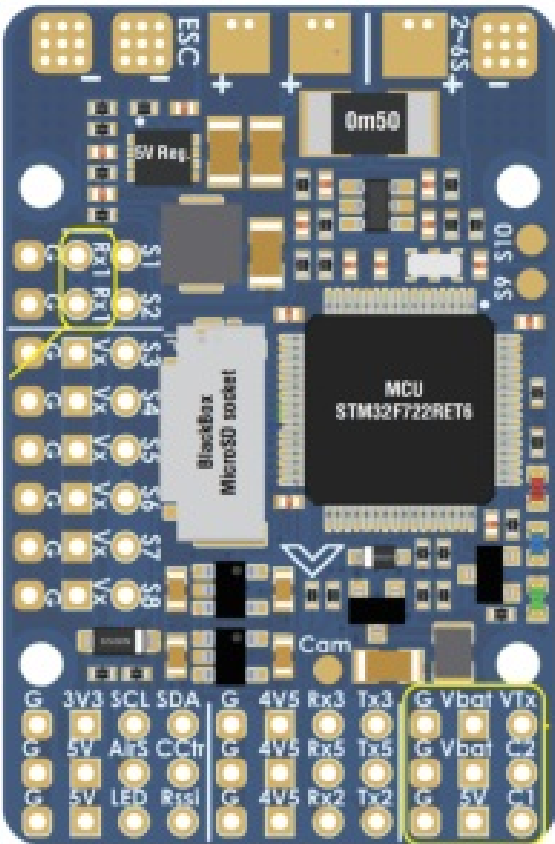




MATEKSYS F722-WPX Flight Controller User Guide

[Home](#) » [MATEKSYS](#) » MATEKSYS F722-WPX Flight Controller User Guide 📄

MATEKSYS F722-WPX Flight Controller



Contents

1 QUICK START GUIDE

1.1 LAYOUT

1.2 INAV Target: MATEKF722WPX

1.3 Wiring (INAV Airplane)

1.4 Vbat Power / Camera switch

2 Documents / Resources

2.1 References

3 Related Posts

QUICK START GUIDE

MCU: 216MHz STM32F722RET6

IMU: MPU6000 (SPI)

Baro: DPS310 (I2C)

OSD: Pixel OSD/FrskyOSD (Uart6)

Blackbox: MicroSD socket (SPI)

6x UARTs(5 Spare) with built-in inversion

1x Softserial_Tx option

10x PWM outputs

1x I2C

4x ADC (VBAT, Current, RSSI, AirSpeed)

1x SH1.0_6pin connector (4V5/G/TX4/RX4/SDA/SCL) for GPS/compass

1x SH1.0_6pin connector for external USB and buzzer

Switchable Dual Camera Inputs

Switchable Vbat for Camera/VTX

6~30V DC IN (2~6S LiPo)

132A high-precision Current Sense

BEC 5V 2A for FC & Peripherals

BEC Vx 5A for servos, 5V/ 6V option

Vbat filtered output 1A for VTx and Camera

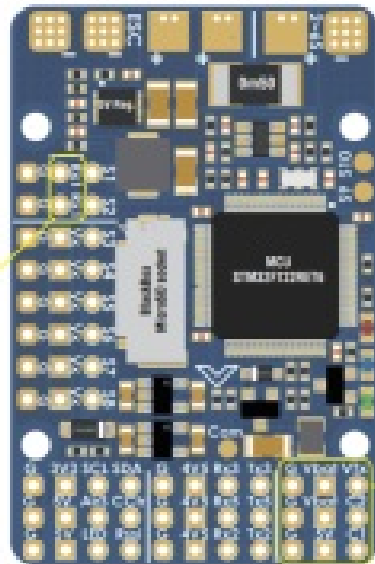
LDO 3.3V 200mA

INAV Target MATEKF722WPX

LAYOUT

+ & - : Battery & ESC power pads, 8-30V DC(2-6S LIPO).

Battery/Voltage Sensor: TK12K, Scale 1100
Current Sensor: I2DA, 0-2V ADC, Scale 250
Current Sense resistor: 0.025R, 50A continuous, 100A burst.



INAV PPM mixer
S1/S2: ESC signal
S3/S4/S5/S6/S7/S8: Servo signal

Vcc: 5V 5V for servos, 5A cont.
Default is 5V

Rx1: UART1_RX for ESC telemetry
DO NOT connect the ESC telemetry (S1 output(Pwm)) to Rx1 pad

AirS: Analog Airspeed sensor
(0-5.0V)

LED: 3812 LED signal output
Res: Analog RCSD 1k
GDR: Not support

ISCL / SDA: I2C1
*** connect GND(S8)/VCC(S8) / MAG3110
/ BME280 / I2C2/SDA
*** Digital AirSpeed sensor (PMS100A05)
*** QMC5883

SW1: USB 2.0 300mA
SW2: 5V 5V 3A cont. Max 3A
400: 4-4.4V, Max 500mA
*** the voltage is also supplied when connecting via USB

Txd/Rxd: UART3_TX & RX
Txd-Pad: UART3_TX & RX

RXD: UART2_RX for Serial RX by default, PPM share RX2 pad
TX3: UART2_TX with DPLI based serial ports enabled
TX2: Software_TX1 w/ CPU based serial ports enabled

*** FYI: all UARTs have built-in inversion, SBUS can be connected to any spare UART_RX
*** Easy-IP, SmartPort, Tramp & SmartAudio can be connected to any spare UART_TX

INAV PPM mixer
S1/S2: Servo signal

LED 3:3 Red, 3.3V Status
LED 2: Blue, PC Status
LED 1: Green, PC Status

Vbat: Filtered battery voltage
*** On/Off switch via Mode/USB1
*** Max 1A load on this rail - (Default ON)

Vtx: Analog Video-DIT to Video Transmitter

C1: Camera-1 video (i) (Default)
C2: Camera-2 video (i)
*** C1/C2 switch via Mode/USB1
*** Two cameras should use identical video format,
both PAL or both NTSC
*** Double check not Camera signal and power cables
before powering them up.

INAV Target: MATEKF722WPX

*** CLI defaults after reflashing

Wiring (INAV Airplane)

*** S1 & S2 for motors

*** S3 – S10 for servos

