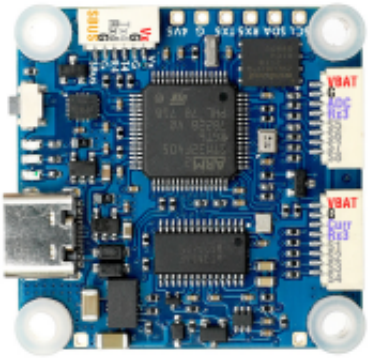
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Link do produktu: https://www.nobshop.pl/kontroler-lotu-matek-f405-hdte-p-4612.html



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 serwomechanizmów 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

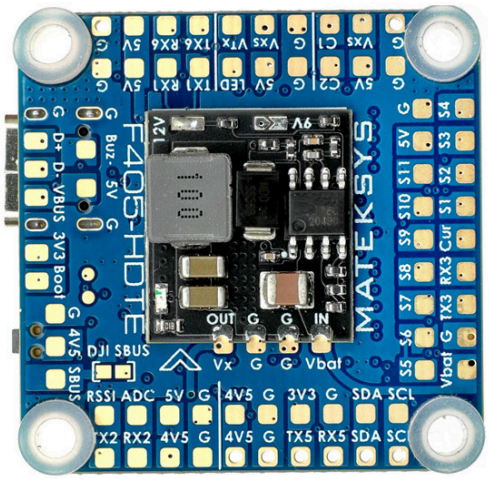
Specyfikacja:
-MCU: STM32F405RGT6,
-IMU: ICM42688-P,
-OSD: AT7456E,
-Baro: SPL06-001 (I2C),
-Blackbox: 16MB pamięci flash,
-6x UART, 1x opcja Softserial_Tx,
-12 wyjść PWM (8x Dshot),
-1x I2C,
-4x ADC (VBAT, prąd, RSSI, prędkość),
-2x PINIO,
-2x złącze SH1.0 8pin dla ESC 4w1,
-1x złącze SH1.0 6pin dla 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 miedzy 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, Φ4mm (z wibroizolatorami Φ3mm),
Wymiary zewnętrzne: 36 x 36 x 5 mm,
Waga: 7g

Szczegółowe informacje o produkcje znajdziesz na stronie: MATEK F405-HDTE



MATEKSYS Flight Controller F405-HDTE

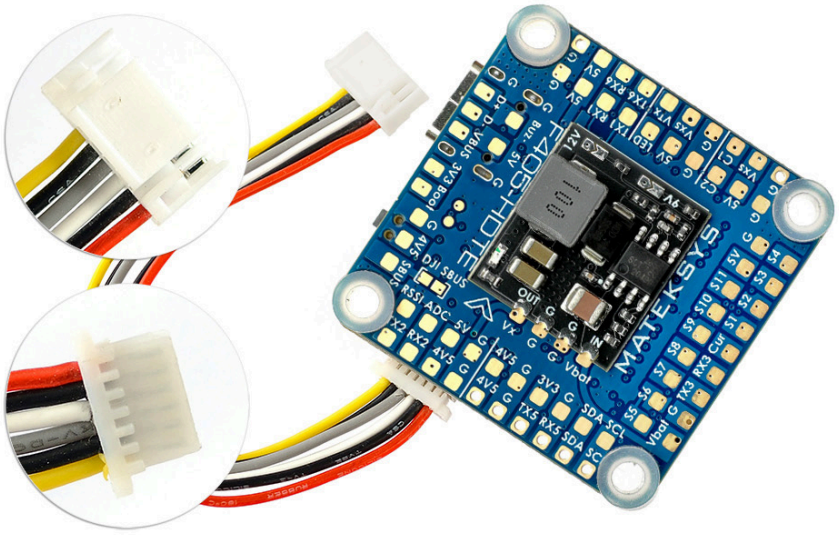
* MCU: STM32F405RGT6
* IMU: ICM42688-P
* Barometer: SPL06-001
* OSD: AT7456E(Analog), DJI OSD(Digital)
* Blackbox: 16M Flash

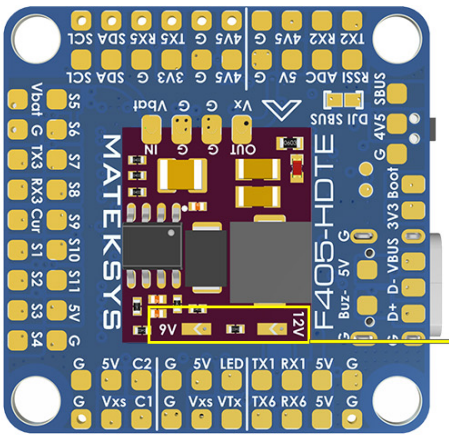
* 6x UARTs, 1x softserial_Tx
* 1x I2C
* 4x ADC
* 12x PWM outputs(S1~11, LED)
* 2x PINIO

* 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





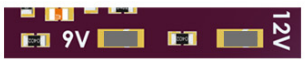
Vxs = Vx Voltage, ON/OFF switchable



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

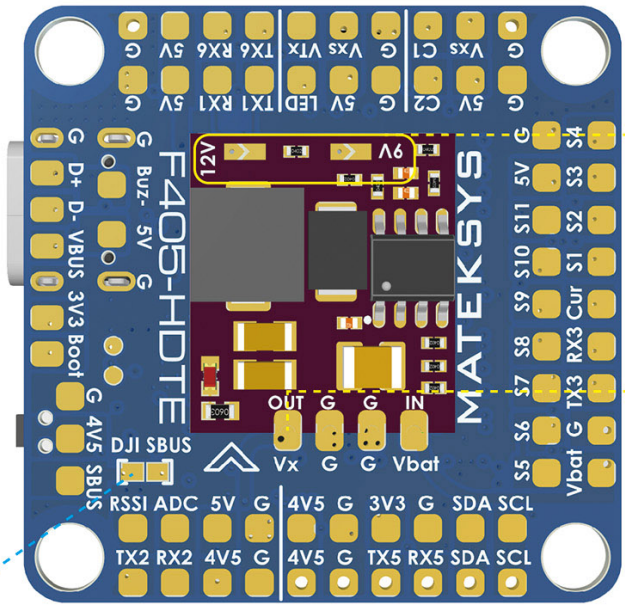
C1: Analog Camera-1 video IN (Default)
C2: Analog Camera-2 video IN
*** C1/C2 can be switched via ArduPilot Relay or Modes/USER2 (BF/INAV)
*** 2 Cameras must be set with identical video format

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

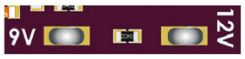




Vbat = 3S LIPO, Vx = 9V 2A



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

This side UP by default



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



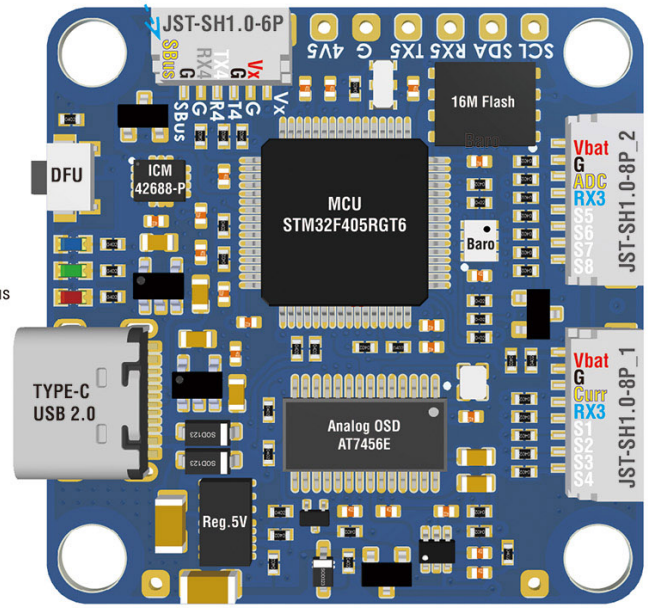
If using DJI FPV Remote Controller, Bridging this pad will link SBUS pin to DJI SBUS on SH1.0-6P connector

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
T2x: 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



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

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

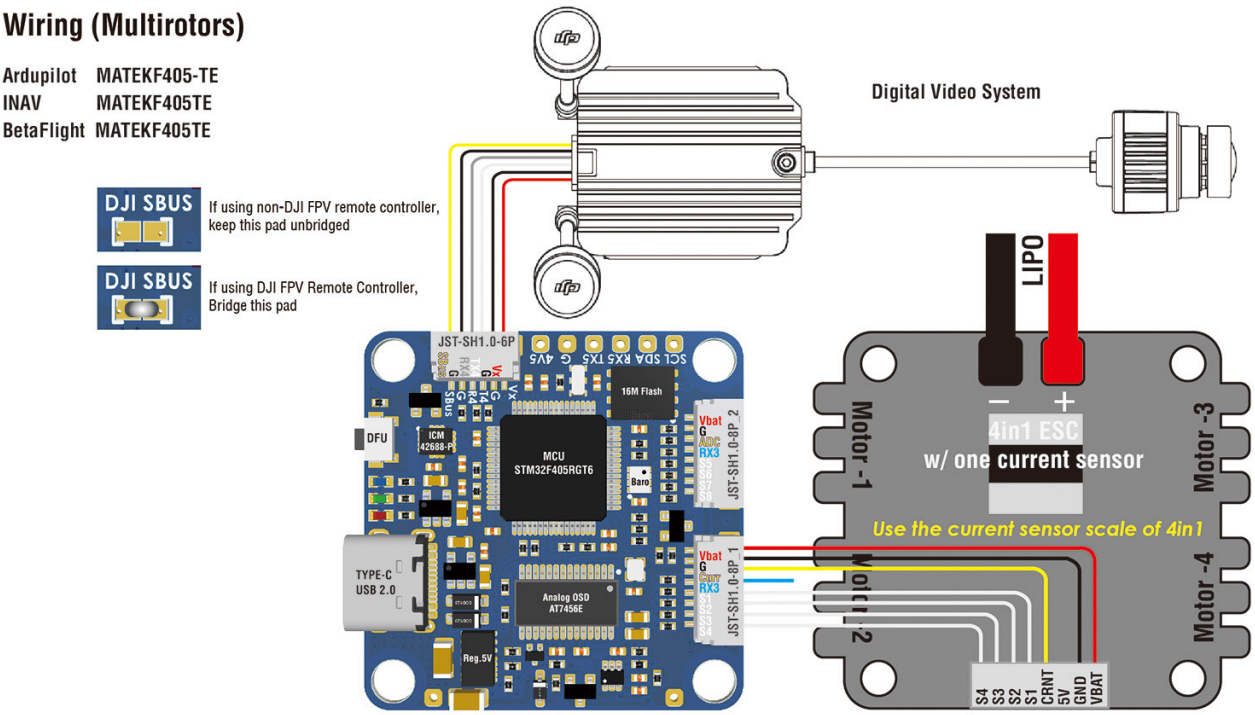
Packing
1x F405-HDTE
1x JST-SH1.0_8P cable 5cm
2x JST-SH1.0_8P connector
6x M3 Silicon Grommets
1x JST-SH1.0_6P to JST-GH1.25_8P 8cm for DJI air unit

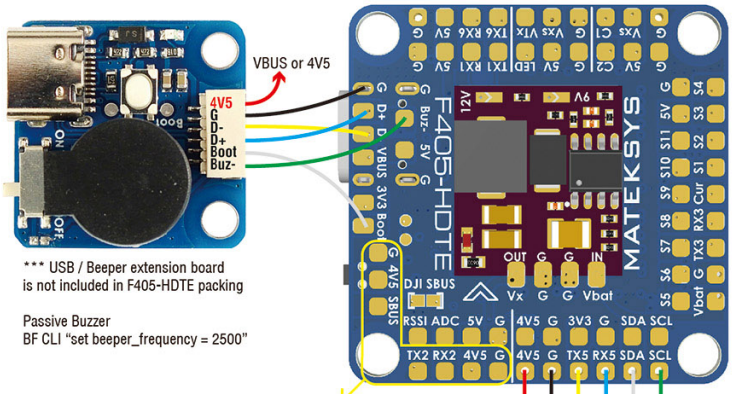
Wiring (Multirotors)

Ardupilot	MATEKF405-TE
INAV	MATEKF405TE
BetaFlight	MATEKF405TE

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

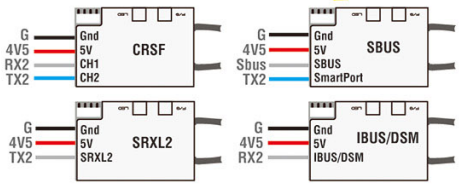
DJI SBUS — If using DJI FPV Remote Controller, Bridge this pad





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

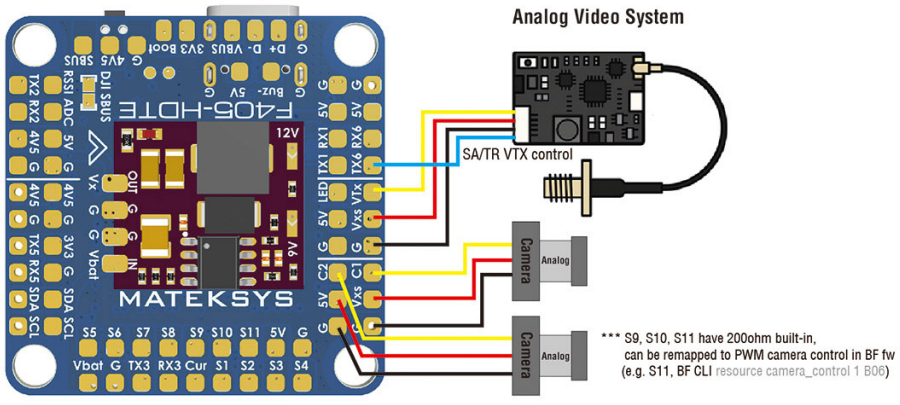
Passive Buzzer
BF CLI "set beeper_frequency = 2500"





*** 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 CPU 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)