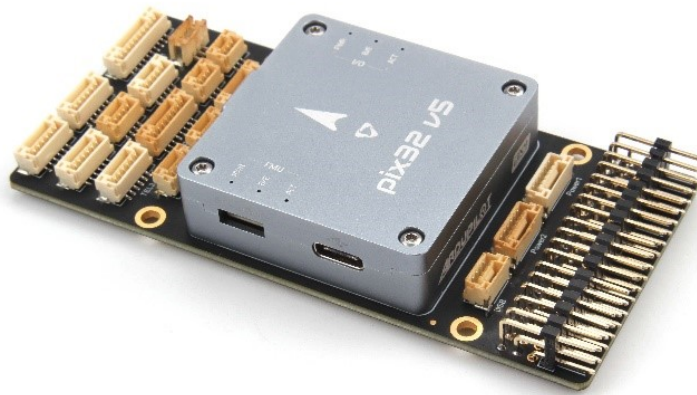# pix32 v5

HolyBro Pix32 v5 is a new flight controller we have developed on the base of FMUv5 scheme, which can be regarded as a variant version of 'Pixhawk4'.

The Pix32 v5 is comprised of a separate flight controller and carrier board which are connected by a 100pin connector. It is designed for those pilots who need a high power, flexible and customisable flight control system.

By using a carrier board designed for the style of model you need you can make sure that the physical size, pinouts and power distribution requirements match the model perfectly. Different carrier boards designed for multirotors, fixed wing aircraft, ground based vehicles or even water based models ensure that you have all the connections you need and none of the expense and bulk of connectors you don't. We have made the carrier board schematics public, you can either make a custom carrier board by yourself or just let HolyBro help you with it.

If you've tried to use a PixHawk4 but struggled to make it work with your design then the Pix32 v5 may be the answer with its ability to fit within a custom carrier board with just what you need. As the Pix32 v5 is based on the PX4 and ArduPilot systems you can also take advantage of all of the latest peripherals, software and enhancements offered by those systems for a quick easy setup and flying experience.

Technical Specifications

- Main FMU Processor: STM32F765
  - 32 Bit Arm ® Cortex®-M7, 216MHz, 2MB memory, 512KB RAM
- IO Processor: STM32F100
  - 32 Bit Arm ® Cortex®-M3, 24MHz, 8KB SRAM
- On-board sensors
  - Accel/Gyro: ICM-20689
  - Accel/Gyro: BMI055
  - Mag: IST8310
  - Barometer: MS5611
- GPS: ublox Neo-M8N GPS/GLONASS receiver; integrated magnetometer IST8310

Interfaces

- 8-16 PWM servo outputs (8 from IO, 8 from FMU)
- 3 dedicated PWM/Capture inputs on FMU
- Dedicated R/C input for CPPM
- Dedicated R/C input for Spektrum / DSM and S.Bus
- with analog / PWM RSSI input
- Dedicated S.Bus servo output
- 5 general purpose serial ports
  - 2 with full flow control
  - 1with separate 1.5A current limit
- 3 I2C ports
- 4 SPI buses
  - 1 internal high speed SPI sensor bus with 4 chip selects and 6 DRDYs
  - 1 internal low noise SPI bus dedicated for
  - Barometer with 2 chip selects, no DRDYs
  - 1 internal SPI bus dedicated for FRAM
  - Supports dedicated SPI calibration EEPROMlocated on sensor module
  - 1 external SPI buses
- Up to 2 CANBuses for dual CAN with serial E
  - Each CANBus has individual silent controls or ESC RX-MUX control

- Analog inputs for voltage / current of 2 batteries
- 2 additional analog inputs

Electrical Data

Voltage Ratings:

- Power module output: 4.9~5.5V
- Max input voltage: 6V
- Max current sensing: 120A
- USB Power Input: 4.75~5.25V
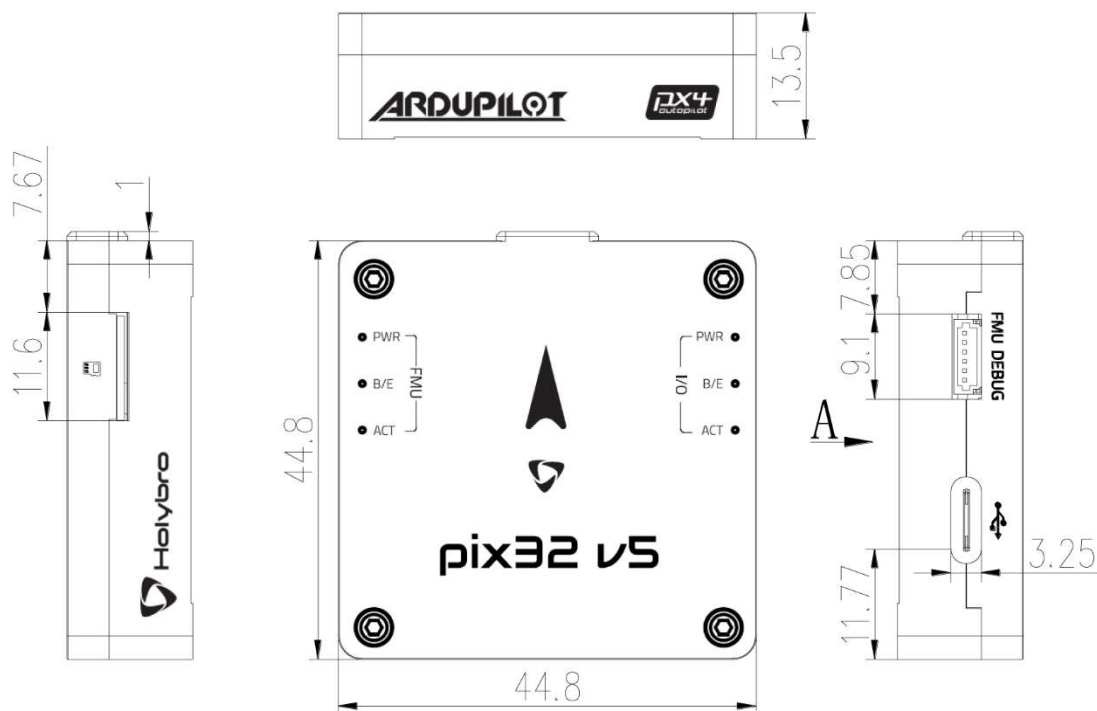- Servo Rail Input: 0~36V

Mechanical Data

- Dimensions: 45x45x13.5mm
- Weight: 33.0g

Environmental Data, Quality & Reliability

- Operating temp. -40~85℃
- Storage temp. -40~85℃
- CE
- FCC
- RoHS compliant (lead-free)

Dimensions

Side A

DIMENSIONS IN MILLIMETERS