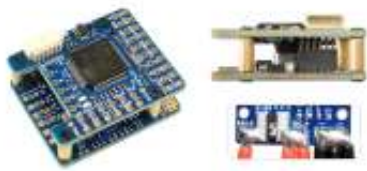


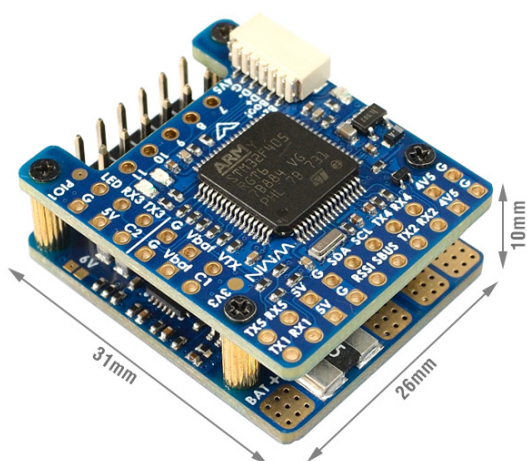
Link do produktu: <https://dronexpert.eu/kontroler-lotu-matek-flight-controller-f405-wmn-p-15386.html>

Kontroler lotu Matek FLIGHT CONTROLLER F405-WMN



Cena brutto	277,39 zł
Cena netto	225,53 zł
Dostępność	Aktualnie niedostępny
Kod producenta	F405-WMN
Producent	MATEKSYS

Opis produktu



MATEKSYS Flight Controller F405-WMN

- * MCU STM32F405RGT6
- * IMU ICM42688-P
- * Barometer SPL06-001
- * OSD AT7456E
- * BlackBox 16M Flash
- * 5x UARTs
- * 1x I2C
- * 3x ADC (Vbat, Current, RSSI)
- * 12x PWM outputs
- * 2x PINIO (Camera switch, PIO1 pad)
- * 6~30V DC IN (2~6S LiPo)
- * 132A current sensor (90A continuous)
- * Dual BEC, 5V/1.5A & Vx(5V/6V)/5A
- * 31*26*16.5mm, 10g
- *** ArduPilot MatekF405-TE
- *** INAV MATEKF405TE

[F405-WMN Quick Start Guide](#) PDF

FC Specifications

- MCU: STM32F405RGT6, 168MHz , 1MB Flash
- IMU: ICM42688-P
- Baro: SPL06-001
- OSD: AT7456E
- Blackbox: 16M Flash
- 5x UARTs, 1x Softserial_Tx option(INAV)
- 12x PWM outputs
- 1x I2C
- 3x ADC (VBAT, Current, RSSI)
- 1x spare PINIO
- USB/Beep Extender with Type-C(USB2.0)
- Built in inverter on UART2-RX for SBUS input
- Switchable Dual Camera Inputs

Power

- 6~30V DC IN (2~6S LiPo)
- 132A Current Sense (INAV Scale 250, ArduPilot 40A/V)
- PDB/Current sense resistor: 90A continuous, 132A burst.

- BEC 5V 1.5A for FC & Peripherals
- BEC Vx 5A for servos, 5V/ 6V option
- Vbat for VTX and camera
- LDO 3.3V 200mA
- Battery Voltage Sensor: 1k:20k

FC Firmware

- ArduPilot: MatekF405-TE
- INAV: MATEKF405TE (INAV 5.0 or newer)

Physical

- Dimensions: 31 x 26 x 16.5 mm
- Mounting: 22 x 22mm, Φ 2mm
- Weight: 10g

Including

- 1x F405-WMN
- 1x USB(Type-C)/Beep (Passive buzzer) Extender + 20cm JST-SH-6P to JST-SH-6P cable for USB extender.
- Dupont 2.54 pins **(Board is shipped unsoldered)**

Layout

LAYOUT

Rx2: UART2-RX for Serial_RX by default
*PPM is not supported by INAV

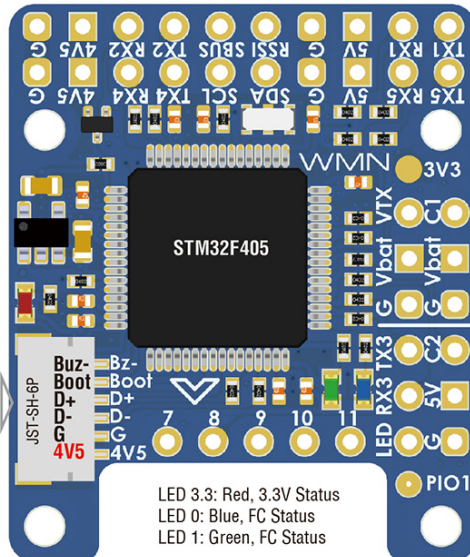
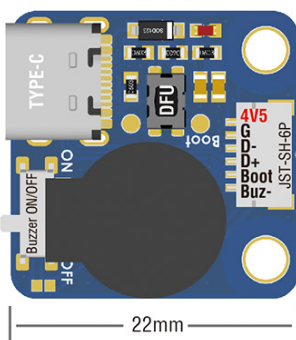
Tx2: UART2-TX
*softserial1_tx is an alternative on Tx2 pad in INAV

Sbus: UART2_RX + inverter for SBUS receiver

Rssi: Analog RSSI ADC, 0~3.3V

Tx4/Rx4: UART4_Tx/Rx
SDA & SCL: I2C_SDA, SCL,
for compass
Digital Airspeed

DFU Button: F405 DFU mode.
Connect USB to the PC While holding the boot button in.
Red LED, USB power indicator



TX5/RX5: UART5_Tx/Rx
TX1/RX1: UART1_Tx/Rx

5V: onboard BEC 5V 1.5A cont. Max.2A
*** 5V is not supplied when connecting USB only.
4V5: 4.4~4.8V, Max.800mA
*** 4V5 is also supplied when connecting USB only
3.3: LD03.3V 200mA
G: Ground

Vbat: Battery voltage

VTx: Video OUT for Video Transmitter
C1: Camera-1 video IN (Default)

C2: Camera-2 video IN

*** C1/C2 can be switched via ArduPilot Relay or INAV Modes/USER2
*** Two cameras should be set with identical video format,
both PAL or both NTSC

TX3/RX3: UART3_Tx/Rx

PIO1: Low/High level switchable via INAV Modes/USER1
or ArduPilot Relay

	INAV AirPlane	INAV Multirotor	ArduPilot
S1	Motor	Motor	PWM1
S2	Motor	Motor	PWM2
S3	Servo	Motor	PWM3
S4	Servo	Motor	PWM4
S5	Servo	Motor	PWM5
S6	Servo	Motor	PWM6
S7	Servo	Motor	PWM7
S8	Servo	Motor	PWM8
S9	Servo	Servo	PWM9
S10	Servo	Servo	PWM10
S11	Servo	Servo	PWM11
LED	2812 LED	2812 LED	PWM12

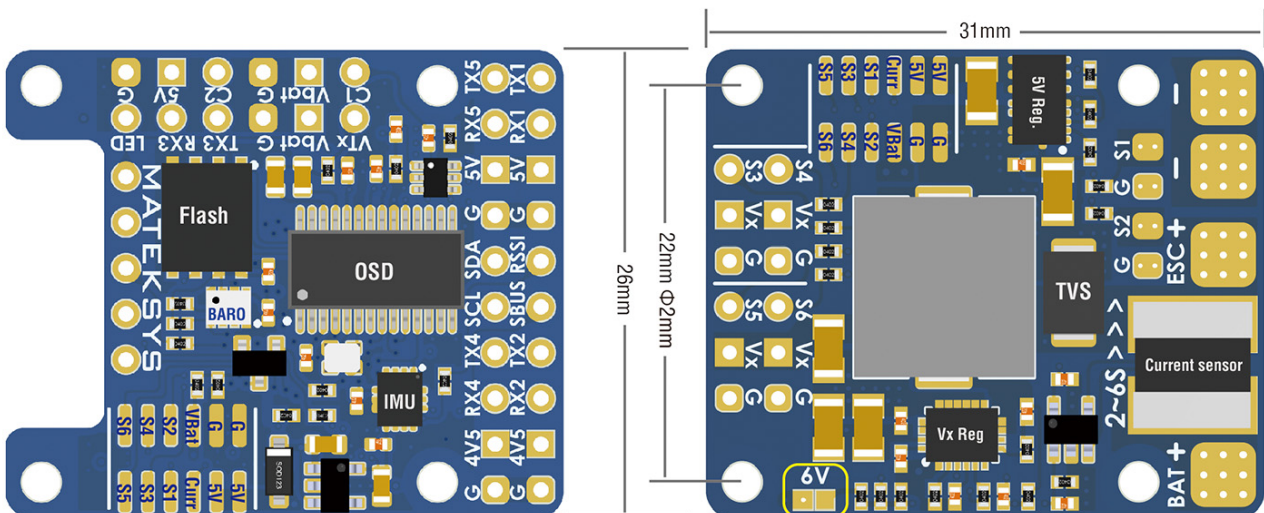
+ & - : Battery & ESC power pads, 6~30V DC(2~6S Lipo)
Current Sensor: 132A Range, 90A Cont.

onboard battery voltage sense:
BATT_VOLT_PIN 14, BATT_VOLT_MULT 21
INAV scale 2100

onboard current sense:
BATT_CURR_PIN 15, BATT_AMP_PERVLT 40
INAV scale 250

S1/S2: ESC signal for motor 1 & 2
G: Ground

Vx: onboard BEC for servos, Default 5V, 5A cont.



Size: 31x26x16.5mm
Weight: 10g
Holes: Φ2mm, 22mm mounting



Wiring Diagram

Wiring (Airplane)

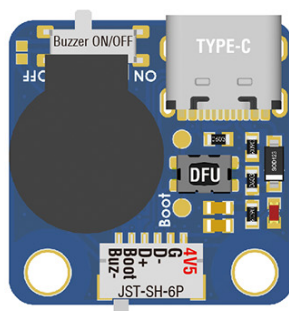
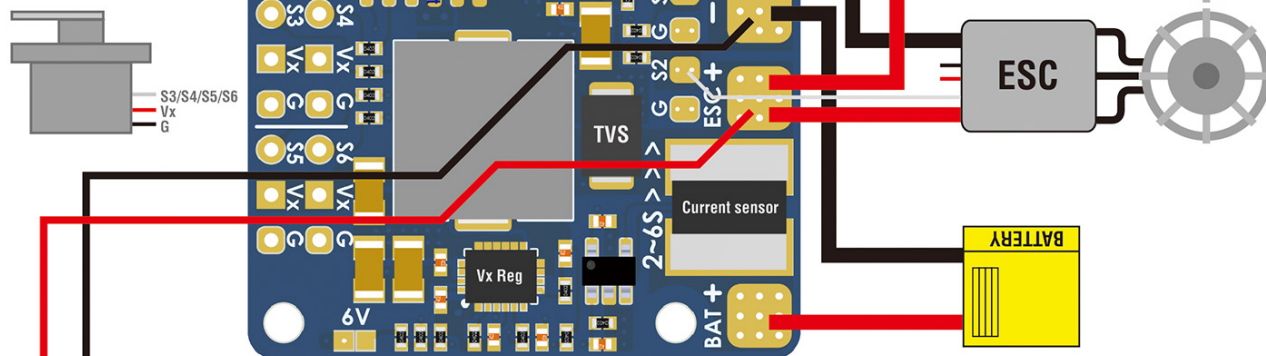
INAV fw: MATEKF405TE

ArduPilot fw: MATEKF405-TE

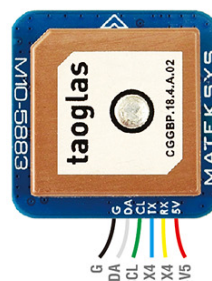
Airplane

S1/S2 motors

S3/S4/S5/S6 servos

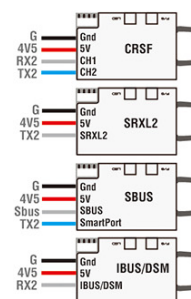
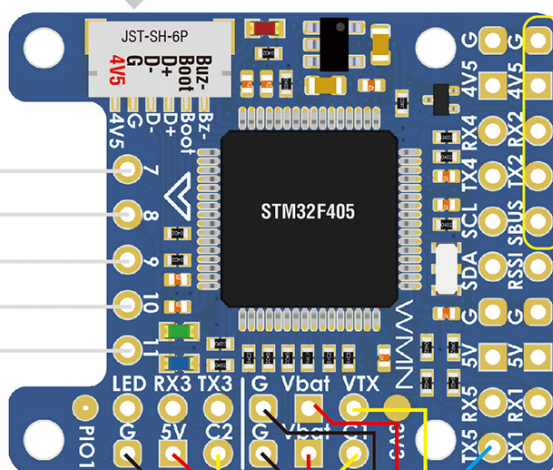
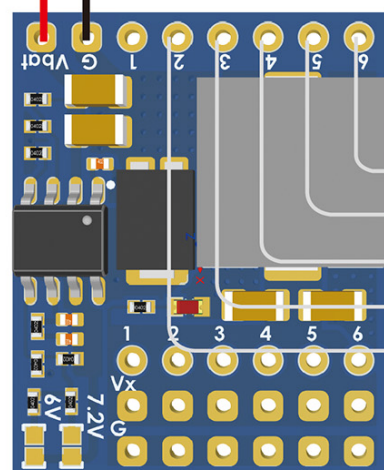


JST-SH-6P Wires



* GPS can work with any spare UART_TX & RX

* I2C Peripherals with different I2C address can be connected to one I2C bus in parallel



* INAV, Softserial1_Tx is an alternative on Tx2 pad by checking "Enable CPU based serial ports"

* Non-inverted(hacked) S.Port signal is needed for FPORT

* IBUS/DSM can be connected to any spare UART_RX

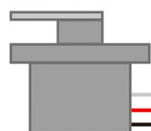
* PPM is not supported by INAV4.1 or newer.

* 5V is not supplied when connecting USB only.

* DJI FPV OSD can work with any spare UART_TX & RX

* With SVPDB-8S, you can connect more servos to F405-WMN easily

* SVPDB-8S is not included in F405-WMN package



S7 S8 S9 S10 S11 (SVPDB 6,5,4,3,2 rail)



*** Two cameras should use identical video format, both PAL or both NTSC

*** Double check Camera signal and power cables before powering them up.