T12 - I2C SPI OLED Display

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0.96" IIC SPI Serial 128X64 OLED LCD LED Display Module 6 Pins

Description

Details:

* 128x64 LED display module supports many control chip.

* Fully compatible with Arduino, 51 Series, MSP430 Series, STM32 / 2, CSR IC, etc.

* Ultra-low power consumption: full screen lit 0.08W

* Super high brightness and contrast are adjustable

* With embedded driver/controller

* Character Color: Yellow and Blue(as pictures show)

* Driving Chip:SSD1306

* Pin Definition:

GND: power ground

VCC: power positive (2.8-5.5V)

D0:clock wire

D1:data wire

RES: reset wire

DC: data/command

CS: chip select

* Interface Type: SPI,IIC

* Pins: 6 pins

* Voltage: 3V ~ 5V DC

* Working Temperature: -30 ? ~ 70 ?

* High resolution: 128 * 64

* Dimensions: 27* 27* 4.1mm/1.06*1.06*0.16 inch(approx)

Package contents:

1* 128x64 Yellow and Blue OLED LED display module

Note: The real color of the item may be slightly different from the pictures shown on website caused by many factors such as brightness of your monitor and light brightness

0.96" IIC SPI Serial 128X64 WHITE OLED LCD Display

Features:

This is a 0.96 inch OLED display module of 128x64 resolution in which the emissive electroluminescent layer is a film of organic compound that emits light in response to an electric current.
Working without backlight, the OLED display module could give out light by itself.
In low ambient light conditions such as a dark room, an OLED screen can achieve a higher contrast ratio than an LCD.
OLED display module also has a much faster response time than an LCD.
The display with small dimension is very suitable for MP3, function cellphone, smart watch, smart health device, etc.

Specifications:

Display Size: 0.96"
Text Color: White

Resolution: 128x64

Driver IC: SSD1306
Input Voltage: 3.3V
Pins:
GND: (Ground)
VCC: (Power)
D0: (Clock)

D1: (Data Cable)

RES: (Reset)

DC: (Data/Command)

0.96" 128x64 IIC/I2C SPI OLED Display

In contrast to LCD technology, Organic Light-Emitting Diode (OLED) displays do not require a backlight and are regarded as the ultimate technology for the next generation of flat-panel displays. OLED displays are composed of a thin, multi-layered organic film placed between an anode and cathode, which are made up of electric conductive transparent Indium Tin Oxide. The multi-layered organic film includes a Hole Transporting Layer, Emission Layer and Electron Transporting Layer. By applying an appropriate electrical voltage, the holes and electrons are injected into the Emission Layer from the anode and cathode respectively and combine to form excitons, after which electroluminescence occurs.

These highly versatile screens are fully compatible with Arduino, 51 Series, MSP430 Series, STM32 / 2, CSR IC, etc. There are both 6 or 7-wire SPI and 4-wire IIC/I2C connections to choose from (SPI is faster, but has more wires) and a variety of different colour options (please select when purchasing). Please see below for detailed specifications, operating instructions and working Arduino code example.

Many thanks for looking and don't forget to check out my other items!

Specifications

0.96" SSD1306 Screen

IIC/I2C Module Size: 28.5mm-33.0mm x 27.5mm x 11.5mm (including header pins)

SPI Module Size: 27.0mm x 28.0mm x 11.5mm (including header pins)

Screen Panel Size: 26.70mm x 19.26mm x 1.85mm

Screen Active Area: 21.74mm x 11.20mm

Pixel Size: 0.15mm x 0.15mm

Supply Voltage: 3-5v

Default I2C Address: 0x3C

Operating Temperature Range: -30 °C to +70 °C

Ultra-low power consumption: Full screen lit 0.08W (0.06W typically with screen full of characters)

Colour Options: White / Blue / Blue Yellow

Pixels: 128x64

Viewing Angle: >160 °

Super High Contrast and Brightness (Adjustable)

Please Note: Although these boards do adhere to the written description on my listing, there can sometimes be minor differences between batches (e.g. Oval rather than round screw holes, 6 or 7 pin SPI, differing order of pins, etc). I have included a number of examples in my listing photos. If you have any specific requirements, then please message me before purchasing.

Instructions

Download the following Arduino Libraries and include within your Arduino IDE Libraries folder:

Download the Adafruit GFX Library Here

Download the Adafruit SSD1306 Library Here

In the Adafruit SSD1306 Library Header File (Adafruit_SSD1306.h) within your ‘Libraries’ folder, ensure that ’#define SSD1306_128_64’ is selected in the ‘SSD1306 Displays’ section.

If you wish to use the code examples contained within the Adafruit SSD1306 Library, you will need to delete the following immediately prior to the 'void setup()' line:

```
#if (SSD1306_LCDHEIGHT != 64)

#error("Height incorrect, please fix Adafruit_SSD1306.h!");

#endif
```

The I2C code examples included within the Adafruit SSD1306 library may be used with the following minor change as these modules use I2C address 0x3C rather than 0x3D:

```
display.begin(SSD1306_SWITCHCAPVCC, 0x3C);  // initialize with the I2C addr 0x3C (for the 128x64)
```

6 or 7-Wire SPI Connection

Please Note: These modules come with either 6 or 7 pins depending on stock at time of purchase. The only difference is that the 6-pin version does not have a dedicated CS pin, but otherwise functions exactly the same.

Prior to powering up the development board and OLED module, make the following connections (I have tested these on the Arduino Uno, Nano, Pro-Mini and Mega 2560):

OLED Pin

Arduino Pin	Use
VCC	5v Power Supply
GND	GND Ground
D0/SCL	D10 Serial Clock (CLK)
D1/SDA	D9

Serial Data Input (MOSI)

RES

D13

Reset

DC

D11

Data Command

CS

D12

Chip Select

Thereafter, connect power up the development board and OLED module, upload your code and watch and see!

4-Wire IIC/I2C Connection

Watch YouTube Tutorial Here for IIC/I2C

Arduino Code Example

The following Arduino code example uses the Adafruit SSD1306 Library (see above link) and can be used for both SPI and IIC/I2C connections; simply adjust the code where indicated:

```
#include

//Define SPI Connections:
#define OLED_MOSI   9
#define OLED_CLK   10
#define OLED_DC    11
#define OLED_CS    12

#define OLED_RESET 13

//Remove comments (//) if using SPI connection:
//Adafruit_SSD1306 display(OLED_MOSI, OLED_CLK, OLED_DC, OLED_RESET, OLED_CS);

//Add comments (//) if using SPI connection:
Adafruit_SSD1306 display(OLED_RESET);

void setup()
{
 Serial.begin(9600);
```

```
 display.begin(SSD1306_SWITCHCAPVCC, 0x3C);  //Initialize with the I2C addr 0x3C for the 128x64 display.
 display.clearDisplay();

 display.setTextSize(2);
 display.setTextColor(WHITE);
 display.setCursor(0,0);
 display.println("Welcome to");
 display.println("Karen's");
 display.setTextSize(3);
 display.println("e-Shop");

 display.drawLine(0, 59, 127, 59, WHITE);
 display.drawCircle(63, 59, 4, WHITE);

 display.display();
}

void loop()
{

}
```