



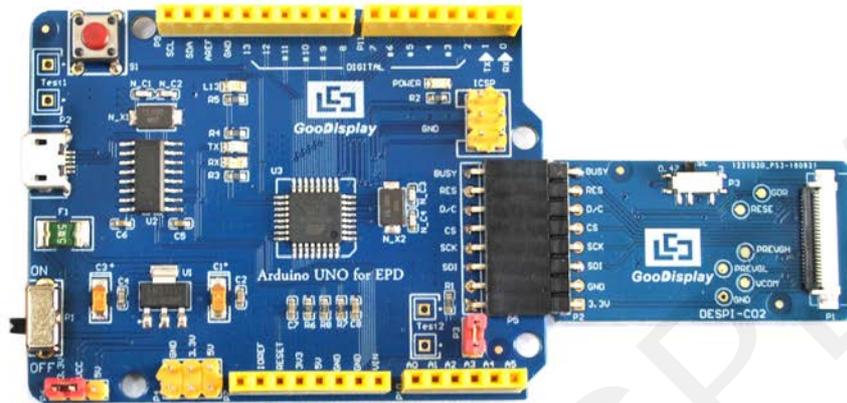
# Development Kit for Epaper Display



**DEArduino**

Dalian Good Display Co., Ltd.

# Product Specifications



<b>Customer</b>	<b>Standard</b>
<b>Description</b>	<b>Development Kit for Epaper Display</b>
<b>Model Name</b>	<b>DEArduino</b>
<b>Date</b>	<b>2018/11/26</b>
<b>Revision</b>	<b>1.0</b>

	Design Engineering		
	Approval	Check	Design
			

No.17 Gonghua Street, Shahekou District, Dalian 116021 China

Tel: +86-411-84619565 Fax: +86-411-84619585-810

Email: [info@good-display.com](mailto:info@good-display.com)

Website: [www.e-paper-display.com](http://www.e-paper-display.com)

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## 1. Overview

Arduino is a simple I/O platform based on open source code and uses a language like Java, C language, which is the basic C language actually. The Arduino language simply functionalizes some of the relevant parameter settings, so we could use it and don't need to know the bootloader.

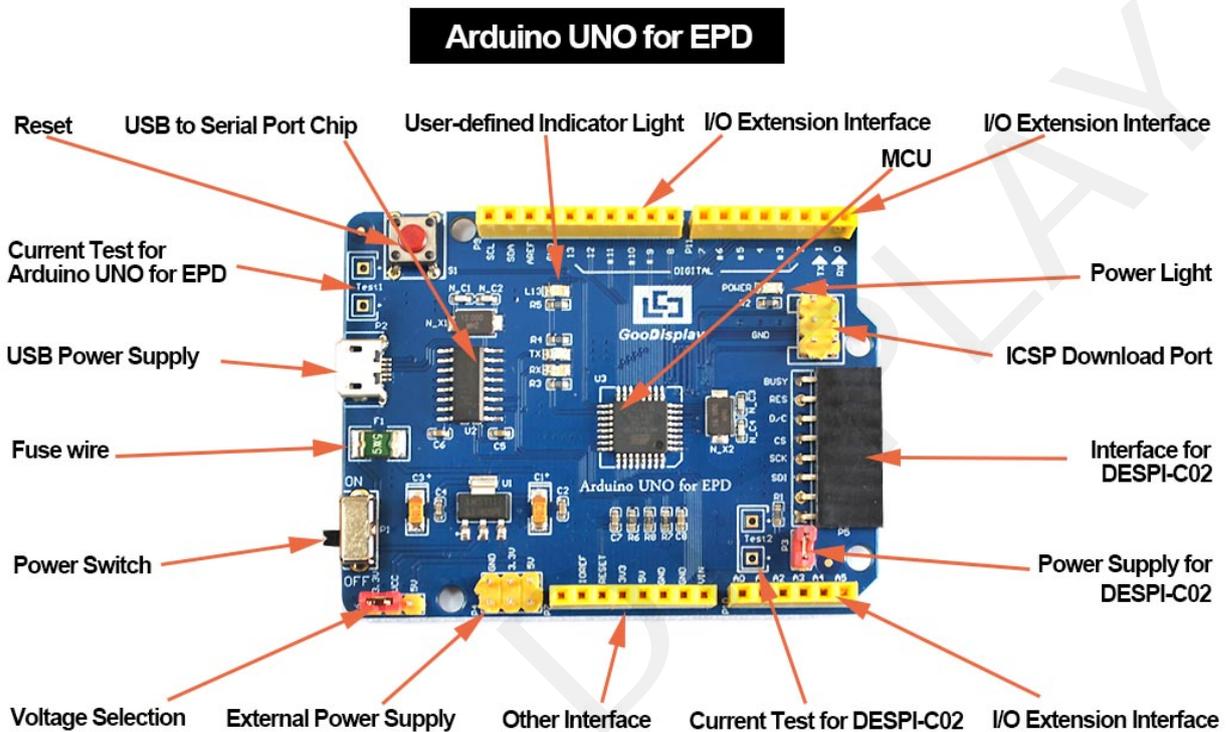
This Development Kit designed for SPI E-paper Display aims to help users to begin constructing our e-paper display with provided source code to create more differentiated solutions. It supports driving Good Display's black-white E-paper Display and three-color (black, white and red/Yellow) Good Display 's E-paper Display: 1.54", 2.04", 2.13", 2.6", 2.7", 2.9", 3.71", 4.2", 5.83" and 7.5".

DEArduino Development Kit consists of the development board Arduino UNO for EPD and the pinboard DESPI-C02

## 2. Mechanical Specifications

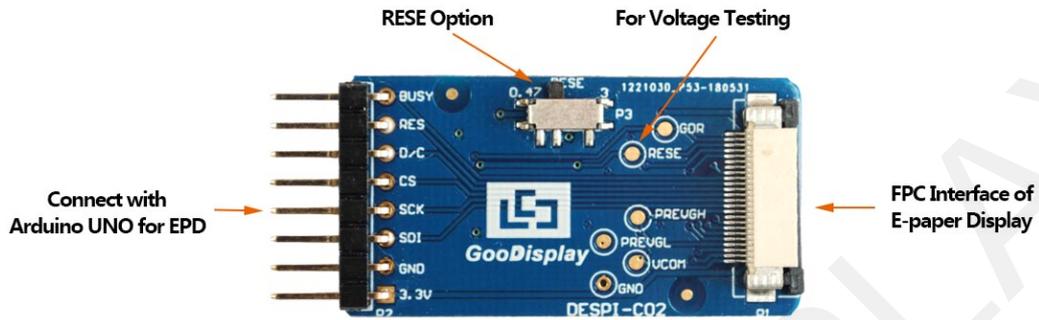
Parameter	Specification
Model	DEArduino
MCU	Arduino
Dimension	70mm*54mm (Arduino UNO for EPD) 41mm*22mm (DESPI-C02)
Power Interface	USB Interface
Sample Code	Available (please contact sales)
Operating Temp.	-20°C ~+70°C
Main Function	<ol style="list-style-type: none"> <li>1. Learn how to drive E-Paper Display based on Arduino.</li> <li>2. Test and evaluate the E-Paper Display.</li> <li>3. Secondary development based on DEARDUINO.</li> </ol>
Additional Function	USB to serial port, indicator, light, keys, current detection and so on.

### 3. Functions

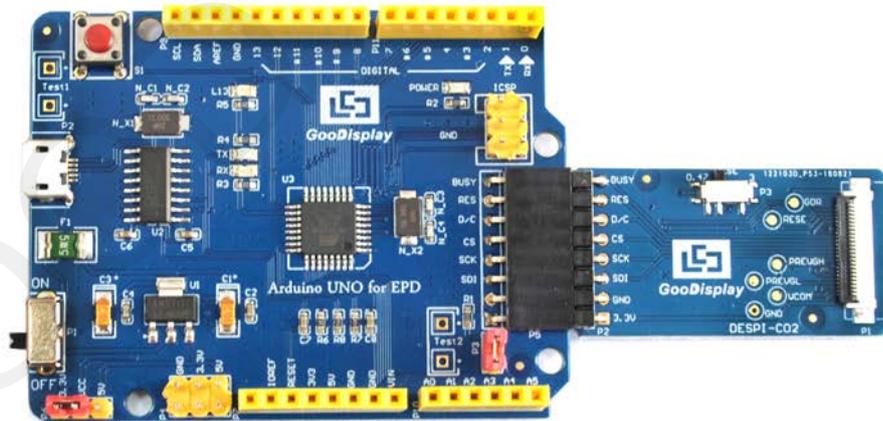


**Pic.01 Main Board**

**DESPI-C02**



**Pic.02 Connector Board**



**Pic. 03 Demo Board**

### 3.1 Power Supply

Input voltage of Demo Board is DC5V, and the power interface is USB Interface.

**Note:** Since the electronic paper is powered by 3.3V, the user needs to short the VCC at P6 to 3.3V when using it.

### 3.2 LED indicator light

One indicator light reserved for developing.

### 3.3 Communication

One USB to serial port reserved for transmission .You should install the driver program CH340 to use it.

### 3.4 I/O Port Extension

I/O port of Digital Input/Output Terminal 0~13 and Simulate the Input/Output Terminal 0~5 have been led out for developing.

### 3.5 Current Test

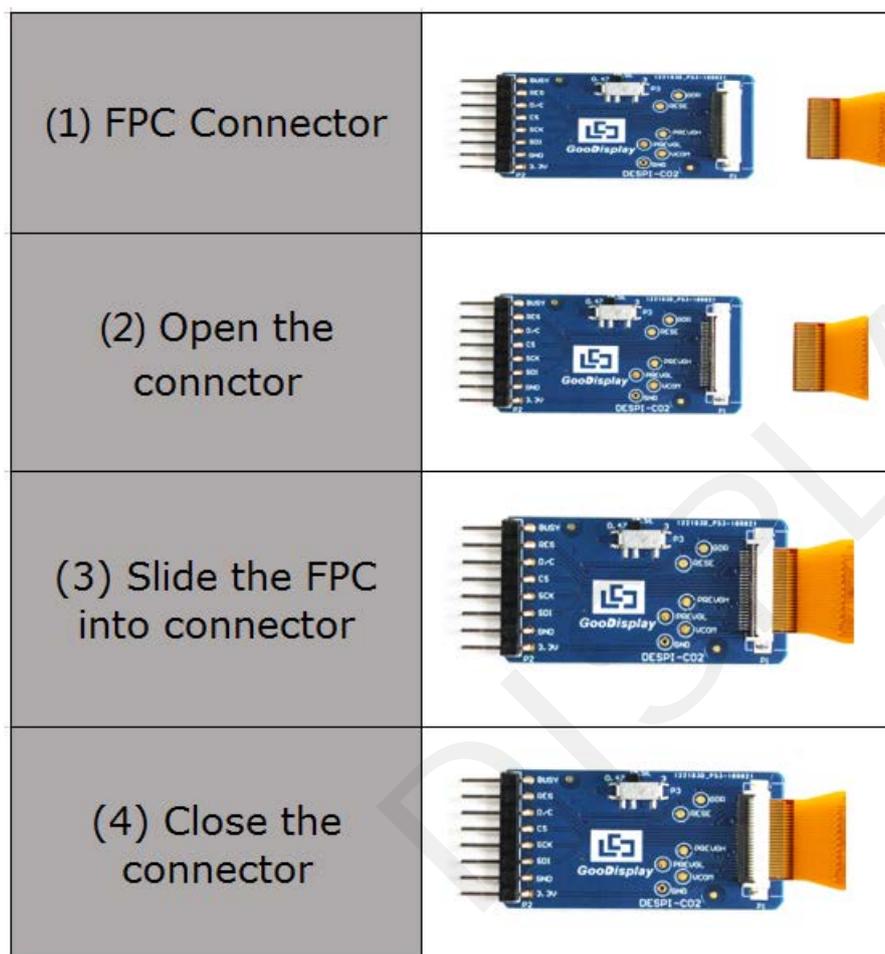
The demo kit supports the current test of the main board DESPI-M02 and the connector board DESPI-C02.

- 1) Test for DESPI-M02: Power off and make series connection between ampere meter and TEST1.
- 2) Test for DESPI-C02: Power on and take off the short circuit plug P3 then make series connection between ampere meter and TEST2.After accomplishing test ,put on the short circuit plug 3.

### 3.6 Key

One Reset Key reserved for customers to use.

### 3.7 Connect E-paper Display to Demo Board



**Pic. 04 Connection**

### 3.8 The connector board DESPI- C02

It can refresh total 10 sizes of Good Display's E-paper Display such as 1.54", 2.04", 2.13", 2.6", 2.7", 2.9", 3.71", 4.2", 5.83", 7.5". The e-paper display can only be refreshed by connecting the DESPI-C02 to the main board.

**RESE is set to 0.47Ω position:**

1.54 inch: GDEW0154T8、GDEW0154Z17、GDEW0154Z04

2.13 inch: GDEW0213T5、GDEW0213Z16

2.6 inch: GDEW026T0、GDEW026Z39

2.7 inch: GDEW027W3、GDEW027C44

2.9 inch: GDEW029T5、GDEW029Z10

3.71 inch: GDEW0371W7

4.2 inch: GDEW042T2、 GDEW042Z15

7.5 inch: GDEW075Z09

5.83 inch: GDEW0583Z21

**RESE is set to 3 position:**

1.54 inch: GDEH0154D27、 GDEP015OC1

2.04 inch: GDE021A1

2.13 inch: GDEH0213B1、 GDEH0213D30LT

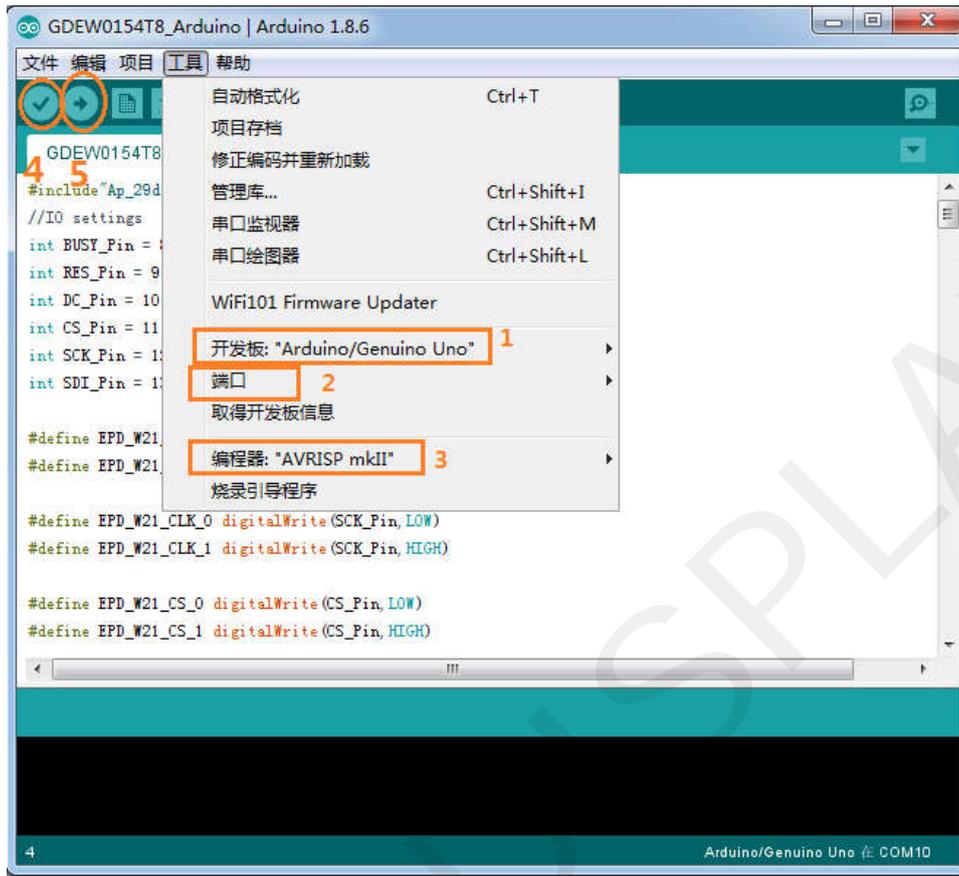
2.9 inch: GDEH029A1、 GDEH029D56LT

5.83 inch: GDEW0583T7

7.5 inch: GDEW075T8

#### **4. Program Download**

DEArduino supports SPI mode to download programs. You should install the driver program CH340 on your computer to use it before you download the program.



**Pic. 05 Download method**

**Steps:**

1. Open Arduino 1.8.6, Click "Tools"("工具"), and then click Position 1 to choose the development kit "Arduino/Genuino Uno"("开发板:"Arduino/Genuino Uno") .
2. Click Position 2 to choose "Serial Port"----"COM"("端口").
3. Click Position 3 to choose "Programmer"----"AVRISP MKII"("编程器"AVRISP MKII").
4. Click Position 4 to compile the program.
5. Click Position 5 to download the program to the DeArduino.