H743 - ZH Flight Controller

Technical Specification Sheet

Contents

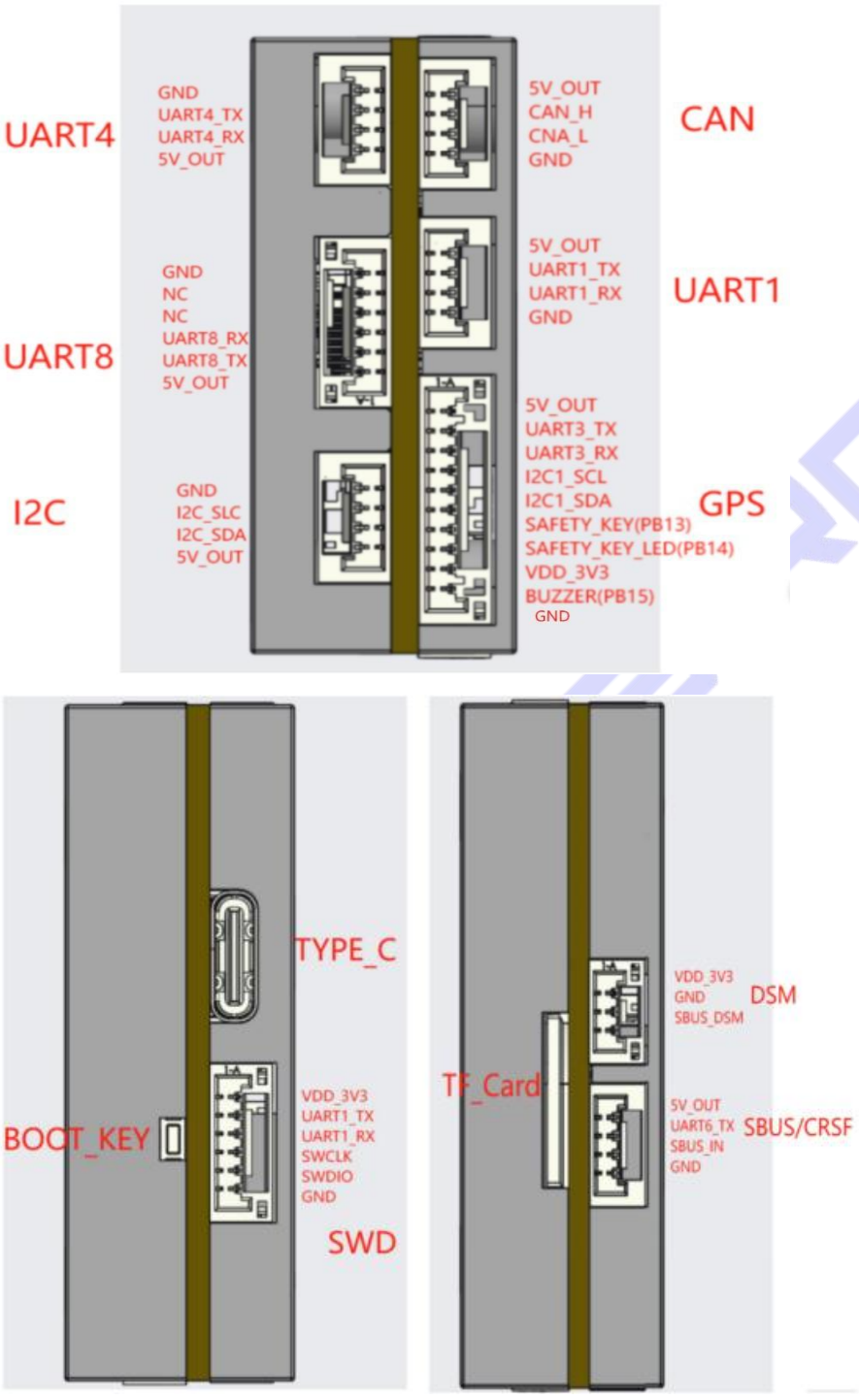
1. Overview

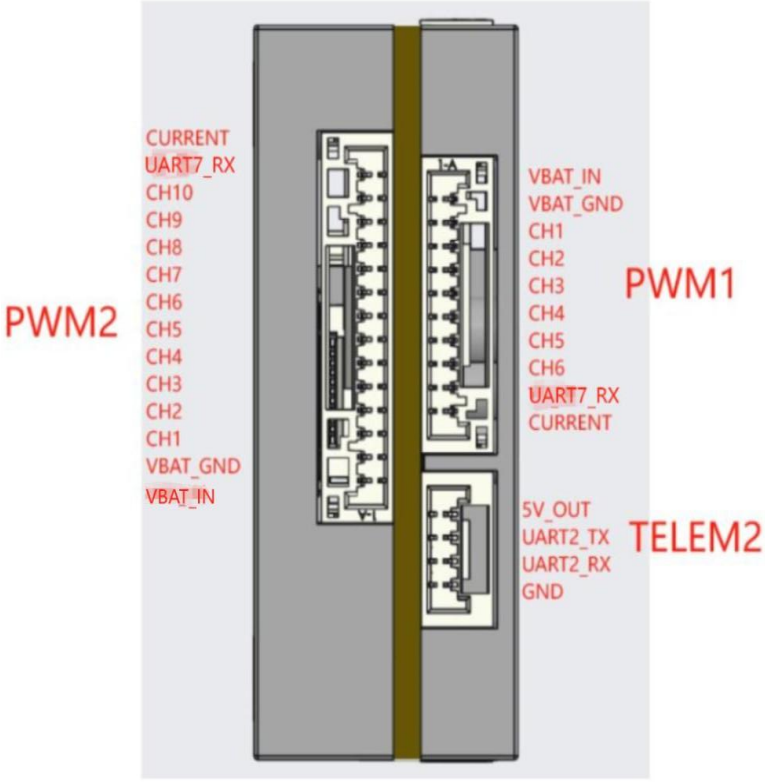
The H743 - ZH Flight Controller is a high - performance controller specially designed for Drone. It supports a variety of firmware options, including Ardupilot, PX4, INAV, and Betaflight. With its powerful STM32H743 MCU, dual IMU sensors (BMI088/BMI270), built - in compass (IST8310), and barometer (DPS310), it ensures precise navigation and stable flight performance. The controller also has a variety of connection options, including 7 UART ports and 10 PWM outputs, making it a versatile and efficient solution for both hobbyists and professional UAV users.

2.Product List

H743 - ZH Flight Controller × 1

3.Product Interfaces





4.Features and Functions

- Excellent Redundancy and Reliability
- Adopts a dual IMU sensor architecture. When the main IMU fails or the data is abnormal, the system can automatically switch to the backup IMU.
- The powerful STM32H743 main control provides super computing power, performs real - time sensor data verification and fusion, and greatly improves the system fault tolerance.
- High - Precision Navigation and Stable Control
- The integrated IST8310 magnetometer and DPS310 high - precision barometer provide precise heading and altitude locking for the aircraft.
- With the high performance of the main control, it runs advanced filtering algorithms, enabling rock - solid flight stability even under complex airflows.
- Powerful Expansion and Connectivity
- Provides up to 7 UART serial ports, which can connect multiple peripherals such as RTK GPS, data transmission modules, visual modules, and lidar at the same time.
- Equipped with 10 PWM outputs, which can flexibly control complex power systems or mission equipment to meet professional application needs.
- Open and Flexible Firmware Ecosystem
- Fully supports mainstream open - source firmware such as Ardupilot, PX4, INAV, and Betaflight. Users can choose freely according to project requirements.
- The open developer community provides rich resources, facilitating in - depth customization and secondary development of functions to accelerate project implementation.

5.Technical Specifications

Parameter	Specification
MCU	STM32H743VIT6, 480MHz
Flash Memory	2048KB
RAM	1024KB
Gyroscope	BMI088/BMI270
Accelerometer	BMI088/BMI270
Barometer	DPS310
Operating Environment Temperature	- 40°C ~ +80°C
UART	7
PWM	10
I2C	1
Firmware Support	INAV/Ardupilot/PX4/Betaflight
BEC Output	5V 3A
Recommended Operating Voltage	2S ~ 8S Lipo Cells 8.8V - 35.2V
Weight	40g
Dimensions	36mm×36mm×8mm
Mounting Hole Specification	30.5×30.5mm, Φ2.2mm