Durandal®

Durandal is a new flight controller designed by Holybro utilizing the STM32H7 microcontroller series.

As increasing number of drone companies and developers need to run more powerful models and build on more embedded memory capabilities, Durandal is designed to offer the performance upgrade for development needs. The advantage will come in handy with intensive calculation features is required.

Harnessing from our extensive autopilot building experience in the past years, we have implemented new vibration absorption system into the mechanical design of the hardware, and integrated IMU heater for sensors temperator control.

Durandal is pre-installed with PX4, and also supported by other flight stacks such as Ardupilot.

Technical Specifications

- Main FMU Processor: STM32H743
  - 32 Bit Arm ® Cortex®-M7, 480MHz, 2MB memory, 1MB RAM
- IO Processor: STM32F100
  - 32 Bit Arm ® Cortex®-M3, 24MHz, 8KB SRAM
- On-board sensors
  - Accel/Gyro: ICM-20689
  - Accel/Gyro: BMI088
  - Mag: IST8310
  - Barometer: MS5611
- GPS: ublox Neo-M8N GPS/GLONASS receiver; integrated magnetometer IST8310

Interfaces

- 8-13 PWM servo outputs (8 from IO, 5 from FMU)
- 6 dedicated PWM/Capture inputs on FMU
- Dedicated R/C input for Spektrum / DSM
- Dedicated R/C input for CPPM and S.Bus
- Dedicated S.Bus servo output and analog / PWM RSSI input
- 5 general purpose serial ports
  - 3 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 temperature control located on sensor module
  - 1 external SPI buses
- Up to 2 CANBuses for dual CAN
  - 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
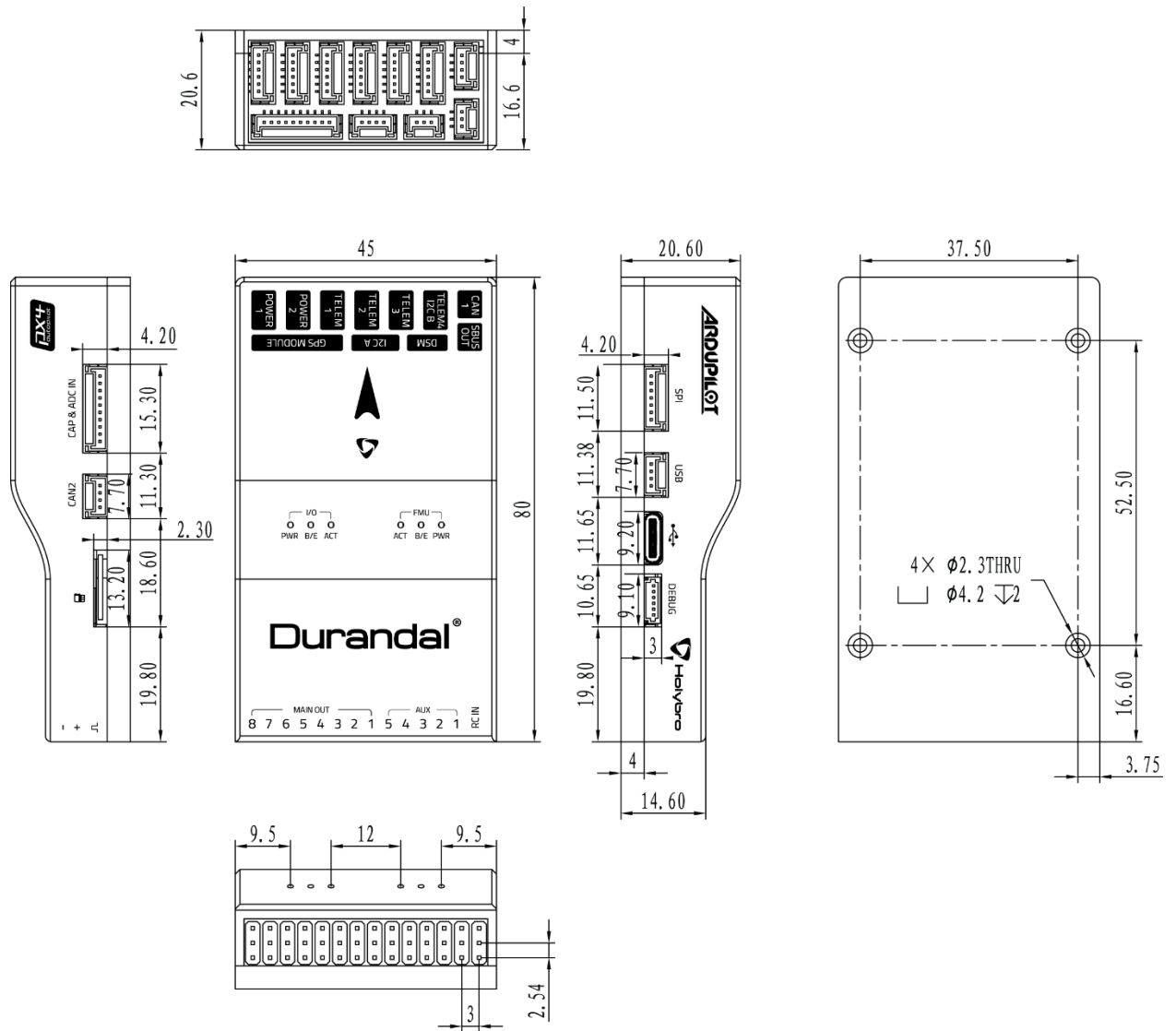- Servo Rail Input: 0~36V

Mechanical Data

- Dimensions:80*45*20.5mm
- Weight: 68.8g

Environmental Data, Quality &

Reliability

- Operating temp. -40~80℃
- Storage temp. -40~85℃
- CE
- FCC
- RoHS compliant (lead-free)

Dimensions

DIMENSIONS IN MILLIMETERS