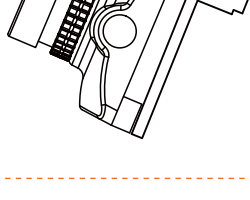


RUNCAM MicroSwift 3

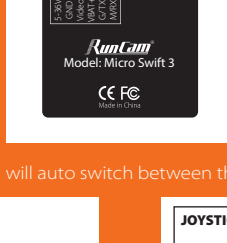
V2 USER MANUAL



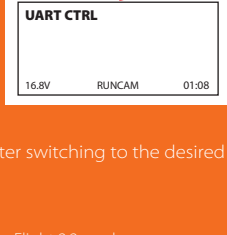
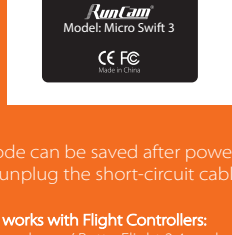
Joystick Control & UART Control Switchable

The top left corner of the screen will shortly display the current control mode. The default is Joystick control mode.

- 1 Short the two camera control pins



- 2 Then power on, camera will auto switch between the two modes

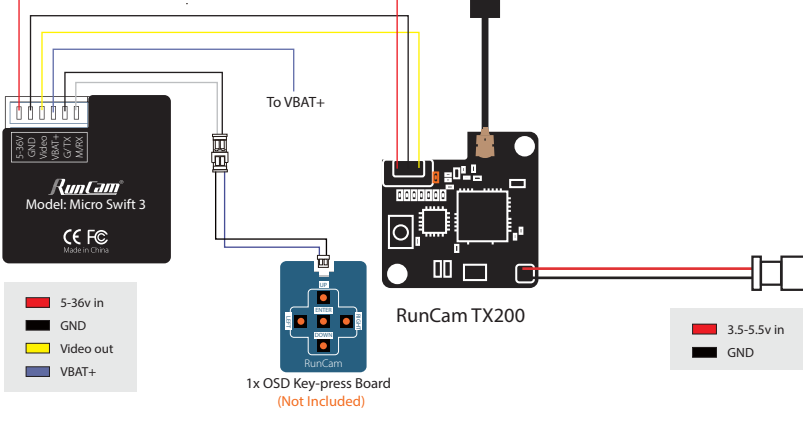


- 3 The mode can be saved after power off. After switching to the desired mode, please unplug the short-circuit cable.

UART Control works with Flight Controllers:

BetaFlight 3.3 or above / ButterFlight 3.4 or above / CleanFlight 2.2. or above

Joystick Control



- 5-36v in
- GND
- Video out
- VBAT+

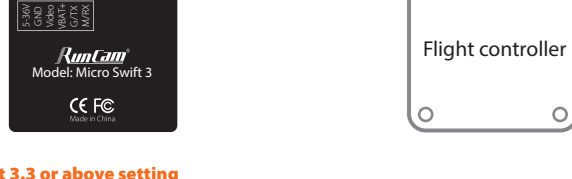
- 3.5-5.5v in
- GND

1x OSD Key-press Board (Not Included)

UART Control

1. Flight controller wiring

Note: Take UART3 for example



2. Betaflight 3.3 or above setting

Identifier	Configuration/MS	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200	Off	Disabled / AUTO	Disabled / AUTO	Disabled / AUTO
UART1	115200	Off	Disabled / AUTO	Disabled / AUTO	Disabled / AUTO
UART2	115200	On	Disabled / AUTO	Disabled / AUTO	Disabled / AUTO
UART3	115200	Off	Disabled / AUTO	Disabled / AUTO	RunCam Device / AUTO
UART4	115200	Off	Disabled / AUTO	Disabled / AUTO	Disabled / AUTO
UART5	115200	Off	Disabled / AUTO	Disabled / AUTO	Disabled / AUTO

3. Remote control

Mode-2

- 1 Connect
- 2 Operation: ENTER, RIGHT, DOWN, LEFT, UP
- 3 Disconnect

Mode-1

- 1 Connect
- 2 Operation: ENTER, RIGHT, DOWN, LEFT, UP
- 3 Disconnect

* When connected, The buzzer on Flight Controller will beep for 3 times; When disconnected, The buzzer on Flight Controller will beep for 2 times only; If connected successfully, you can long press the up button to enter the OSD menu, right button to switch preset scenes, left button to calibrate voltage and down button to reset OSD.

OSD Menu

QUICK SETTINGS

Quick settings:

- Long press UP button for three seconds to access to the OSD setting's screen
- Long press LEFT button for three seconds to calibrate the voltage. When the voltage text flashes, press UP/DOWN button to adjust it
- Long press DOWN button for ten seconds to reset OSD settings to default
- Long press RIGHT button for three seconds to switch between the camera presets

OSD Menu

- CLR: clear the ID character;
- ALARM: low voltage warning value, smartly judge the warning value of the battery when it's low; if set it manually, then it saves the manual preset value;
- SCENE: switch the camera presets among Personal / Lightrax / Outdoor/ Indoor/ Cloudy / Twilight
- Press the middle button to switch ON / OFF, then move to POS to enter the position adjustment..

Camera Menu

- MAIN MENU**
 - PERSONAL MENU: EXPOSURE, BACKLIGHT, WHITE BAL, DAY & NIGHT, IMAGE ADJ, DPC, LANGUAGE, RESET, EXIT
 - EXPOSURE: SHUTTER, BRIGHTNESS, AGC, DWDR, RETURN
- LANGUAGE (English/中文)
- WHITE BAL (ATW1 / ATW2 / AWC → SET / MANUAL: MANUAL)
- DPC (Cover the lens then press enter key)
- SHUTTER (AUTO / 50-100000 / FLK)
- BRIGHTNESS (50 / 0-255)
- AGC (OFF / LOW / MIDDLE / HIGH)
- DWDR (ON: 63 0-63 / OFF)

Camera Menu

- IMAGE ADJ**
 - LENS SHAD, 2DNR, MIRROR, FONT COLOR, SHARPNESS, DISPLAY, NEG IMAGE, RETURN
- USER ADJ.**
 - GAMMA, PED LEVEL, COLOR GAIN, RETURN
- LENS SHAD (OFF / ON: 22 0-255)
- CONTRAST (16 / 0-255)
- SHARPNESS (210 / 0-31)
- DISPLAY (CRT/LCD/USER)
- GAMMA (0.5 / 0.05-1.0)
- PED LEVEL (17 / 0-63)
- COLOR GAIN (176 / 0-255)

Camera Menu

- BACKLIGHT (BLC / HLC / OFF)**
 - BLC: AREA SEL, AREA STATE, GAIN, HEIGHT, WIDTH, LEFT/RIGHT, TOP/BOTTOM, RETURN
 - HLC: LEVEL, MODE, RETURN
- AREA SEL (AREA1/AREA2)
- GAIN (042 / 0-255)
- HEIGHT (4 / 0-10)
- WIDTH (3 / 0-9)
- LEFT/RIGHT (6 / 0-6)
- TOP/BOTTOM (10 / 0-10)
- LEVEL (200 / 0-255)
- MODE (ALL DAY / NIGHT ONLY)

Camera Menu

- DAY & NIGHT (AUTO / COLOR / B&W / EXT)**
 - D & N AUTO: D → N LEVEL, D → N DELAY, N → D LEVEL, N → D DELAY, RETURN
 - D & N B & W: BURST, IR SMART, IR LEVEL, RETURN
- DAY → NIGHT LEVEL (80 / 0-176)
- DAY → NIGHT DELAY (3 / 1-30)
- NIGHT → DAY LEVEL (032 / 0-255)
- NIGHT → DAY DELAY (1 / 1-30)
- BURST (OFF/ON)
- IR SMART (OFF/ON)
- IR LEVEL (HIGH/LOW)

Parameters

Model	RunCam Micro Swift 3	
Image Sensor	1/3" SONY Super HAD II CCD	
Horizontal Resolution	600TVL	
Lens	2.1mm (M8) FOV160°	2.3mm(M8) FOV 145°
Signal System	PAL/NTSC	
Integrated OSD	Yes	
One Touch Scene Setting	Personal / Lightrax / Outdoor / Indoor / Cloudy / Twilight	
S/N Ratio	>60dB (AGC OFF)	
Electronic Shutter Speed	PAL: 1/50~100,000; NTSC: 1/60~100,000	
Auto Gain Control (AGC)	Yes	
Min. Illumination	0.01Lux@1.2F	
WDR	D-WDR	
DNR	2DNR	
Day/Night	Color/Auto/B&W	
Menu Control	Joystick Control / UART Control Switchable	
Power	DC 5-36V	
Working Current	60mA@12V / 120mA@5V	
Net Weight	6g(M8)	
Dimensions	19mm*19mm*18mm	