

# PIXFALCON AUTOPILOT



## TELEM port

Pin	Signal	Volt
1 (red)	VCC	+5V
2 (blk)	TX1 (OUT)	+3.3V
3 (blk)	RX1 (IN)	+3.3V
4 (blk)	GND	GND

## I2C port

Pin	Signal	Volt
1 (red)	VCC	+5V
2 (blk)	SCL	3.3
3 (blk)	SDA	3.3
4 (blk)	GND	GND

## SWITCH port

Pin	Signal	Volt
1 (red)	VCC	+3.3V
2 (blk)	IO_LED_SAFETY	GND
3 (blk)	SAFETY	GND

## GPS&I2C port

Pin	Signal	Volt
1 (red)	SCL	+3.3V
2 (blk)	SDA	+3.3V
3 (blk)	VCC	+5V
4 (blk)	TX3	+3.3V
5 (blk)	RX3	+3.3V
6 (blk)	GND	GND

## PM port

Pin	Signal	Volt
1 (red)	VCC	+5V
2 (blk)	VCC	+5V
3 (blk)	CURRENT	+3.3V
4 (blk)	VOLTAGE	+3.3V
5 (blk)	GND	GND
6 (blk)	GND	GND



## PIXFALCON

The PIXFALCON, which can be recognized as a scaled-down version of the PIXHAWK, is a high-performance autopilot-on module suitable for fixed wing, multi rotors, cars, boats and any other robotic platform. Compared with the PIXHAWK the PIXFALCON are much more compact and light weighted but their functions and software compatibility are exactly the same.

## Key Features

- 168 MHz / 252 MIPS Cortex-M4F
- 8PWM / Servo outputs (8 with failsafe and manual override, high-power compatible)
- Abundant connectivity options for additional peripherals (UART, I2C)
- Integrated backup system for in-flight recovery and manual override with dedicated processor and stand-alone power supply (fixed-wing use)
- Backup system integrates mixing, providing consistent autopilot and manual override mixing modes (fixed wing use)
- Onboard safety switch and external safety switch
- Multicolor LED main visual indicator



## Specifications

### PROCESSOR

- ◆ 32bit STM32F427 Cortex M4 core with FPU
- ◆ 168 MHz
- ◆ 256 KB RAM
- ◆ 2 MB Flash
- ◆ 32 bit STM32F103 failsafe co-processor

### SENSOR

- ◆ ST Micro L3GD20H 16 bit gyroscope
- ◆ ST Micro LSM303D 14 bit accelerometer / magnetometer
- ◆ Invensense MPU 6000 3-axis accelerometer/gyroscope
- ◆ MEAS MS5611 barometer

### INTERFACES

- ◆ 1x UART (serial ports)
- ◆ Spektrum DSM / DSM2 / DSM-X® Satellite compatible input
- ◆ Futaba S.BUS® compatible input and output
- ◆ PPM sum signal input
- ◆ I2C
- ◆ Internal microUSB port

### POWER SYSTEM AND PROTECTION

- ◆ Ideal power multiplexer with automatic current Limit
- ◆ All peripheral outputs over-current protected, all inputs ESD protected

## Voltage Ratings

Pixhawk can be double-redundant on the power supply if two power sources are supplied. The two rails are: Power module input, USB input.

Normal Operation Maximum Ratings

Under these conditions all power sources will be used in this order to power the system

Power module input (4.1V to 5.5V)

USB power input (4.1V to 5.5V)

Absolute Maximum Ratings

Under these conditions the system may be permanent breakdown.

Power module input (0V to 6V)

Servo rail input (0V to 10V) Servo rail input is detected by Pixhawk, it don't power the system