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Unit QRCode

SKU:U173

Description

Unit QRCode is an integrated 1D/2D barcode scanning unit, internally equipped with a 640x480 resolution CMOS barcode scanning engine and a bus conversion MCU (STM32F030). By toggling the side switch, it can switch between I2C and UART communication interfaces. The scanning engine supports 3 types of 2D barcodes and 8 types of 1D barcodes prevalent in the market, and comes with a firmware upgrade interface. The unit features a scan trigger button, a built-in buzzer, and a fill light LED, providing audio cues in different states. A red LED is used for focus and aiming assistance. It can be programmed to operate in either automatic continuous trigger or manual trigger mode. Suitable for logistics, retail, manufacturing, and other fields.

Features

- STM32F030F4P6@32-bit ARM Cortex-M0 processor
- Supports 3 types of 2D barcodes and 8 types of 1D barcodes
- Firmware upgradeable
- Built-in I2C and UART communication interface switch
- Built-in buzzer for audio cues
- Built-in illumination LED
- High-resolution imaging
- Focus and aiming function

Includes

- 1 x Unit QRCode
- 1 x HY2.0-4P Grove cable (20cm)

Applications

- Logistics
- Retail
- Manufacturing

Specifications

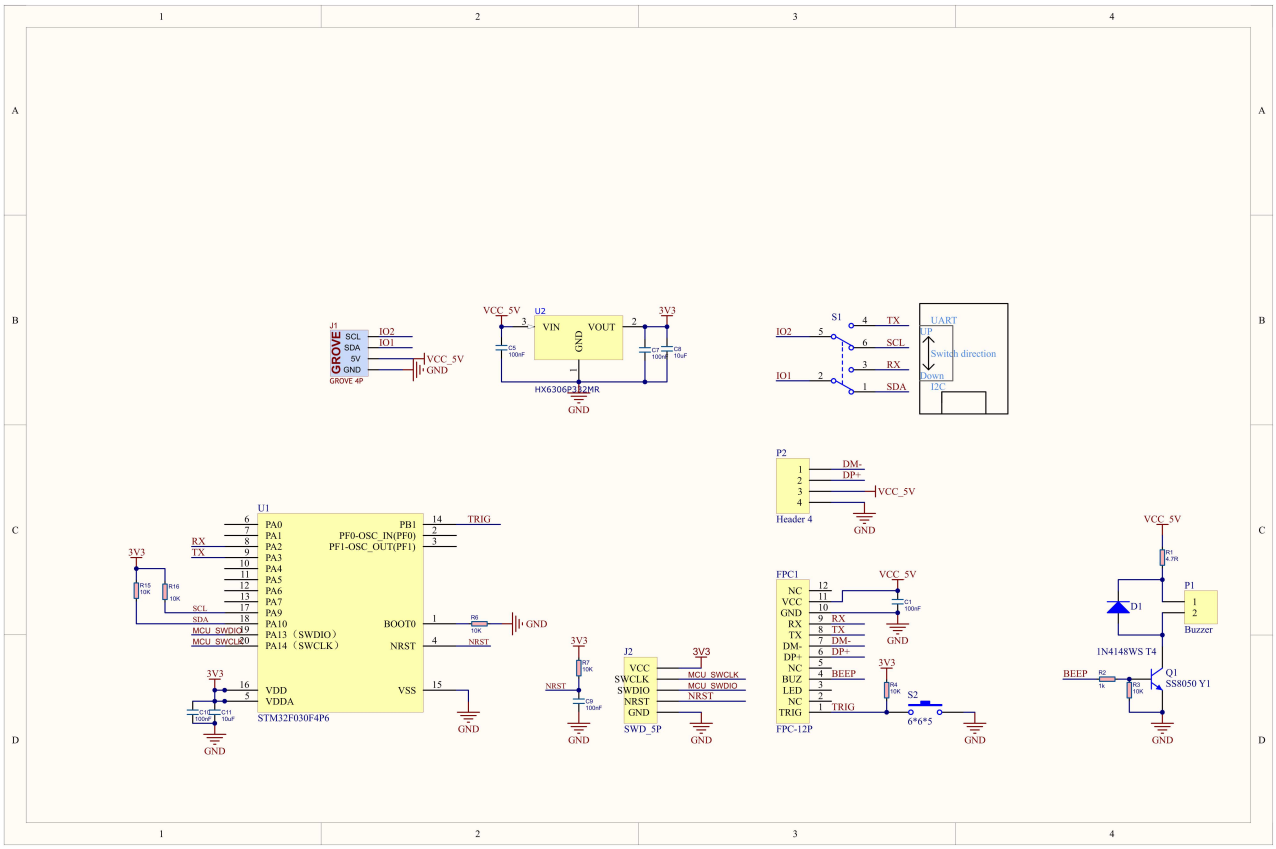
Specification	Parameter
MCU	STM32F030F4P6@32-bit ARM Cortex-M0 processor
Sensor	640x480 CMOS@M14 module
Illumination	White LED
Focus and Aiming	Red LED
2D Barcode Types	PDF417, QR Code, Data Matrix
1D Barcode Types	Code39, Code93, Code 128, EAN-13, EAN-8, UPC-A, UPC-E, Interleaved 2 of 5
Read Accuracy	≥5mil
Print Contrast	≥ 20%
Scanning Angle	Pitch angle ±55°, yaw angle ±55° (can be adjusted with a refracting lens)
Communication Interface	I2C communication (0x21)
Housing Material	Plastic (PC)
Product Size	65.8 x 27.2 x 18.4mm
Product Weight	14.0g
Package Size	138.0 x 93.0 x 19.4mm
Gross Weight	19.4g

Learn

> Installing a refracting lens can change the scanning angle, as shown above.

Schematics

- Unit QRCode Schematics PDF



PinMap

Unit QRCode I2C Mode

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

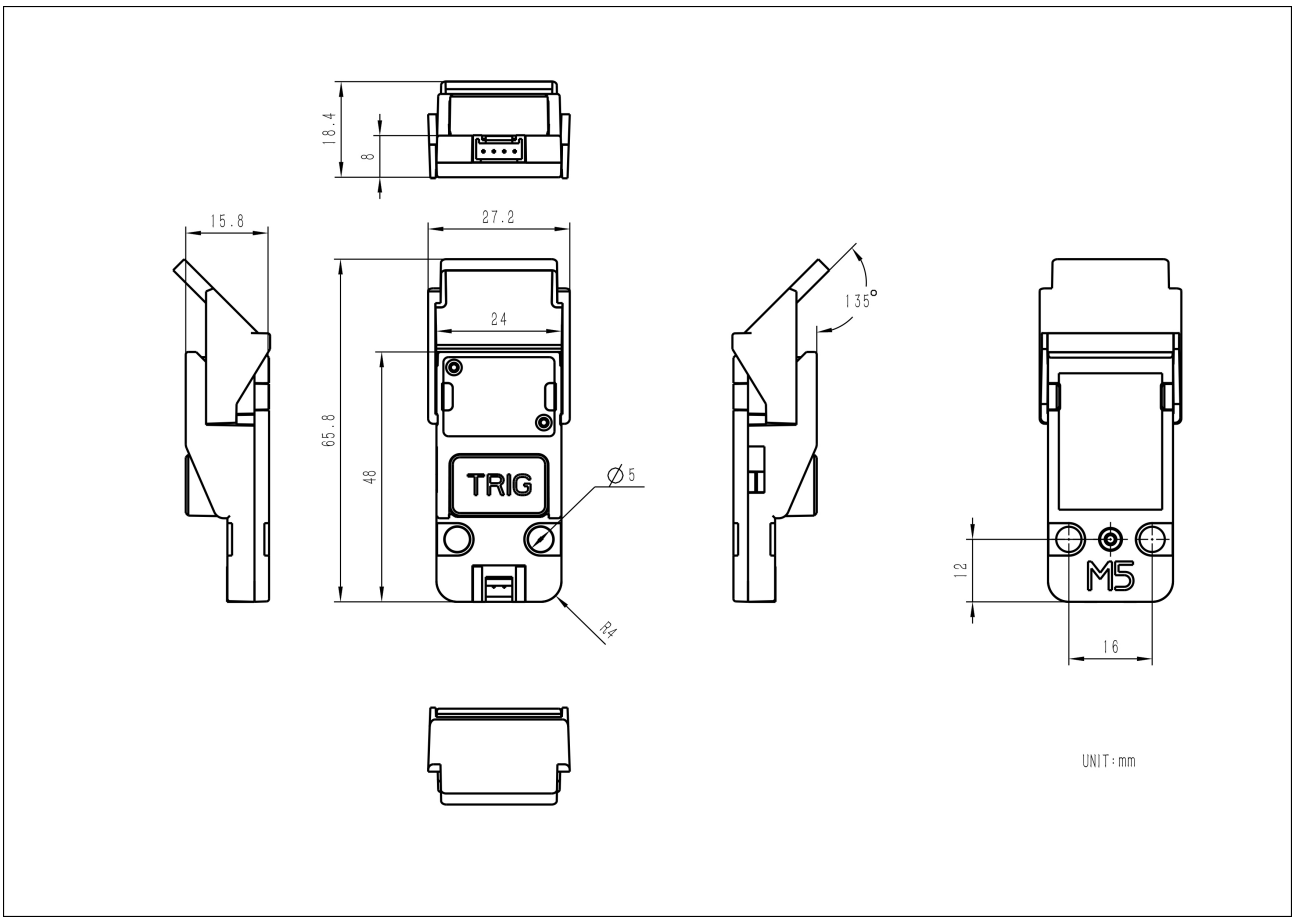
Unit QRCode UART Mode

HY2.0-4P	Black	Red	Yellow	White
PORT.C	GND	5V	UART_TX	UART_RX

STM32 Trig Button

STM32	PB1
BUTTON	TRIG

Model Size



Datasheets

- QRCODE Module Datasheet

Softwares

Arduino

- Unit QRCode I2C Mode Example
- Unit QRCode UART Mode Example

UiFlow1

- Unit QRCode UiFlow1 Docs

UiFlow2

- Unit QRCode UiFlow2 Docs

Protocol

M5Stack Unit QRCode I2C Protocol

V2 (FW Version)
2023/9/7

REG MAP (Addr:0x21)		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	note
QRCode Trigger (Only effective in manual trigger mode)	0x0000 W	Trigger																Trigger: 0: Stop continuously decode 1: Start continuously decode
QRCode Data Status	0x0010 R/W	Status																Status(reset after read qrcode data or write 0): 0: not ready 1: data good 2: need to read again
QRCode Length	0x0020 R	Length-L	Length-H															QRCode Length: Length = (Length-L + Length-H * 256)
Trigger Mode	0x0030 W/R	Trigger Mode																Trigger Mode: 0: Auto Trigger Mode(default) 1: Manual Trigger Mode
Trig Button Status	0x0040 R	Trig Button Status																Trig Button Status: 0: press; 1: not press
Firmware Version	0x00F0 R															Version		**Version:** firmware version number
I2C Address	0x00F0 W/R																Address	**Address:** I2C Address
QRCode Data	0x1000 R	0x1000-0x11FF																

- AT Command Manual

Video

- Unit QRCode Feature Introduction

U173 Unit-QRCode 视频.mp4

- UiFlow2 QRCode Unit