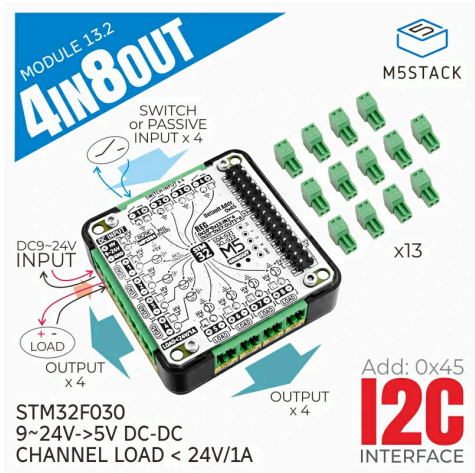


SKU:M122



Description

Module13.2 4In8Out is a stackable **8-channel MOS driver output + 4-channel passive contact input** IO expansion control module. It uses STM32F030 as the IO expansion chip, communicates via I2C protocol, supports 9 ~ 24V DC power input on an independent port, and integrates an MP1584 DC-DC circuit to provide 5V/3A power to the main controller. The 8 output channels use AO3400A MOSFETs with a common power anode, capable of directly driving loads with a maximum switching current of 1A per channel. The 4 input channels are common-ground passive contact inputs — **connecting active signals or signals greater than 5V is prohibited**. The module connects to the main controller via the M5-Bus interface, supports stacking expansion, and is suitable for multi-channel load driving, limit switch detection, button detection, and similar applications.

Features

- STM32F030F4P6 main control chip
- 8-channel common power anode MOS driver output ports (AO3400A), capable of directly driving loads with a maximum switching current of 1A per channel
- 4-channel common-ground passive input ports — connecting **active signals** or signals **greater than 5V** is prohibited
- Built-in MP1584 DC-DC circuit, providing 5V/3A power to the main controller
- I2C communication interface

Includes

- 1 x Module13.2 4In8Out
- 13 x KF2EDGK-2.54-2P terminal blocks

Applications

- Multi-channel load driving (relays, pneumatic valves, unidirectional motors, signal indicator lights, etc.)
- Limit switches
- Button detection

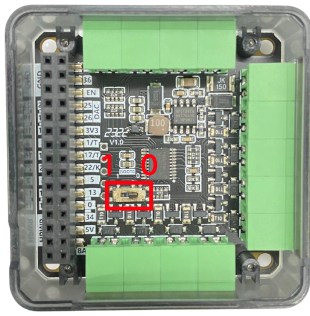
Specifications

Specification	Parameter
MCU	STM32F030F4P6
Communication Interface	I2C @ 0x45 (configurable)
Supply Voltage	9 ~ 24V
Output Channels	8
Output Current	<= 1A per channel, total <= 8A
Input Channels	4
Channel Interface	KF2EDGR-2.54-2P
Product Size	54.0 x 54.0 x 19.7mm
Product Weight	21.9g
Package Size	80.0 x 55.0 x 28.0mm
Gross Weight	52.5g

Learn

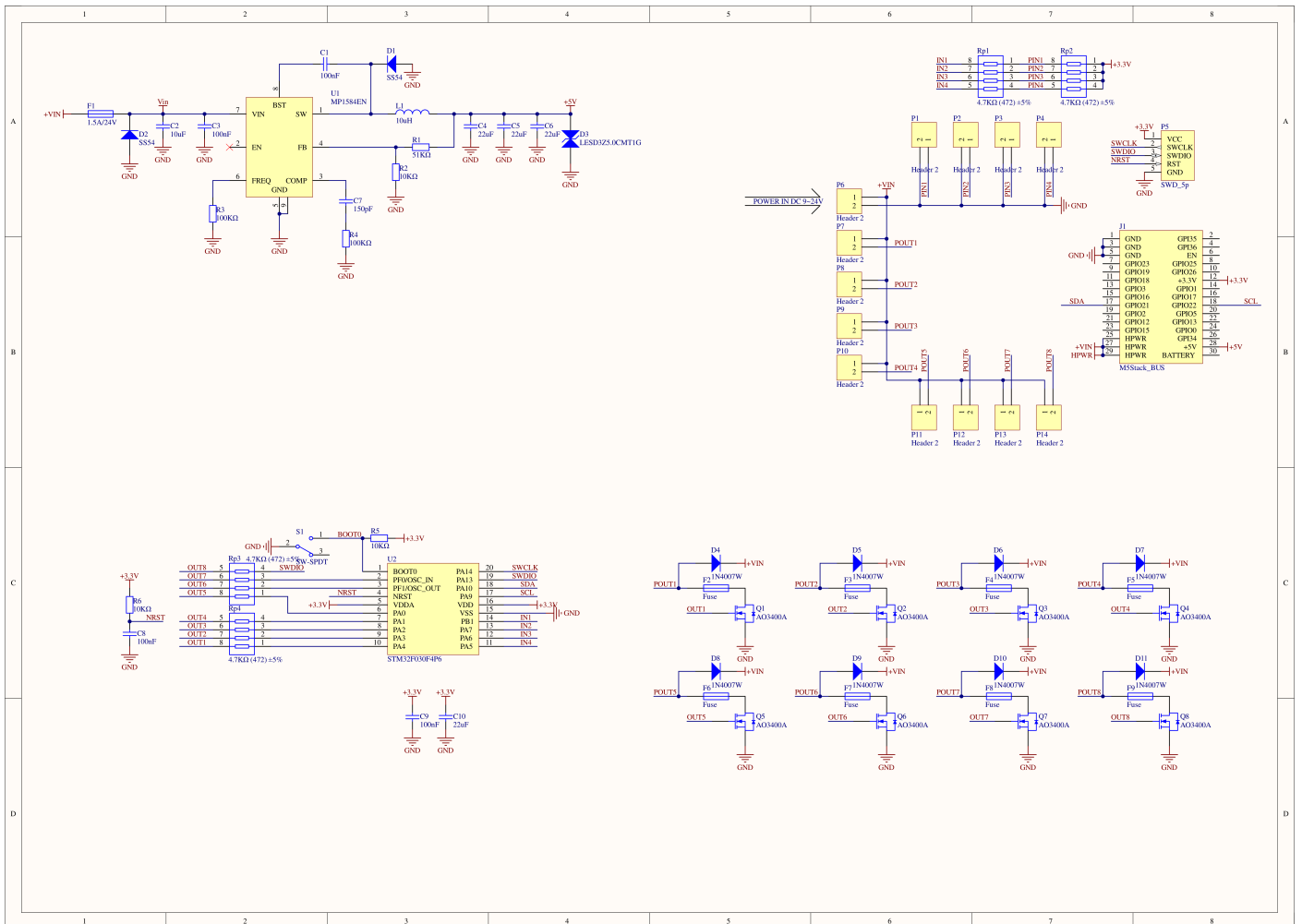
On-board DIP Switch

The toggle switch in the red box below controls boot0. Switching to position 1 (high) enters firmware flashing mode. Switching to position 0 (low) reads the user program from flash, which is the normal operating mode.



Schematics

- Module13.2 4In8Out Schematics PDF

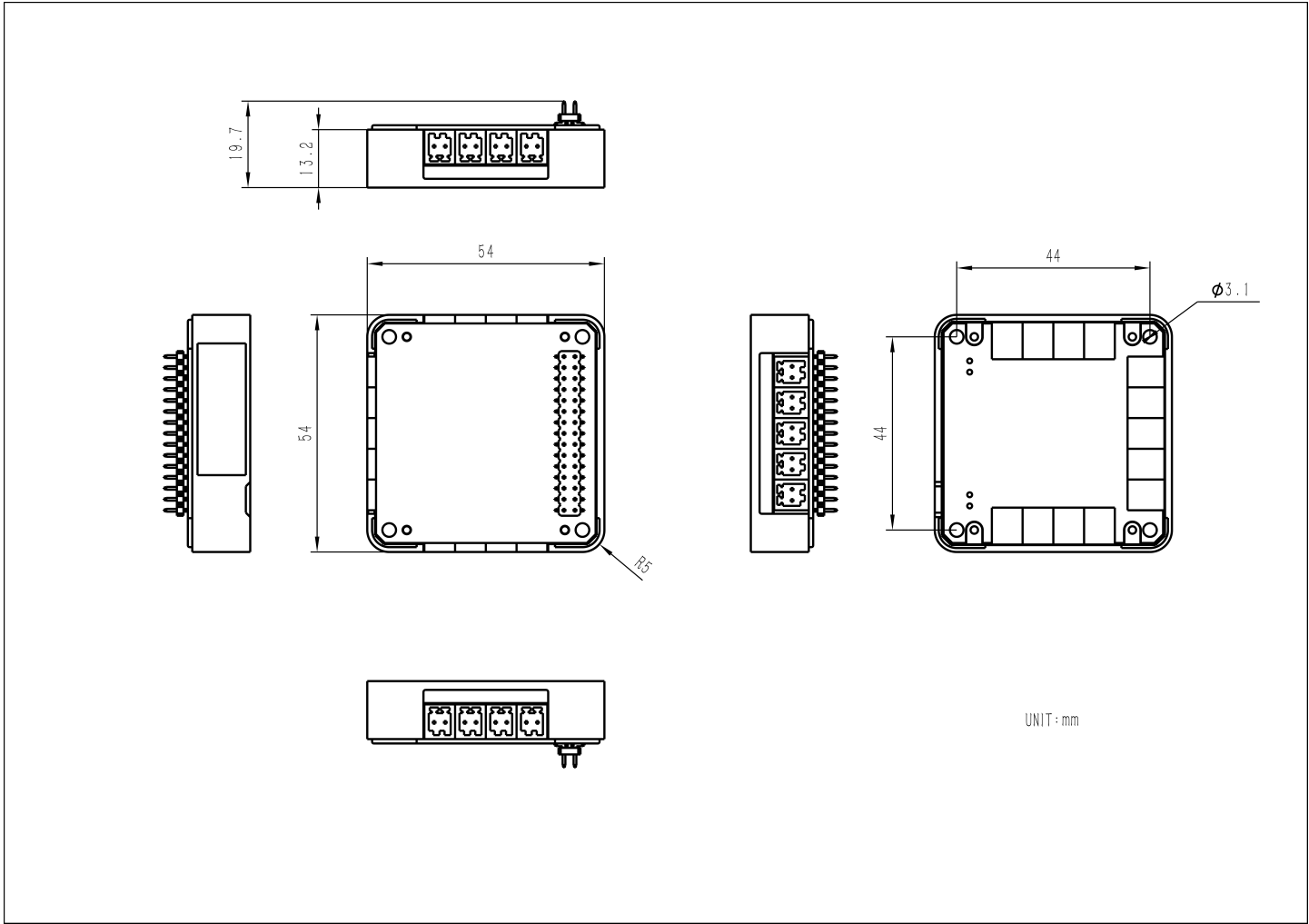


M5-Bus

PIN	LEFT	RIGHT	PIN
GND	1	2	
GND	3	4	
GND	5	6	
	7	8	
	9	10	
	11	12	3V3
	13	14	
	15	16	
SDA	17	18	SCL
	19	20	
	21	22	
	23	24	
HPWR	25	26	
HPWR	27	28	5V
HPWR	29	30	

Model Size

◦ [Module13.2 4In8Out Model Size PDF](#)



Softwares

Arduino

- [Module13.2 4In8Out Arduino Driver Library](#)
- [Module13.2 4In8Out Arduino Tutorial](#)

UiFlow1

- [Module13.2 4In8Out UiFlow1 Documentation](#)

UiFlow2

- [Module13.2 4In8Out UiFlow2 Documentation](#)

Protocol

REG MAP (Addr:0x45)		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	note	
Switch input	0x10 R	Input0	Input1	Input2	Input3													Input: value of switch input, 0 or 1	
Load output	0x20 R/W	Output 0	Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	Output 7										Output: 0: Off; 1: On
Firmware version	0xF0 R																Version		Version: firmware version
I2C Address	0xF0 R/W																Addr		Addr: I2C address: 0~127

