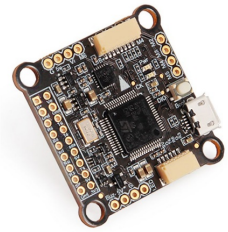
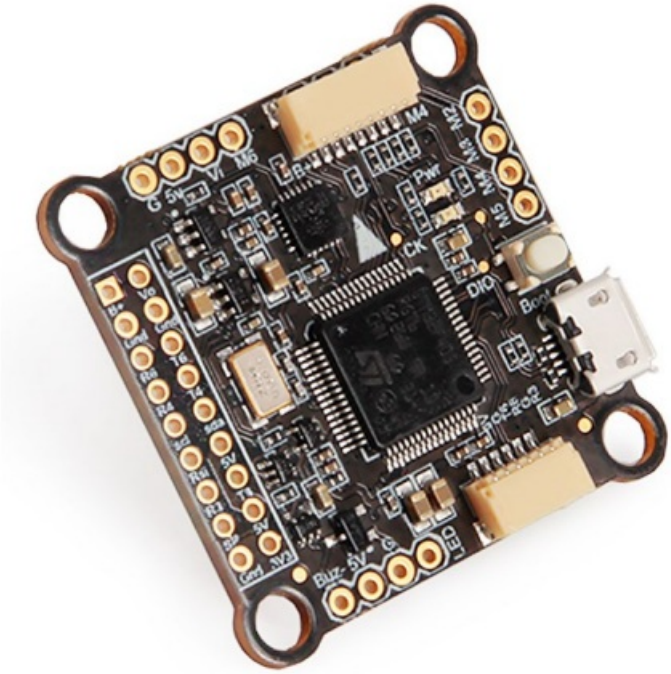


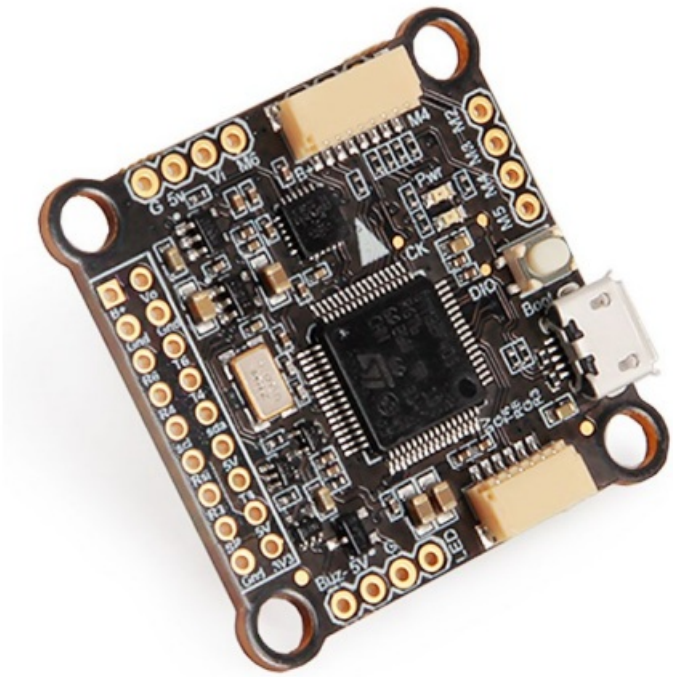
Holybro Kakute F4 V2.4 Flight Controller User Manual

Holybro Kakute F4 V2.4 Flight Controller



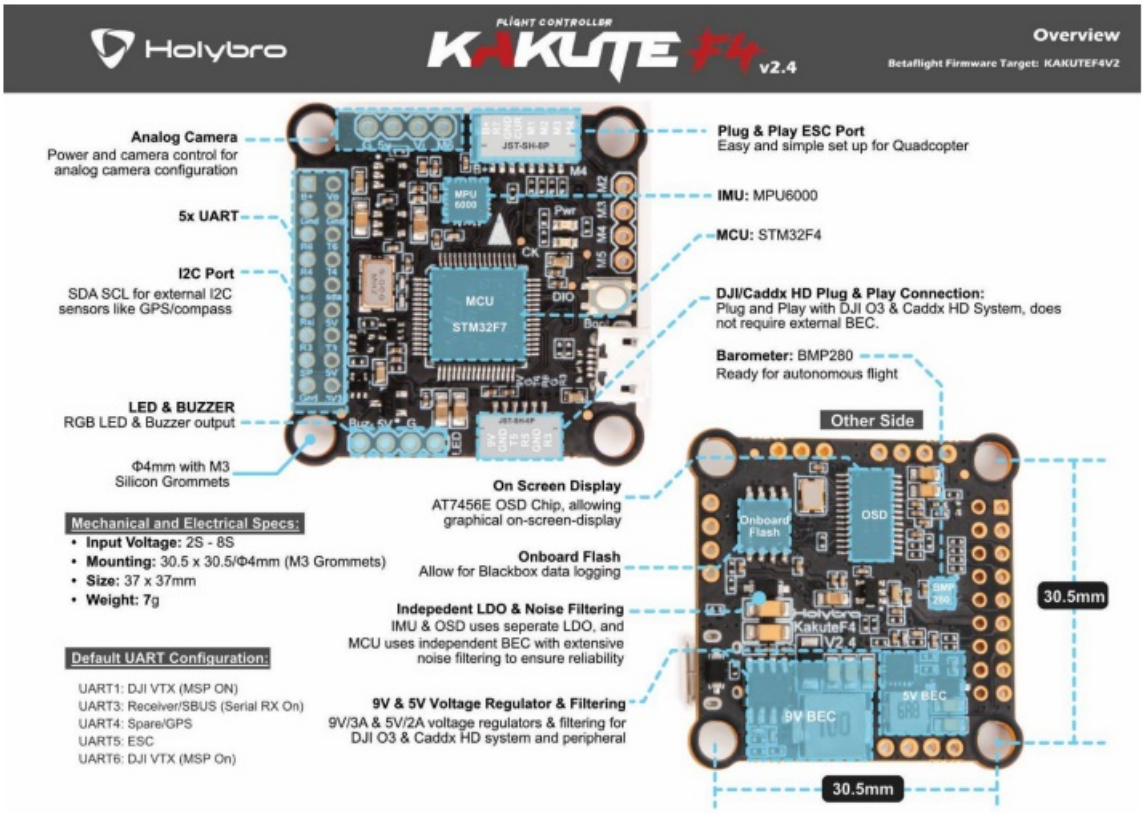
Contents

Overview



The Holybro Kakute F4 V2.4 Flight Controller includes plug-and-play DJI O3 HD camera plug, 4in1 ESC ports, barometer, OSD, 5x UARTs, logging capability with built-in flash, 5V and 9V/3A BEC, easy soldering layout and much more.

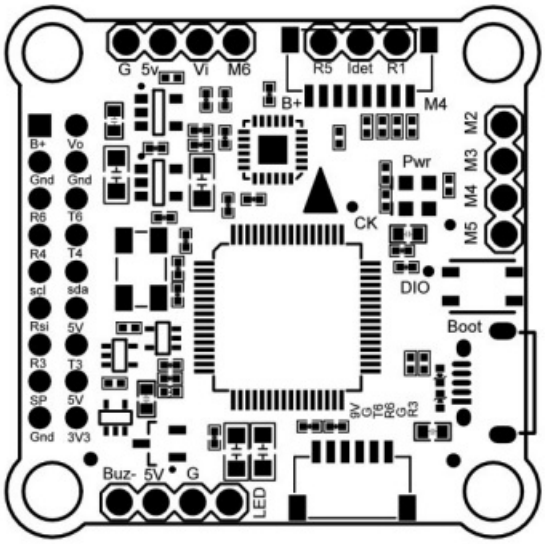
The Kakute F4 V2.4 is DJI HD ready. It has an easy plug-and-play port with an on-board 9V/A regulator designed to power your HD video transmitter like DJI O3 Air Unit & Caddx Vista while supporting analog system. It has 5x dedicated UART ports with built-in inversion for peripherals. It is also ready for autonomous flight with the on-board barometer. There are LED & buzzer pad, I2C pad (SDA & SCL) for external GPS/Magnetometers



Specification:

- MCU – STM32F405
- IMU – MPU6000
- Barometer – BMP280
- OSD – AT7456E
- 5x UARTs (1,3,4,5,6,)
- 128 Mbit Dataflash chip
- Battery input voltage: 2S-8S
- BEC 9V/3A – Optimized for DJI O3 Air unit
- BEC 5V/2A
- 7x PWM Outputs (6 Motor Output, 1 LED)
- Supports serial receivers (SBUS, iBus, Spektrum, Crossfire, ESLR).
- Mounting – 30 x 30mm, Φ4mm hole with M3 Grommets
- Dimension – 37x37mm
- Weight – 7g
- JST-SH1.0_8pin port (For 4in1 ESCs)
- JST-SH1.0_6pin port (For DJI/Caddx HD System and other VTX)

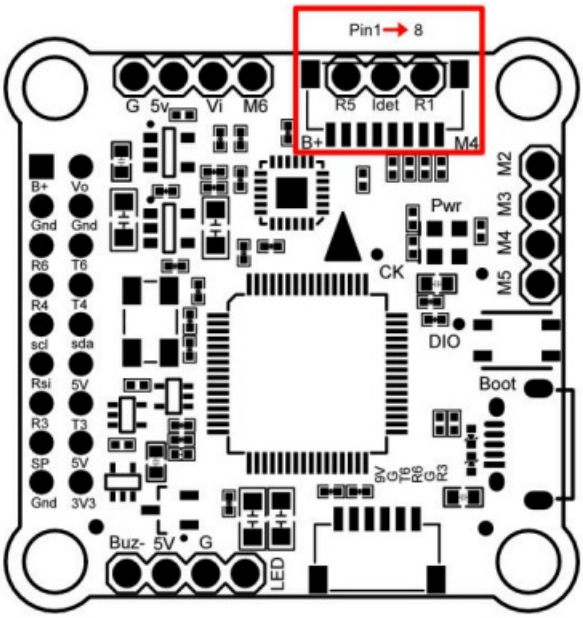
Pinout Diagram



Pin	Function
Buz-	Piezo buzzer negative leg
Led	WS2812 addressable LED signal wire
SP	FrSky SmartPort Telemetry (UART 1, inverted)
R3, T3	UART3 RX and TX (automatic inversion)
R4, T4	UART4 RX and TX (uninverted)
R5	UART5 RX (uninverted)
R6, T6	UART6 RX and TX (uninverted)
Scl	I2C SCL pin
Sda	I2C SDA pin
Rsi	Analog (0-3.3v) RSSI input
Idet	Current Sensor (0-3.3v) input
3V3	3.3v output (200 mA max)
5v	5v output (1.0 A max)
M1 to M4	Motor signal outputs

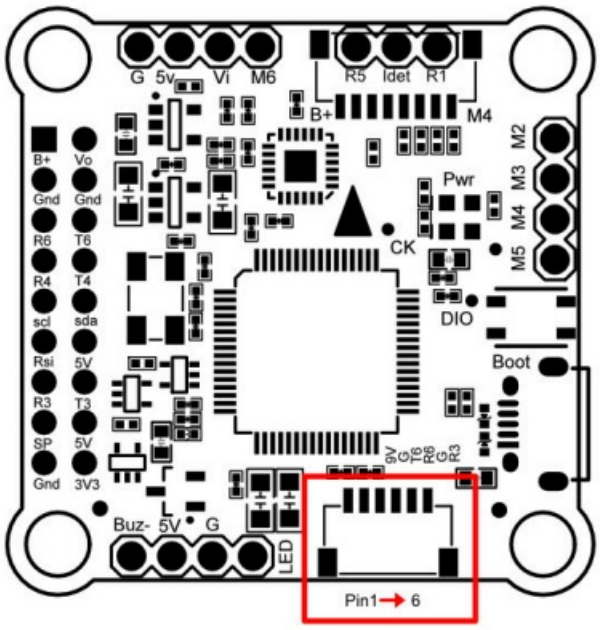
M5 to M6	Motor signal outputs(need to resource)
RX	UART 5 RX (uninverted, for ESC Telemetry)
VO	Video output to video transmitter
VI	Video input from FPV camera
Boot	Bootloader button
G or Gnd	Ground
B+	Battery positive voltage (2S-6S)

JST SH 8 Pin Port



Pin	Function
1	Battery Voltage
2	R5 (for ESC telemetry)
3	Ground
4	Current Sensor Input
5	M1
6	M2
7	M3
8	M4
The 8PIN SH connector can be used to connect directly to compatible 4-in-1 ESCs. However, you might need to use the SH connector even if you are not using a 4-in-1 ESC, because some pins are only present in the SH co nnector, not as pads on the board.	

JST SH 6 Pin Port

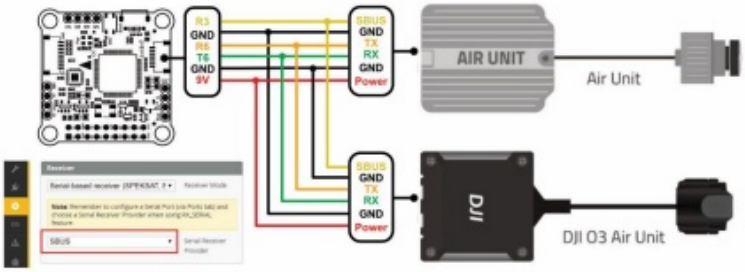


Pin	Function
1	R3
2	G
3	R6
4	T6
5	G
6	9V
The 6PIN SH port available on the board makes it much more convenient for you to connect HolyBro Kakute F4 V2 to the DJI O3 Air Unit or Caddx Vista or other Vtx, for both signal and power supply.	

Wiring diagram

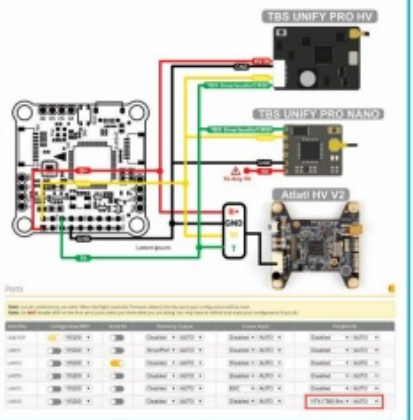
Using DJI/Caddx Digital FPV System with DJI Remote Controller

Note:
In order for the flight controller to send OSD information to the Air Unit/Vista, UART1 needs to be set to MSP. If you are using DJI Remote Controller, set Serial Rx on for UART 3. Ensure your Reciever Protocal is set to SBUS.

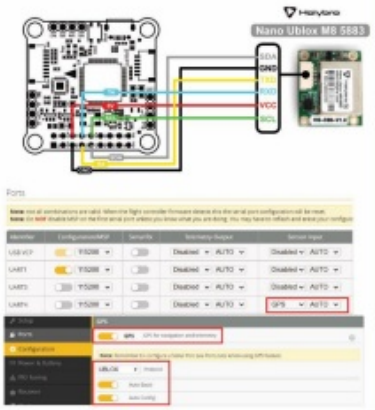


Video Transmitter (Vtx)

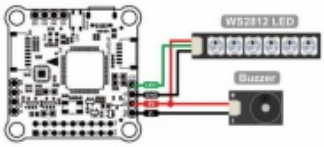
If you are not Using DJI/Caddx Digital System Vtx



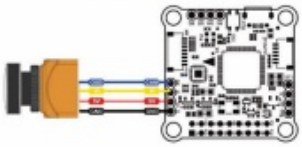
GPS

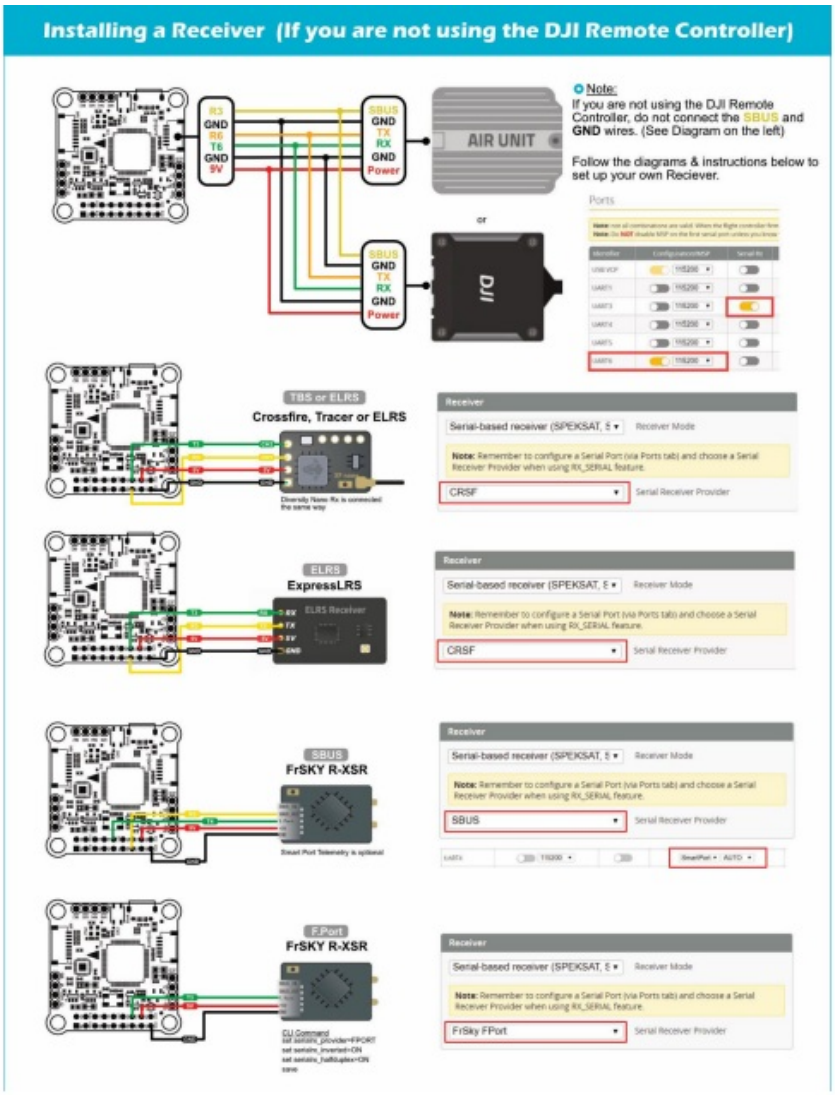


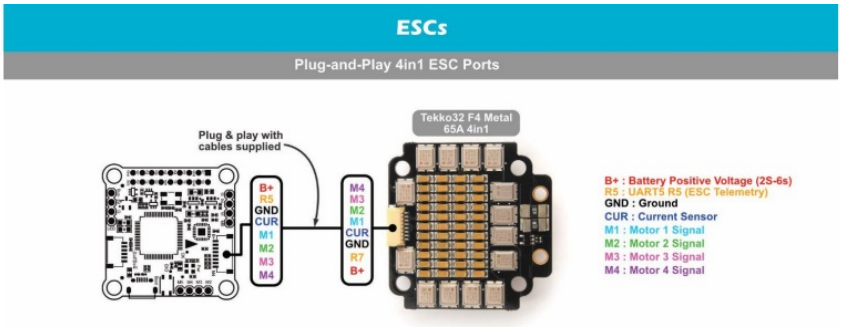
Buzzer/LED



Analog FPV Camera







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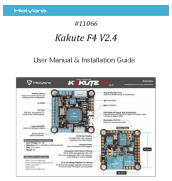
Documents / Resources

	**Holybro Kakute F4 V2.4 Flight Controller** [pdf] User Manual 11066, Kakute F4, Kakute F4 V2.4 Flight Controller, V2.4 Flight Controller, Flight Controller, Controller

References

- Holybro - Build your drone from here
- Holybro - Build your drone from here