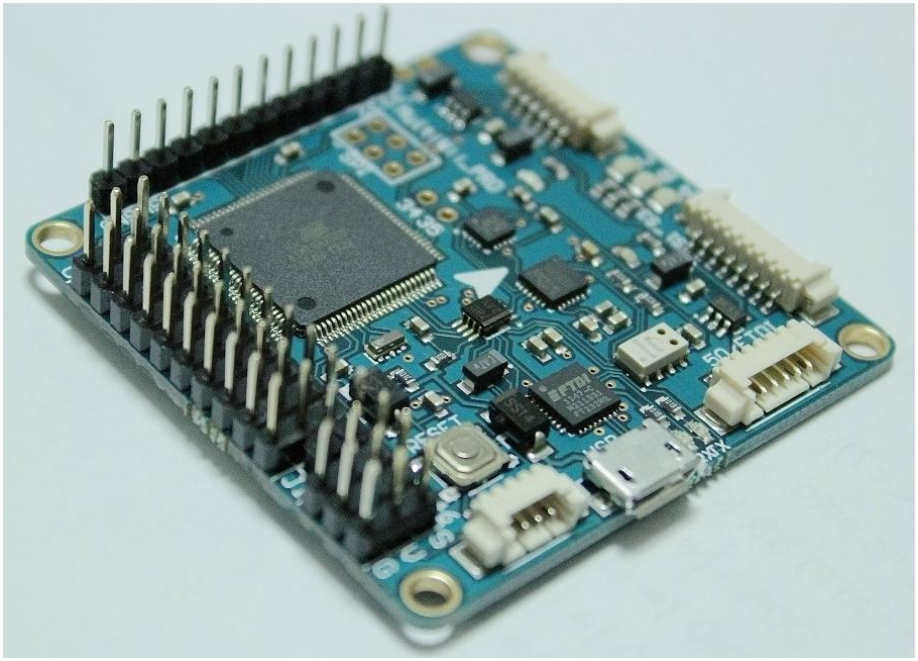
Multiwii_Pro/ MegaPirate FlightController With *MS5611*



Features:

·Supported MegaPirateNG and MultiWii firmware
·Up to 8-axis motor output
·8 input channels for standard receiver
·4 serial ports for debug/Bluetooth Module/OSD/GPS/telemetry
·2 servos output for PITCH and ROLL gimbal system
·A servos output to trigger a camera button
·6 Analog output for extend device
·A I2C port for extend sensor or device
·Separate 3.3V and 5V LDO voltage regulator
·ATMega 2560 Microcontroller
·MPU6050 6 axis gyro/accel with Motion Processing Unit
·HMC5883L 3-axis digital magnetometer
·MS5611-01BA01 high precision altimeter (10cm)
·FT232RQ USB-UART chip and Micro USB receptacle
·On board logic level converter
·Match the standard of RoHS

Flight mode for Multiwii

·One of the following basic mode

- Acro
- Level
- Alt Hold
- Head Lock

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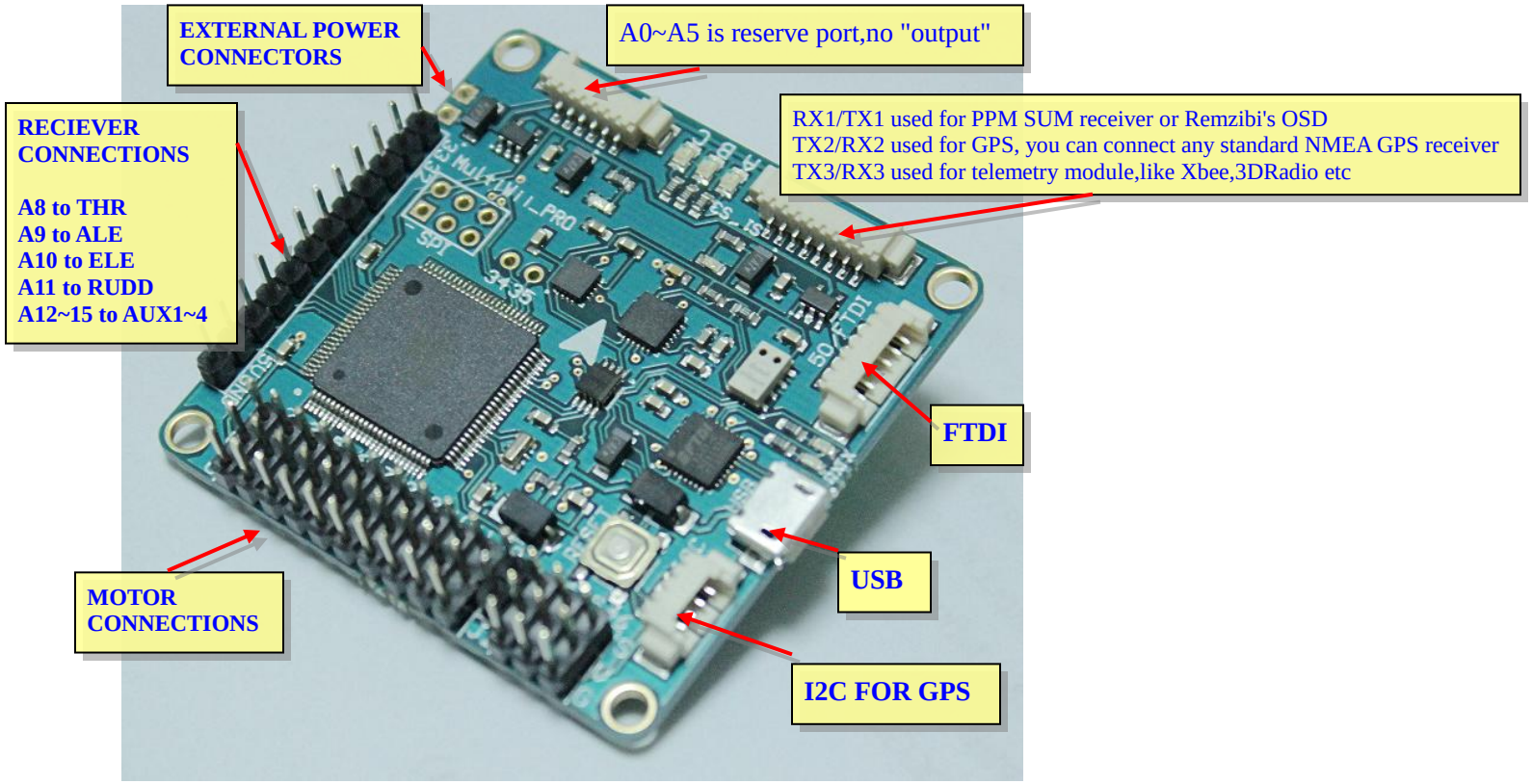
Optional mode

- HeadFree (CareFree)
- GPS Hold (Need GPS receiver or Extend Board)
- GPS Back to home position (Need GPS receiver or Extend Board)

Flight mode for MegaPirate

·Acro
·Alt Hold
·Simple
·Loiter (uses GPS)
·Guided (uses GPS)
·Position (uses GPS)
·Circle (uses GPS)
·RTL (uses GPS)
·Auto(uses GPS)
- Follow Me(uses GPS)



Motor connection

-MultiWii : D2/D3/D5/D6/D7/D8/D9/D10
-MegaPirateNG: D2/D3/D5/D6/D7/D8/D11/D12

External Power: if you don't power it by the BEC from the ESC Also needed to power Expansion Board.

-cam pitch = input from RX -cam roll = same
-aux4= same (aux port 1-4 u can see in the MultiWii config tool on PC)
-aux3= same (aux port 1-4 u can see in the MultiWii config tool on PC)
-aux2= same (aux port 1-4 u can see in the MultiWii config tool on PC)
-aux1= same (aux port 1-4 u can see in the MultiWii config tool on PC)
-yaw = input from RX
-pitch = input from RX
-roll = input from RX
-throttle = input from RX
-5v = so the RX gets power
-gnd= ground

-trigger 9 = to trigger the cam if needed
-echo 10 = optional echo ultrasonic sensor
-2x Motor out 11, 12
-5v bridge, jumper (if you power it by the BEC from the ESC this must be closes)
-pitch 44 = for the CAM Gimbal system
-roll 45 = for the CAM Gimbal system
-trigger 46 = another trigger
D9/D10 is sonar sensor port when you use MegaPirateNG firmware

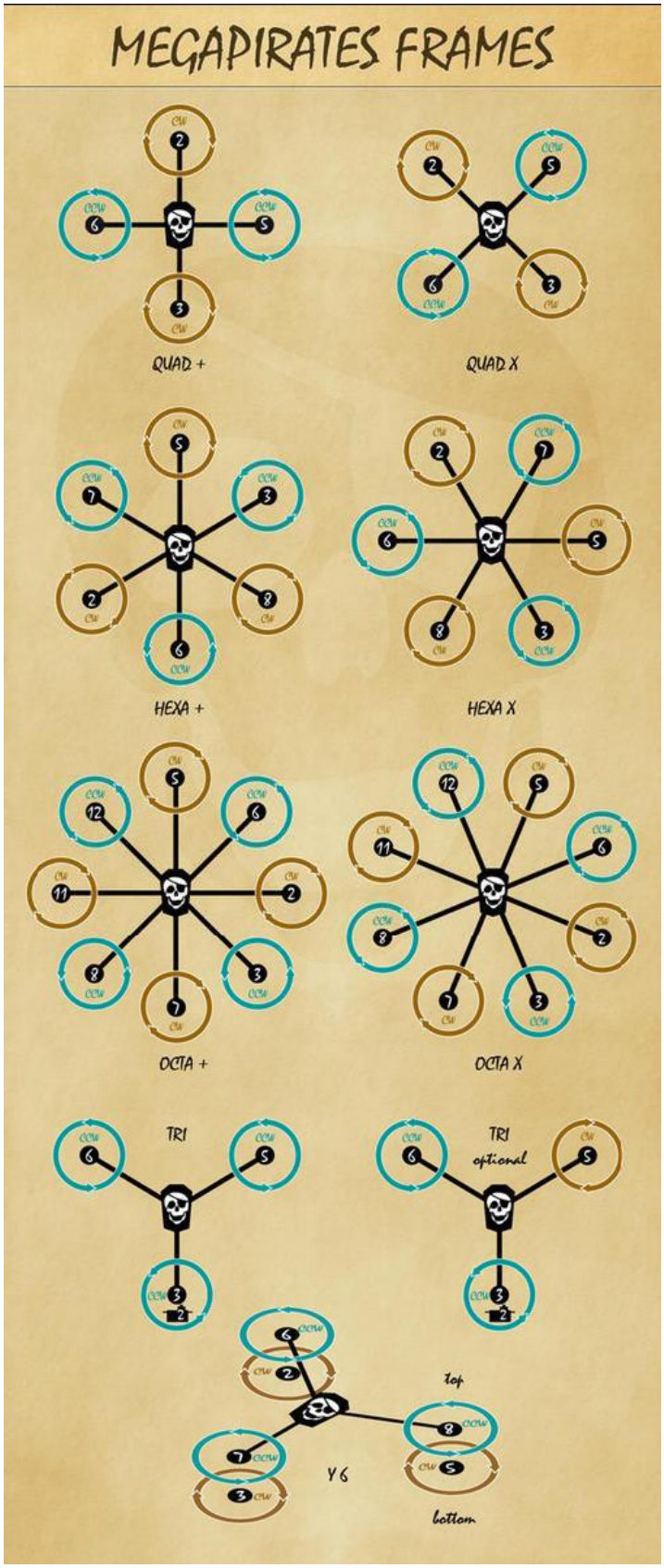
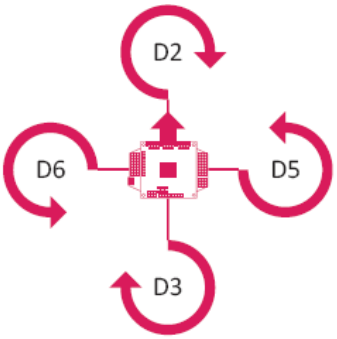
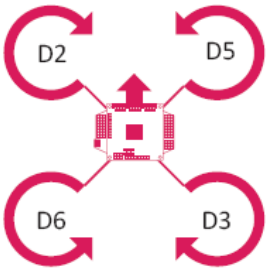
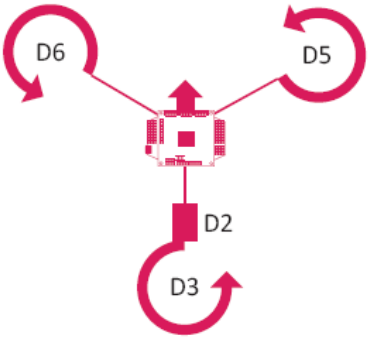
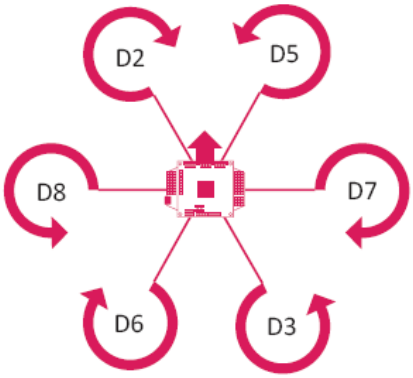
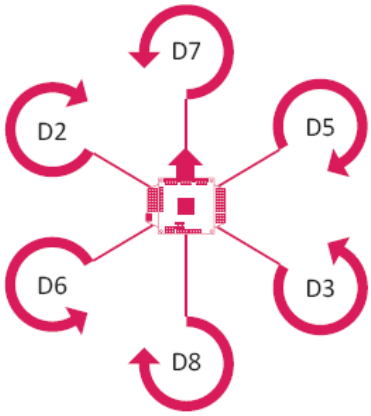
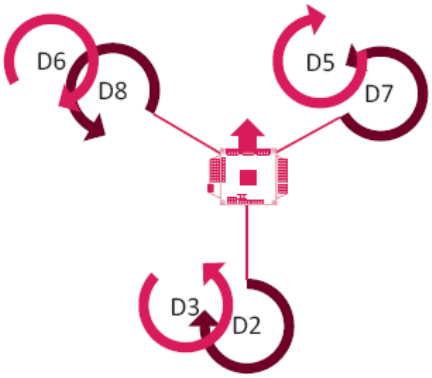
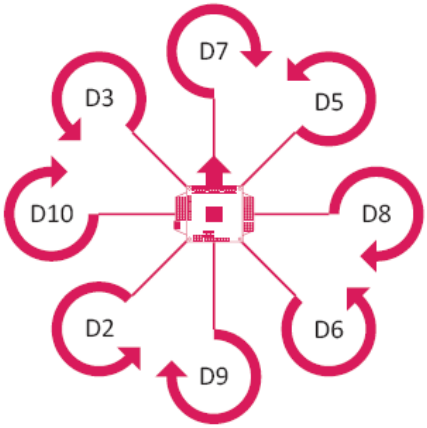
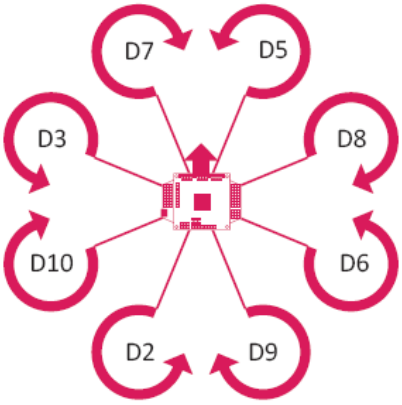
I2C port
(slc, sda, 5v, gnd) = this is for the expanding like GPS.

S0/FTDI
(gnd, gnd, 5v, rx0, tx0, dtr) = can be connected a bluetooth module or standalone FTDI cable(if the USB on board is broken)

S1-S3
(tx1, rx1, tx2, rx2 tx3, rx3, vcc, gnd) = RX1/TX1 used for PPM SUM receiver or Remzibi's OSD board
TX2/RX2 used for GPS, you can connect any standard NMEA GPS receiver
TX3/RX3 used for telemetry module,like Xbee,3DRadio etc

A0-A5
A0~A5 is reserve port,no "output"

MegaPirate Motor Plan



Multiwii_Pro Motor Plan