

## DH Research Flight Controller V5 – Technical Specifications

|                    |               |                                                                          |
|--------------------|---------------|--------------------------------------------------------------------------|
| Main FMU Processor | STM32F765     | Core: Arm® 32-bit Cortex®-M7 CPU 216MHz                                  |
|                    |               |                                                                          |
|                    |               | Adaptive real-time accelerator allowing 0-wait state execution           |
|                    |               | from Flash memory                                                        |
|                    |               | Frequency up to 216 MHz                                                  |
|                    |               | Memories:Up to 2 MB of Flash memory                                      |
|                    |               |                                                                          |
| IO Processor       | STM32F103C8T6 | Core: ARM 32-bit Cortex™-M3 CPU                                          |
|                    |               |                                                                          |
|                    |               | Frequency up to 72 MHz                                                   |
|                    |               | Memories:<br>32-to-128 Kbytes of Flash memory,<br>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 (10 <sup>14</sup> ) read/writes           |
|       |          | 151-year data retention                                               |
|       |          | Very fast serial peripheral interface (SPI)<br>Up to 40-MHz frequency |

|                                         |                                                                          |                                      |
|-----------------------------------------|--------------------------------------------------------------------------|--------------------------------------|
|                                         |                                                                          |                                      |
| Dual Buffer Driver With 3-State Outputs | To improve the performance and density of 3-state memory address drivers |                                      |
|                                         | SN74LVC2G240                                                             | oriented receivers and transmitters. |
|                                         |                                                                          |                                      |
| On-board Sensors                        | A 3-axis gyroscope, 3-axis accelerometer, and a Digital Motion           |                                      |
|                                         | ICM-45686 (TDK)                                                          | Processor™ (DMP) , SPI at 20MHz      |
|                                         | BMI088 (BOSCH)                                                           | connected over SPI                   |
|                                         | BMM350 (BOSCH)                                                           | Compass Sensor (I2C)                 |
|                                         | BMP581 (BOSCH)                                                           | Barometric Pressure Sensor (SPI)     |
|                                         |                                                                          |                                      |
| Externals Interface                     | GPS UART * 2                                                             |                                      |
|                                         | UART*4                                                                   |                                      |
|                                         | PPM, SBUS                                                                |                                      |
|                                         | USB TYPE-C                                                               |                                      |
|                                         | I2C * 3                                                                  |                                      |
|                                         | CAN * 2                                                                  |                                      |
| Supported Firmware                      | Ardupilot , PX4 Autopilot                                                |                                      |

\*Power Management Unit Input voltage: 10V–25V (3S–6S battery)

