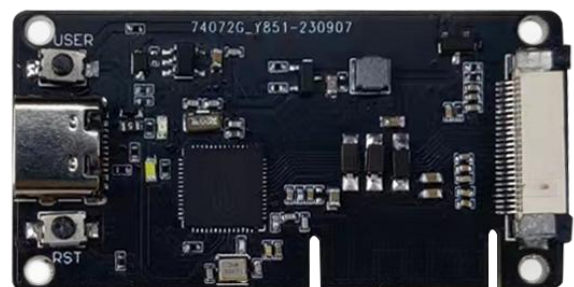




## HT-DE01

Universal E-Ink Driver Board





## Document version

Version	Time	Description	Remark
Rev. 1.0	2023-09-03	Preliminary version	Richard

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# 1 Description

## 1.1 Overview

**HT-DE01** is a universal driver board for E-Ink, which is compatible with E-Ink for most 24 pin FFC interface. It uses ESP32-S3FN8 as the main chip and provides the communication mode of Bluetooth and Wi-Fi.

It is also used as an Arduino development board, We provide the development environment and sample code, So that you can do the corresponding development work.

## 1.2 Product features

- The MCU uses ESP32-S3FN8, supports Wi-Fi and BLE.
- Integrated USB to serial chip, facilitate user secondary development.
- Supports Arduino.
- Provides a development environment and sample code.
- Storage temperature range: -40 ~ 85°C.<sup>①</sup>
- Onboard SH1.25-2 battery interface, integrated lithium battery management system (charge and discharge management, overcharge protection, battery power detection, USB / battery power automatic switching).

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<sup>①</sup> The storage temperature of the development board itself, and most E-ink is far from meeting this temperature requirement.





## 2 Specifications

### 2.1 General specification

Table 2.1: General specification

Parameters	Description
<b>MCU</b>	ESP32-S3FN8 (Xtensa® 32, dual-core processor, 240MHz)
<b>UART chip</b>	CP2102
<b>Storage temperature</b>	-40~85 °C
<b>Recommended operating temperature</b>	-10~55 °C
<b>Power Supply</b>	SH1.25-2 lithium battery
	USB Type-C 5V
<b>Wi-Fi Protocol</b>	IEEE 802.11b/g/n
<b>BLE<sup>②</sup></b>	Bluetooth 5; Bluetooth mesh
<b>E-Ink Interface</b>	24 pin FFC
<b>Communication mode</b>	Wi-Fi, Bluetooth
<b>Dimensions</b>	49mmx25mm

<sup>②</sup> Wi-Fi and Bluetooth share one antenna, so they cannot work simultaneously.

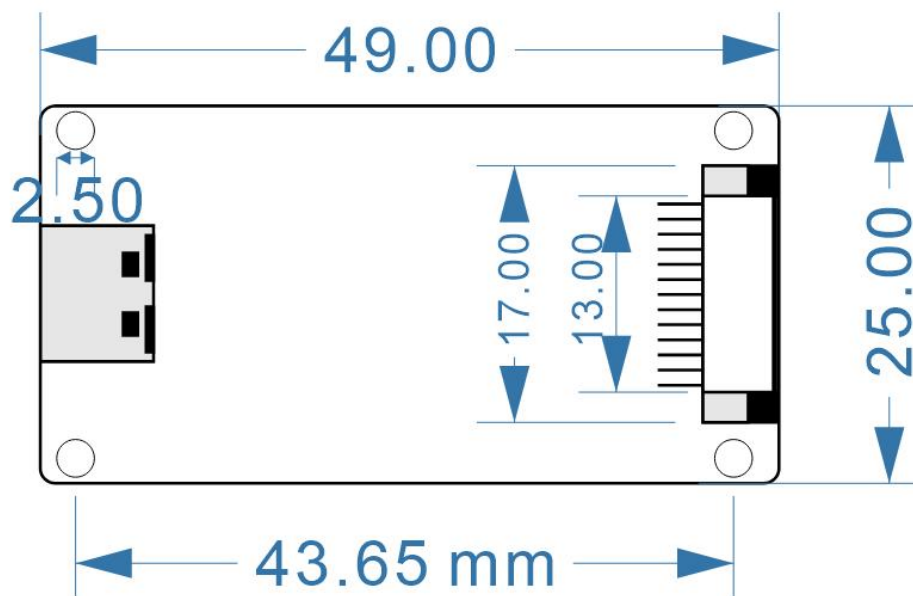


## 2.2 Power consumption

Table 2.2: Working current

Mode		Consumption	
		@3.7v@ battery interface	@5v@USB
Wi-Fi	STA	105mA	107mA
	AP	140mA	145mA
BT		133mA	135mA

## 3 Physical dimensions





## 4 Resource

### 4.1 Relevant resource

- [Heltec ESP \(ESP32 & ESP8266\) framework](#) (Already included Heltec ESP32 LoRaWAN library)
- [User Manual Document](#)
- [E-Ink Libraries](#)

### 4.2 Heltec Contact Information

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