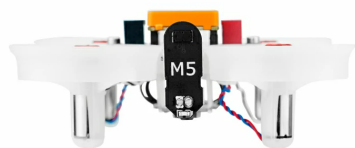
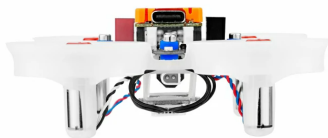
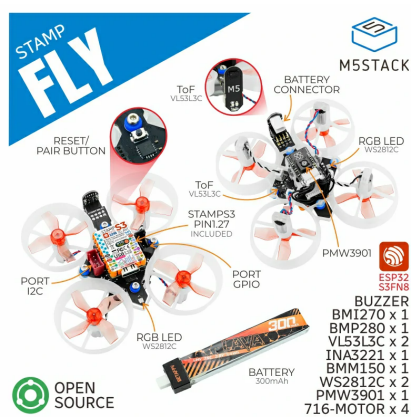


StampFly

SKU:K138



Description

M5Stamp Fly is a programmable open-source quadcopter kit, with StampS3 as the main controller. It integrates a BMI270 6-axis gyroscope and BMM150 3-axis magnetometer for attitude and direction detection, a BMP280 barometric pressure sensor, and two VL53L3 distance sensors for precise altitude hold and obstacle avoidance. The PMW3901MB-TXQT optical flow sensor enables displacement detection, while a buzzer, reset button, and WS2812 RGB LED are used for interaction and status indication. It is equipped with a 300mAh high-voltage power battery and four high-speed coreless motors. The PCB features an onboard INA3221AIRGVR for real-time current/voltage monitoring, and two Grove interfaces for easy expansion of other sensors and peripherals. Pre-installed with debugging software, it pairs with the Atom JoyStick for remote control via the ESP-NOW protocol. Users can choose between automatic or manual modes to easily achieve functions such as position hold and flips. The firmware source code is open-source. This product is suitable for education, research, and various drone development projects.

Tutorial



StampFly & Atom Joystick Firmware Flashing, Getting Started Tutorial

This tutorial will guide you on how to flash the factory firmware to StampFly & Atom Joystick using M5Burner, pairing, and basic operations and indications of the quadcopter.

Note

Charging Precautions

Plug the battery into the Atom Joystick charging slot and connect the data cable to the Atom Joystick to charge.

Battery Maintenance

1. Do not discharge the battery below 3V per cell under load.
2. Do not store a fully charged battery for more than 3 days. For long-term storage, keep the voltage between 3.8V and 3.9V.

Features

- M5StampS3 as the main controller
- BMP280 barometric pressure detection
- VL53L3 distance sensor for altitude hold and obstacle avoidance
- 6-axis attitude sensor
- 3-axis magnetometer for direction detection
- Optical flow sensor for displacement detection
- Buzzer
- 300mAh high-voltage power battery
- Current and voltage detection
- Grove interface for expansion

| Includes

- 1x Stamp Fly
- 1x 300mAh high-voltage lithium battery
- 1x Propeller removal tool
- 2x Propellers (0.8mm aperture)

| Applications

- Education
- Research
- Drone development
- DIY projects

| Specifications

Specification	Parameter
M5StampS3	ESP32-S3@Xtensa LX7, 8M-FLASH, WIFI, OTG\CDC function
Motor	716-17600kv
Distance Sensor	VL53L3C 0x29(7-bits) @up to 3 meters
Optical Flow Sensor	PMW3901MB-TXQT
Barometric Pressure Sensor	BMP280(0x76)@300-1100hPa
3-axis Magnetometer	BMM150(0x10)
6-axis Attitude Sensor	BMI270
Grove	I2C+UART
Battery	300mAh high-voltage lithium battery
Battery Output Voltage	4.35V
Flight Time	Approximately 4 minutes
Current/Voltage Detection	INA3221AIRGVR(0x40)
Buzzer	Passive onboard buzzer@5020
Operating Temperature	0-40°C
Product Size	81.5 x 81.5 x 31mm
Package Size	162 x 99 x 36mm
Product Weight	36.8g
Package Weight	70.7g

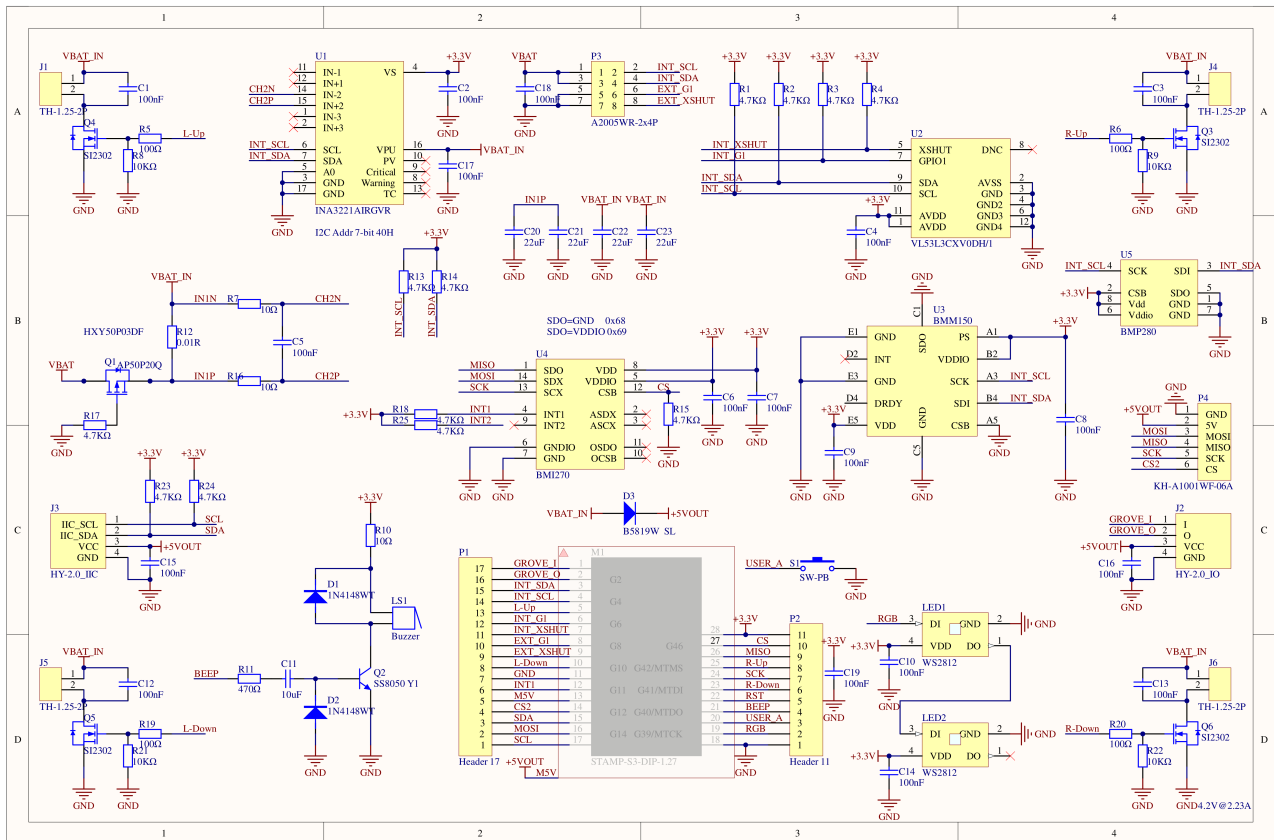
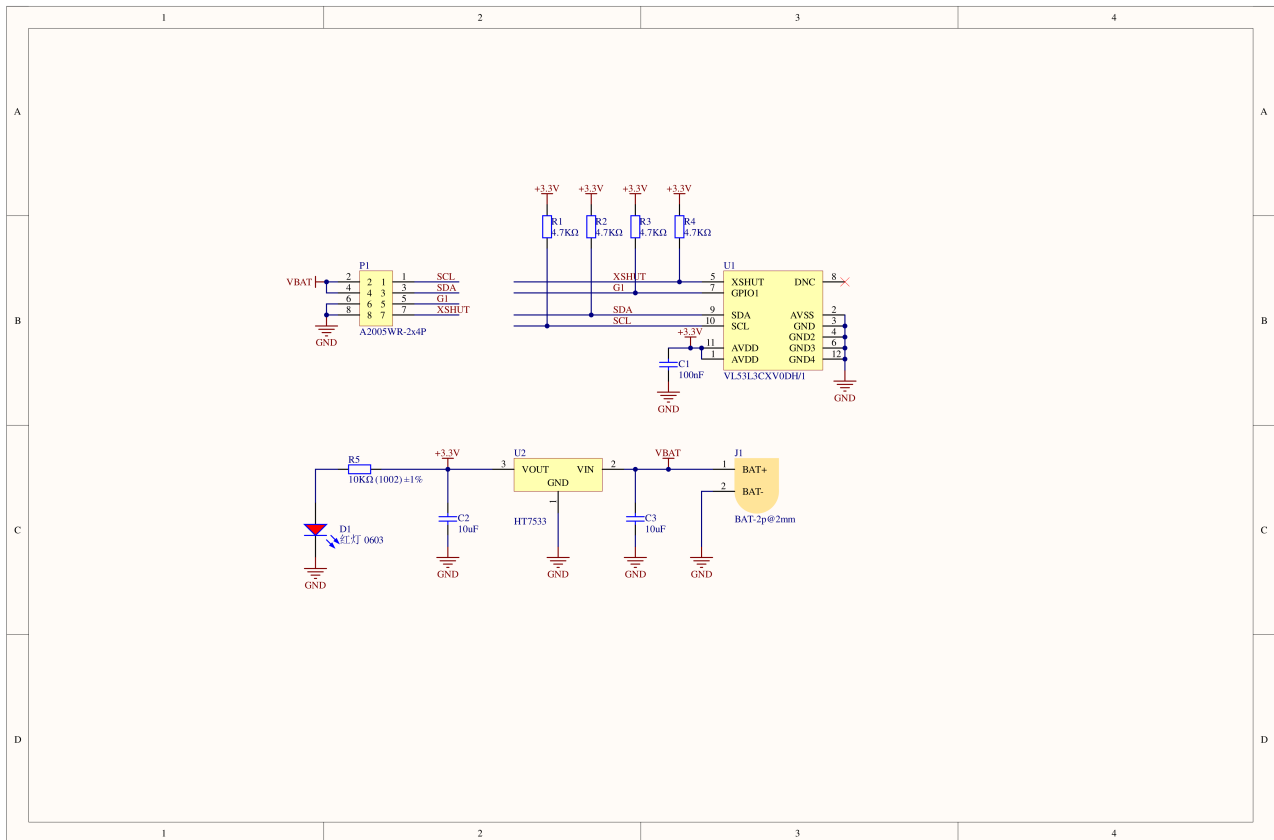
Learn

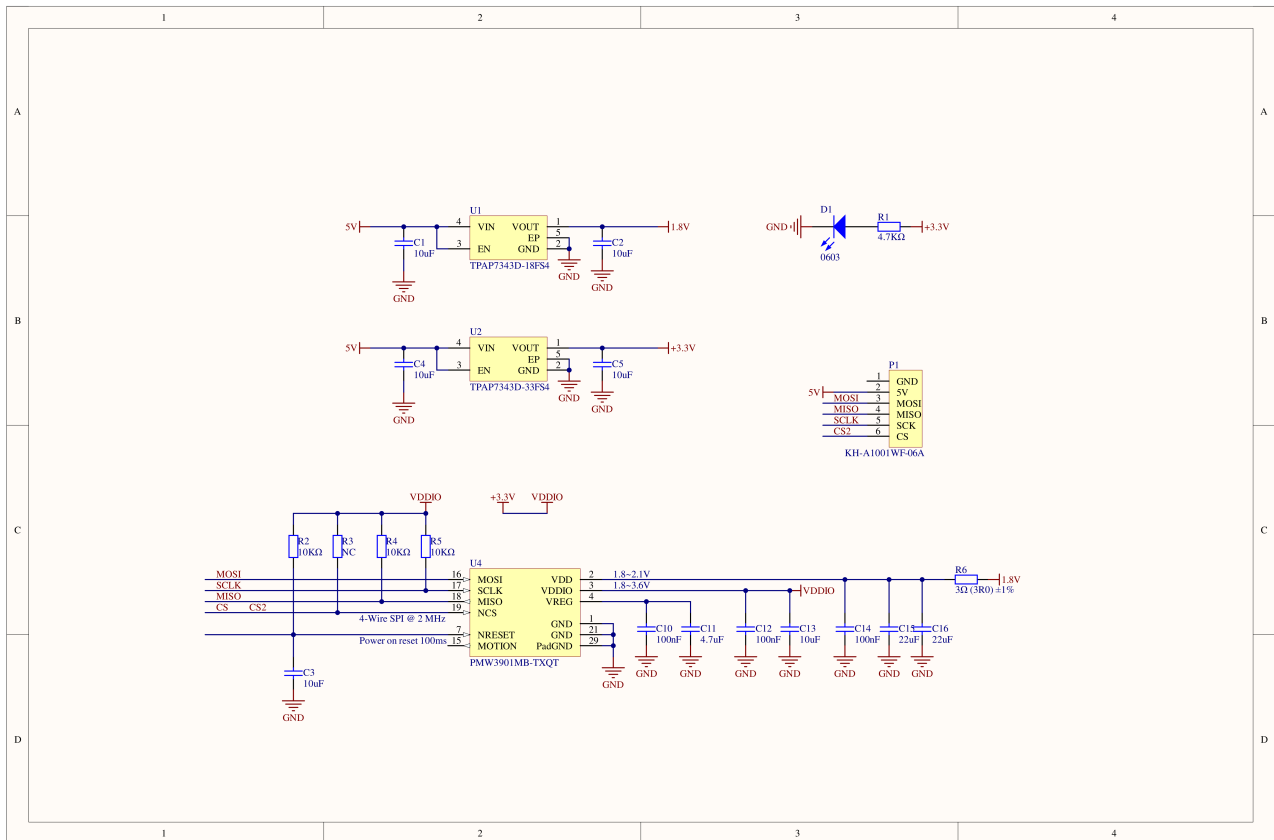
BMM150 Magnetic Field Interference

Products with magnets may interfere with the BMM150 magnetic field sensor, causing abnormal readings. When used with an M5 master control device containing a magnet, the magnet needs to be removed, and at the same time, the BMM150 sensor should be kept away from strong magnetic fields.

Schematics

- [StampS3_Fly_Hat Schematics PDF](#)
- [Stamp_Fly Schematics PDF](#)
- [PMW3901MB Schematics PDF](#)





PinMap

I2C Interface

StampFly (Stamp-S3)	G3	G4
INA3221AIRGVG	INA_SDA	INA_SCL
BMM150	INA_SDA	INA_SCL
BMP280	INA_SDA	INA_SCL
VL53L3	INA_SDA	INA_SCL

SPI Interface

StampFly (Stamp-S3)	G14	G44	G43	G46	G12
BMI270	MOSI	SCK	MISO	CS	
PMW3901MB-TXQT	MOSI	SCK	MISO		CS2

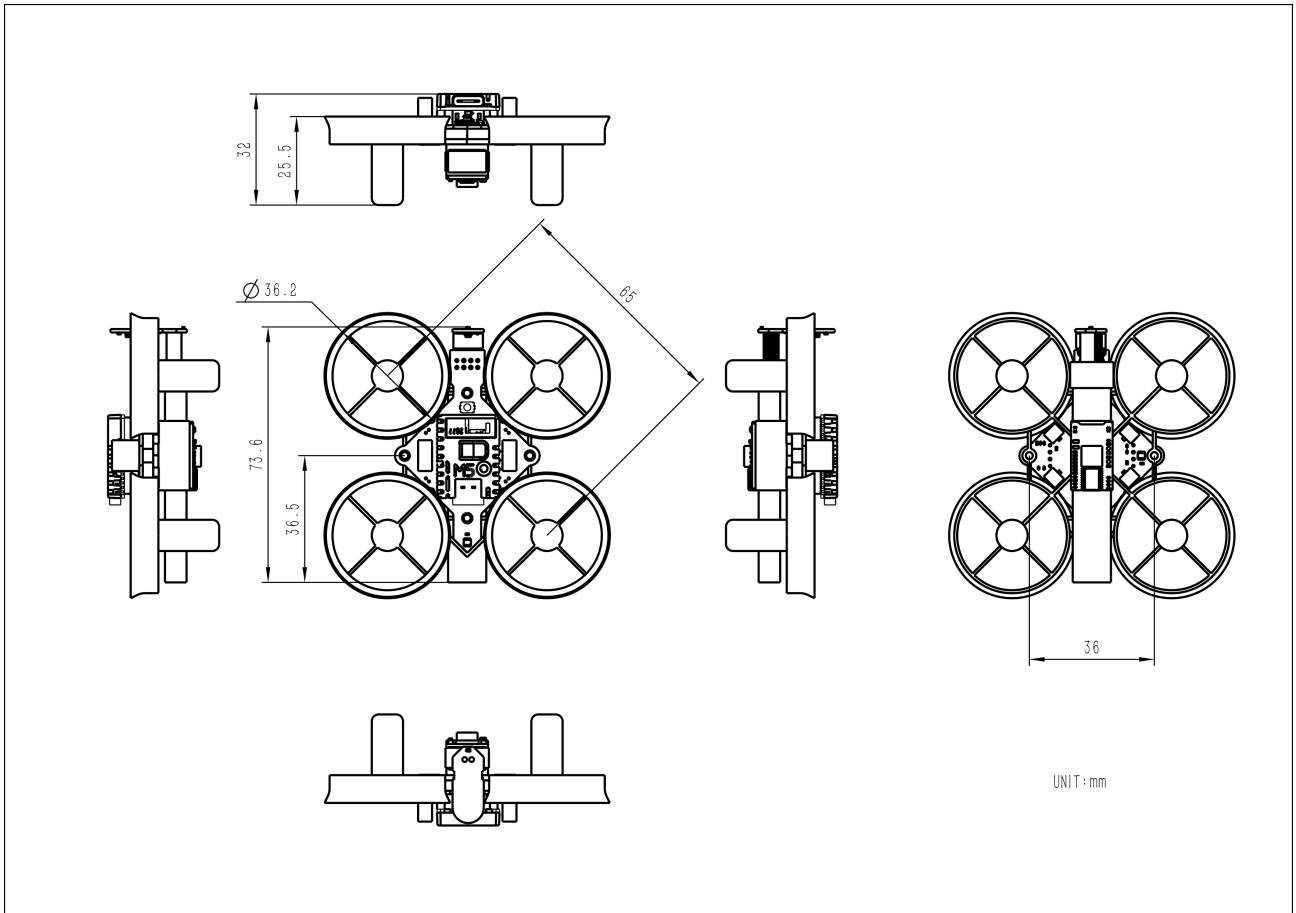
| Grove Interface

StampFly (Stamp-S3)	G13	G15	G1	G2
Grove (RED)	SDA	SCL		
Grove (BLACK)			GROVE I	GROVE O

| Buzzer and RGB LED

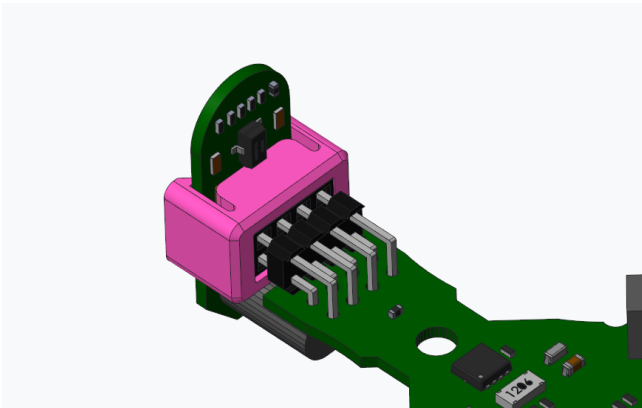
StampFly (Stamp-S3)	G12	G39
BEEP	BEEP	
WS2812		RGB

| Model Size



3D

- [Battery Protection Component STL File](#)



Datasheets

- [VL53L3\(ToF\)](#)
- [PMW3901MB-TXQT\(Optical Flow Sensor Chip\)](#)
- [BMP280\(Pressure Sensor Chip\)](#)
- [BMM150\(3D Magnetometer Compass\)](#)

- [BMI270\(6-axis Inertial Measurement Unit \(IMU\) Sensor\)](#)

| Softwares

| Arduino

- [StampFly Firmware](#)

| Easyloader

Easyloader	Download Link	Notes
StampFly Firmware Easyloader	download	/

| Video

- Atom JoyStick with StampFly Quadcopter Basic Function Demonstration

[StampFly](#), [AtomJoyStick video.mp4](#)

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Multiple Function Sensor Development Tools](#) ***category:***

Click to view products by [M5Stack](#) ***manufacturer:***

Other Similar products are found below :

[DK-45686](#) [EV_ICM-42670-P](#) [MIKROE-5448](#) [MIKROE-4636](#) [GX-F12A](#) [GX-F12A-P](#) [GX-F15A](#) [GX-F6A](#) [GX-F6A-P](#) [GX-F8B](#) [GX-H12A](#)
[1093](#) [MIKROE-2455](#) [MIKROE-2458](#) [MIKROE-2507](#) [MIKROE-2508](#) [MIKROE-2529](#) [176](#) [189](#) [1893](#) [ATQT4-XPRO](#) [GP30-DEMO](#)
[MODULE](#) [GX-F12AI-P](#) [GX-F15A-P](#) [GX-F8A](#) [GX-F8A-P](#) [GX-H8A](#) [GX-H8A-P](#) [AAS-AQS-UNO](#) [SDAF01](#) [IQS620AEV04-S](#)
[SMOD701KITV1](#) [DFR0131](#) [DFR0165](#) [DFR0280](#) [SEN0213](#) [SEN0217](#) [SEN0219](#) [SEN0220](#) [SEN0231](#) [SEK002](#) [SSCCOMMBOARDV4P1C](#)
[MIKROE-2786](#) [MIKROE-2731](#) [SPEEDTOGOKITTOBO1](#) [2JCIE-BL01-P1](#) [SEN0160](#) [SEN0203](#) [SLI-1000 FMK](#) [EV_ICM-20602](#)