mana

Quick Start Guide

Carbon Fiber and custom plastic design

2204-2300kv motor

Integrated Flight Controller
pre-loaed with Cleanflight

Integrated MWOSD

Integrated 40 channel5.8GHz Video Tx

7-segment display for Vtx band switching
more intuitive and convenient for adjusting

Pro-tuning options, select your favorite pilot

Compatible with S-Bus
Spektrum Satelite or CPPM receivers

Tillable, Vibration-free Camera mount

GoPro (3/4) and Mobius
and runcam mounting options

Flight controller

IMU *MPU6050, 3 axis Gyro, 3 axis Accelerometer*

CPU *STM32F303 32-bit-cortex M4 core processor*

Firmware *Cleanflight*

* Altimeter *Ms5611*

* Compass *HMC5883*

* If there is no special note
the shipment will not have this IMU included.

OSD

Hardware *Minim OSD*

Firmware *MWOSD R1.5*

Power

Standard prop *5045*

Race Motors *2204-2300kv*

Recommended Battery *1500mAh 3S, 1500mAh 4S*

Video TX Features

Transmitter Module *Integrated,5.8GHz module*

Channels *40 Initally*

Bands *5, including RaceBand*

Power Output *600mw*

Recommended Antenna *4 leaf*

ESC

Type	*Blheli*
Rating	*20A continuous,30A peak*
Feature	*Oneshot125, and Motor Braking*

R/C Receiver

Channel Required	*Absolute minimum four* *Five recommended to support mode switch*
Interface	*5v S. Bus, 3.3v SPK Sat,* *or 5V PPM sum*

Camera

Video Standard	*PAL or NTSC, switchable using a camera-mounted jumper*
CMOS	*800 TVL*

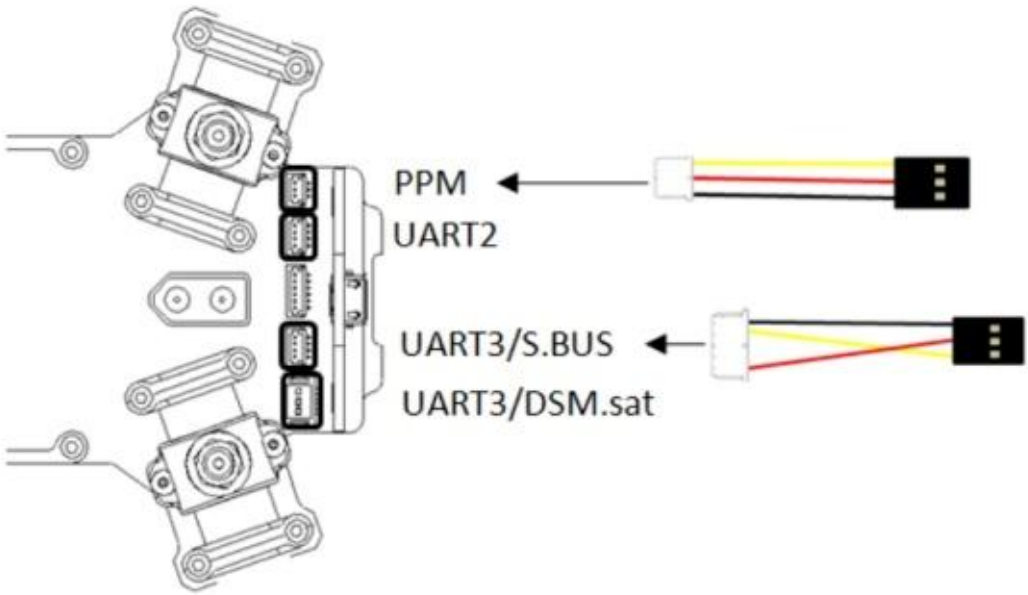
Weight and Size

Weight, as shipped,ARF	*~360g*
Weight,Typical RTF	*~520g with 1500mAh 3s pack and SPK. Sat reciever*
Size	*295mm between diagonal motors*
Folder Size	*120(w)*310(L)*70(h)mm without battery/Gopro/Mobius*

Step One

Install Compatible R/C Reciever

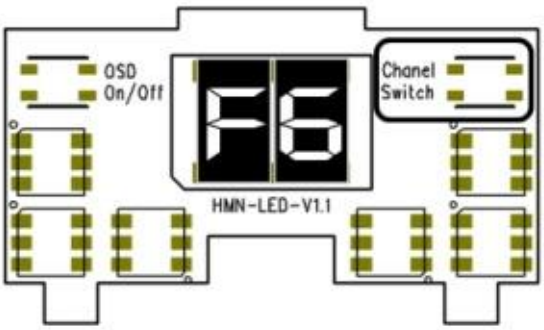
- The mana is compatible with S-Bus Spektrum Satelite CPPM recievers
- It is not compatible with standard R/C receivers with multiple channels of PWM out



Step Two

Setup the Video Link

- The mana uses a button to define video TX channels
- The mana ships with a default TX frequency of 5740MHz which corresponds to FatShark frequencies, Channel 1
- To switch bands
  press the button on the LED board
  hold 2 seconds and release
- To switch channels
  short press the button on the LED board
- The left 7-segment display is band number
  the right 7-segment display is channel number



		1	2	3	4	5	6	7	8
F	IRC/FS	5740	5760	5780	5800	5820	5840	5860	5880
C	RaceBand	5658	5695	5732	5769	5806	5880	5880	5917
E	Band E	5705	5685	5665	5645	5885	5925	5925	5945
B	Band B	5733	5752	5771	5790	5809	5847	5847	5866
R	Band A	5865	5845	5825	5805	5785	5745	5745	5725

Step Three

Setup flight controller via Cleanflight configurator

Install latest Silicon Labs CP2102 USB to UART Bridge VCP Drivers

http://www.silabs.com/products/mcu/pages/usbtouartbridgevcpdrivers.aspx

Install and launch the Cleanflight Configurator tool

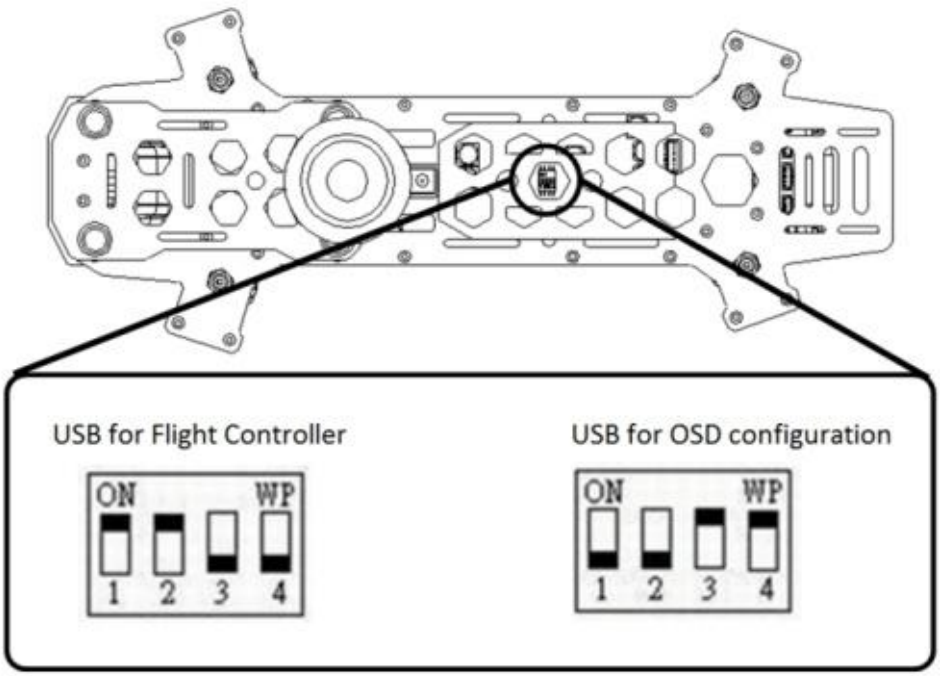
https://chrome.google.com/webstore/detail/cleanflight-configurator/enacoimjcgeinfnnnpajinjgmkahmfgb

Connect mana to computer via USB cable.
Select the correct COM port if it is not automatically detected Click connect,
verify that communication is established.

How to use:

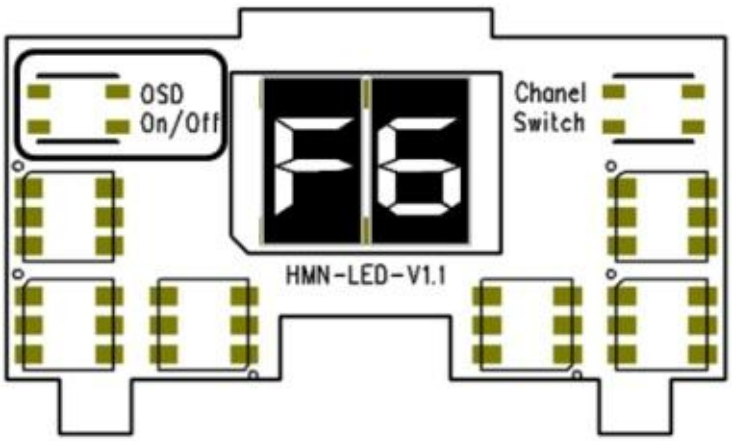
http://cleanflight.com/
http://www.rcgroups.com/forums/showthread.php?t=2249574

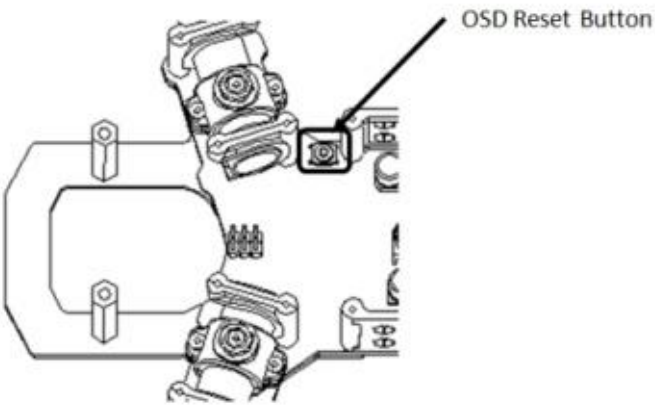
USB Function Switch



OSD ON/OFF Switch

Press button to switch OSD on/off





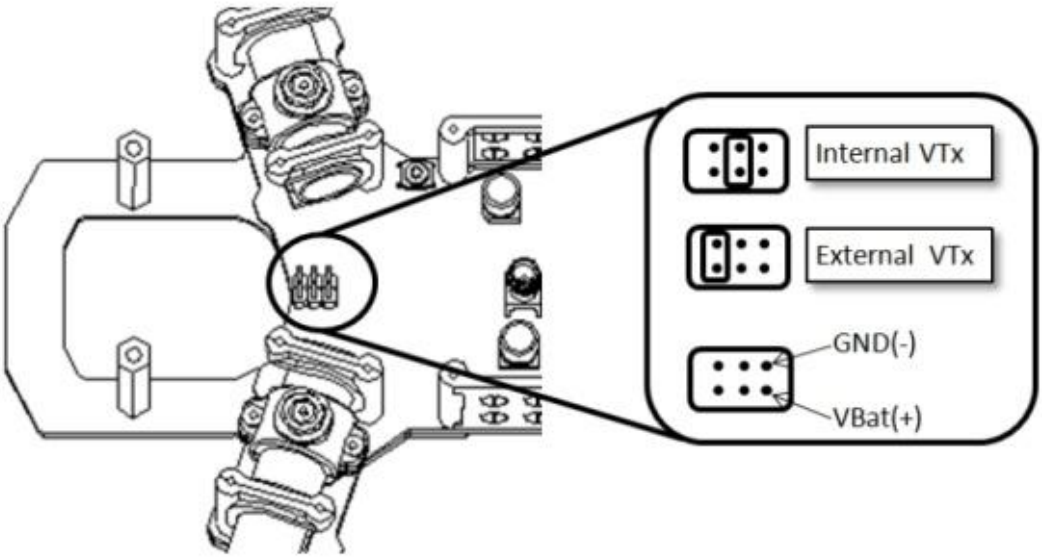
External Video Tx Jumper

If you are going for race
you will need to specified VTx provided by organizer

We have the switching jumper reserved here for you
as shown in the figure below

You can choose to use the internal VTx
or the external one by this jumper

The supply voltage for the external VTx
is the same as the battery voltage



Firmware Upgrade

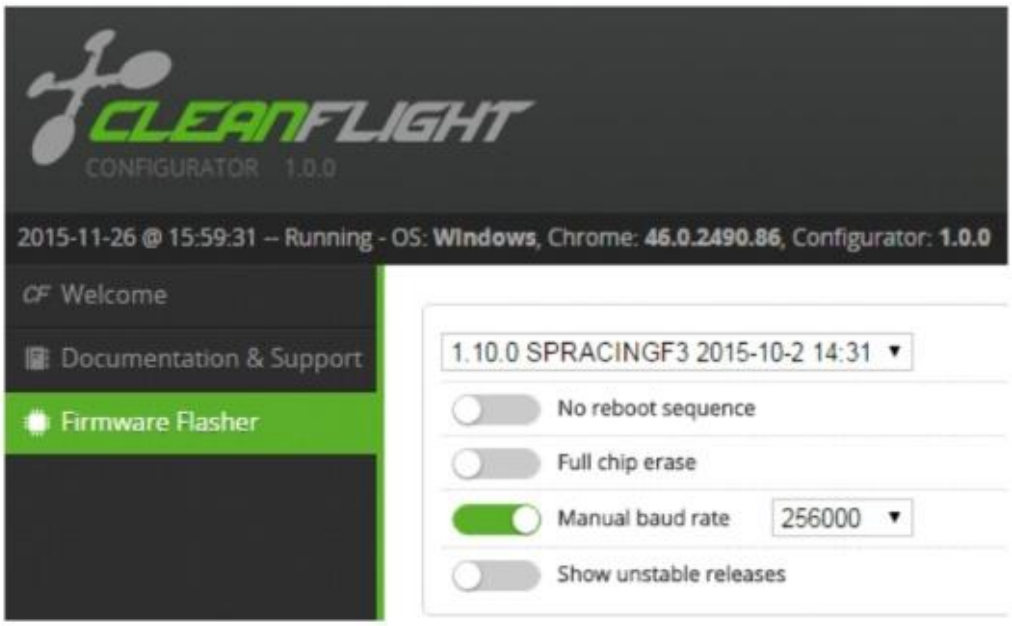
Click the Firmware Flasher tab

Select the latest SPRacingF3 stable release

Set the flashing baud rate to 256000

Click 'Load firmware [Online]' and wait for firmware to download and read release notes

Click 'Flash Firmware'



mana

Made in china