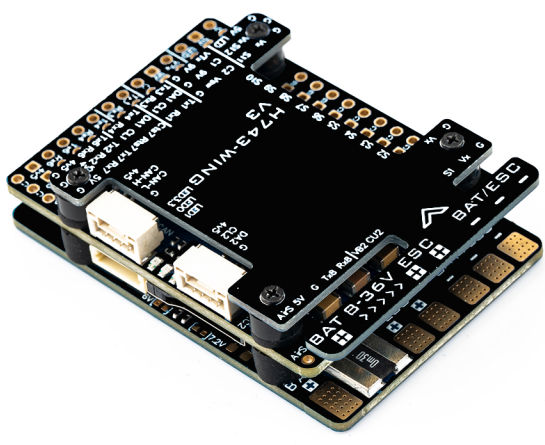
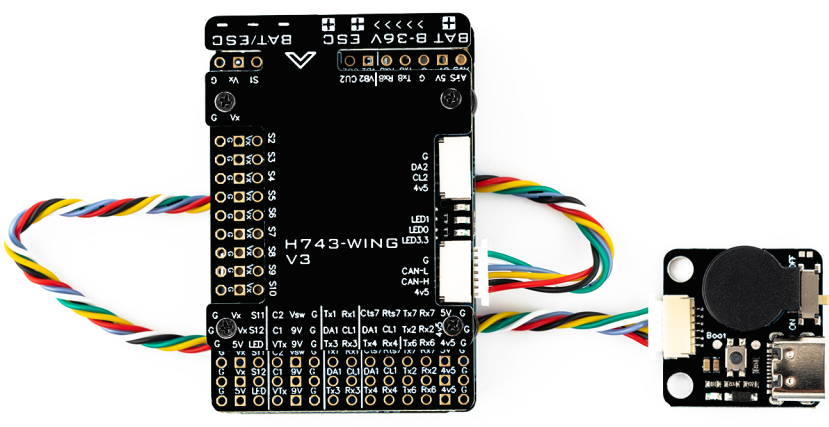
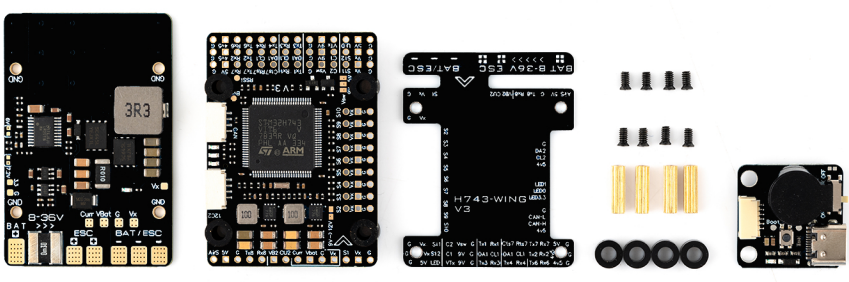






Vbat: 8~36V DC IN
Voltage divider 1K:10K, Max.36V supported
BATT_VOLT_PIN 10, BATT_VOLT_MULT 11
Curr: for current sensor, 0~3.3V
BATT_CURR_PIN 11, BATT_AMP_PERVLT 66.7
INAV current scale: 150

VB2: Voltage divider 1K:20K, Max.69V supported
BATT2_VOLT_PIN 18, BATT2_VOLT_MULT 21
CU2: for external current sensor, 0~3.3V
BATT2_CURR_PIN 7

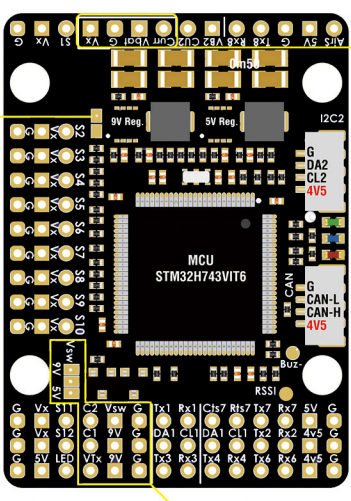
TX8/RX8: UART8

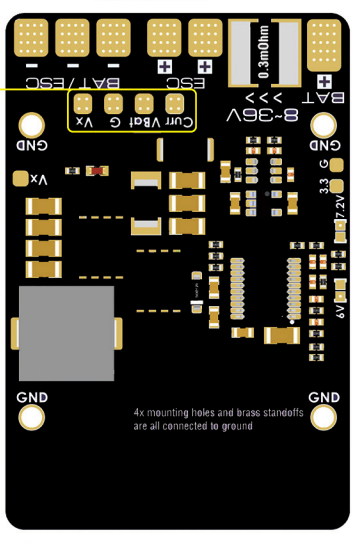
AirS: Analog Airspeed sensor (0~6.6V)
1: 1 voltage divider built-in
ARSPD_PIN 4

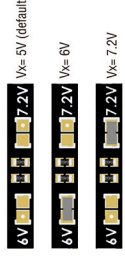
+ & - : Battery & ESC power pads, 8~36V DC(3~8S LIPO).

Current Sensor: 90A continuous, 220A peak.
INAV Current sensor scale: 150

connection with silicon wires







DA2 & CL2: I2C2
JST-GH-4P

LED 1: Green, FC Status
LED 0: Blue, FC Status
LED 3.3: Red, 3.3V Status

CAN Port
JST-GH-4P

Rssi:
Analog RSSI,
RSSI_ANA_PIN 8

S1-S12, LED: PWM1~PWM13

Vx: BEC 5V/6V/7.2V for servos, Default is 5V
8A cont. 10A peak
5V: onboard BEC 5V 2A cont. 3A peak
9V: onboard BEC 9V 2A cont. 3A peak,
*** 9V rise to 12V if "9V->12V" jumper is bridged.
G: Ground

9V->12V

TX1/RX1: UART1
TX7/RX7: UART7
CTs7/Rts7: Uart7_CTS/RTS for ArduPilot Telem

TX2/RX2: UART2
DA1 & CL1: I2C1

TX3/RX3: UART3, TX4/RX4: UART4

RX6: UART6-RX for Serial_RX by default
PPM share RX6 pad
TX6: UART6-TX

4V5: 4.4~4.8V, Max.500mA
*** the voltage is also supplied when connecting via USB

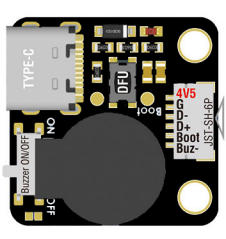
A battery must be plugged in for power to be provided
to the pins marked "5V" on the board.

Vsw= 9V Vsw= 5V

Vsw: 5V/9V selection
*** ON/OFF can be switched via ArduPilot Relay or Modes/USER1 (INAV)
*** Max.1.5A load on this pad. (Default ON)
*** Vsw jumper one or the other must be bridged

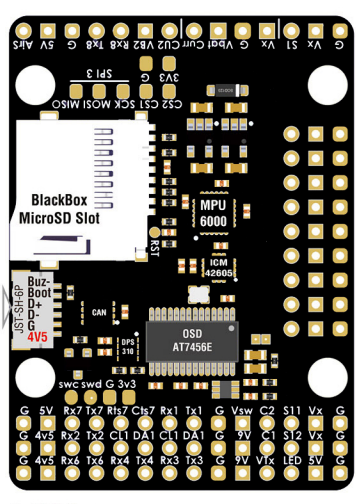
C1: Camera-1 video IN (Default)
C2: Camera-2 video IN
*** C1/C2 can be switched via ArduPilot Relay or Modes/USER2 (INAV)

VTX: Video OUT for Video Transmitter

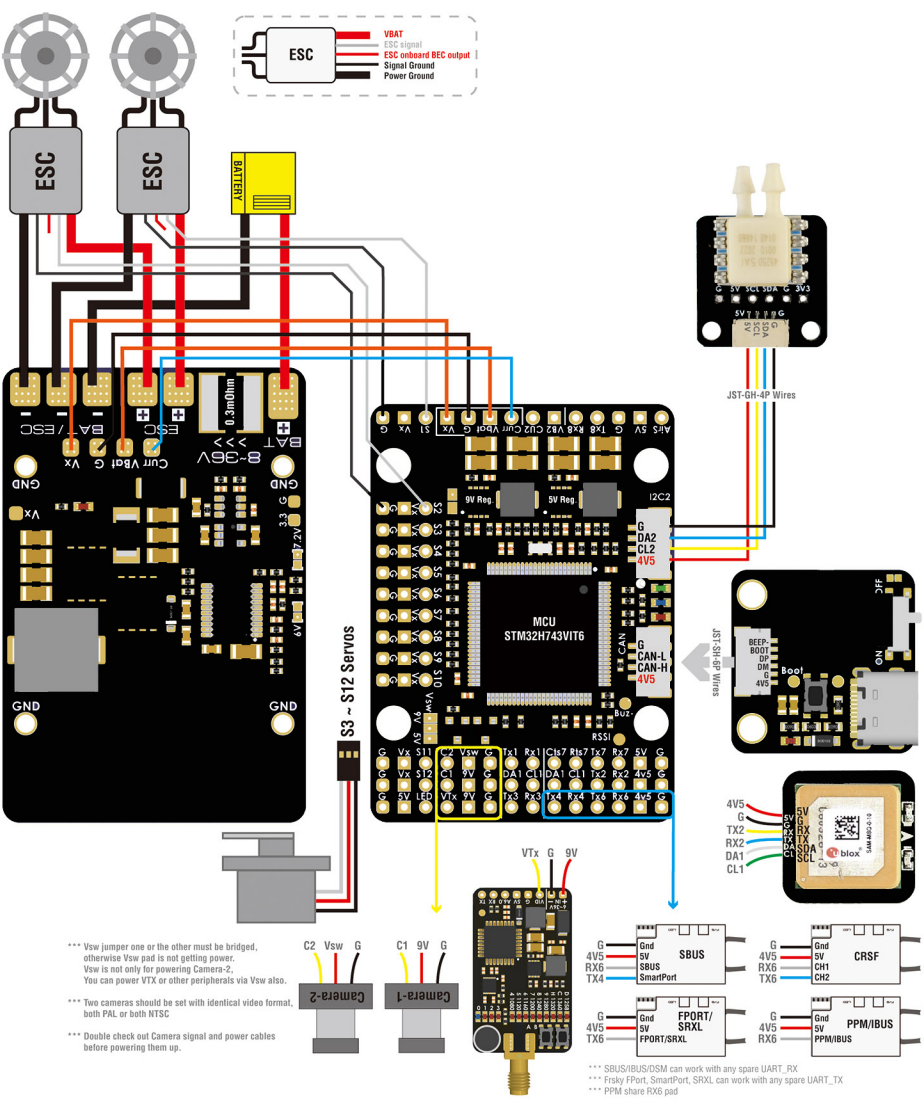


DFU Button: DFU mode
Connect USB to the PC While holding the boot button in.

6pin wires



Size: 54x36x13mm
Weight: 30g w/ top and bottom plate & USB externder
Holes: Φ4mm, 30.5mm mounting
M3 Silicon Grommets included



FC Specifications
MCU: STM32H743VIT6, 480MHz , 1MB RAM, 2MB Flash
IMU: MPU6000 (SPI1) & ICM42605 (SPI4)
Baro: Infineon DPS310 (I2C2)
OSD: AT7456E (SPI2)
Blackbox: MicroSD card slot (SDIO)
7x Uarts (1,2,3,4,6,7,8) with built-in inversion.
13x PWM outputs(including "LED" pad)
2x I2C
1x CAN
6x ADC (VBAT, Current, RSSI, Analog AirSpeed, VB2, CU2)
3x LEDs for FC STATUS (Blue, Red) and 3.3V indicator(Red)
1x SPI3 breakout
USB/Beep Extender with Type-C(USB2.0)
Dual Camera Inputs switch
5V/9V(12V) for Camera/VTX power switch
High-precision Current Sense (90A continuous, 220A peak)
Battery Voltage Sensor: 1K:10K (Scale 1100 in INAV,
BATT_VOLT_MULT 11.0 in ArduPilot)
ADC VB2 voltage divider: 1K:20K
ADC AirSpeed voltage divider: 20K:20K
Static power 160mA@5V

FC Firmware
ArduPilot(ChiBiOS): MATEKH743
INAV: MATEKH743

PDB
Input voltage range: 8~36V (3~8S LiPo) w/TVS protection
2x ESC power pads
Current Senor: 220A, 3.3V ADC (Scale 150 in INAV, 66.7 A/V in ArduPilot)
Sense resistor: 90A continuous, 220A peak.

BEC 5V output
Designed for Flight controller, Receiver, OSD, Camera, Buzzer, 2812 LED_Strip, Buzzer, GPS module, AirSpeed
Output 5.15 +/- 0.1V DC
Continuous current 2 Amps, 3A Peak

BEC 9V /12V output
Designed for Video Transmitter, Camera, Gimbal ect.
Continuous current 2 Amps, 3A Peak
12V option with Jumper pad

BEC Vx output
Designed for Servos
Voltage adjustable, 5V Default, 6V or 7.2V via jumper
Continuous current 8 Amps, 10A Peak

BEC 3.3V output
Linear Regulator
Continuous current: 200mA

Physical
Mounting: 30.5 x 30.5mm, Φ4mm with Grommets Φ3mm
Dimensions: 54 x 36 x 13 mm
Weight: 30g with USB extender
H743-WING-V3 3d step fil

Including
1x H743-WING
1x USB(Type-C)/Beep (Passive buzzer) Extender
1x 20cm JST-SH-6P to JST-SH-6P cable for USB extender.
2x 20cm JST-GH-4P to JST-GH-4P cable for CAN & I2C port
1x Rubycon ZLH 35V 470uF capacitor
Dupont 2.54 pins (Board is shipped unsoldered)