

# **RunCam Split 3-25**

User Manual

# Instruction Diagram





# Lens Module Connection Diagram





# Micro SD Card

Capacity up to 64GB; Please use high speed cards(Class10/UHS-I/UHS-II)







Please push the shield a little bit up with one hand like showed in above step 1 and then press the SD card(step 2) with another hand to let the card pop out.

# Basic Camera Operation

Powering On/Off	Long press the Power/Shutter button
Standby Mode	Camera Status Light: Blue is On
Mode Switching	In Standby Mode, long press the Mode Switch button to cycle through the three modes: Video/Photos/OSD settings.
Video Mode	Camera Status Light: Blue blinks Press the Power/Shutter button to start/stop recording.
OSD Setup Mode	Camera Status Light: Orange is On • Press the Power/Shutter button to move to a setting. • Short press the Mode Switch button to change setting. • Long press the Mode Switch button to exit the menu.
Firmware Upgrading	Camera Status Light: Orange blinks https://www.runcam.com/download/runcamsplit3series

### Transmitter Connection Diagram



**Warning:** Current Input  $\geq 1A$  (Don't powered by VTx)

# Flight Controller Set

#### Preparation

- Firmware: BetaFlight Firmware ( $\geq$ 3.2.0),CleanFlight Firmware( $\geq$ 2.1.0),
- KISS Firmware ( $\geq$ 1.3-RC30) or INAV Firmware ( $\geq$ 1.7.3). • Any available UART interface on the Flight Controller

#### 1. Connect the Split 3 series with the UART interface of the Flight Controller



#### 2. Make the Flight Controller recognize the Split 3 series

For example, we connect the Split 3 series to the UART 3 interface on the Flight Controller: connect the Flight Controller to the computer, then open the configurator software of the Flight Controller. (Open up the configurator that matches the firmware you are running, Betaflight Configurator for Betaflight, Cleanflight Configurator for Cleanflight). In the Peripherals column of the line UART3 (on the Ports tab), select RunCam Device and click Save And Reboot.

Configurator; 10. Firmware: BTFL 3	LIGH 0.0 .2.3 (Target: OB72)			A 🛡 🖉 Gyr	b Accel Mag Baro	GPS Sonar	Enable Expert Mode	Disconnect
017-12-14 @ 14:44:12 Flight ( 017-12-14 @ 14:44:12 Runnir 017-12-14 @ 14:44:12 Board: 017-12-14 @ 14:44:13 Uniqur 017-12-14 @ 14:44:13 Craft n	ontroller info, identifier g firmware released on <b>OB72</b> , version: <b>0</b> • device ID: <b>0x35001a33</b> ame:	: BTFL, version: 3.2.3 : Dec 11 2017 07:57:37 :35510735303934						Hide Lo Scroll
<sup>2</sup> Setup	Ports							WIK
V Ports	TOTES							
Configuration	Note: not all com	binations are valid. When the fligh	it controller firmware di pless you know what yo	etects this the serial port configuration will	be reset.	u do		
Configuration	Note: not all com Note: Do NOT dis	binations are valid. When the fligh sable MSP on the first serial port u	it controller firmware d nless you know what yo	etects this the serial port configuration will ou are doing. You may have to reflash and o	be reset. erase your configuration if yo	u do.		
Configuration Power & Battery PID Tuning	Note: not all com Note: Do NOT dis Identifier	binations are valid. When the fligh sable MSP on the first serial port u Configuration/MSP	it controller firmware do nless you know what yo Serial Rx	etects this the serial port configuration will ou are doing. You may have to reflash and Telemetry Output	be reset. erase your configuration if yo Sensor Input	u do.	Periphera	ls
Configuration Power & Battery PID Tuning Receiver	Note: not all com Note: Do NOT dis Identifier USB VCP	binations are valid. When the fligh sable MSP on the first serial port un Configuration/MSP	nt controller firmware di nless you know what yo Serial Rx	etects this the serial port configuration will ou are doing. You may have to reflash and o Telemetry Output Disabled + (AUTO +	be reset. rase your configuration if yo Sensor Input Disabled 🗘 AUT	u do.	Periphera Disabled 🛟	ls Auto 🛟
Configuration Power & Battery PID Tuning Receiver	Note: not all com Note: Do NOT dis Identifier USB VCP UART1	binations are valid. When the fligh sable MSP on the first serial port un Configuration/MSP (115200 ‡) (115200 ‡)	it controller firmware di nless you know what yo	etects this the serial port configuration will bu are doing. You may have to reflash and Telemetry Output Disabled + AUTO + Disabled + AUTO +	be reset. erase your configuration if yo Sensor Input Disabled ‡ AUT Disabled ‡ AUT	u do.	Periphera Disabled + Disabled +	Is AUTO ¢ AUTO ¢
Configuration Power & Battery PID Tuning Receiver Modes Motors	Note: not all corr Note: Do NOT di Identifier USB VCP UART1 UART2	binations are valid. When the fligh sable MSP on the first serial port un Configuration/MSP 115200 ‡ 115200 ‡ 115200 ‡	serial Rx	etects this the serial port configuration will bu are doing. You may have to reflash and of Telemetry Output Disabled ¢ AUTO ¢ Disabled ¢ AUTO ¢ Disabled ¢ AUTO ¢	be reset. erase your configuration if yo Sensor Input Disabled \$ AUT Disabled \$ AUT Disabled \$ AUT	u do. 0 + (C 0 + (C 0 + (C 0 + (C))	Periphera Disabled ¢ Disabled ¢ Disabled ¢	Is AUTO ¢ AUTO ¢ AUTO ¢
Configuration Power & Battery Power & Battery PID Tuning Receiver Modes Motors OSD	Note: not all com Note: Do NOT di Identifier USB VCP UART1 UART2 UART3	binations are valid. When the fligh sable MSP on the first serial port un Configuration/MSP 115200 ‡ 115200 ‡ 115200 ‡	It controller firmware de nless you know what you Serial Rx	etects this the serial port configuration will bu are doing. You may have to reflash and Telemetry Output Disabled ¢ AUTO ¢ Disabled ¢ AUTO ¢ Disabled ¢ AUTO ¢ Disabled ¢ AUTO ¢	be reset. erase your configuration if yo Sensor Input Disabled ‡ AUT Disabled ‡ AUT Disabled ‡ AUT Disabled ‡ AUT	u do. 0 + ( [ 0 + ( ] 0 + (	Periphera Disabled + Disabled + Disabled + RunCam Device +	Is AUTO ¢ AUTO ¢ AUTO ¢ AUTO ¢
Configuration Configuration Power & Battery PID Tuning Receiver Nodes Modes Notors OSD Ellackbox	Note: not all com Note: Do NOT dis Identifier USB VCP UART1 UART2 UART3 UART6	binations are valid. When the fligh sable MSP on the first serial port un Configuration/MSP 115200 ‡ 115200 ‡ 115200 ‡ 115200 ‡	tt controller firmware de Inless you know what you Serlal Rx	tects this the serial port configuration will bu are doing. You may have to reflash and Telemetry Output Disabled + AUTO + Disabled + AUTO + Disabled + AUTO + Disabled + AUTO + Disabled + AUTO +	be reset. srase your configuration if yo Sensor Input Disabled \$ AUT Disabled \$ AUT Disabled \$ AUT Disabled \$ AUT Disabled \$ AUT Disabled \$ AUT	u do.	Periphera Disabled ¢ Disabled ¢ Disabled ¢ RunCam Device ¢ Disabled ¢	Is (AUTO \$) (AUTO \$) (AUTO \$) (AUTO \$) (AUTO \$)

# *3. Instructions of the functions of the camera and assigning transmitter channels to them*

# In the Flight Controller Configurator, navigate to the Modes tab. There are new CAMERA WI-FI, CAMERA POWER and CAMERA CHANGE modes

- CAMERA POWER: start/stop the video. When in the OSD of the camera, this is used to move to the next menu item.
- CAMERA CHANGE MODE: switch among the two modes: video and OSD setting mode. When in the OSD of the camera, this will exit the menu

#### Assign any available channel to the function you need, for example:

- Assign the AUX2 to the CAMERA POWER, range 1900-2100
- Assign the AUX3 to the CAMERA CHANGE MODE, range 1900-2100

				Betaflight Confi	gurator					
BETAF Configurator: 10.0 Firmware: BTFL 3.	LIGHT 1.0 2.3 (Target: 0872)				0.1 V	Syro Accel	A Baro		No datafiash chip found	Disconnect
2017-12-14 @ 14:45:12 Running 2017-12-14 @ 14:45:12 Board: 1 2017-12-14 @ 14:45:12 Unique 2017-12-14 @ 14:45:12 Craft na 2017-12-14 @ 14:45:53 EEPRON	g firmware released on: De OB72, version: 0 device ID: 0x35001a33355 ame: v saved	c 11 2017 07:5 10735303934	7:37							Hide Log Scroll
🖌 Setup	FPV ANGLE MIX									
🖌 Ports	Add Range									
Configuration										0
Power & Battery	CAMERA WI-FI BUTTON	AUX 1 \$		1 T C	т. т. т.		1			
க் PID Tuning	Add Range	Min: 1900 Max: 2100	I I 900 1000	 1200	l 1400	1500	 1600	 1800	1 2000	l 2100
由 Receiver										
岩 Modes	CAMERA POWER BUTTON	AUX 2 \$		а н. с.	с. с. т.		1 1	e a no e		
L Motors	Add Range	Max: 2100	900 1000	1200	1400	1500	1 1600	1 1800	2000	2100
🚥 OSD										0
: Blackbox	MODE	AUX 3 \$	The state of the s	a pro-	с. с. <u>т</u>		1	e a que e		
🗉 CLI	Add Range	Max: 2100	900 1000	1200	1400	1500	1600	1800	2000	2100
	PREADM									
	Add Bange									
	Additanee									Save
Port utilization: D: 27% U: 2%	Packet error: 0 12C error	r: 0 Cycle Tir	ne: 125 CPU Load: 7%					Firmware	:: BTFL 3.2.3 (Target: OB7	2), Configurator: 10.0.0

#### 4. Assign the channel to the switch of the controller

Please choose your Model on the controller, then access to the MIXER interface and assign the channel to the switch of the controller. Take opentx 2.2.0 for example, assign the channels CH5, CH6 and CH7 to SA, SB and SD respectively



## 5. Test

#### Power the Flight Controller and the Split 3 series

- Set the SA to the bottom, the camera starts/stops the video
- Set the SD to the bottom, the camera switches among the two modes: video and OSD setting mode

## Technical Support

Please visit: https://support.runcam.com

#### Parameter

Model	Split 3 Nano25
Field of View(FOV)	Recording FOV 165°(FPV FOV: 165 ° @16:9, 130 ° @4:3)
Video Resolution	1080@60fps/1080@50fps/1080@30fps/720@60fps
Video File Format	MOV
Image Resolution	2 MP
TV Mode	NTSC (720*480)/PAL (720*576) Switchable
Interface	JST 1.25mm / UART
Max Micro SD Card Supported	64G(need Class 6 or above, recommend Class 10/UHS-I/UHS-II/UHS-III)
Mounting Hole Distance	20*20mm
PCB Size	29*29mm
Lens Module Size	14*14mm
Lens Specs	M8
Power Input	DC 5-20V (Non-direct power supply from battery, Powered direcly with battery will generate surges and burn the camera.)
Working Current	650mA @5V/270mA @12V
Weight	10.5g