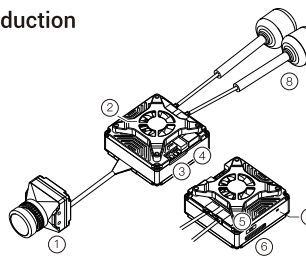
AVATAR GT KIT

QUICKSTART GUIDE

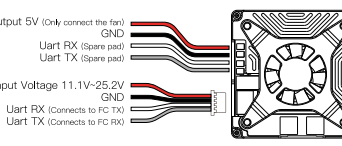
V1.1

Introduction



1、Camera
2、Fan
3、Serial Port Pad
4、Power Port
5、Link Button
6、Micro SD Card Slot
7、VTX LED
8、Antenna

Connection



⚠
- Power consumption: 12V@1.5A
  Please consider the power supply capability of the power supply.
- VTX generates a lot of heat when working, so please pay attention to airflow for heat dissipation

Linking

1. Connect the VTX and the power of the goggles.
2. Short press the VTX and goggles linking buttons respectively, when the VTX enters the pairing state The VTX LED turns red, and the goggles end is a DI... DI... DI...
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.

Upgrade

Please go to the official website to download the upgrade firmware, Avatar_Sky_X.X.X.img is the VTX file, be careful not to change the file name.

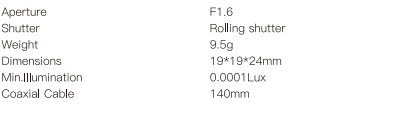
1. Copy the upgrade file to the VTX Micro SD card directory, connect the power supply and wait for the device to start up (if there are old firmware files, please delete them).
2. Press and hold the VTX linking button for 8 seconds, and release the button after the indicator light goes out. At this time, the VTX will automatically restart and enter the upgrade state, and the indicator light will change from blinking red to solid red and then turn off. The upgrade time is about 20 seconds, please do not power off during the upgrade process! (If the VTX continues to light up red, it means that the firmware cannot be detected or the firmware is wrong, please check the firmware file)
3. After the upgrade is successful, the VTX indicator turns green and blinks.

*The Avatar GT TF card slot does not have a rebound function. Please stick the PVC sticker to the TF card before inserting it.

UART

The UART function enables the VTX communicate with the flight controller, allowing the VTX obtain the flight controller information. Take Betaflight Configurator as an example to introduce the UART setting method.

1. Solder the white and gray wires of the 4 pin cable to the flight controller (refer to the Connection page).



2. Connect the flight controller to the Betaflight Configurator, and open the corresponding UART port (Take UART1 as an example in the figure) Check the MSP switch and click Save.

3. Open the CLI command line and enter the content in red font
   "set osd_displayport_device = MSP"
   "set displayport_msp_serial = Y" (Where Y is one less than the number of the serial port. e.g. Y = 2 for serial 3)
   "save"

Betaflight 4.4 or above version settings:

1.Open the corresponding uart port (Take uart1 as an example in the figure) Check the MSP switch and click Save, Check the VTX (MSP+Displayport)。

3. Open the CLI command line and enter the content in red font,
   "set osd_displayport_device = MSP"
   "set vcd_video_system = HD"
   "save"

Status indication

Goggles Buzzer Status	
Link state	DI....DI....DI....
upgrade firmware	DI.....DI.....DI..... DI——
Upgrade failed	DI..DI..DI..
VTX Indicator Status	
Link state	Steady red light
upgrade firmware	Red light rapidly flashes
Wireless connection, image output is normal	Steady green light
Wireless not connected	green light rapidly flashes
Wireless connection is normal, image is abnormal	green light slowly flashes

Precautions

1. Before powering on, please install all antennas to avoid damage to components.
2. When the standby mode is turned on, the power is limited to 10mW. Before taking off, you need to unlock the flight control or turn off the standby mode.
3. If you use it with other 5.8GHz devices at the same time, please choose a different channel.
4. If you use the Gyroflow function of the camera, please provide shock absorption for the fixed deck of the camera to avoid the failure of the anti-shake.

VTX Specification

Name	Avatar GT KIT
Communication Frequency	5.725-5.850 GHz
Transmitter Power (EIRP)	MAX: 33dBm; FCC: <30dBm; CE: <14dBm; SRRC: <20dBm; MIC: <25dBm
I/O Interface	JST1.0*4(power cable); micro sd card slot
Mounting Holes	25.5*25.5mm; 20*20mm
Dimensions	33.8*33.8*23.4mm
SD card	Support 256G
Recording	1080p/720p
Weight	29.7g
Operating Temperature	-10~40℃
Channels	8
Wide Power Input	11.1V-25.2V
Supported FC System	Betaflight; Inav; Fettec; Kiss; ArduPilot
OSD	Canvas mode
Latency	Average delay 22ms
Antenna	2(IPEX)

Camera parameters

Name	Avatar pro camera
Image Sensor	1/1.8-Inch sony starvis2 sensor
Resolution	1080P/100fps; 1080P/60fps; 720P/100fps; 720P/60fps
Ratio	4/3 16/9
Lens	8Mp
FOV	160°
Aperture	F1.6
Shutter	Rolling shutter
Weight	9.5g
Dimensions	19*19*24mm
Min.Illumination	0.0001Lux
Coaxial Cable	140mm

VTX Antenna

Name	Avatar V2 antenna
Polarization	LHCP
Frequency range	5600MHz-6000MHz
Average Gain	1.9dBi
VSWR	≤1.5
Interface	IPEX-1
Dimension	D15mm X 45mm (without cable)
Weight	2g

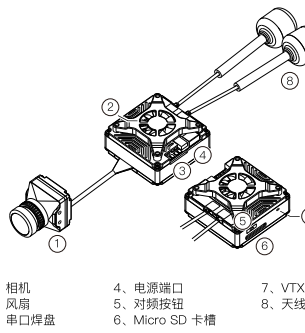
CADDXFPV Support
email: support@caddxfpv.com

AVATAR GT KIT

快速入门指南

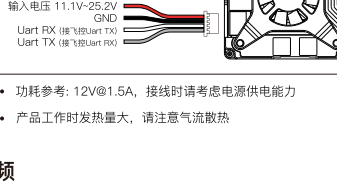
V1.1

简介



1、相机
2、风扇
3、串口焊盘
4、电源端口
5、对频按钮
6、Micro SD 卡槽
7、VTX 指示灯
8、天线

接线



⚠
- 功耗参考: 12V@1.5A，接线时请考虑电源供电能力
- 产品工作时发热量大，请注意气流散热

对频

1. 连接 Avatar GT 和眼镜端电源。
2. 分别短按 Avatar GT 和眼镜端对频按钮，Avatar GT 进入配对状态后 VTX LED 变为红灯常亮，眼镜端蜂鸣器为 DI...DI...DI...
3. 连接成功后，VTX LED 指示灯呈绿色常亮，眼镜端蜂鸣声停止并显示图像。

升级

请到官网下载最新升级固件，Avatar_Sky_X.X.X.img 对应 Avatar GT 升级固件，注意请勿修改文件名。

1. 将升级文件拷贝到 Avatar GT 的 Micro SD 卡根目录下，连接电源等待设备开机（如果有旧固件文件请删除）。
2. 长按 Avatar GT 对频按键 8 秒，等指示灯熄灭后松开按键，Avatar GT 自动重启进入升级状态，指示灯从红色闪烁变为红色常亮然后再熄灭。升级时间大约为20秒，升级过程中请勿断电！（如 Avatar GT 持续常亮红灯，表示检测不到固件或固件错误，请检查固件文件）
3. 升级成功后，Avatar GT 指示灯变为绿色闪烁。

*Avatar GT Micro SD 卡槽没有回弹功能，
请先将 PVC 贴纸粘贴到 Micro SD 卡再插入

UART

UART 功能可以使图传与飞控进行通信，获取飞控 OSD 等信息。以 Betaflight Configurator 为例介绍 UART 设置方法。

1.将 4Pin 电源线白线和灰线焊接到飞控 Uart 串口（参考连接页面），这里以 Uart 1 串口为例。

2. 将飞控连接到 Betaflight Configurator，打开对应的 UART 接口，勾选 MSP 开关，点击保存。

3. 打开 CLI 命令行，输入红色字体内容，
“set osd_displayport_device = MSP”
“set displayport_msp_serial = Y”（其中 Y 比使用串口数小一位，例如 Y = 0 对应Uart 1，Y = 2 对应Uart 3以此类推）
“save”

Betaflight 4.4 或以上版本设置：

1.打开对应的 UART 接口，勾选 MSP 开关，勾选 VTX (MSP+Displayport)。

3. 打开 CLI 命令行，输入红色字体内容，
“set osd_displayport_device = MSP”
“set vcd_video_system = HD”
“save”

状态指示

眼镜端蜂鸣器状态	
对频状态	滴....滴....滴....
升级固件	滴.....滴.....滴..... 滴——
升级失败	滴..滴..滴..
VTX 指示灯状态	
对频状态	红灯常亮
升级固件	红灯快速闪烁
无线连接，图像输出正常	绿灯常亮
无线未连接	绿灯快速闪烁
无线连接正常，图像异常	绿灯慢闪

注意事项

1、通电前请安装好所有天线，避免元器件损坏。
2、待机模式开启时功率受限 10mW，起飞前需解锁飞控或关闭待机模式。
3、如果您同时与其他 5.8GHz 设备一起使用，请选择不同频道。
4、如果您使用相机陀螺仪功能，请给相机固定平台做减震，避免防抖失效。

VTX 规格

名称	Avatar GT KIT
通信频率	5.725–5.850 GHz
发射功率 (EIRP)	MAX: 33dBm; FCC: <30dBm; CE: <14dBm; SRRC: <20dBm; MIC: <25dBm
接口	JST1.0*4(电源线); Micro SD 卡槽
安装孔距	25.5*25.5mm; 20*20mm
外形尺寸	33.8*33.8*23.4mm
SD 卡槽	支持 256G
录制规格	1080p/720p
重量	29.7g
工作环境温度	–10~40℃
频点数量	8
宽电源输入	11.1V–25.2V
支持飞控系统	Betaflight; Inav; Fettec; Kiss; ArduPilot
OSD	Canvas mode
端到端延时	平均延时 22ms
天线	2(IPEX)

相机规格

名称	Avatar pro camera
图像传感器	1/1.8–Inch sony starvis2 sensor
分辨率	1080P/100fps; 1080P/60fps; 720P/100fps; 720P/60fps
比例	4/3 16/9
镜头	8Mp
FOV	160°
光圈	F1.6
快门	卷帘快门
重量	9.5g
外形尺寸	19*19*24mm
最低照度	0.0001Lux
同轴线	140mm

VTX 天线

名称	Avatar V2 antenna
极化方向	LHCP
工作带宽	5600MHz–6000MHz
平均增益	1.9dBi
输入阻抗	50Ω
驻波比	<1.5
接口	IPEX–1
外形尺寸	D15mm X 45mm （不含线）
重量	2g

CADDXFPV 技术支持
email: support@caddxfpv.com

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