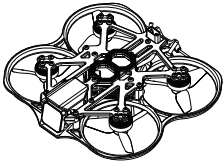


# GOFILM 20

## QUICKSTART GUIDE

V1.2



### How to bind ELRS 2.4G:

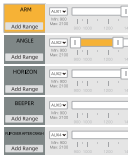
1. The flight controller has a built-in ELRS receiver. Use the battery to quickly power up the GoFilm 20 three times. When the receiver indicator (as shown in Figure 3) turns red and flashes twice quickly, it enters the binding mode.
2. Use the ELRS 2.4G protocol remote controller for frequency binding. Take the Radiomaster Zorro ELRS 2.4G remote controller settings as an example. Perform the remote controller settings according to Figures 1-2. After the frequency binding is successful, the flight controller ELRS receiver indicator light will be solid red.



GoFilm 20 receiver version (optional V0.5.1)

### ARM & Mode:

After the binding is successful, use FC to connect to the Betaflight, and enter the Mode tab. Try to toggle the corresponding switch for each function. You move the yellow cursor of the corresponding sub-channel of the switch, the corresponding function will be turned on when you move to the left range.



Default motor rotation direction

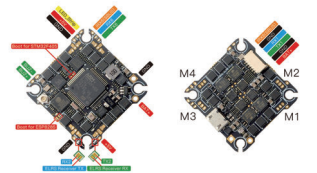
### How to bind VTX:

1. Connect the moonlight kit and the power of the goggles.
2. Short press the moonlight kit and goggles binding buttons respectively, when the moonlight kit enters the pairing state. The VTX LED turns red, and the goggles are in a DL...DL...DL... state.
3. After the link is successful, the indicator light on the VTX LED turns solid green, the beeping sound on the goggles stops and the screen is displayed.

For more information on how to use the MOONLIGHT KIT, please scan the QR code to view the electronic manual.



### Flight control wiring:



### Pre-flight Check:

1. Turn on the transmitter and select the correct mode. Please confirm that the arming switch on the transmitter is in the "Disarmed" position and the throttle is all the way down.
2. Check whether the propeller steering is correct, whether the rotation is smooth, and whether the screws are locked.
3. Check whether the battery power is sufficient. The 4S battery is fully charged at 16.8V.
4. Please confirm the battery is securely attached to the aircraft by the strap. And secure the balance head so that it can't be struck by the prop.
5. Observe whether the take-off environment is safe, whether there are obstacles, and whether it is a no-fly zone.
6. Verify that you have clear, strong video in your Fox goggles or screen. If you see interference or you see another pilot test, resolve this issue before flying.

### CAUTION!

- This product is NOT a toy, thus it is not suited for children under 14 years of age. Minors should be accompanied by an adult when operating.
- Warnings listed in the instructions must be read carefully.
- Improper adjustments and operation will result in crashes and damage to the item.
- Experience is required before handling this product.

- FCC Warning
- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
  - (1) This device should be used away from public areas and should not interfere with public wireless facilities or other wireless devices.
  - (2) This device may receive radio interference, which may cause malfunction or damage to the device. It is necessary to stay away from the environment where radio interference occurs.
- Users of modified or cracked versions or unlicensed amateur bands may be subject to penalties for violating local laws or regulations.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. It not intended and used in accordance with the instructions, it may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, it is recommended that you try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the device and the receiver.
  - Consult the dealer, manufacturer, or an experienced radio/TV technician for help.
- To maintain compliance with FCC safety guidelines, this device should be installed and operated with a minimum distance of 20 cm between the radiator and your body.
- Use only the supplied antenna.

### Product Information

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GOFILM 20 Features | Equipped with Avata moonlight HD digital VTX, 1080p low-latency, low-latency transmission.<br>Support 1080p video recording.<br>Designed specifically for the Avata moonlight and can be fitted with HD lenses.<br>Use high quality 1303 6000kv motor with strong power.<br>Fixed power plug design reduces exposed wires.<br>Use 2-in-1 propellers with protective rings for safer flight.<br>Flight controller built-in ELRS 2.4G receiver. |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| GOFILM 20 Parameter     | Name                        | GOFILM 20 |
|-------------------------|-----------------------------|-----------|
| Flight Control          | CAD9-CAD9FL-UK-ELRS         |           |
| VTX                     | Moonlight Kit               |           |
| Motor Diagonal          | 94mm                        |           |
| Motor                   | 1303 6000kv                 |           |
| Propeller               | HDProp T2-243               |           |
| Weight                  | 115g                        |           |
| Size                    | 133x153x39mm                |           |
| Maximum Hover Time      | 45-55mins & About 5 min 30s |           |
| Remote Control Receiver | ELRS 2.4G                   |           |
| Battery Interface       | XT30                        |           |

| Flight Control Parameters | MCU                    | STM32F409GRT6  |
|---------------------------|------------------------|----------------|
|                           | GYRO and IMU           | ICM42688       |
|                           | Barometer              | BMF280         |
|                           | ExpressLRS Receiver    | ELRS V3.0 UART |
|                           | ESC                    | 20A 4-11-1     |
|                           | Beckbox                | 8085           |
|                           | Support Power          | 2-4S Lipo/LiWh |
|                           | Mounting hole Distance | 25.5x25.5mm    |
|                           | Firmware Target        | BETAFLIGHT4    |

| VTX Parameters | Model                          | Moonlight Kit                                                                                             |
|----------------|--------------------------------|-----------------------------------------------------------------------------------------------------------|
|                | Firmware Name                  | AvataMoonlight_Skip_VXX                                                                                   |
|                | Communication Frequency        | 8.725-8.875GHz                                                                                            |
|                | Transmitter Power (ERP)        | FCC: <30dBm, CE: <14dBm, SRRC: <30dBm, UK: <20dBm, JETI: <400mW (power cable), JETI: <400mW (power cable) |
|                | I/O Interface                  | microSD Card Slot, PEX-1                                                                                  |
|                | Sensor                         | Smart sensor                                                                                              |
|                | FOV                            | Max 160°                                                                                                  |
|                | Aperture                       | F2.1                                                                                                      |
|                | Shutter                        | Rolling shutter                                                                                           |
|                | ISO                            | 100-6500                                                                                                  |
|                | Recording Resolution           | 4096/3000p, 2798/30/600p, 1000/30/600p, 720p/600p                                                         |
|                | Max Mbps                       | 100Mbps                                                                                                   |
|                | Video Format                   | MPEG4 (H.264)                                                                                             |
|                | 3D DNR                         | Support                                                                                                   |
|                | Opt Flow                       | Support                                                                                                   |
|                | Built-in LED                   | Support                                                                                                   |
|                | Wide Power Input               | 7.4V-25.2V                                                                                                |
|                | Power Consumption              | 120W (A: 8V82.2A)                                                                                         |
|                | Memory Card Type               | U3 miniSD, Max 256G                                                                                       |
|                | Camera Size                    | 16.8mm (16mm x 4mm)                                                                                       |
|                | VTX Size                       | 15.3mm x 34.5mm x 34.5mm                                                                                  |
|                | VTX Installation Hole Distance | 20x20mm (25x25mm (M2))                                                                                    |
|                | Weight                         | 38.5g (Antenna not included)                                                                              |
|                | CSD                            | Camera mode                                                                                               |
|                | Latency                        | Average delay 22ms                                                                                        |
|                | Antenna                        | 2 (PEX)                                                                                                   |



## V1.2



1. 飞控板蜂 ELRS 2.4G 接收机, 使用电池给 Gofim 20 快速充电 3 次, 当接收机指示灯 (如图 ③) 变为红灯快闪两次时为进入对频模式。
2. 使用 ELRS 2.4G 协议遥控器进行对频, 以 Radiomaster ZORRO ELRS 2.4G 遥控器为例, 根据图 ① ② 进行遥控器设置, 对频成功后飞控 ELRS 接收机指示灯为红灯常亮。

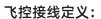


对频成功后，连接 Betaflight 地面站，进入模式选项，尝试拨动遥控器各功能开关，当黄色光标移动到设定范围就会开机相对应的功能，设置完成后点击保存。



1. 连接 Moonlight Kit 和眼镜端电源。
2. 等待设备白机后，分别按压 Moonlight Kit 和眼镜端对频按钮，当进入配对状态时，VTX 指示灯变为红色，眼镜端发出滴...滴...滴...蜂鸣器提示。
3. 对频成功后，VTX 指示灯变为绿色常亮，眼镜端蜂鸣器停止并显示图像画面。

更多 MOONLIGHT KIT 产品信息请扫描二维码查看电子说明书。



1. 请在起/刹遥控器上正确的模型，将油门位置保持在最低位，将解锁开关处于关闭状态。
2. 检查螺旋桨转向是否正确，转动是否顺畅，螺丝是否紧固。
3. 检查电池电量是否充足，4S电池电压为16.8V。
4. 检查电池组是否将电池固定好，整理好电池平衡头以免被螺旋桨打到。
5. 观察起飞环境是否安全，是否有障碍物以及禁飞区。
6. 如果是多人 FPV 飞行，请使用不同的无线频道，以免干扰他人或被他人干扰。

**注意!**

- [illegible]

### 参数规格

[illegible]