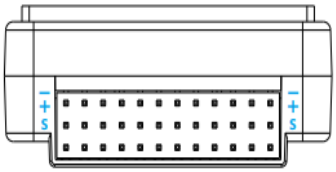
DH RESEARCH Flight Controller A2
Technical Specifications

Main FMU Processor	**STM32F427VIT6**	**Core: Arm® 32-bit Cortex®-M4 CPU** **Adaptive real-time accelerator allowing 0-wait state execution from Flash memory** **Frequency up to 180 MHz** **Memories:Up to 2 MB of Flash memory** **Debug mode:SWD & JTAG interfaces**
IO Processor	**STM32F103C8T6**	**Core: ARM 32-bit Cortex™-M3 CPU** **Frequency up to 72 MHz** **Memories:** **32-to-128 Kbytes of Flash memory,** **6-to-20 Kbytes of SRAM** **Debug mode:SWD & JTAG interfaces**
Flash	**FM25V02A**	**256-Kbit (32 K × 8) Serial (SPI) F-RAM** **High-endurance 100 trillion (1014) read/writes** **151-year data retention** **Very fast serial peripheral interface (SPI)** **Up to 40-MHz frequency**
Dual Buffer Driver With 3-State Outputs	**SN74LVC2G240**	**To improve the performance and density of 3-state memory address drivers, clock drivers, and bus-oriented receivers and transmitters.**
On-board Sensors (1)	**MPU6000**	**A 3-axis gyroscope, 3-axis accelerometer, and a Digital Motion Processor™ (DMP)** **SPI at 20MHz** **The FIFO buffers the complete data set, reducing timing requirements on the system processor by allowing the processor burst read the FIFO data.**
On-board Sensors (2)	**MS5611-01BA03**	**Barometric Pressure Sensor** **SPI at 20MHz** **Range MAX 1200 mbar**
On-board Sensors (3)	**BMP280**	**BOSCH** **I2C** **Range MAX 1100 mbar**
Externals (1)	**GPS**	**M10N: GPS L1C/A, Galileo E1B/C, SBAS L1** **ublox -167dBm** **Navigation update rate 10Hz, Maximum number of satellites 32** **Cold start speed 27S, Hot start speed 1S** **UART**
Externals (2)	**QMC5883L**	**3-Axis Magnetoresistive Sensors** **I2C Digital Interface**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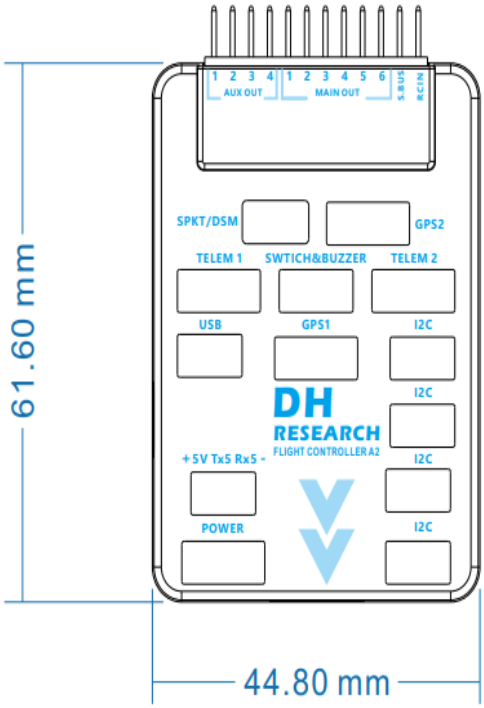
1 2 3 4
AUX OUT
1 2 3 4 5 6
MAIN OUT
S.BUS
RCIN
SPKT/DSM
GPS2
TELEM 1
SWTICH&BUZZER
TELEM 2
USB
GPS1
I2C
I2C
DH
RESEARCH
FLIGHT CONTROLLER A2
+ 5V Tx5 Rx5 -
I2C
POWER
I2C
61.60 mm
44.80 mm