

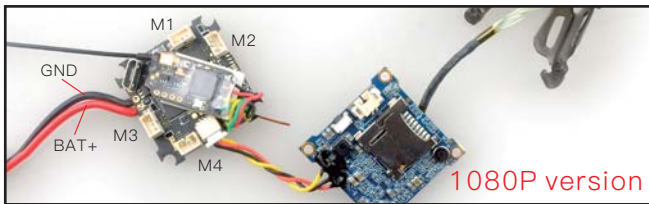
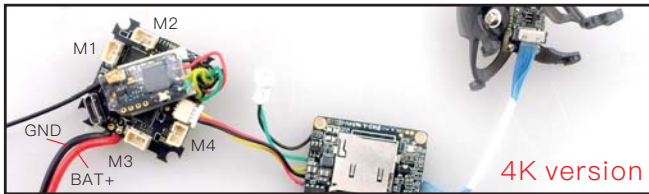
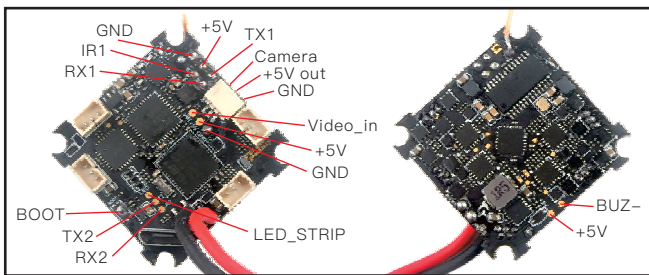
Features
The lightest 4K Cinewhoop in the World
Powerful and smoothly
Caddx Loris 4K Camera & DVR ready
Runcam Split3-lite 1080P Camera & DVR ready
Betaflight OSD support ,easy to get RSSI, Voltage ,current from your goggles
Camera Angle adjustable
VTX power switchable 25mw-200mw

Specifications
Brand Name: Eachine
Item Name: 1S Cinefun 75mm 1080P/ 4K Cinewhoop
Wheelbase: 75mm
Size: 97mm*97mm*51mm
Weight: 39g(without battery)
Weight:54.5g(with Original 1s 650mah Lipo battery)

Package includes

Item Name	Qty
75mm Frame	1
Option1 : CrazybeeX FR V2.2 built-in SPI Frsky receiver	1
Option2: CrazybeeX FS V2.2 built-in SPI Frsky receiver	
Option3: CrazybeeX PNP V2.2 with external TBS Crossfire Nano RX	
NC1102 KV19000 motors	4
HQPROP 1.6x1.6x4 propeller(4cw+4ccw)	1
Option1:Runcam Split3-lite	1
Option2:Caddx Loris	
Built-in 5.8G 40ch 25mw-200mw VTX	1
1s 650mah Lipo battery	4
Propeller disassemble tool	1
Screwdriver	1

Flight controller connection diagram



Receiver configuration

1. Connect CH1(TX) of the XF Nano receiver to RX1 pad of the CrazybeeX PNP flight controller , Connect CH2(RX) of the XF Nano receiver to TX1 pad of the CrazybeeX PNP flight controller. Enable Serial RX for UART1 and Smart audio for UART2

Identifier	Configuration/MP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200	Off	Disabled / AUTO	Disabled / AUTO	Disabled / AUTO
UART1	115200	On	Disabled / AUTO	Disabled / AUTO	Disabled / AUTO
UART2	115200	Off	Disabled / AUTO	Disabled / AUTO	VTX (TBS Sns) / AUTO

2. Choose the receiver mode to Serial-Based receiver and the Serial Receiver Provider is CRSF. Enable telemetry in the Betaflight configurator and set AUX8 for RSSI

Receiver

Serial-based receiver (SPEKSAT, S) Receiver Mode

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

CRSF Serial Receiver Provider

Channel Map: TAER1234 RSSI Channel: AUX 8

TELEMETRY Telemetry output

TBS Micro TX configuration

Some TBS TX and RX setting screen shot



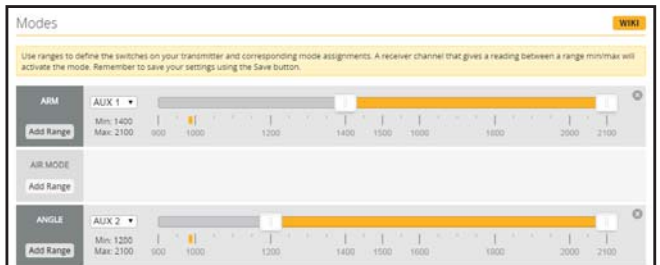
TBS CRSF NANO Bind and Setup video <https://www.youtube.com/watch?v=ioDzyV2vGb0>

Binding procedure

- Binding the transmitter and receiver is super simple.
1. Just power up the TBS CROSSFIRE transmitter
 2. On the standard transmitter, enter the configuration menu by pressing and holding the joystick for 3 seconds, select "General" and "Binding" – a message "Binding" will start blinking, waiting for the receiver. On the micro transmitter, a short press on the button will initiate binding mode.
 3. Now, power up the receiver (without pressing the Bind button!), if your receiver has not been previously bound, it will automatically bind. Otherwise, press and release the "BIND" button on the receiver to initiate binding. On the receiver is a timeout of one minute for after power up to enter bind mode. If the status LED will start blinking slowly the receiver has switched successfully to bind mode.
 4. Within a few seconds the process will finish with a "Binding complete" message on the standard transmitter, or a solid green LED on the micro transmitter. The receiver has now stored the unique serial number of that particular CROSSFIRE transmitter. If it doesn't bind, please verify that your firmware is to the newest version on both the receiver and the transmitter.

Arm/Disarm the Motor Use frsky x9d as an example

1. The Default Arm/Disarm switch for Cinefun is AUX1(Channel 5),and you can also customize it with Betaflight Configurator.



2.Turn on the Turn on the TBS transmitter(use Frsky X9D with TBS transmitter module as example) and move to the MIXER interface, Set "SA" or "SB" switch etc. for Ch5 to ARM/DISARM the motor.



3.The default channel map for Cinefun Crossfire version is TAER1234, please make sure your transmitter is matched, otherwise it will can't be armed. Toggle the AUX1 Switch ,the Green LED on the flight controller will getting to be solid, this indicates the motor was armed .And also you can found "Armed" displayed on your FPV Goggles or the FPV Monitor. Please make sure keep the Cinefun level before arming .Be careful and enjoy your flight now !



VTX Bands and Channels setup

Frequency and channel frequency table:

FR \ CH	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Band1(A)	5865M	5845M	5825M	5805M	5785M	5765M	5745M	5725M
Band2(B)	5733M	5752M	5771M	5790M	5809M	5828M	5847M	5866M
Band3(E)	5705M	5685M	5665M	5665M	5665M	5665M	5905M	5905M
Band4(F)	5740M	5760M	5780M	5800M	5820M	5840M	5860M	5880M
Band5(R)	5658M	5695M	5732M	5769M	5806M	5843M	5880M	5917M

There are 2 ways to switch the vtx channels:

1. If we need to use Channel 5705 then we should Go to Betaflight CLI, type the command:

Set VTX_band=3

Set VTX_channel=1

save

2. Disarm the Cinefun and then move the stick of the transmitter (THR MID+YAW LEFT+PITCH UP)

to enter OSD Menu, Enter to Features, then enter to VTX SA to set VTX Band and channel

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200	On	Disabled / AUTO	Disabled / AUTO	Disabled / AUTO
UART1	115200	On	Disabled / AUTO	Disabled / AUTO	Disabled / AUTO
UART2	115200	On	Disabled / AUTO	Disabled / AUTO	VTX (TBS Srv) / AUTO



Mixer type and ESC/motor protocol

Mixer

Quad X

Props Out

reversed

Motor direction is reversed

ESC/Motor Features

DSHOT600 ESC/Motor protocol

MOTOR_STOP Don't spin the motors when armed

Disarm motors regardless of throttle value (When ARM is configured in Modes tab via AUX channel)

5 Disarm motors after set delay [seconds] (Requires MOTOR_STOP feature)

4.5 Motor Idle Throttle Value [percent]

Default PID setting

	Proportional	Integral	Derivative	Feedforward	RC Rate	Super Rate	Max Vel [deg/s]	RC Expo
ROLL	85	100	85	120	1.00	0.70	662	0.00
PITCH	80	100	85	120	1.00	0.70	662	0.00
YAW	100	100	0	120	1.00	0.70	662	0.00

PID Controller Settings

0.21 Feedforward transition

20 Acro Trainer Angle Limit

5 Throttle Boost

0 Absolute Control

I Term Rotation

Vbat PID Compensation

Smart Feedforward

I Term Relax

Axis: RPY Type: Setpoint

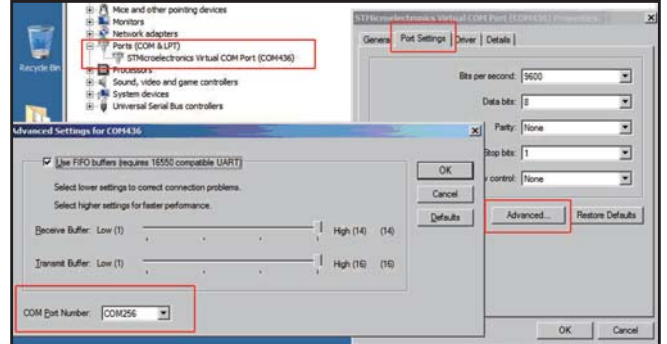
Note:
"ESC Check and flash firmware" and "Flight controller firmware update" procedure are not necessary. The procedure at the right side is just a tutorial to show how to do it. We already pre-install firmware and pre-configure the ESC and the flight controller.

ESC Check and Flash firmware

1. Download New release BLHeliSuite from: <https://www.mediafire.com/folder/dx6kfaasvo24/BLHeliSuite>
2. Plug the usb and connect the flight controller to computer



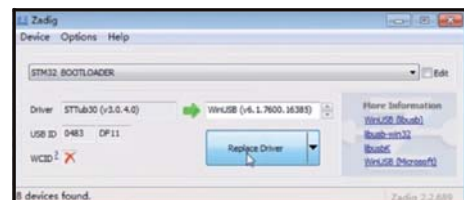
3. Open the Device Manager of your computer, find the Ports, please make sure the Com port Serial Number is under 255, otherwise it will can't connect to the BLHELISUITE. You can change the port serial number like the following step:



4. Open the BLHELISUITE, Select SILABS BLHeli Bootloader (Cleanflight) from the third tab on the top side. Then Select the right Serial com port and Click connect. You can also Flash the new release BLHeli_s firmware via the BLHELISUITE, the firmware Target is "S-H-50"

Flight controller firmware update

1. Install latest STM32 Virtual COM Port Driver <http://www.st.com/web/en/catalog/tools/PP257938>
2. Install STM BOOTLOAD Driver (STM Device in DFU MODE)
3. Open Betaflight configurator and choose firmware target "CRAZYBEEF4DX(LEGACY)", then select the firmware version.
4. There are 2 ways to get in DFU Mode: 1). solder the boot pad and then plug USB to computer 2). loading betaflight firmware and hit "flash", then it will getting into DFU Mode automatically.
5. Open Zadig tools to replace the drivers from STM32 Bootloader to WINUSB Driver.
6. Reconnect the flight controller to the computer after replace driver done, and open Betaflight Configurator, loading firmware and flash.



"Flip over after crash" procedure

Set one channel of your radio transmitter to activate the Flip over function in the Mode tab of Betaflight configurator. The default Switch for Activate "Flip" is AUX4(Channel8)

