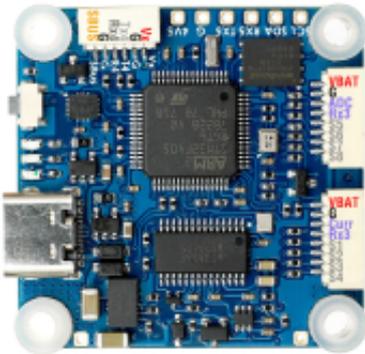


Link do produktu: <https://www.nobshop.pl/kontroler-lotu-matek-f405-hdte-p-4612.html>



Kontroler lotu MATEK F405-HDTE

Cena brutto	249,00 zł
Cena netto	202,44 zł
Dostępność	Aktualnie niedostępny
Czas wysyłki	1 - 3 dni
Producent	Matek Systems

Opis produktu

Kontroler lotu MATEK F405-HDTE

Cechy:

- STM32F405 ma 1MB pamięci flash, na której można uruchomić ArduPilot/INAV/BetaFlight,
- InvenSense z IMU III generacji ICM42688-P,
- Szerokie napięcie wejściowe 9-60V (3~12S LiPo) z czujnikiem napięcia oraz BEC 9-16V dla cyfrowego lub analogowego nadajnika obrazu,
- Obsługa 8 silników + 3 serwo mechanizmów w INAV/BF,
- 2x złącze SH1.0 8pin do połączenia 2x ESC 4w1,
- 1x złącze SH1.0 6pin do połączenia nadajnika HD (Caddx Vista & Air Unit),
- Złącze do podłączenia zewnętrznego adaptera USB

Specyfikacja:

- MCU: STM32F405RGT6,
- IMU: ICM42688-P,
- OSD: AT7456E,
- Baro: SPL06-001 (I2C),
- Blackbox: 16MB pamięci flash,
- 6x UART, 1x opcja Softserial_Tx,
- 12 wyjść PWM (8x Dshot),
- 1x I2C,
- 4x ADC (VBAT, prąd, RSSI, prędkość),
- 2x PINIO,
- 2x złącze SH1.0 8pin dla ESC 4w1,
- 1x złącze SH1.0 6pin dla systemu HD (Caddx Vista & Air Unit),
- 2x diody LED stanu FC (niebieska, zielona) i wskaźnik 3,3V (czerwony),
- Przełączane wyjście ON/OFF 9~16V(VTX),
- Możliwość połączenia i przełączania się między 2 kamerami analogowymi

Zasilanie:

- Wejście: 9~60V (3~12S LiPo),
- BEC: 5V 1.5A,
- BEC: VTX 9~16V/1~2A (3S - 9V 2A / 4S - 12V 2A / 6S - 16V 2A / 8S - 16V 1.5A / 12S - 16V 1A),
- Czujnik napięcia akumulatora: 1K:20K (skala INAV 2100, skala BF 210),
- Brak wbudowanego czujnika prądu (obsługuje zewnętrzny czujnik prądu PDB/4w1)

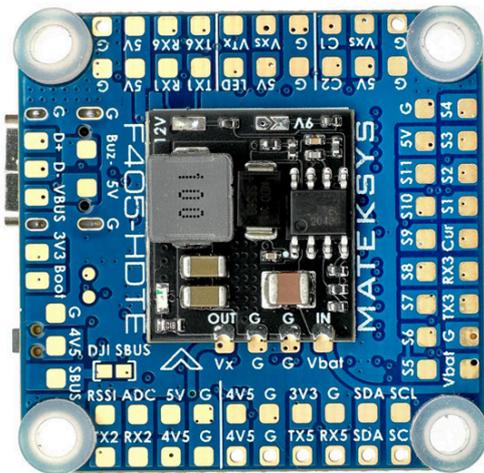
Oprogramowanie (targety):

ArduPilot: MatekF405-TE
INAV: MATEKF405TE
BetaFlight: MATEKF405TE

Wymiary:

Montaż: 30.5 x 30.5mm, Φ 4mm (z wibroizolatorami Φ 3mm),
Wymiary zewnętrzne: 36 x 36 x 5 mm,
Waga: 7g

Szczegółowe informacje o produkcji znajdziesz na stronie: [MATEK F405-HDTE](#)



MATEKSYS Flight Controller F405-HDTE

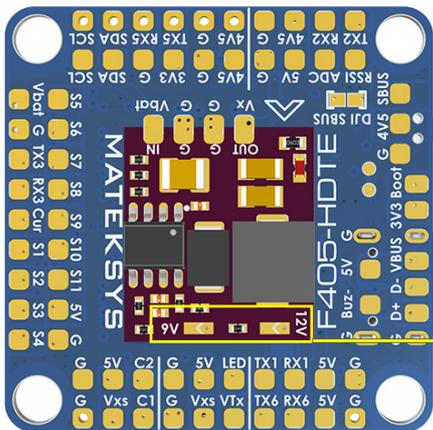
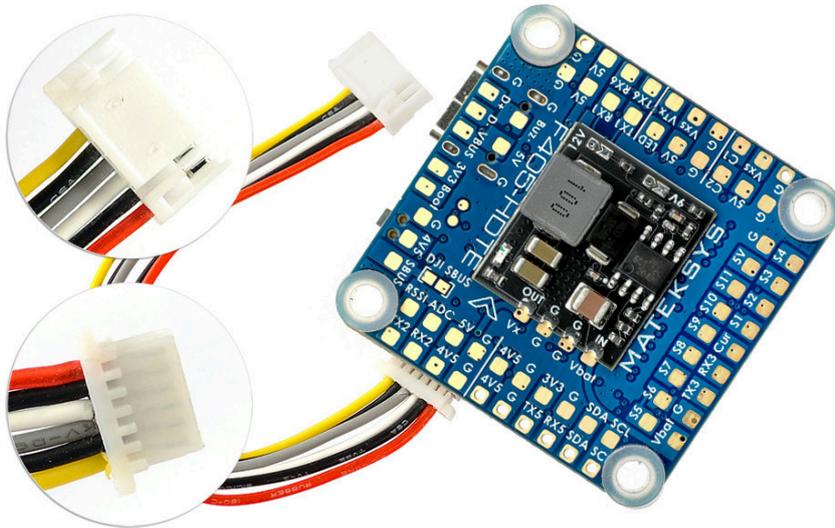
- * MCU: STM32F405RGT6
- * IMU: ICM42688-P
- * Barometer: SPL06-001
- * OSD: AT7456E(Analog), DJI OSD(Digital)
- * Blackbox: 16M Flash

- * 6x UARTs, 1x softserial_Tx
- * 1x I2C
- * 4x ADC
- * 12x PWM outputs(S1~11, LED)
- * 2x PINIO

- * 9~60V DC IN (3~12S LiPo)
- * Dual BEC, 5V/1.5A & 9~16V/1-2A

- * BEC 9~16V output ON/OFF(PINIO1)
- * Dual analog camera signal inputs(PINIO2)

- *** ArduPilot MatekF405-TE
- *** INAV MATEKF405TE
- *** BetaFlight MATEKF405TE



Vxs = Vx Voltage, ON/OFF switchable



3S IN: Vx=9V 2A, 5V 1.5A



4S IN: Vx=12V 2A, 5V 1.5A
6S IN: Vx=12V 1.7A, 5V 1.5A
8S IN: Vx=12V 1.5A, 5V 1.5A



6S IN: Vx=16V 2A, 5V 1.5A
8S IN: Vx=16V 1.5A, 5V 1.5A
12S IN: Vx=16V 1A, 5V 1.5A

*** Continuous Load, Ambient Temp. 25C

*** DJI Air Unit Power Consumption: 16V*0.5A @ 1200mW output

LAYOUT

5V: onboard BEC 5V 1.5A cont.
 Vxs: onboard BEC 9-16V, Voltage=Vx
 *** Vxs ON/OFF can be switched via ArduPilot Relay or Modes/USER1 (BF/INAV) (Default ON)
 G: Ground

RX1 & TX1: UART1_RX & TX
 RX6 & TX6: UART6_RX & TX

LED: 2812 LED signal Out, PWM12 in ArduPilot fw

C1: Analog Camera-1 video IN (Default)
 C2: Analog Camera-2 video IN
 *** C1/C2 can be switched via ArduPilot Relay or Modes/USER2 (BF/INAV)
 *** 2 Cameras must be set with identical video format

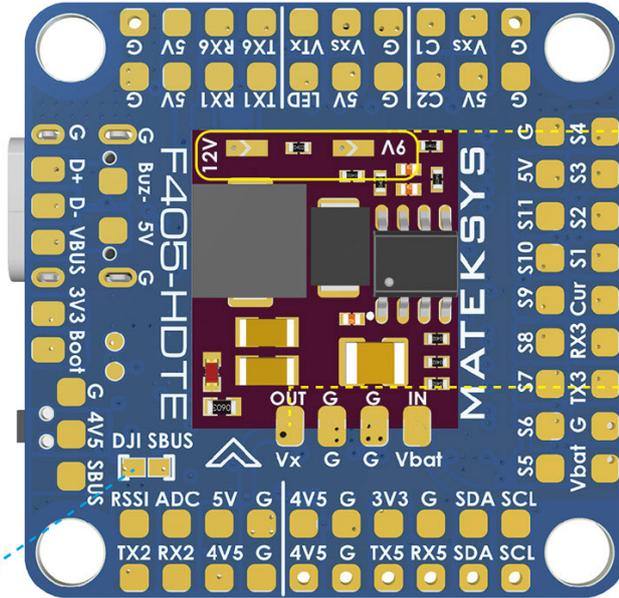
VTX: Analog Video OUT for Analog Video Transmitter

D+ & D-: USB data
 VBUS: USB voltage
 USB shell: Ground

Buz- & 5V: Passive 5V buzzer
 Buz- /5V/G: Matek DBUZ5V

Boot: STM32F405 boot pin
 DFU mode: Bridge Boot to 3V3 while powering on

This side UP by default



Vbat = 3S LIPO, Vx = 9V 2A



Vbat = 4S LIPO, Vx = 12V 2A
 Vbat = 6S LIPO, Vx = 12V 1.7A
 Vbat = 8S LIPO, Vx = 12V 1.5A



Vbat = 6S LIPO, Vx = 16V 2A
 Vbat = 8S LIPO, Vx = 16V 1.5A
 Vbat = 12S LIPO, Vx = 16V 1A

S1-S11: PWM outputs
 S1-S8 support DSHOT with ArduPilot/BF fw

Cur: current sensor signal IN (0-3.3V)
 Rx3 & Tx3: UART3_RX & TX

Vbat: Battery voltage, 9-60V DC IN (3-12S LIPO)
 G: Ground

4V5: 4.4-4.8V, Max.800mA, the voltage is also supplied when connecting via USB
 3V3: LDO3.3V Max.200mA

SBUS: UART2_RX with inversion for SBUS receiver protocol
 Rx2: UART2_RX
 Tx2: UART2_TX
 *** Tx2 can be remapped to softserial_tx1 for Frsky SmartPort telemetry (BF CLI resource SERIAL_TX 11 A02, enabled CPU based serial port in INAV)
 *** Frsky FPort must be uninverted signal

ADC: Analog Airspeed sensor IN with INAV/ArduPilot (0-3.3V), spare ADC pin with BF fw
 Rssi: Analog RSSI IN (0-3.3V)

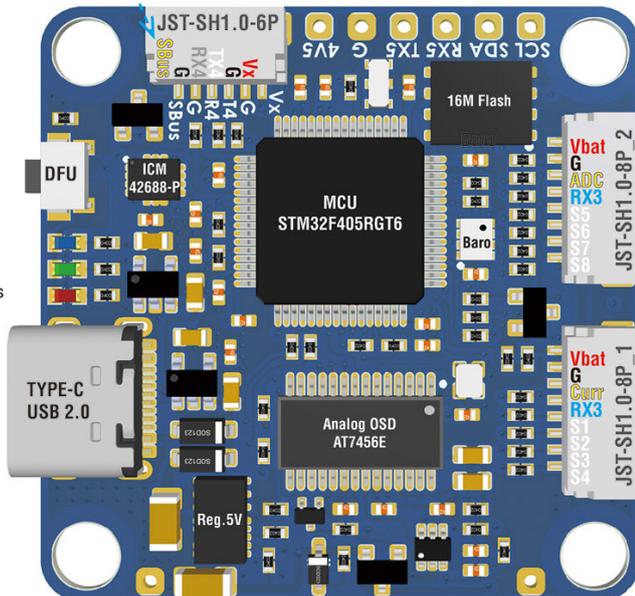
SCL & SDA: I2C1 Bus for Magnetometer/Digital airspeed sensor/OLED
 Tx5 & Rx5: UART5_TX & RX
 *** GPS can be connected to any spare UART_TX & RX



If using non-DJI FPV remote controller, keep this pad unbridged



If using DJI FPV Remote Controller, Bridging this pad will link SBUS pin to DJI SBUS on SH1.0-6P connector



SH1.0-8P_2 Sequence
 --Vbat: Battery voltage, 9-60V DC IN
 --G: Ground
 --ADC: can be remapped as current sense ADC
 ***Ardu: BATT_CURR2_PIN = 10 (ArduPilot support 2x Current readout)
 ***INAV: set current_adc_channel = 4
 ***BF: resource ADC_CURR 1 C00
 --Rx3: UART3_RX, for BLHeli32 ESC Telemetry
 --S5/S6/S7/S8: DShot/PWM outputs

SH1.0-8P_1 Sequence
 --Vbat: Battery voltage, 9-60V DC IN
 --G: Ground
 --Curr: current sensor signal IN
 --Rx3: UART3_RX, for BLHeli32 ESC Telemetry
 --S1/S2/S3/S4: DShot/PWM outputs

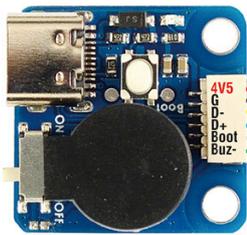
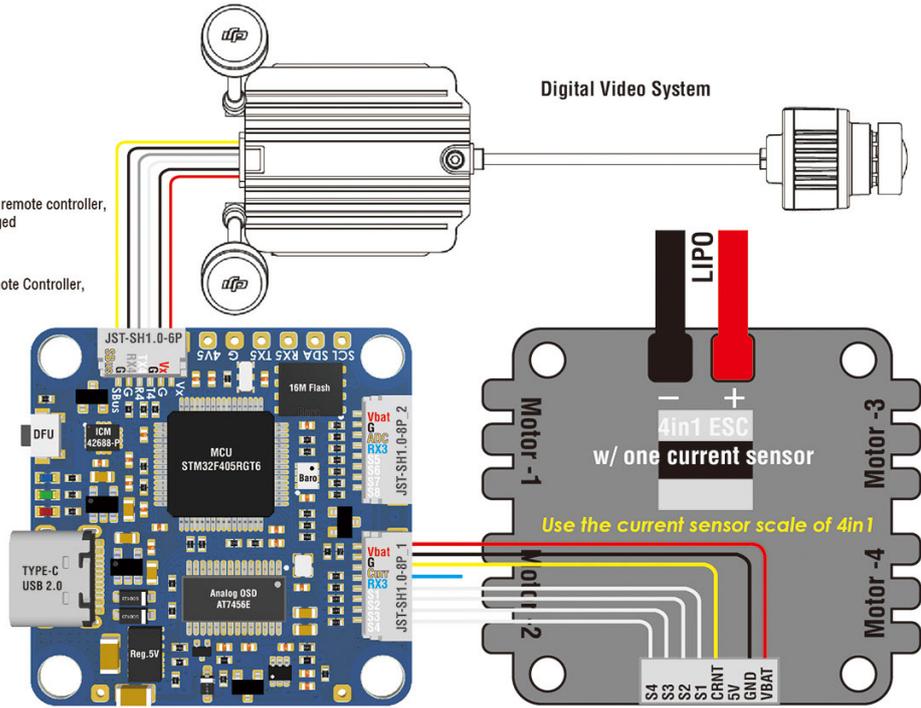
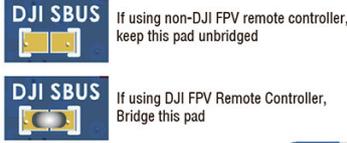
Size & Weight: 36x36mm /7g
 Holes: Φ4mm, 30.5mm x 30.5mm

Packing
 1x F405-HDTE
 1x JST-SH1.0_8P cable 5cm
 2x JST-SH1.0_8P connector
 6x M3 Silicon Grommets
 1x JST-SH1.0_6P to JST-GH1.25_8P 8cm for DJI air unit

LED 0: Blue, FC Status
 LED 1: Green, FC Status
 LED 3.3: Red, 3.3V Status

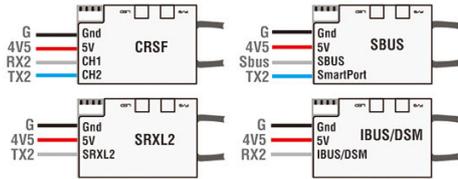
Wiring (Multirotors)

Ardupilot MATEKF405-TE
 INAV MATEKF405TE
 BetaFlight MATEKF405TE



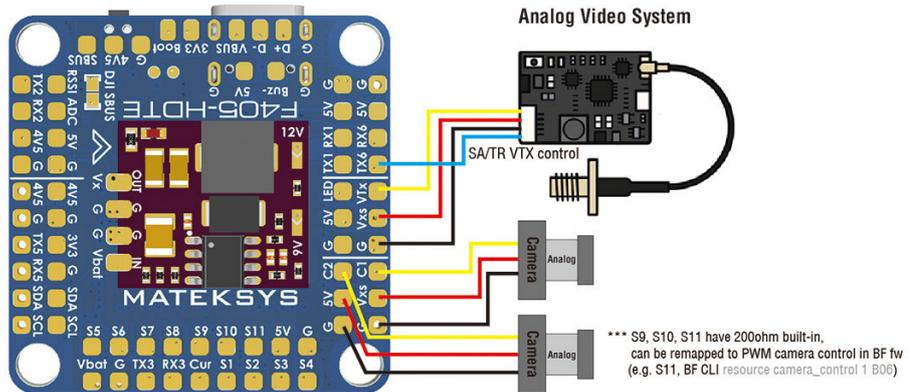
*** USB / Beeper extension board is not included in F405-HDTE packing

Passive Buzzer
 BF CLI "set beeper_frequency = 2500"



*** Tx2 can be remapped to softserial_tx1 for Frsky SmartPort telemetry
 BF, CLI resource SERIAL_TX 11 A02,
 INAV, Softserial1_Tx is an alternative on Tx2 pad by checking "Enable GPU based serial ports"
 * IBUS/DSM can be connected to any spare UART_RX
 * PPM is not supported by INAV4.1 or newer.
 * STM32F405 UART_TX only work with **Non-inverted(hacked) S.Port/F.Port** signal

*** GPS can work with any spare UART_TX & RX
 *** 4V5 is also supplied when connecting via USB only



*** S9, S10, S11 have 200ohm built-in, can be remapped to PWM camera control in BF fw (e.g. S11, BF CLI resource camera_control 1 B06)

Zawartość:

1x kontroler Matek F405-HDTE,

6x wibroizolator,

1x przewód SH1.0 8pin 5cm, 2x konektor SH1.0 8pin,

1x przewód SH1.0 6pin na GH1.25 8pin 8cm dla cyfrowych nadajników obrazu (Caddx Vista & Air Unit)