Embedded Artists
2.7 inch E-paper Display Module
&
Arduino Uno

Embedded Artists

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1 Required Hardware

The hardware listed below is needed to get Embedded Artists 2.7 inch E-paper display module connected to an Arduino Uno

- **Arduino Uno**

- Embedded Artists 2.7 inch **E-paper Display** module **Rev B**. Part number: EA-LCD-009. Please **NOTE** that Rev A of the board does **NOT** have 5V tolerant I/O. You should use Rev B of the board if you want to connect it to an Arduino Uno. http://www.embeddedartists.com/products/displays/lcd_27_epaper.php

- 14 pcs female-to-male **jumper wires** (prototyping cables). Embedded Artists 50 pack with part number EA-ACC-016 can be used. http://www.embeddedartists.com/products/acc/acc_wire_fm.php

2 Connect the Display

Use female-to-male jumper wires (prototyping cables) to connect the Arduino with the display. The figures below as well as the table guides you how to connect the cables.
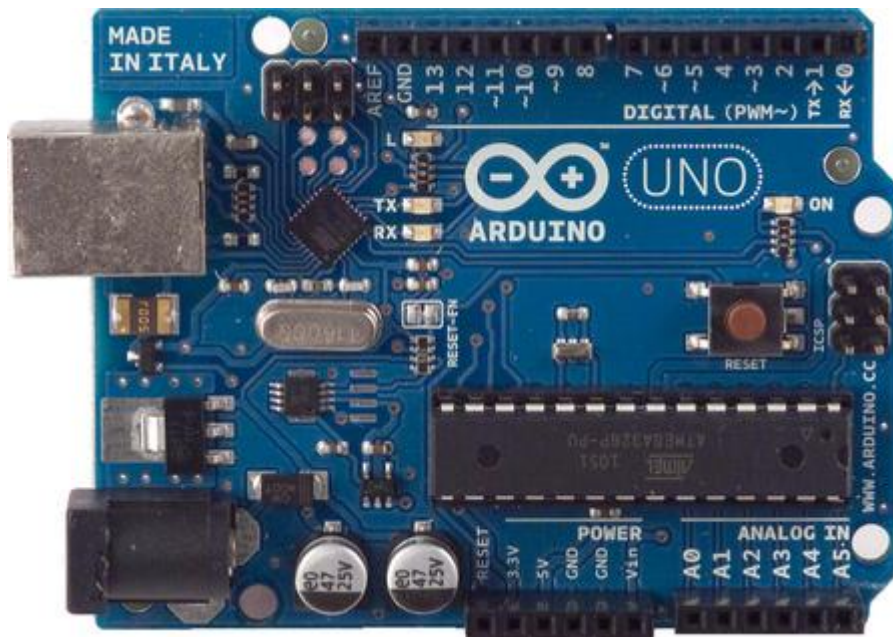

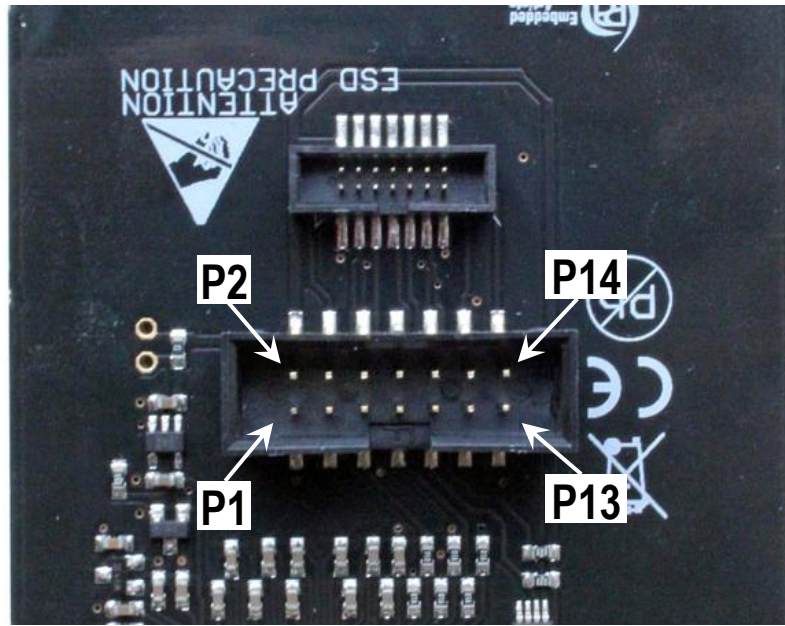**Figure 1 - Pin numbering on Arduino**

Figure 2 - Pin numbering on display

mbed			Display	
GND	GND	←→	1	GND
3V3	3V3	←→	2	3V3
13	SCK	←→	3	SCK
11	MOSI	←→	4	MOSI
12	MISO	←→	5	MISO
8	GPIO	←→	6	SSEL
7	GPIO	←→	7	Busy
3	GPIO	←→	8	Border Ctrl
A5	SCL	←→	9	SCL
A4	SDA	←→	10	SDA
5	PWM	←→	11	PWM
6	GPIO	←→	12	Reset
2	GPIO	←→	13	Pwr
4	GPIO	←→	14	Discharge

Figure 3 - Arduino connected to Display

3 Import to Arduino Environment

1. Download the zip file (epaper_arduino_xxxxxx.zip) from the E-paper display module product page
http://www.embeddedartists.com/products/displays/lcd_27_epaper.php

2. Unzip to your Sketchbook directory

    a. epaper - This is the application (contains .ino file)

    b. libraries/EPD – This is the E-paper driver from Pervasive Displays

    c. libraries/Images – This folder contains images

    d. libraries/LM75A

3. Start Arduino application

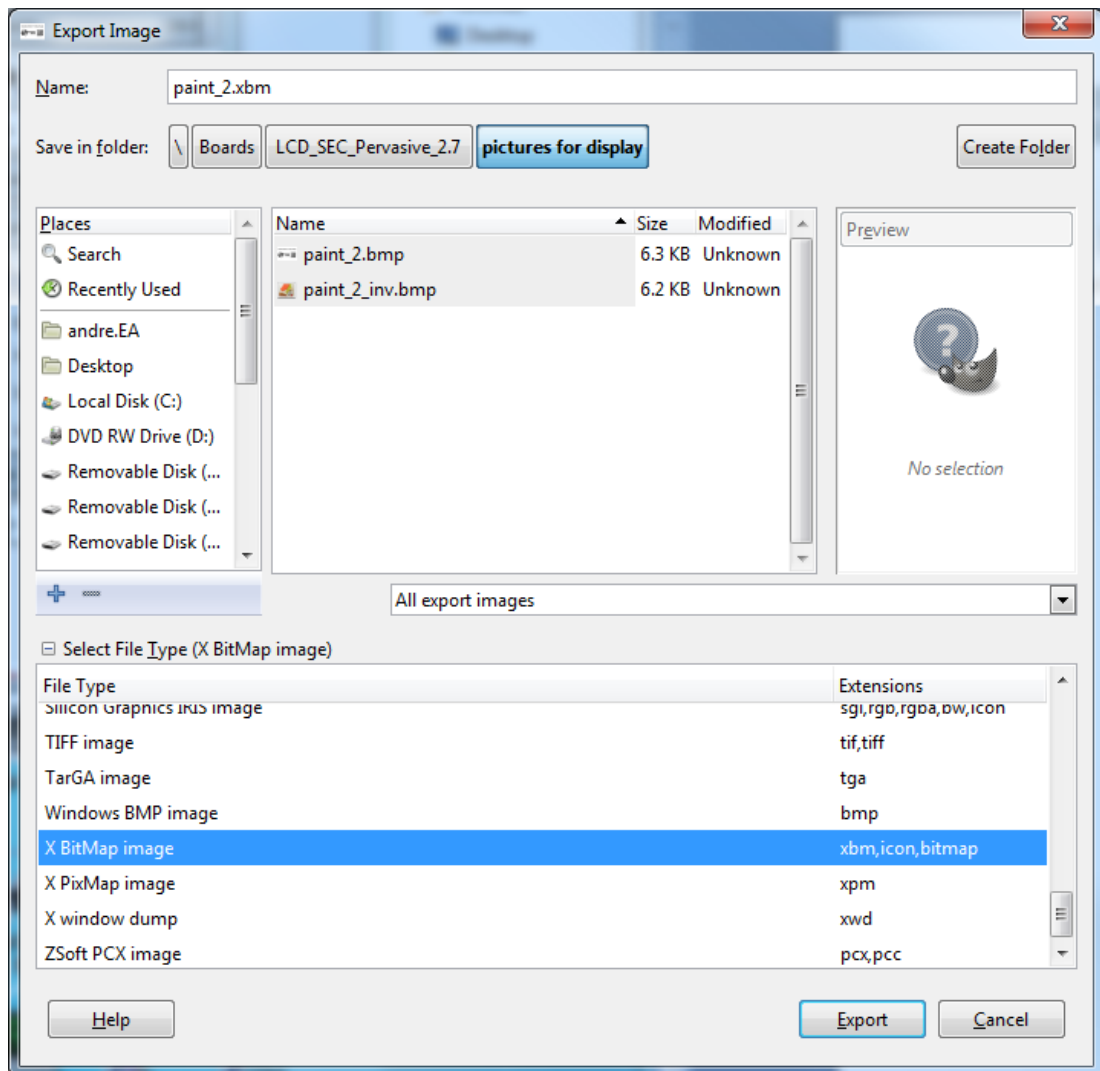4. Go to File → Sketchbook → epaper to load the application
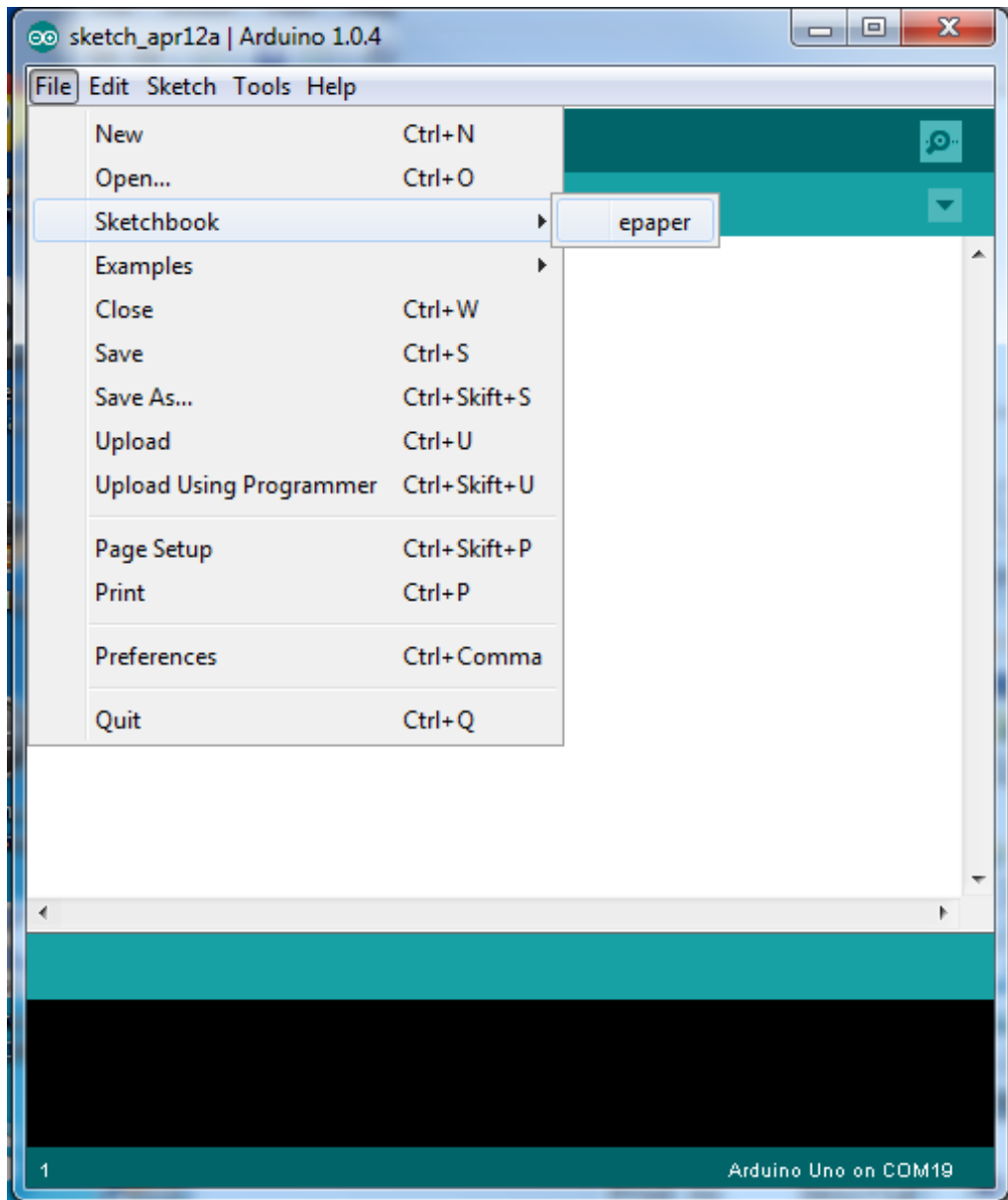
5. You can now compile and download the application to the Arduino Uno

4 Image Format

The format used for the images is the X BitMap (xbm) format. The image manipulation program called GIMP can be used to save a monochrome image in xbm format.

http://www.gimp.org/

5 Disclaimer

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