

# SPECIFICATION

Product Type: E-Paper Display Development Kit  
Model Number: DESTM32-L  
Description:

- EPD Development Kit
- Support Parallel interface EPD
- RoHS Compliant

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## 1. Summary

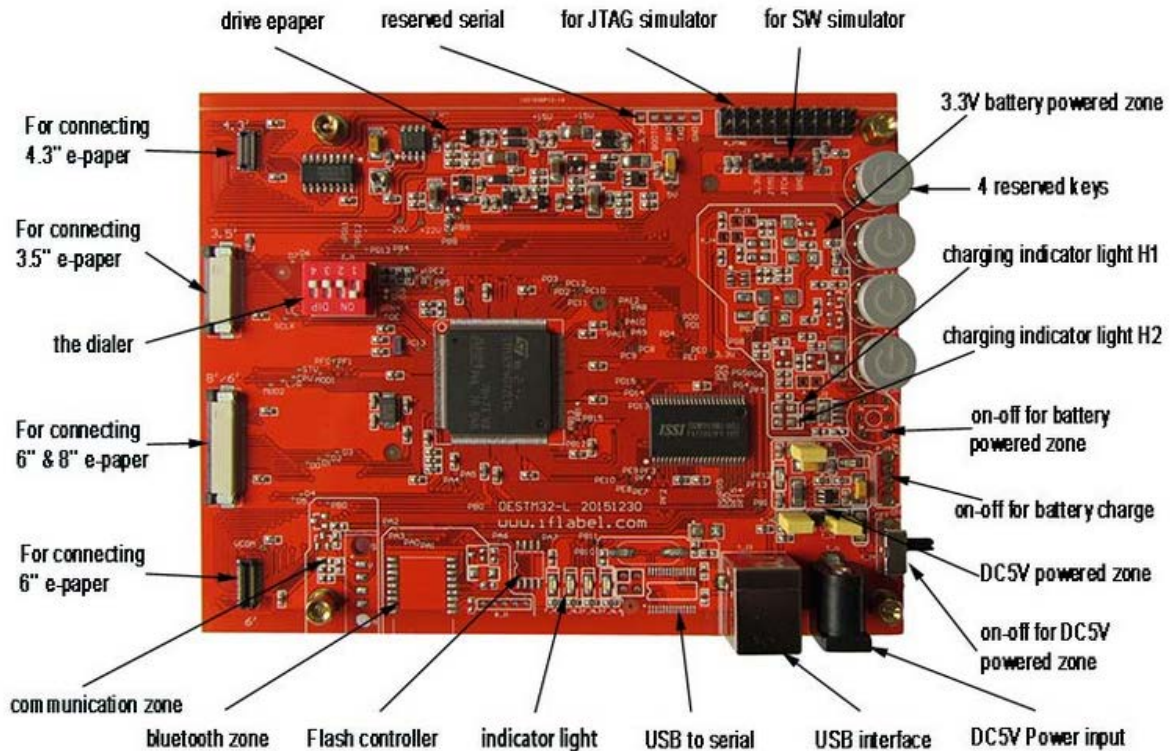
This Demo Kit is aim to help the users to learn how to use the E-Paper display easier, and it is designed for 3.5 inch, 4.3 inch, 6 inch and 8 inch e-paper display, which is built-in update display function, and we also add the extra function such as Flash controller/SRAM/multiple communication interfaces, two ways of power supply resolution, including 4 reserved LED indicator lights and 4 reserved keys.

## 2. Main parameter

parameter	Specification
Model.	DESTM32-L
MCU	STM32
Dimension	132x105x1.6mm
Input Voltage	5 V
Interface	USB
Sample Code	Available(please contact sales)
Working Temperature	-20°C ~+70°C
Main Function	EPD driving & outer SRAM
Additional Function	Reserved Serial ports and 4 keys, USB to serial port, SW simulator.



### 3. Main Function



Attention: The above price do not include any e-paper display, but it contains all 4 sizes e-paper's driving code.

And this board is suitable for large size dot matrix e-paper display(3.5",4.3",6",8")

#### Pic1 Demo Board

##### 3.1 Power supply Module:

3.1.1 Power input option : the input voltage for Demo Board is DC5V, there is 2

options for power input :

Option one: USB ( T\_J3 ) type, by shorting VCC and A

Option two: DC 5.0V type, by shorting VCC and B

**Sometimes the current output is not enough by USB type which lead to the**

**whole circuit can' t work normally, so we recommend DC5V type.**



3.1.2 Power supply of PCB: DC 5V power and 3.7V lithium battery power (Reserved Function).

3.1.3 Lithium battery type: (Reserved)

Lithium battery 3.7V is transformed to 3.3V for rated voltage.

Lithium battery 3.7V is transformed to 5.0V for drive circuit of E-paper display and USB to serial port circuit.

P\_J2 is designed for the output port of the lithium battery, which can supply the whole board directly as power is adequate.

#### Battery charging

The port of battery charging is the same to USB and DC5V port. Please refer to 3.1 as power input. When the switch ( P\_J5 ) is on, DC5V charges the battery.

Charging status: H2 light is on and H1 light is off.

Charge is finished status: H2 light is off and H1 light is on.

#### Battery power supply

Connecting P\_J3 & P\_J4 with short cap on the board, and put on the switch (P\_J5), the battery would supply the board.

3.1.4 5V Power supply:

5V for drive circuit of E-paper display and USB to serial port circuit.

5V is transformed to 3.3V for rated voltage.

Connecting T\_J5 & T\_J6 with short cap on the board, and put on the switch (T\_J4), and 5V power supply.



Attention: please cut off the relative switch and short cap of DC5V power supply when battery supply is used, vice versa.

Battery power related parts: P\_J3, P\_J4, and on-off switch for battery charge

DC5V power related parts: T\_J5, T\_J6 and on-off switch for power.

### 3.2 Connector for E-Paper Display

4 type of connector are mounted on the board for 4.3 inch, 3.5 inch, 6 inch and 8 inch E-Paper Display, 2 kinds of connector are just for the 6 inch one. Please refer to picture 1 and connect the different size E-paper display separately.

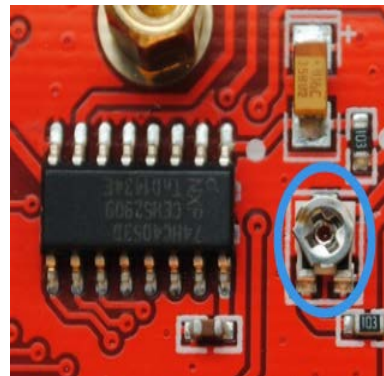
### 3.3 Driving circuit for E-Paper Display

The circuit can generate 5 kind of voltages: +15V、-15V、+22V、-20V and VCOM.

Picture2 show the voltage testing point of VCOM . You can adjust the voltage (P3--potentiometer ) according to the different kinds of E paper.



Pic2 the voltage testing point of VCOM



Pic3 Potentiometer of VCOM

### 3.4 Communication interface

We reserved 4 communication interface on the board, one is for bluetooth, another is USB to serial port, the rest are for user' s definition.



### 3.5 Indicator lights

There are 4 lights on this board, which indicate 4.3 inch, 3.5 inch, 6 inch and 8 inch E-Paper display status from the left to the right, and you can definite them as your requirements.

### 3.6 Keys

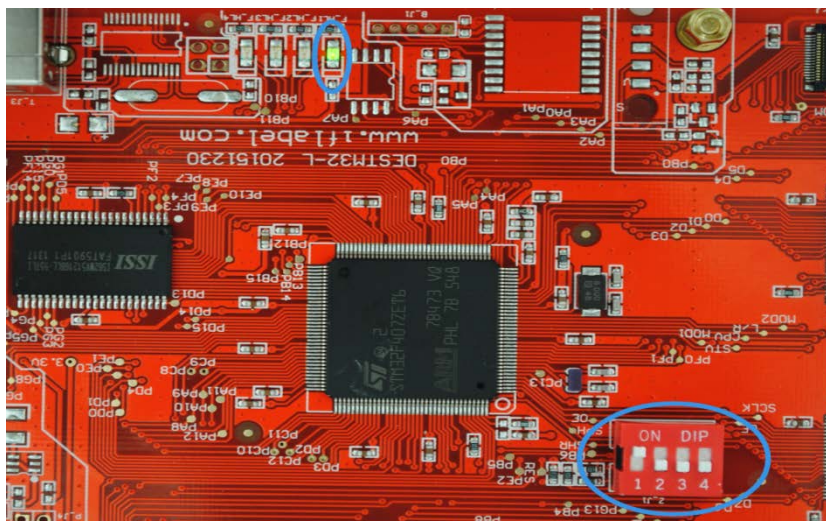
4 reserved keys on the board without any definition in Demo code, it is for the user' s development.

## 4. Display

4.1 4 kinds of display code are integrated in the demo kit by using the dialer to switch.

4.2 the dialer vs E-Paper display

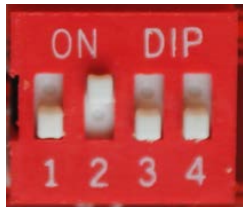
4.2.1 When 1 is positioned on, that is for 4.3 inch E-Paper display code and the leftmost indicator light is on at the same time. see Pic4



Pic4 4.3 inch E paper indicator light and its dialer

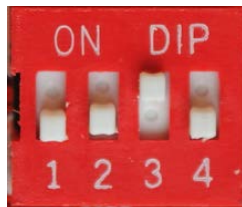


4.2.2 When 2 is positioned on ,that is for 3.5 inch display code and the relative indicator light is on. see Pic5



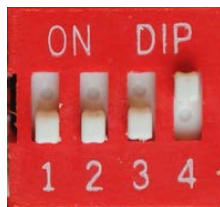
Pic5 3.5 inch E paper and its dialer

4.2.3 When 3 is positioned on ,that is for 6inch display code.P6



Pic6 6 inch E paper and its dialer

4.2.4 When 4 is positioned on ,that is for 8 inch display code. See Pic7



Pic7 8 inch E paper and its dialer

## 5. JTAG Simulator (optional)

### 5.1 Tool: The Fire CMSIS-DAP Simulator

Software : MDK518

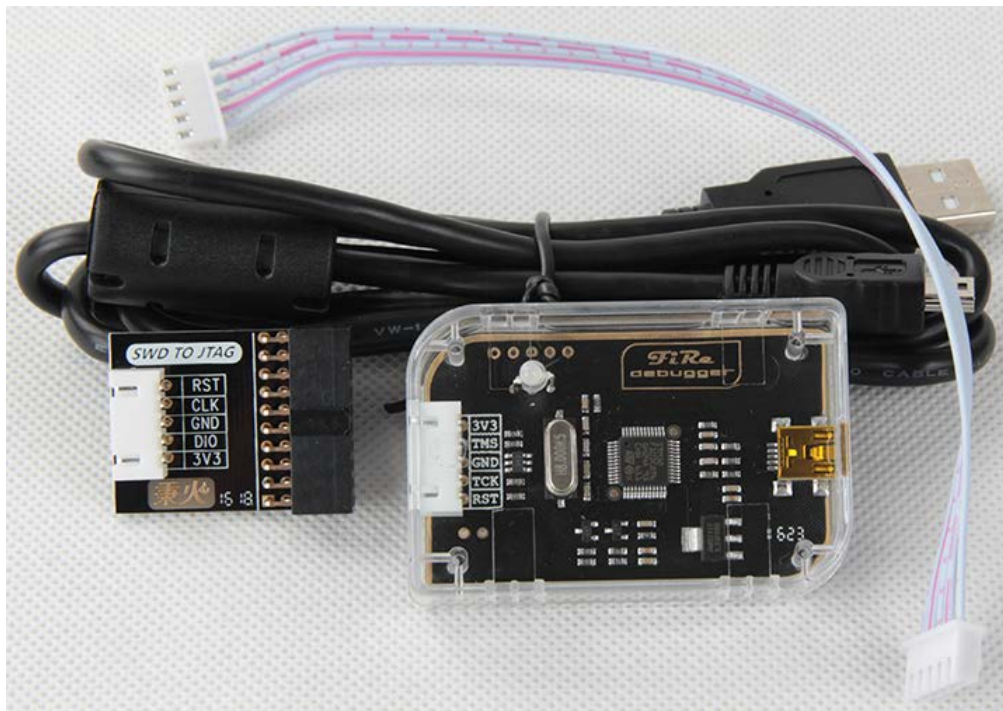
JTAG simulator: The Fire CMSIS-DAP simulator 、 SW simulator

Notice: The NO.4 on the dialer should not be positioned on when it is burning or

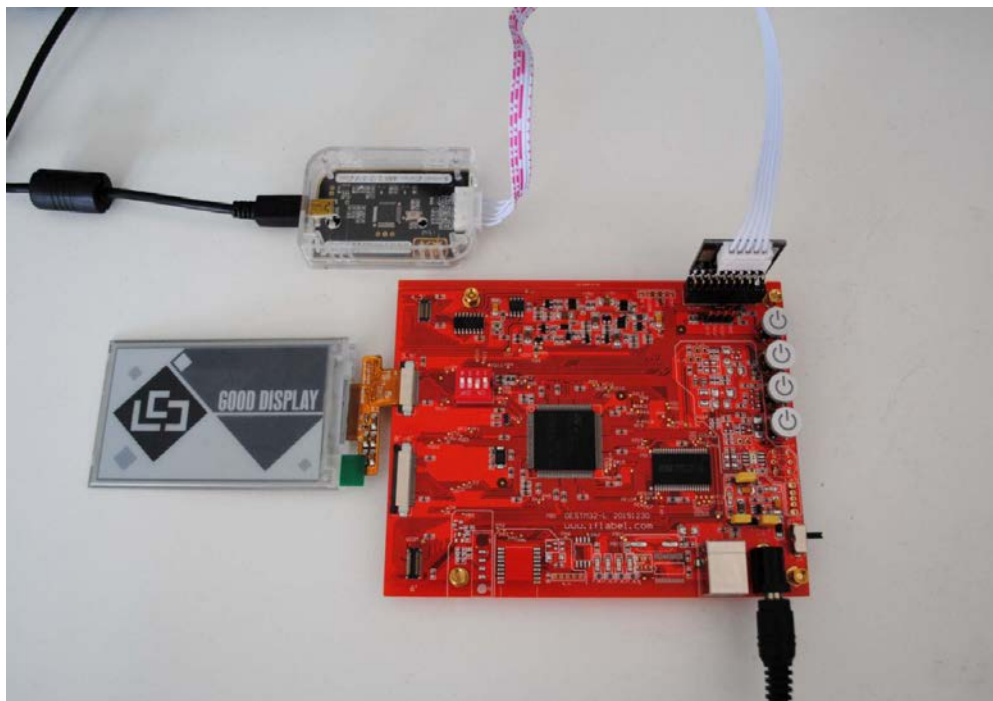




simulating.









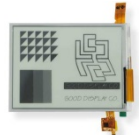
## 5.2 Connection, see Pic8



Pic 8 How to connect the simulator, display and the board



## 6. E-paper Display vs DESTM32-L List

size	Model	Connection	Product
3.5 inch	GDE035A3	Pluggable	
4.3 inch	GDE043A2	Press Type	
6 inch	GDE060BA	Pluggable	
	GDE060B7	Pluggable	
	GDE060B3	Press Type	
	GDE060B5	Press Type	
	GDE060BT	Press Type	
8 inch	GDE080A1	Pluggable	