EACHINE

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	
Option2: CrazybeeX FS V2.2 built-in SPI Flysky receiver	1
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







Binding procedure

1.Powering the Cinefun then the red LED at the bottom of the flight controller will blinking slowly. And then press the bind butoon ,the red led will getting to be solid ,this indicate the receiver is in bind mode.



There is another simple way to get into bind mode :Plug the USB and go to the CLI command tab in te betaflight configurator, then type "frsky_bind"(Betaflight 3.5.7 firmware), the red LED will getting to be solid ,and it means the receiver is in bind mode. For betaflight 4.0.X the bind code is "bind_rx_spi" and for Betaflight 4.1.X or 4.2.X version the bind code is "bind_rx"



2.Turn on your Frsky Taranis transmitter, and move to BIND OPTION from SETUP MENU, Choose receiver mode D16 or D8 according to your Betaflight receiver configuration(Frsky_X = D16 mode, Frsky_D=D8 mode)we recommend use D8 mode



3.ENT [Bind] to binding with the Cinefun ,the red LED at the bottom of the flight controller will blinking slowly ,this indicate binding successfully, and then exist binding mode of your Frsky transmitter, the red LED at the bottom of the flight controller will getting to be solid again, this indicate working normal.

Receiver configuration

Please set Receiver mode to be SPI RX Support from the Configuration tab of the Betaflight Configurator, then select FRSKY_X Provider for FRSKY D16 MODE or Select FRSKY_D Provider for FRSKY D8 MODE, don't enable Serial RX since the CRAZYBEE Flight controller is integrated SPI BUS Receiver

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200 🔹		Disabled • AUTO •	Disabled • AUTO •	Disabled • AUTO •
UART1	115200 •		Disabled • AUTO •	Disabled • AUTO •	Disabled • AUTO •
UART2	115200 •		Disabled • AUTO •	Disabled • AUTO •	TBS SmartAuc • AUTO •
Receive	er				
SPI R	K support		 Receiver Mode 		
Note:	The SPI RX provider	will only v	work if the required hard	ware is on board or conn	ected to an SPI bus.
FRSK	Y_X		 SPI Bus Receiver P 	rovider FRSKY	D16 MODE
Receive	5r.				
SPI R)	<pre>support</pre>		 Receiver Mode 		
Note:	The SPI RX provider	will only v	work if the required hard	ware is on board or conn	ected to an SPI bus.
FRSK	(_D		 SPI Bus Receiver P 	rovider FRSKY	D8 MODE

If you want to use "Frsky_x_lbt" or Futaba "S-FHSS" protocol , please upgrade the betaflight firmware to 4.0.x or 4.1.x

Arm/Disarm the Motor

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 Frsky transmitter (Use X9D+ as an 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 Frsky 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	frequen	cy table					
FR CH	CH1	CH2	СНЗ	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	5885M	5905M	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 🔹		Disabled • AUTO •	Disabled • AUTO •	Disabled • AUTO •
UART1	115200 •		Disabled • AUTO •	Disabled • AUTO •	Disabled • AUTO •
UART2	115200 •		Disabled • AUTO •	Disabled • AUTO •	TBS SmartAuc • AUTO •



Mixer type and ESC/motor protocol

Mixer	
4 2	Quad X v
3 reversed	Props Out
Motor direction is reversed	0
ESC/Motor Features	
DSHOT600 ESC/Motor protocol	0
MOTOR_STOP D	on't spin the motors when armed

Disarm motors after set delay [seconds] (Requires MOTOR_STOP feature)
 4.5
 Motor Idle Throttle Value [percent]

Default PID setting

PID Settings			Fi	ilter	Settings								
	Proporti	onal	Integral		Derivativ	re .	Feedforv	varo	RC Rate		Super Rate	Max Vel [deg/s]	RC Expo
Basic/Acro													6
ROLL	85	\$	100	\$	85	\$	120	\$	1.00	÷	0.70 ‡	662]0.00 ±
PITCH	80	\$	100	\$	85	\$	120	\$	5		0.70 ‡	662	5
YAW	100	\$	100	\$	0	\$	120	\$	1.00	-	0.70 \$	662	0.00

PID Contro		
0.21 ‡	Feedforward transitio	on 🕜
20 🗘	Acro Trainer Angle Lin	nit 🕜
5 \$	Throttle Boost	0
0 \$	Absolute Control	0
	l Term Rotation	0
	Vbat PID Compensation	0
	Smart Feedforward	0
	I Term Relax Axes: RPY V Type: Setpoint V	0

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/dx6kfaasyo24I/BLHeliSuit

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 bellowing 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 BLHEILISUITE, 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/PF257938

2.Install STM BOOTLOAD Driver (STM Device in DFU MODE)

3.Open Betaflight configurator and choose firmware target "CRAZYBEEF4FR(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.

STM32	BOOTLOADER		•
Driver	STTub30 (v3.0.4.0)	WinUSB (v6. 1. 7600. 16385)	Hore Information
USB ID	0483 DF11		ibusb-win32
WCID ²	×	Replace Driver	Mini ISB (Microsoft)

"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)

