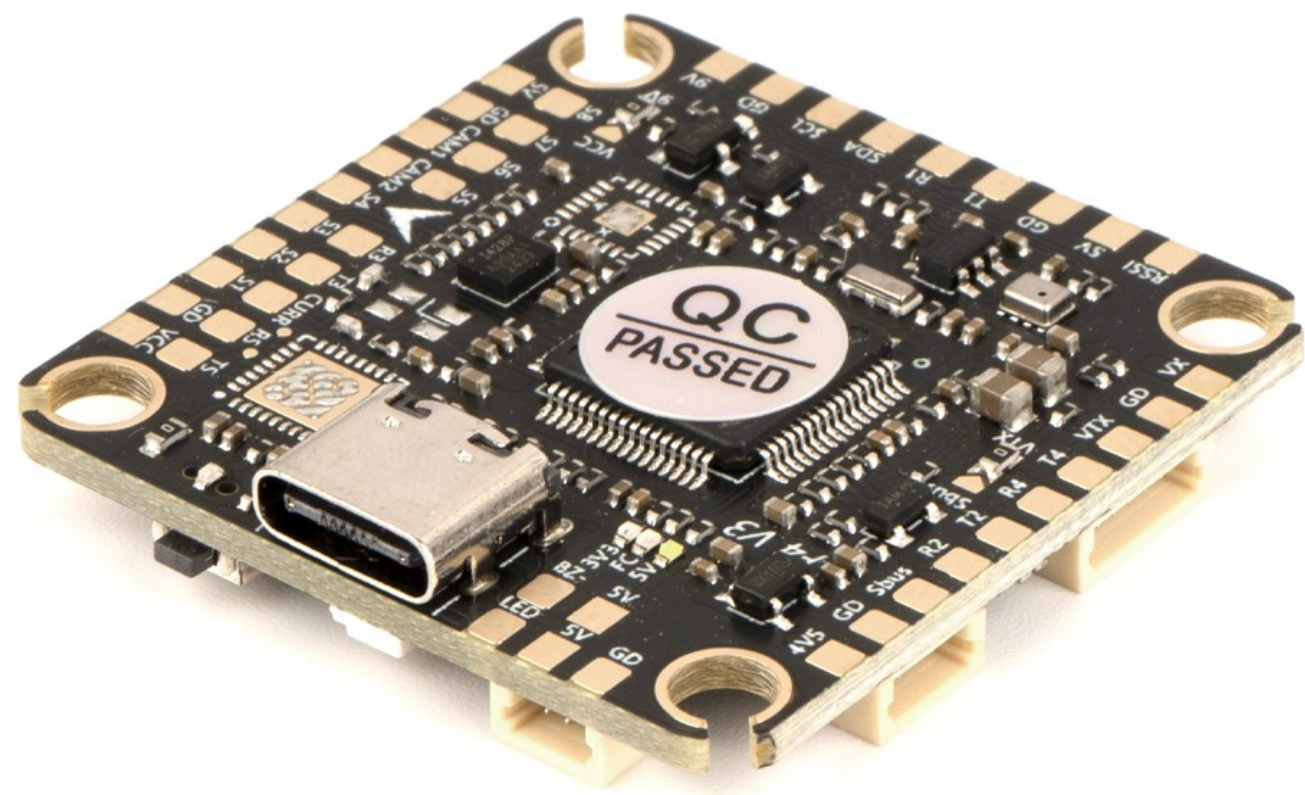




FPV flight controller built around the STM32F405 microcontroller with ICM42688-P gyroscope connected via SPI interface. Features built-in accelerometer, magnetometer, and SPL06 barometer for flight stabilization and altitude sensing. Equipped with analog OSD and dual analog video inputs with composite video output. Provides 5V/2.5A and 9V/2.5A BEC outputs, five UART ports, one I2C port, and four motor control outputs supporting multiple protocols including bi-directional DShot up to DShot1000. Compatible with Betaflight firmware under PILOTIXF405V3 target. Board measures 36 x 36 mm with 30.5 x 30.5 mm M3 mounting pattern, weighing 9.6 grams. Operates in temperatures from -20°C to 40°C.

| Product details           |                          |
|---------------------------|--------------------------|
| Model                     | F405 ICM42688 V3         |
| SKU                       | 5447                     |
| MCU                       |                          |
| FC MCU                    | STM32F405                |
| Firmware target           | PILOTIXF405V3            |
| Firmware support          | Betaflight               |
| OSD type                  | Analog OSD               |
| Sensors                   |                          |
| Gyro                      | ICM42688-P               |
| Gyro connection           | SPI                      |
| Number of gyros           | 1                        |
| Accelerometer             | Built-in                 |
| Barometer                 | SPL06                    |
| Magnetometer              | Built-in                 |
| Electrical specifications |                          |
| BEC                       | 5 V @ 2.5 A, 9 V @ 2.5 A |
| Interfaces                |                          |
| Motor control outputs     | 4                        |

|                           |                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------|
| ESC protocols             | PWM, OneShot125, Multishot, DShot150, DShot300, DShot600, DShot1000, OneShot42, Brushed |
| Bi-directional DShot      | yes                                                                                     |
| Receiver protocol         | SBUS, CRSF, ELRS, FrSky, Futaba, Flysky, TBS Crossfire, DSMX                            |
| DFU button                | yes                                                                                     |
| I2C port                  | 1                                                                                       |
| LED strip output          | yes                                                                                     |
| SD card slot              | no                                                                                      |
| UART ports                | 5                                                                                       |
| Buzzer output             | yes                                                                                     |
| USB port                  | USB Type C                                                                              |
| Video inputs              | 2                                                                                       |
| Video input               | Analog                                                                                  |
| Video output              | Analog                                                                                  |
| Mechanical specifications |                                                                                         |
| Dimensions                | 36 x 36 mm                                                                              |
| Mounting                  | 30.5 x 30.5 mm (M3)                                                                     |
| Weight                    | 9.6 g                                                                                   |
| Operating conditions      |                                                                                         |
| Humidity range            | 20-95% RH (non-condensing)                                                              |
| Operating temperature     | -20 - 40 °C                                                                             |
| Storage temperature       | -30 - 50 °C                                                                             |
| Common                    |                                                                                         |
| Package contents          | Set of cables, Shock-absorbing balls (4x)                                               |
| Warranty                  | 2 years                                                                                 |

Wiring diagram

