seeed studio

INDUSTRIAL PRODUCT DATASHEET

ESP-FLY DIY Kit - DIY Micro Drone Kit based on XIAO ESP32-S3 by Max Imagination

The ESP-FLY is a compact, lightweight DIY micro drone kit powered by the Seeed Studio XIAO ESP32-S3.

SKU	UPDATED	PRICE
114993694	2026-05-06 08:30:36	$59.99(Excl. VAT)

Overview

The ESP-FLY is a compact, lightweight DIY micro drone kit powered by the Seeed Studio XIAO ESP32-S3. Designed for STEM education and hobbyists, it offers dual control methods via Wi-Fi (mobile app) or ESP-NOW (radio controller), providing a hands-on way to understand electronics and aerial robotics.

Key Features

01 **Ultra-Compact & Lightweight Design**

With a compact footprint of 67mm x 67mm x 31mm and a take-off weight of only 25g (including battery), the ESP-FLY is incredibly agile and safe for indoor flight exploration.

02 **Powerful Brain with XIAO ESP32-S3**

Driven by the XIAO ESP32-S3 module, featuring a dual-core 240MHz CPU and 2.4GHz Wi-Fi, acting as a high-performance, ultra-compact flight controller.

03 **Dual Control Methods**

Fly seamlessly from your phone via the ESP-Drone app (Wi-Fi AP mode) with low latency (~7-25 ms), or use a radio controller via ESP-NOW for extended range and stick precision.

04 **Stable Flight & Custom PCB**

Features a custom 4-layer flight controller PCB integrating an MPU-6050 6-axis IMU for self-leveling stability in Angle mode, paired with high-speed coreless motors.

05 **Perfect for STEM & DIY Learning**

A hands-on kit that requires basic soldering and assembly, making it an ideal platform for students and makers to learn drone technology and firmware customization.

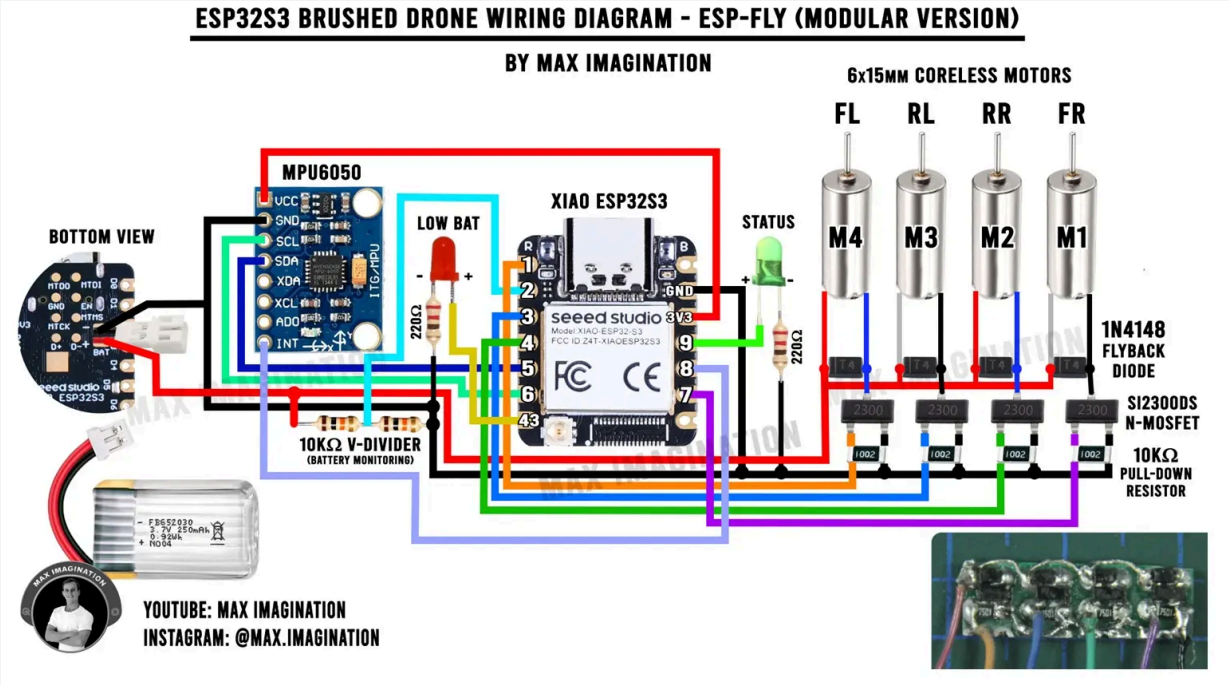
Product Gallery

Specification

Seeed Studio XIAO ESP32-S3

Category	Feature	Specification
Core	Microcontroller	
Core	Processor	Xtensa® 32-bit LX7 dual-core, up to 240MHz
Flight System	IMU Sensor	MPU6050
Propulsion	615 Coreless Motors (70,000 RPM)	
Propulsion	Propellers	30mm (CW & CCW)
Connectivity	Wireless	2.4 GHz Wi-Fi (AP mode) & ESP-NOW
Connectivity	Control Range	~50m (via smartphone) / ~200m (ESP-NOW via controller)
Power	Battery	3.7V 250mAh 25C LiPo Battery
Power	Flight Time	~5 minutes
Power	Charging	USB-C (via XIAO)
Mechanical	Take-off Weight	25g (including battery)
Mechanical	Dimensions	67m x 67mm x 31mm

Hardware Overview



Applications

- STEM Education
- Hobbyist DIY Projects
- Indoor Flight Practice

Part List

Seeed Studio XIAO ESP32-S3	×1
2.4G Antenna for XIAO ESP32-S3	×1
IMU/Motor Driver Module	×1
24 AWG Red/Black Wire - For joining battery power to XIAO	×2
Coreless Motor (6×15 mm)	×4 (2 CW and 2 CCW motors with pre-attached wires)
Propeller (30 mm tri-blade)	×8 (4 CW and 4 CCW props)
1S LiPo Battery (3.7V, 250 mAh)	×1
3D printed Parts Set - Frame, standard Top Cover, and optional FPV Top Cover	×1
"ESP-FLY" Sticker	×1
Battery-mounting Zip-Tie	×1
Landing Gear Enameled Solid Wire	×4

Compliance & Logistics

HSCODE	8543709990
USHSCODE	8517180050
EUHSCODE	8543709099
COO	CHINA

Logistics	Value
ECCN	5A992
HSCODE	8543709990
USHSCODE	8517180050
EUHSCODE	8543709099
COO	CHINA

Resource Links

- https://www.seeedstudio.com/ESP-FLY-co-create-p-6744.html
- Wiki-XIAO ESP32-S3 Series Resources

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