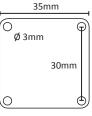
Naze32 10dof

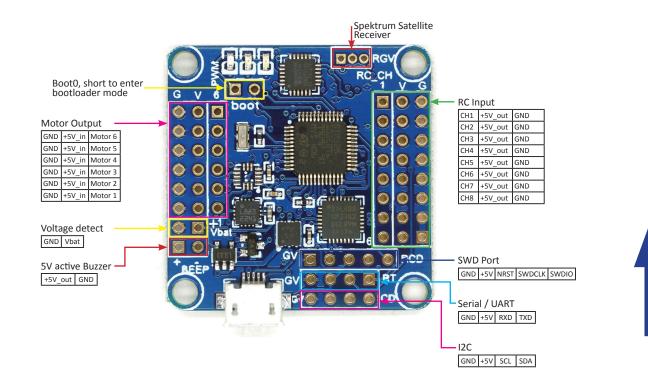
- 36x36 mm
- 3-axis MEMS gyro + accelerometer (MPU6050)
- 3-axis magnetometer (HMC5883L)
- Pressure sensor (MS5611)
- Flexible motor outputs, support various airframe types
- Quad/Hexa/Tri/Bi/Y4/Y6/Octo/Camera Gimbal. (Default is Quad-X)
- Up to 8 ch RC input supports standard receivers (PWM), PPM Sum receiver (FrSky, etc), or Spektrum Satellite receiver.
- Battery voltage monitoring
- Modern 32-bit processor running at 3.3V/72MHz (STM32F103CB).
- Onboard MicroUSB for setup and configuration
- MultiWii-based configuration software for easy setup
- rev4 hardware

-mms DOORGV L...... v 6 G 0 booi 00 HHHHH 0 0 C C 0 C \mathbb{C} 0 \bigcirc BFinn C G١ RCD

* The difference between 10dof and 6 dof version are compass and barometer, the 6 dof version HASN'T HMC58831 and M55611.



Connection diagrams



Firmware update

- Short boot 0 -
- Connect to computer over USB
- Download the newest firmware from: https://code.google.com/p/afrodevices/
 downloads/list
- Open STM32 Flash Loader Demonstrator
- 5. Choose the COM port and NEXT



STMicroelectr	onics	STMicroelectronics				
Select the communication port and sel connection. Common for all families	t settings, then click next to open	Target is readable. Please click "Next" to proceed.				
• UART						
Port Name COM4 🗾	Parity Even 💌					
Baud Rate 115200 💌	Echo Disabled 💌	Remove protection				
Data Bits 🛛 🖉 🚽	Timeout(s) 10 💌					
Flow Control OFF	RTS ON RTS OFF DTR ON DTR OFF By default DTR & RTS are ON	Flash Size 128 KB				
<u>B</u> ack <u>N</u> ex	t <u>C</u> ancel <u>C</u> lose	Back Next Cancel Close				

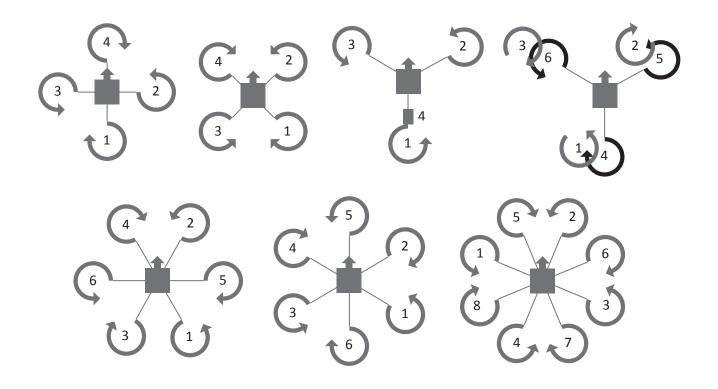
• Choose the right HEX file

STMicroelectronics					STMicroelectronics				
Please, select your device in the target list					C Erase				
Target [STM32_Med-density_128K			•		© AI	C Se	election	
PID (h)	0410								_
BID (h)	NA				•	Download to device			
(-) 1	2.2					E:\baseflight.hex			
, Flash mapping						Erase necessary pace	ies C N	o Erase 🔿 (Global Erase
Name	Start address	End address	Size	B W 🔺					
🔦 Page0	0x 8000000	0x 80003FF	0x400 (1K)	66		@ (h) 8000000	<u>~</u>	Jump to the u	iser program
Sequence Page 1	0x 8000400	0x 80007FF	0x400 (1K)	66		🗌 🔲 Optimize (Remove so	me FFs)	Verify after do	ownload
🔦 Page2	0x 8000800	0x 8000BFF	0x400 (1K)	66		Apply option bytes			
🎭 Page3	0x 8000C00	0x 8000FFF	0x400 (1K)	66					
🎭 Page4	0x 8001000	0x 80013FF	0x400 (1K)	66	C	Upload from device			
🎭 Page5	0x 8001400	0x 80017FF	0x400 (1K)	66		Upload to file			
🎭 Page6	0x 8001800	0x 8001BFF	0x400 (1K)	66					
🔦 Page7	0x 8001 C00	0x 8001FFF	0x400 (1K)	66 66 66 66 66 66 66	1 January	L'			
🔦 Page8	0x 8002000	0x 80023FF	0x400 (1K)	66	0	Enable/Disable Flash prote	ection		
🏇 Page9	0x 8002400	0x 80027FF	0x400 (1K)	66			-		-
🔦 Page10	0x 8002800	0x 8002BFF	0x400 (1K)	66		ENABLE 💌	READ P	ROTECTION	
🔦 Page11	0x 8002C00	0x 8002FFF	0x400 (1K)	88 -					
Legend :	🔒 Protei	cted [UnProtected	ł	0	Edit option bytes			
	Back	Next	Cancel	Close		Back	Next	Cancel	

• Flash, then it should be done

STMicroelectronics			STMicroelectronics			
Target Map file	STM32_Med-density_128K STM32_Med-density_128K.STmap		Target Map file	STM32_Med-density_128K STM32_Med-density_128K.STmap		
	DOWNLOAD E:\baseflight.hex			DOWNLOAD E:\baseflight.hex		
File size Status Time	56.07 KB (57416 bytes) 3.92 KB (4018 bytes) of 56.07 KB (57416 bytes) 00:00:02		File size Status Time	56.07 KB (57416 bytes) 56.07 KB (57416 bytes) of 56.07 KB (57416 bytes) 00:00:16		
-	Downloading data 7%		Download operation finished successfully			
	Back Next Cancel Close			Back Next Cancel Close		

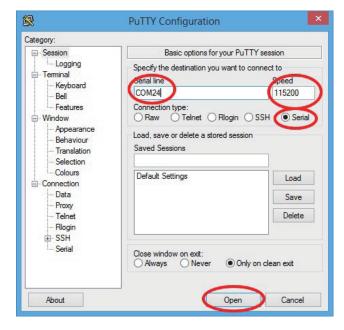
Motor Connection:



General Setting

- Install the driver for USB to UART CP2102 •
- Connect the board to computer .
- **Open Putty.exe** •
- Download PuTTY from

http://www.chiark.greenend.org.uk/~sgtatham/putty/



- -choose serial
- -choose your com port(its may different as your computer, have a look in the device manager) •
- -Speed 115200 •
- -click on "open" button •
- it opens a Command Prompt
- type "#" to activate the input •
- You can Enter the commands now.

Command line is interactive, and most commands will print something in return. Available commands:

help	print out a list of all commands with short description of each
defaults	reset all settings to built in defaults, and reboot
feature	enable, disable, or list enabled features (such as CPPM input, GPS, etc)
map	configure RC channel mapping for CPPM and standard receiver
cmix	create custom motor mix for non-standard airframe type
mixer	set or show current multirotor mixer (such as Quad-/Hexa-/etc)
set	set or list available parameters. Many settings are available.
status	print out system status (voltage, uptime, enabled sensors, etc)
version	print out firmware version and build date/time
save/exit	savesettings and reboot

WARNING Any changes to settings in cli, in particular related to motor output (throttle values, etc) are accepted REALTIME and may result in motors starting up without warning.

Always configure with props disconnected or when model is only powered by USB.

Common usage examples: To enable CPPM receiver, enable PPM feature: # feature ppm # save To disable battery voltage monitoring, disable VBAT feature: # feature -vbat # save To enable camera stabilization and change mixer to Quad-Plus: # mixer quadp # feature servo_tilt # save To configure CPPM receiver for EATR channel order and swap AUX1/2: # map EATR2134 #save Settings are applied real-time, however not saved until 'save' or 'exit' command is executed.

Notice

Few things need to be done to ensure smooth flying experience. The guidelines below should cover most common setup issues. Do not move the model while plugging in the battery and during the first few seconds after powerup. Gyro must be idle, or else initial calibration will be wrong. Alternatively, make sure to execute the "Gyro Calibration" stick sequence prior to arming.

First flight should always be in gyro-only mode. Do not enable auto-level, baro, headfree, etc until you know what you're doing. If model immediately flips on take off, double-check board orientation (front facing), each motor number, rotation direction, and type of prop installed. Refer to "Motor Mixer" chapter for details. Trim transmitter once, and never trim in-flight. Connect to GUI, and subtrim on transmitter until all channels are centered at 1500. If using Futaba gear, center might be 1520. In that case, set midrc value in config to 1520, then subtrim to center all channels at 1520. Do not use trim in flight for either gyro or auto-level mode. Use acc-trim function. Cover the barometer with open-cell foam and keep it away from direct sunlight. Placing the flight controller in a plastic enclosure of some kind is recommended.

Download the newest GUI from :https://code.google.com/p/mw-wingui/.