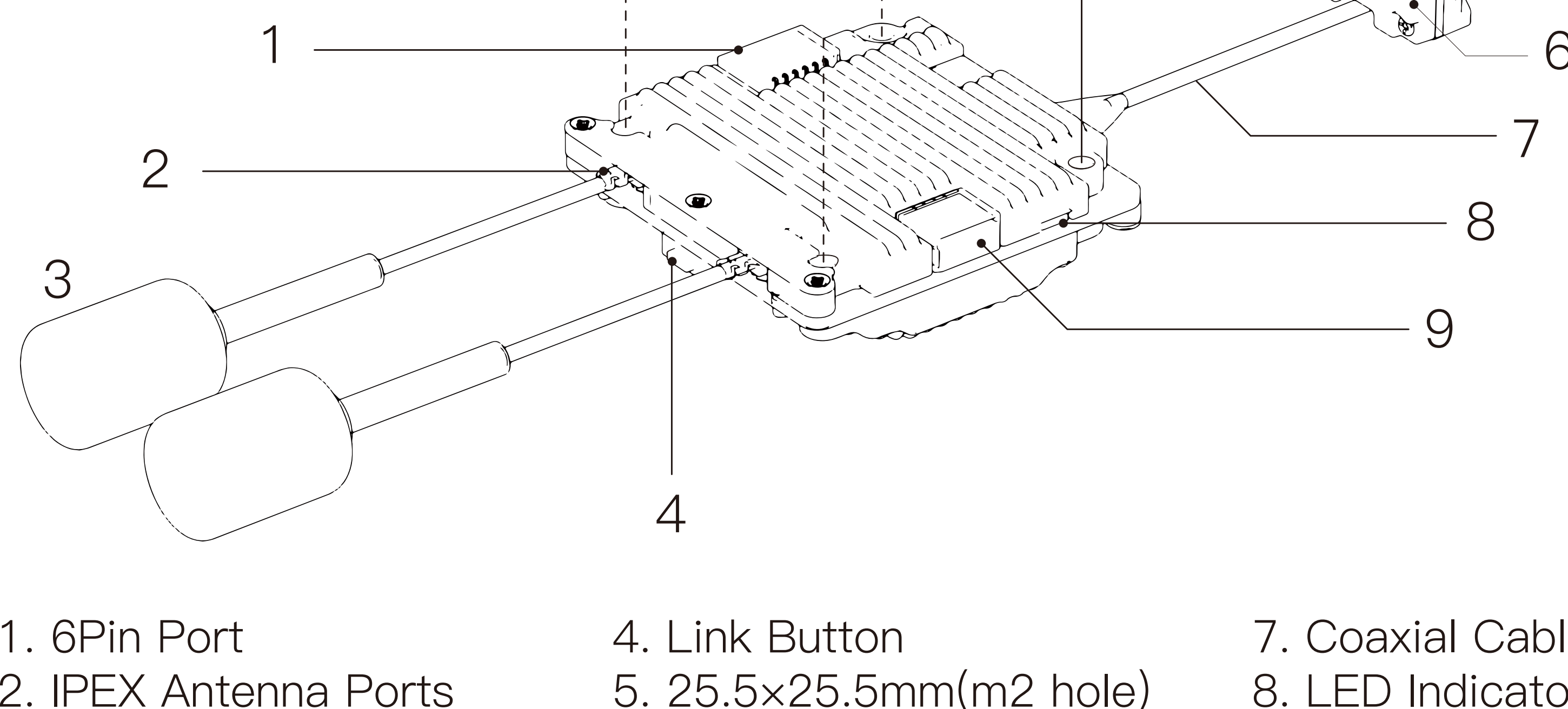


AVATAR KIT

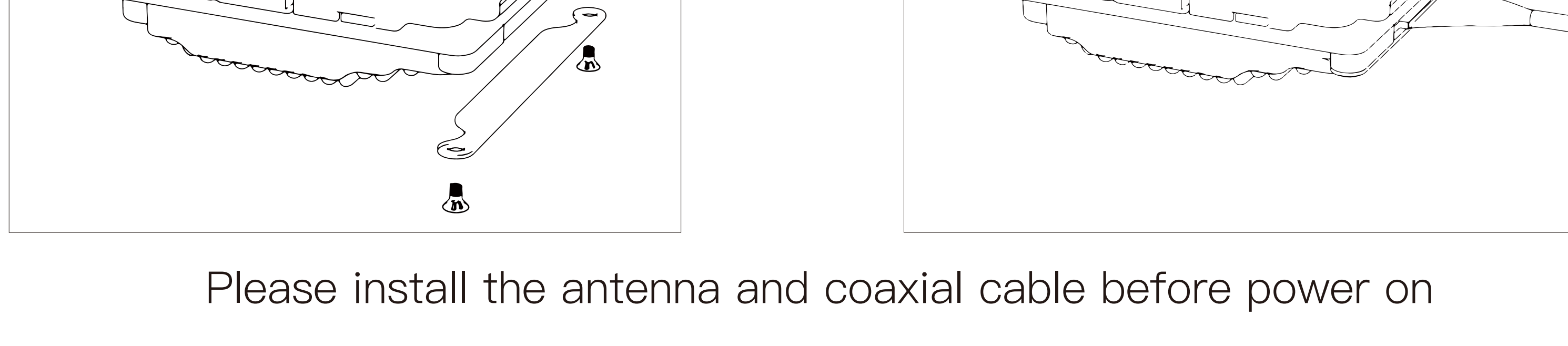
QUICKSTART GUIDE

V1.1

Introduction

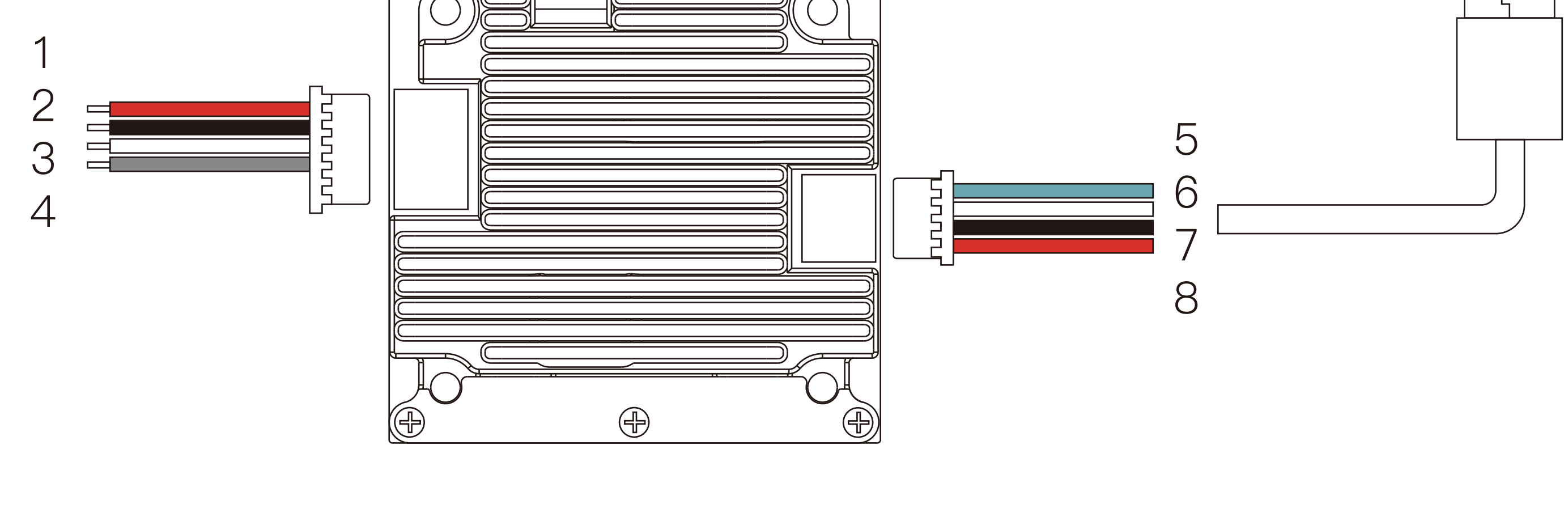


- 1. 6Pin Port
- 2. IPEX Antenna Ports
- 3. Antenna
- 4. Link Button
- 5. 25.5x25.5mm(m2 hole)
- 6. Camera
- 7. Coaxial Cable
- 8. LED Indicator
- 9. USB Port



Please install the antenna and coaxial cable before power on

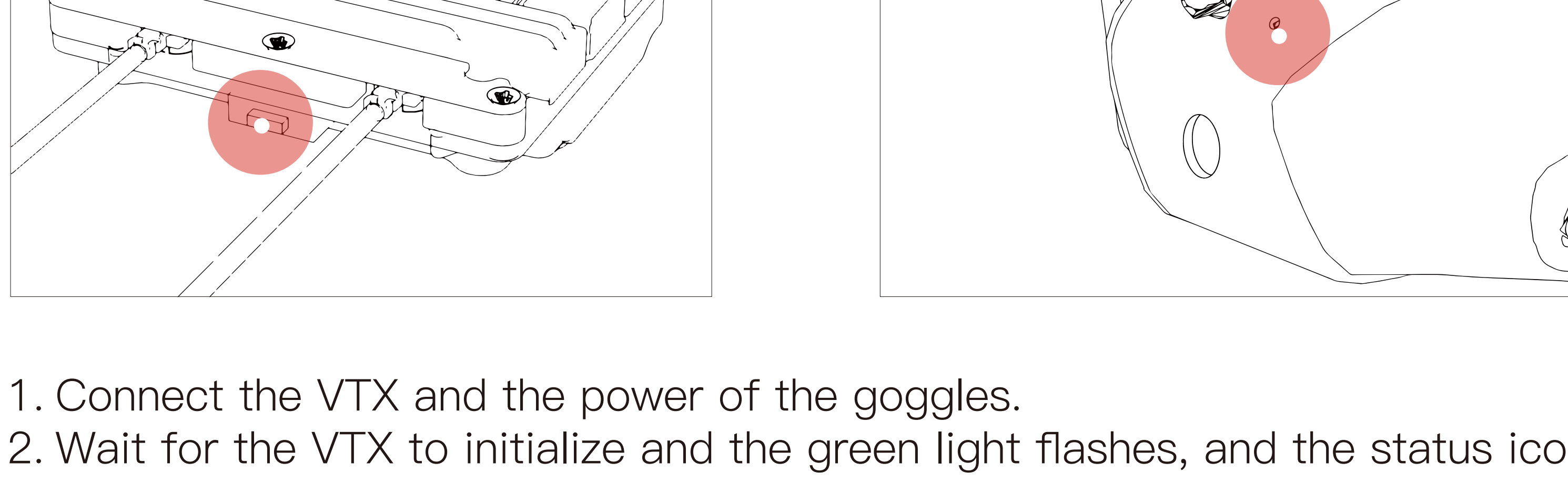
Connection



- 1. *Power 6V~25.2V
- 2. Power GND
- 3. Uart RX(Connects to Flight Controller TX)
- 4. Uart TX(Connects to Flight Controller RX)
- 5. USB-DP
- 6. USB-DM
- 7. USB-GND
- 8. USB-5V

* It is recommended to use a regulated power supply for power supply. If you use a 6S battery, be sure to install a capacitor at the battery input It is recommended to use the specifications above 50V/47uF, the voltage ripple is higher than 35V, and the risk of burning the device is high.

Linking



1. Connect the VTX and the power of the goggles.
2. Wait for the VTX to initialize and the green light flashes, and the status icon appears on the goggles.
3. Press the link button of the VTX and goggles respectively (as shown in the picture), when the VTX enters the pairing state The indicator light turns red, and the goggles send is a DI... DI... DI...
4. After the link is successful, the indicator light on the VTX turns solid green, the beeping sound on the goggles stops and the screen is displayed.

upgrade

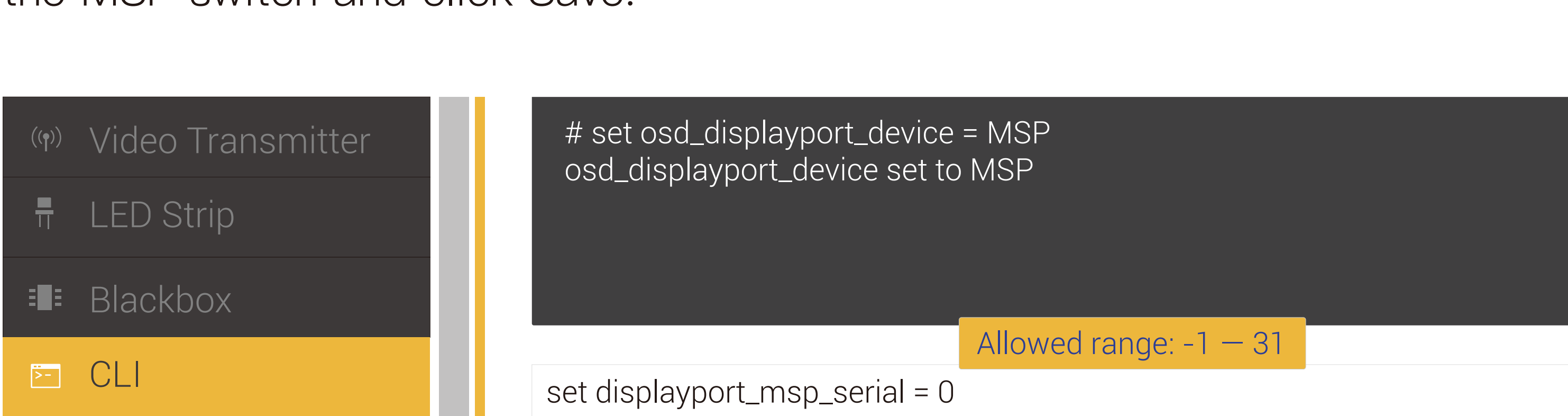
Please go to the official website to download the upgrade firmware, Avatar_Sky_X.X.X.img is the VTX file, Avatar_Gnd_X.X.X.img is the goggles file, copy it to the VTX or SD card, be careful not to change the file name. You need to turn on the power to use the U disk function.

1. Copy the upgrade file to the root directory of the VTX and the goggles, connect to the power supply and wait for the device to initialize (delete the old firmware file first if there is one).
2. Press the link button of the VTX and the goggles respectively for 8 seconds. When the VTX enters the upgrade status, the indicator turns on. It flashes red, and the goggles are beeping...DI... DI... DI... prompts sound (the upgrade time is long, please pay attention to the ambient temperature. do not cut off the power in the middle)
3. After the upgrade is successful, the indicator light of the VTX turns green and flashes, and the beeping sound stops after the goggles beeps for 5 seconds.

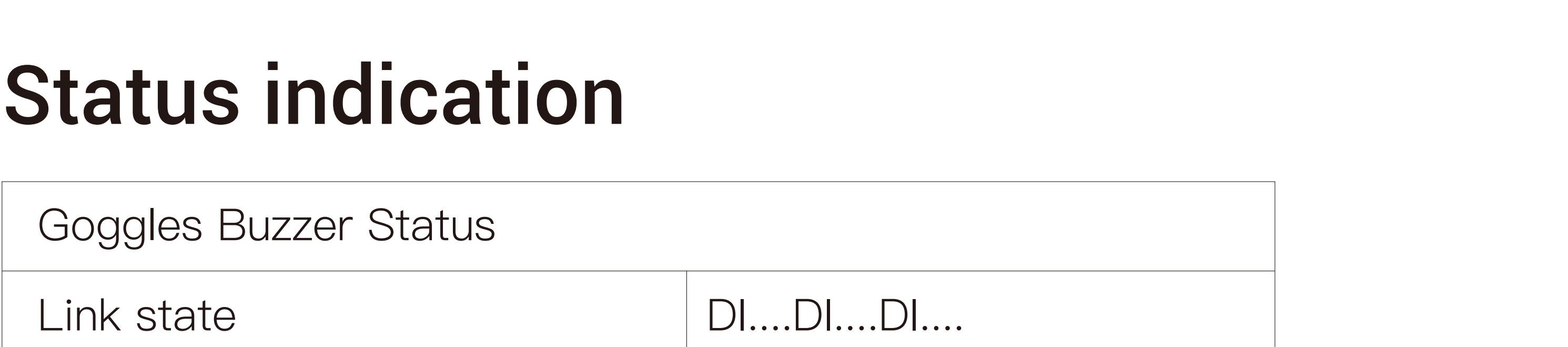
UART

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 6 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"

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, but the image is abnormal	green light slowly flashes

Operating channel

Central frequency(MHz)	Channel1	Channel2	Channel3	Channel4	Channel5	Channel6	Channel7	Channel8
FCC	5660	5695	5735	5770	5805	5878	5914	5839
CE/SRRC	5735	5770	5805	-	-	-	-	5839
MIC	5660	5700	-	-	-	-	-	5745

Make sure you fully understand and abide by local laws and regulations before using this product. An amateur radio license may be needed in FCC regions when using channels 1,2,6or 7, as they are amateur frequency bands. Users who use the amateur frequency bands with a modified or cracked version or without a license may be punished for breaking local laws or regulations.

VTX Specification

Model	Avatar module
Communication Frequency	5.725~5.850 GHz
Transmitter Power (EIRP)	FCC: <30dBm; CE: <14dBm; SRRC: <20dBm; MIC: <25dBm
I/O Interface	JST1.0*6(Power in) JST1.0*4(USB)
Mounting Holes	25.5*25.5 mm
Dimensions	33*33*9.5 mm
Storage	8 G
Recording	1080p/720p
Weight	16 g
Operating Temperature	-20~40°C
Channels	8
Wide Power Input	6V~25.2V
Supported FC System	Betaflight
OSD	Avatar mode
Latency	Average delay 22ms
Antenna	2(IPEX)

Camera parameters

Model	Avatar nano/Avatar camera
Image Sensor	1/2.7”Inch
Resolution	1080P/60fps, 720P/120fps, 720P/60fps
Ratio	16/9 4/3
Lens	2.1mm
FOV	170°
Aperture	F2.0
Shutter	Rolling shutter
Min.Illumination	0.001Lux
Weight	3.5g / 6g
Dimensions	14*14*17mm / 19*19*22mm
Coaxial Cable	90mm / 140mm

VTX Antenna

Model	Polar antenna
Polarization	LHCP
Bandwidth	5.6GHz~5.9GHz
Average Gain	2dBi
Radiation Efficiency	≥98%
VSWR	≤1.4
Connector	U.FL
Line Length	90mm
Dimension	H105mm*R11.2mm
Weight	1.5g