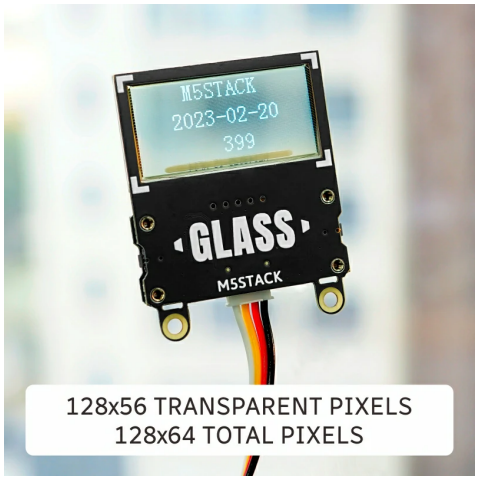
Unit Glass

SKU:U158



描述

Unit Glass 是一款 **1.51 英寸** 的 **透明 OLED** 拓展屏幕单元。采用 **STM32 + SSD1309** 驱动方案，**分辨率为 128 x 64**，单色显示，**透明区域为 128 x 56**。MCU 采用 **STM32F030F4P6**，内部集成 **两路输入按键** 和 **一路蜂鸣器**，方便用户与屏幕互动，支持通过 I2C（**0x3D**）通信接口进行控制与固件升级。该透明 OLED 屏幕拓展适合嵌入到各种家居产品或者各种控制设备中作为显示面板。

产品特性

- 128×56 透明像素（128×64 总像素）
- 显示区域 35.05×18mm
- 玻璃面积 42.04×27.22mm
- 1 位颜色深度
- I2C 通信（地址 0x3D）
- 支持编程平台：Arduino、UiFlow

包装内容

- 1 x Unit Glass
- 1 x HY2.0-4P Grove 连接线（20cm）

应用场景

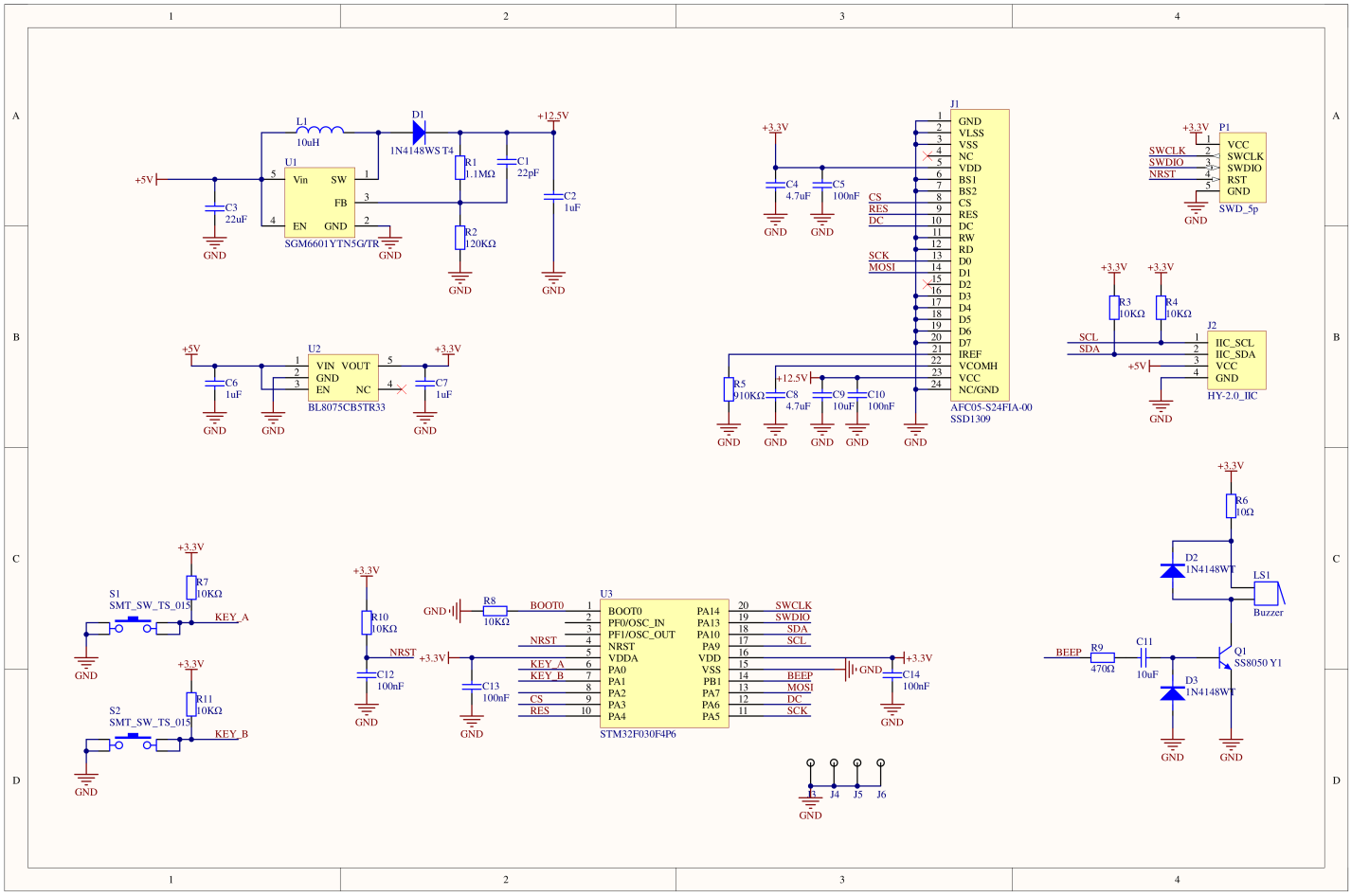
- 家居产品
- 控制设备
- 显示面板

规格参数

规格	参数
MCU	STM32F030F4P6
屏幕	1.51 英寸透明 OLED 屏幕
分辨率	128 x 64
显示颜色	蓝色
显示区域	35.05 x 18mm
面板尺寸	42.04 x 27.22 x 1.25mm
视角方向	全视角
工作温度	0 ~ 40°C
逻辑电压	3.3V
通信接口	I2C 通信 @ 0x3D
产品尺寸	53.0 x 42.0 x 6.0mm
产品重量	10.1g
包装尺寸	138.0 x 93.0 x 7.0mm
毛重	16.4g

原理图

- Unit Glass 原理图 PDF

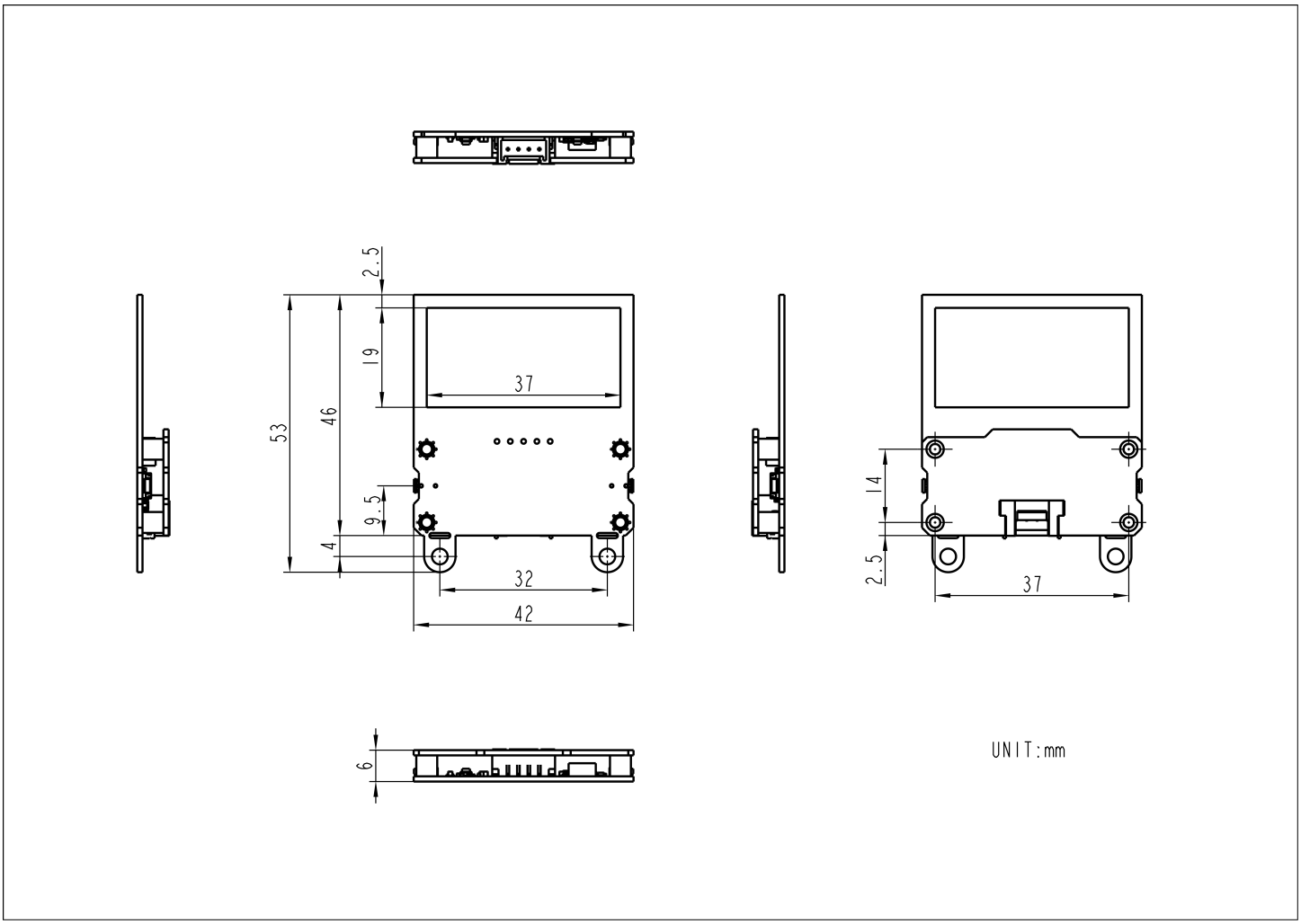


管脚映射

Unit Glass

HY2.0-4P	Black	Red	Yellow	White
PORT.A	GND	5V	SDA	SCL

尺寸图



数据手册

- STM32F030F4P6
- SSD1309
- 128*64 Transparent OLED

软件开发

Arduino

- Unit Glass Arduino 教程

UiFlow1

- Unit Glass UiFlow1 文档

UiFlow2

- Unit Glass UiFlow2 文档

内置固件

- Unit Glass 内置固件

通信协议

- Unit Glass I2C Protocol PDF

M5Stack Unit GLASS I2C Protocol																	V4 (FW Version) 2023/3/8
REG MAP (Addr:0x3D)		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	note
Clear	0x00 W	Clear																Clear: Write 1 to clear OLED
Show	0x10 W	Show																Show: Write 1 to show OLED
Draw String	0x20 W	pos-x	pos-y	text size	mode[1]													text size: 8 and 16 (need 1 ms delay after draw string)
Draw Point	0x30 W	pos-x	pos-y	mode														
Draw Line	0x40 W	pos-x1	pos-y1	pos-x2	pos-y2	mode[1]												
Draw Circle	0x50 W	pos-x	pos-y	radius	mode[1]													
Invert	0x60 W	Invert																Invert: 0, front display; 1, front display, flip 180 degrees; 2, reverse display; 3, reverse display, flip 180 degrees
Display ON/OFF	0x70 W	ON/OFF																ON/OFF: 1:Display on; 0:Display off
String Buffer Array[2]	0x80 W	Index-L	Index-H	data														
Picture Buffer Array[3]	0x90 W	Index-L	Index-H	data														
Color reverse	0xA0 W	color reverse																color turn: 0: Normal; 1: reverse color display
Draw Picture	0xB0 W	pos-x	pos-y	size-x	size-y	mode[1]												
Buzz	0xC0 W	Buzz-Freq-L	Buzz-Freq-H	Buzz Duty	Buzz Control													Buzz Freq[4], Buzz Duty[5] Buzz Control: 0, disable; 1, enable
Key	0xD0 R	Key-A	Key-B															Key: 0 or 1
Firmware Version	0xF0 R															Version		Version: firmware version number

[1] mode: 1, filling; 0, clear

[2] String buffer: For example, to write "Hi" to buffer, we need to write two bytes. The first byte, index-L = 0, index-H = 0, data = 'H'. The second byte, index-L = 1, index-H = 0, data = 'i'. (The maximum length of character buffer is 64 bytes)

[3] Picture buffer: The usage method is the same as string buffer. (The maximum length of the picture buffer is 1024 bytes)

[4] Buzz Freq: The unit is Hz. For example, set the buzz frequency to 4000Hz, Buzz-Freq-L = 0xA0, Buzz-Freq-H = 0x0F

[4] Buzz duty. For example, set Buzz duty to 50%, Buzz Duty = 255 * 0.5 = 127

相关视频

- UiFlow2 Glass Unit