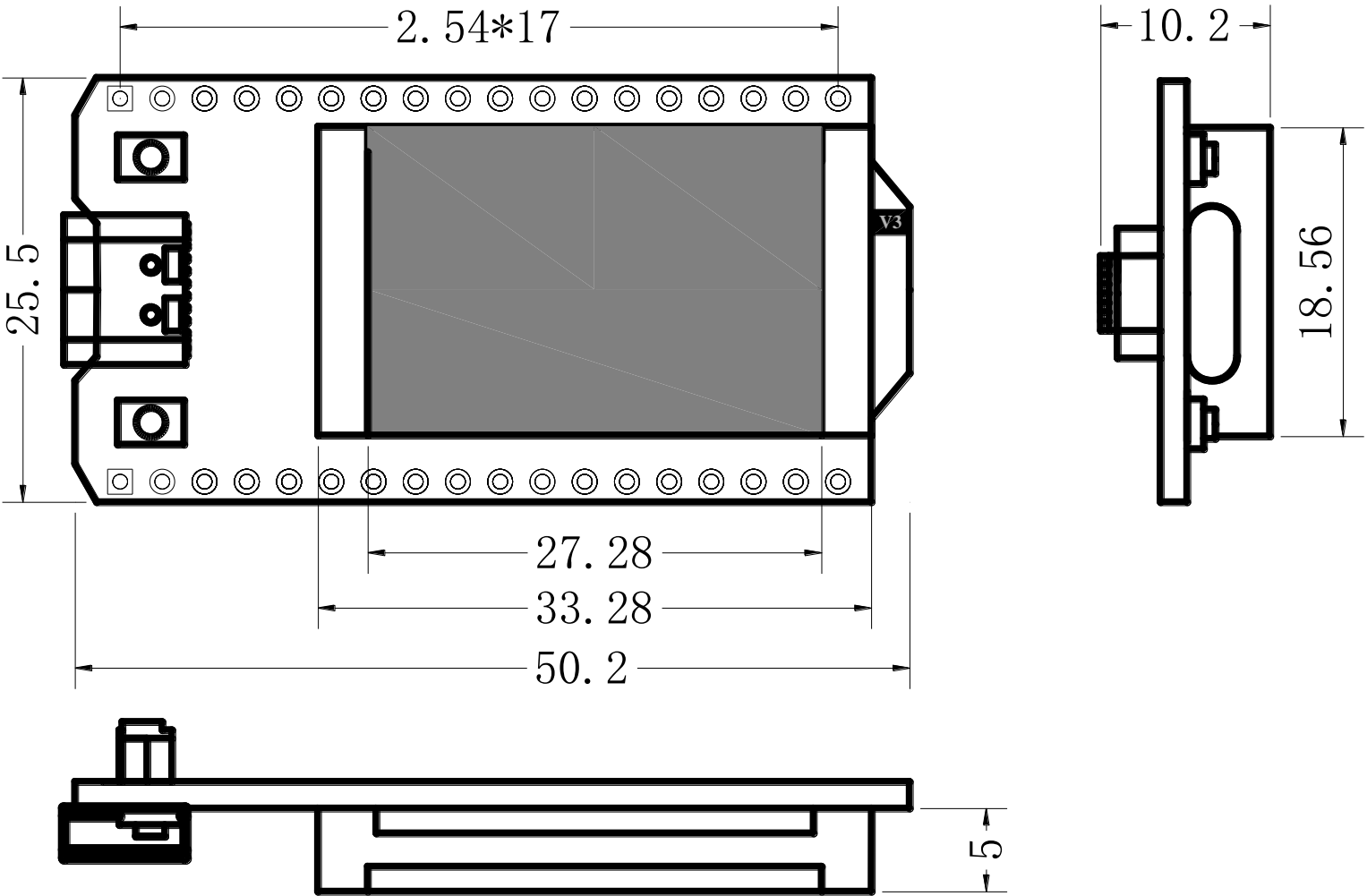
U	#	U	u	U	#
‡ 7'o	U S B p o w e r e d		1 1 5		m A
‡ 7''h	U S B p o w e r e d		150		m A
"u	U S B p o w e r e d		11 5		m A



	U S B   p o w e r e d		2		m A
	V B A T / b a t t e r y		1 5		u A
	3 . 3 V   h e a d e r		1 0		u A

4. Hardware resource

4.1 h





## 5. Resource

### 5.1 k i k

- Source Code

- [Heltec ESP32 & ESP8266 ready-made LoRaWAN library](#)

- [Heltec ESP32 library](#)

- [Schematic diagram](#)

- [Pin map](#)

- [Downloadable resource](#)

### 5.2 # '@

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