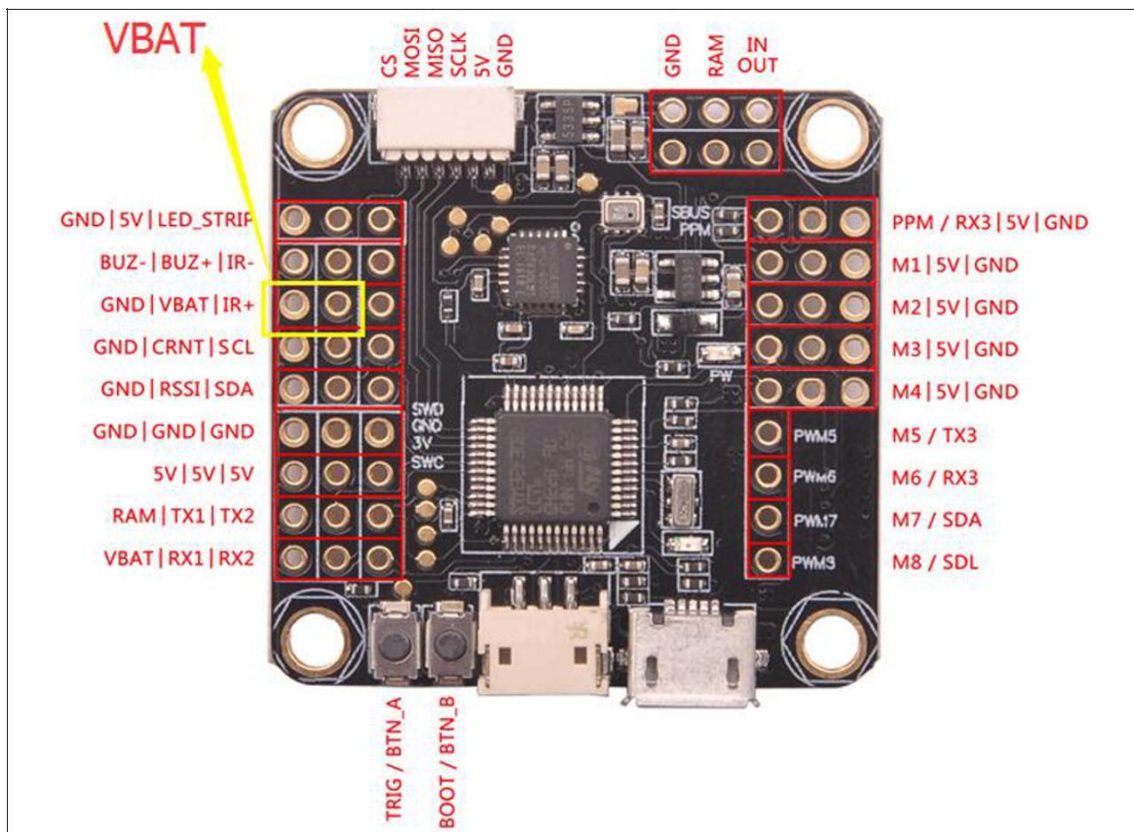


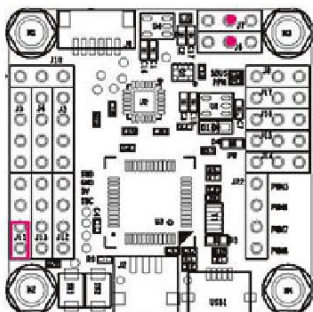
Flight controller connection diagram:



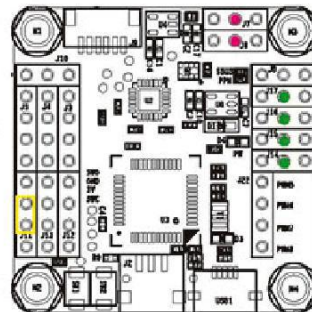
RAM / Power source for VTX and Camera jumper

The RAM pin, was connect to nothing, just the 3 RAM pin are passthrough.

There are 3pin jumper next to UART1, which you could power the RAM pins by ESC_5V(BEC, normally it is 5V) or VBAT(LIPO, normally 12 or 14V)



If short the red Jumper then the red pins will be connected to Lipo(Over VBAT pin)



If short the Yellow Jumper then the red pins will be connected to ESC 5V

Ports setting:

The screenshot shows the INAV configurator interface. At the top, there's a status bar with battery level (0V), various sensor icons (Gyro, Accel, Mag, Baro, GPS, Flow, Sonar, Speed), and a 'No dataflash chip found' warning. The main content area is titled 'Ports' and contains a table with columns: Identifier, Data, Logging, Telemetry, RX, and GPS. Below the table, there are instructions: 'TX1 For Smartport', 'UART2 for GPS', and 'UART3 for Serial RX'. A 'Save and Reboot' button is at the bottom right. The bottom status bar shows system metrics like Packet error: 0, I2C error: 1, Cycle Time: 1049, CPU Load: 17%, MSP load: 0.2, MSP round trip: 22, HW round trip: 8, Drop ratio: 0%, and version 1.7.2.

Identifier	Data	Logging	Telemetry	RX	GPS
USB VCP	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 38400
UART1	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	SmartPort AUTO	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 38400
UART2	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	<input checked="" type="checkbox"/> 38400
UART3	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input checked="" type="checkbox"/> Serial RX	<input type="checkbox"/> 38400

TX1 For Smartport
UART2 for GPS
UART3 for Serial RX

Save and Reboot

Packet error: 0 I2C error: 1 Cycle Time: 1049 CPU Load: 17% MSP load: 0.2 MSP round trip: 22 HW round trip: 8 Drop ratio: 0% 1.7.2

This is a close-up of the 'Ports' tab table from the previous screenshot. It shows the configuration for four identifiers: USB VCP, UART1, UART2, and UART3. The 'Data' column shows MSP is enabled for USB VCP, UART1, and UART2, and disabled for UART3. The 'Logging' column shows Blackbox logging is disabled for all. The 'Telemetry' column shows SmartPort for UART1 and Disabled for others. The 'RX' column shows Serial RX is disabled for USB VCP, UART1, and UART2, and enabled for UART3. The 'GPS' column shows GPS is disabled for USB VCP, UART1, and UART3, and enabled for UART2.

Identifier	Data	Logging	Telemetry	RX	GPS
USB VCP	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 38400
UART1	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 38400
UART2	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	<input checked="" type="checkbox"/> 38400
UART3	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input checked="" type="checkbox"/> Serial RX	<input type="checkbox"/> 38400

GPS is pre-solder to UART2 , So please enable GPS for UART2 , there is a jumper from SCL and SDA to 3.3v in order to fix compass i2c error

GPS Setting:

The screenshot shows the 'GPS' settings tab in the INAV configurator. It features a yellow note: 'Remember to configure a Serial Port (via Ports tab) when using GPS feature.' Below the note, there are four settings: 'GPS for navigation and telemetry' (enabled), 'Protocol' (set to UBLOX), 'Ground Assistance Type' (set to Disable), and 'Magnetometer Declination [deg]' (set to 0).

GPS

Note: Remember to configure a Serial Port (via Ports tab) when using GPS feature.

GPS for navigation and telemetry

UBLOX Protocol

Disable Ground Assistance Type

0 Magnetometer Declination [deg]

Receiver setting: (Both the PPM/SBUS/DSM Receiver connect to PPM/RX3 pad)

1. Sbus receiver / Ibus receiver / DSM2 receiver / DSMX receiver please enable Serial RX for UART3

Identifier	Data	Logging	Telemetry	RX	GPS
USB VCP	<input checked="" type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Blackbox 115200 ▼	Disabled ▼ AUTO ▼	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 38400 ▼
UART1	<input checked="" type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Blackbox 115200 ▼	Disabled ▼ AUTO ▼	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 38400 ▼
UART2	<input type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Blackbox 115200 ▼	Disabled ▼ AUTO ▼	<input type="checkbox"/> Serial RX	<input checked="" type="checkbox"/> 38400 ▼
UART3	<input type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Blackbox 115200 ▼	Disabled ▼ AUTO ▼	<input checked="" type="checkbox"/> Serial RX	<input type="checkbox"/> 38400 ▼

Please set Receiver Mode to Serial-based receiver and select correct Serial receiver Provider

Receiver Mode

- PPM RX input
- Serial-based receiver (SPEKSAT, SBUS, SUMD)
- PWM RX input (one wire per channel)
- MSP RX input (control via MSP port)
- NRF24L01 based receiver

Serial Receiver Provider

Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.

SBUS ▼

2. PPM Receiver needn't enable serial RX , just set Receiver Mode to PPM RX input

Receiver Mode

- PPM RX input
- Serial-based receiver (SPEKSAT, SBUS, SUMD)
- PWM RX input (one wire per channel)
- MSP RX input (control via MSP port)
- NRF24L01 based receiver

Sensor calibration and more setting guide:

<https://github.com/iNavFlight/inav/wiki/Sensor-calibration>