VAXIS STORM 800 INSTRUCTIONS

VAXIS STORM
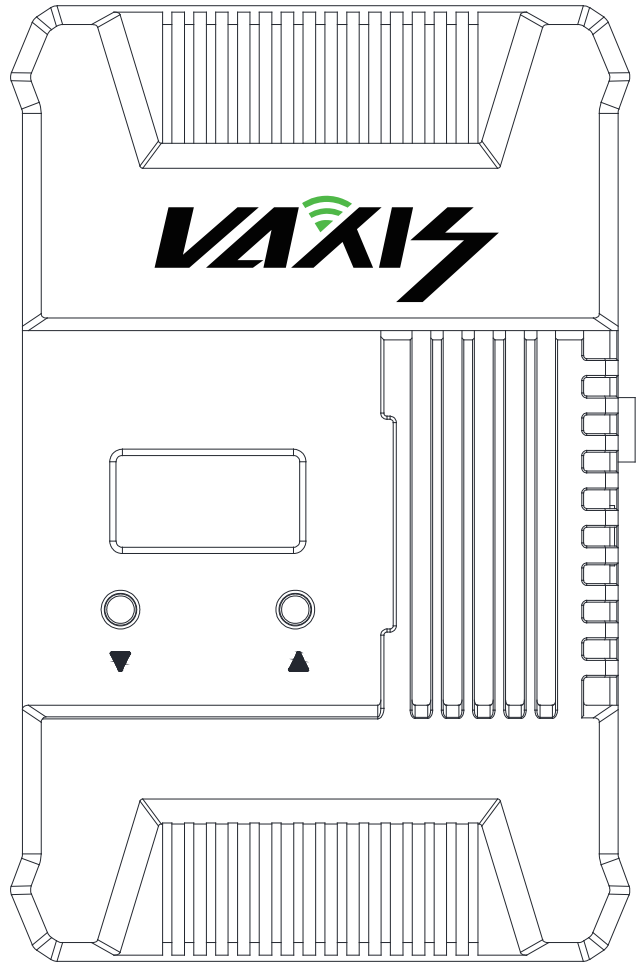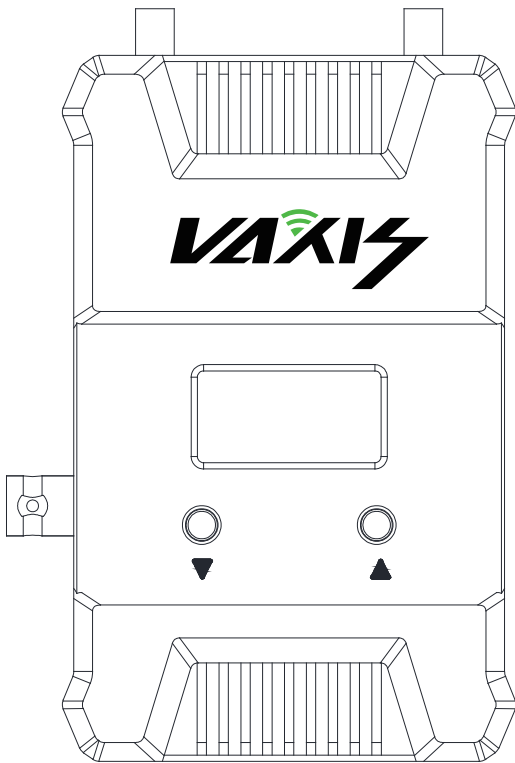
VAXIS

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Introduction

- Thank you for choosing our long-range wireless HDMI / SDI HD products. Before you install the product, please read the user manual carefully and follow the manual of the user manual to avoid product damaged or other safety accidents.

- Due to product version upgrade or other reasons, the contents of this manual will be updated from time to time. Unless otherwise agreed, this manual is used only as a guide, and all statements, information and recommendations in this manual do not constitute any guarantee either express or implied.

1. Cautions

■Logo and meaning

⚠ Careful, warning, dangerous, Pay attend to following items.

■Cautions

- Do not use this product in the extreme hot, cold, dusty or humid environments.

- Prevent friction with hard objects.

- Avoid the product falling down from a high place, or it may damage the hardware.

- The product is not water proofed. So do not get any liquid into the unit please.

- Do not dismantle, assemble or alter the product arbitrarily.

2. About

■Product Model and standard

The VAXIS STORM 800 Wireless HDMI/SDI Transmission Suite utilize today's most advanced wireless video transmission technology, which can realize the broadcast-class and uncompressed 3G SDI/ HDMI HD video signal transmitted with no compression and zero delay. The suite includes one transmitter and one receiver, The transmitter provides a 3 G /HD SDI in and a 3G/HD SDI out and an HDMI interface .The receiver provides a 3G/HD SDI in and an HDMI interface . The transmitter with 2 sword antennas , and 5 antennas built -in receiver , and it can work in 5.1-5.9GHz frequency band and be flexibly software configured to licensed or ISM band of global different regions. Meanwhile,on the front of the transmitter and receiver have been installed a control panel with OLED and channe

adjustment button , which provides maximum 10 workable frequency channels . The product supports maximum 4 sets working simultaneously and in same place (Multi -point to multi -point to transmit different images).

The wireless suite can accept wide range DC power input, which is suitable for many kinds of camera battery model. The suite also can sustain ±4 kV ESD (HBM, contact discharge), the industry class metal case and professional heat design would guarantee most robust reliability.

■ Main features:

- HDMI 1.3 spec supports

- HDMI and 3G SDI input and output

- Highest resolution 1080p 60,no delay and no compression

- Support audio formats include Dolby True HD, DTS-master, etc.

- AES-128 encryption with air interface HD video data stream

- Support point to point, and point to multi points network topology

- 5GHz ISM frequency band，maximum 10 frequency channels selected by user knob, coexist with WIFI.

- Maximum transmission distance 180meters

- OLED screen display the current channel,power status,signal stength

- Wide range power voltage input , adapt most kinds of camera battery

- Transmitter with Sony F97 battery plate,Receiver with V-lock or AB-lock,easy to install and replace in the shoot site

- Any input and output ports with ±4 kV ESD protection level (HBM, contact discharge)

- Industrial metal shell for easy installation

■Parameters:

	Transmitter	Receiver
Interface	SDI Input (BNC Female); SDI loopout (BNC Female)HDMI Input (Type A Female);2 Antenna Interfaces ;DC Input (2 Pin LEMO Female);Add a USB port to upgrade	SDI Output x 2 (BNC Female); HDMI Output (Type A Female);2 Antenna Interfaces ;DC Input (2 Pin LEMO Female);Add a USB port to upgrade
Supply Voltage Range	6.5-16.8V DC	6.5-16.8V DC
Power consumption	<6W	<6W
Size	(LxWxH):115x67x23mm,Not including the external antennas	(LxWxH):152x95x23mm
Mass	270g	355g
Input Video Format	HDMI:525i, 625i, 720p 50/59.94/60,1080i 50/59.94/60,1080p23.98/24/25/29.9/30/50/59.94/60;HDMI Type A SDI： 3G, HD, and SD-SDI(auto-selected), SMPTE-259/274/292/296/372/424/425;1x BNC	/
Output Video Format	/	HDMI:525i, 625i, 720p 50/59.94/60,1080i 50/59.94/60,1080p23.98/24/25/29.9/30/50/59.94/60；HDMI Type A SDI： 3G, HD, and SD-SDI (auto-selected), SMPTE-259/274/292/296/372/424/425；1x BNC
Input Audio Format	SDI embedded 4 channel 24 bit/48KHz	/
Output Audio Format	/	SDI embedded 4 channel 24 bit/48KHz
Signal Indicator	OLED Display	OLED Display
Frequency Band	5.1-5.9GHz,configurable with China, North American, Europe, etc	5.1-5.9GHz,,configurable with China, North American, Europe, etc

| Modulation Mode	OFDM 16QAM	OFDM 16QAM
Transmitted Power	Maximum 20dBm	/
Receive inspiration	/	-75dBm
Occupied Bandwidth	20/40MHz	20/40MHz
Temperature Range	0~40°C(operating condition); -20~60°C(Storage)	0 ~ 40°C (operating condition); -20~60°C(Storage)
Compliance	FCC;CE.	FCC;CE.

■Name of the product parts

Transmitter:
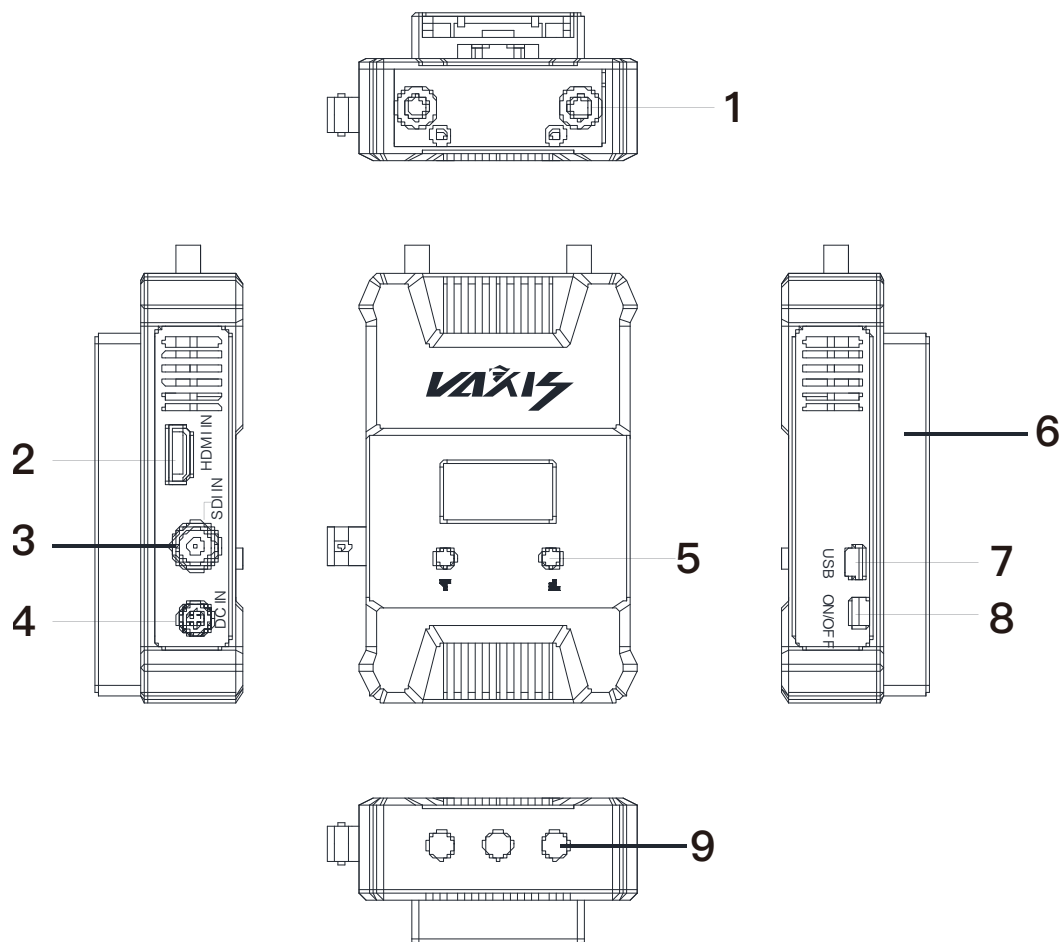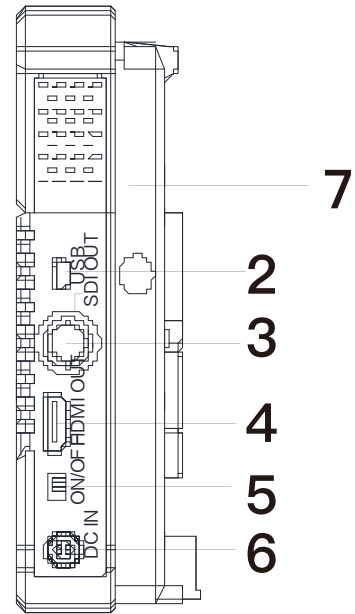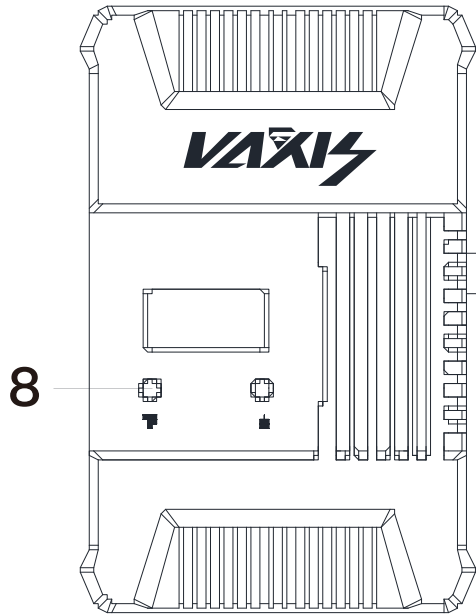

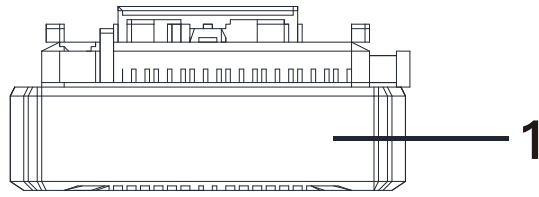①RP-SMA Antennae connector

②HDMI Input

③SD/HD/3G SDI Input

④DC Input, LEMO 2 Pin B series connector

⑤Screen control button

⑥Optional battery buckles

⑦USB interface to upgrade

⑧DC switch

⑨1/4-20 threaded hole

Receiver:
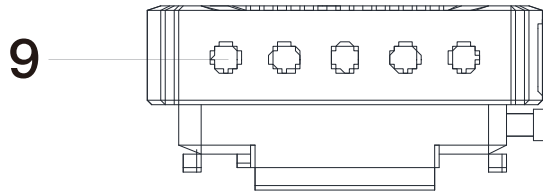
①Built-in Antennas

②USB interface to upgrade

③SD/HD/3G SDI output

④HDMI output

⑤DC switch

⑥DC Input, LEMO 2 Pin B series connector

⑦V-LOCK or AB-LOCK optional plate

⑧Screen control button

⑨1/4-20 threaded hole

■ Packing list:

- 1 piece transmitter

- 1 piece receiver

- 3 pieces 5GHz polydirectional and high performance sword antennas(SMA female)

- 2 pieces DC conversion cable (LEMO 2 pin male to D-Type)

- 1 piece 3G-SDI flexible cable

- 1 piece Vaxis Blue Noga Arm

- 1 user Manual

- SONY NP-F970 battery plate

- V-LOCK battery plate

3.Installation and Debugging

■Installation details and cautions

● Transmitter Settings

a) Contact 2 pieces sword antennas to Transmitter's SMA male antenna connectors

b) There are 3 1/4-20 screw nuts in the bottom transmitter metal case, which are located on the bottom. So the user can utilize Vaxis Noga Arm to fix the transmitter on camera.

c) If the product you purchased has a battery plate, you can connect the battery corresponding to the battery plate to the transmitter. Please note: Batteries and battery plates must match, otherwise it may cause product damage!

d) The user also can utilize a subsidiary LEMO 2 pin male to D-Type receptacle power cable to get power input from an outside power source.

● Receiver Settings

a) If the product you purchased has a battery plate, you can connect the battery corresponding to the battery plate to the transmitter. Please note: Batteries and battery plates must match, otherwise it may cause product damage!

b) The user also can utilize a subsidiary LEMO 2 pin male to D-Type receptacle power cable to get power input from an outside power source。

- Typical connection instruction

  Connect camera SDI or HDMI output to transmitter SDI or HDMI input port, and the transmitter can fixed in hot-shoe port of the camera. Connect HDMI or SDI output port of the receiver to SDI or HDMI input port of the HD monitor. Make sure all antennas ,batteries and Video cable are equipped normally.

4. Operation instruction

■**Getting started**

After finishing all steps above, system is workable, follow below steps.

a) Ensure the video source output of the camera is OK, and the HD monitor is power on and switched to connected video input port.

b) Ensure all input, output SDI or HDMI cables are connected.

c) Ensure both the transmitter and receiver installed batteries or DC input ports connected to outside power sources. Then toggle power switch of transmitter and receiver to 'ON' respectively, then 'Power' screen will be light.

d) Ensure the transmitter and receiver in same channel(the OLED screen display the same channel number), and this will make sure the transmitter and receiver work with same RF frequency.

e) If the camera is on and video input is OK, TX side 'video' screen will be light.

f) Before RX finished wireless link with TX, the Receiver's wireless signal strength "RSSI" and the screen "Video" indicator lights are not light; when wireless link is OK, the Receiver's wireless signal strength "RSSI" indicator light will bright, and will indicate the current signal strength. If the receiver detects normal wireless video signal from established wireless communication, then the

"Video"will light. Before the receiver output the normal video signal,the monitor will display an OSD of "Link connecting……" like below picture:

g) The system will spend about 10 seconds to complete the initialization and wireless connection. The actual connection time will be associated with the wireless environment of the specific usage scenario. When wireless link is set up, Screen signal icon will display the current wireless signal strength, as well the screen "Video" will light, means it had receive the normal signal; then connected HD monitor will display the HD video and audio from TX module.

h) For the best wireless transmission performance, it need install the transmitter and receiver more than 1.5m about the ground and keep the same height, and make sure no obstacles between them; Moreover, it is the best to keep the transmitter antennas face to

face, and don't turn round any sides with too big angle. The real transmission distance is also relevant to current air electromagnetic environment, because the system works in ISM band, it is exposure to all kind od 5GHz band air interference, we suggest the users should do a manual frequency sweep by adjusting frequency selection knob with a circle before using the equipment, then choose the best frequency channel for stable performance.

■ Input video port selection of transmitter

The transmitter has a 3G SDI video input port, a 3G SDI Loopout, and a HDMI video input port, and the system will automatically detect the input video interface. If both SDI and HDMI have valid video inputs, the system will take 3G SDI input as priority.

■ RSSI indicators

The receiver will calculate received RF signal strength and through the OLED Screen to display the particular channel,signal strength and the video format.
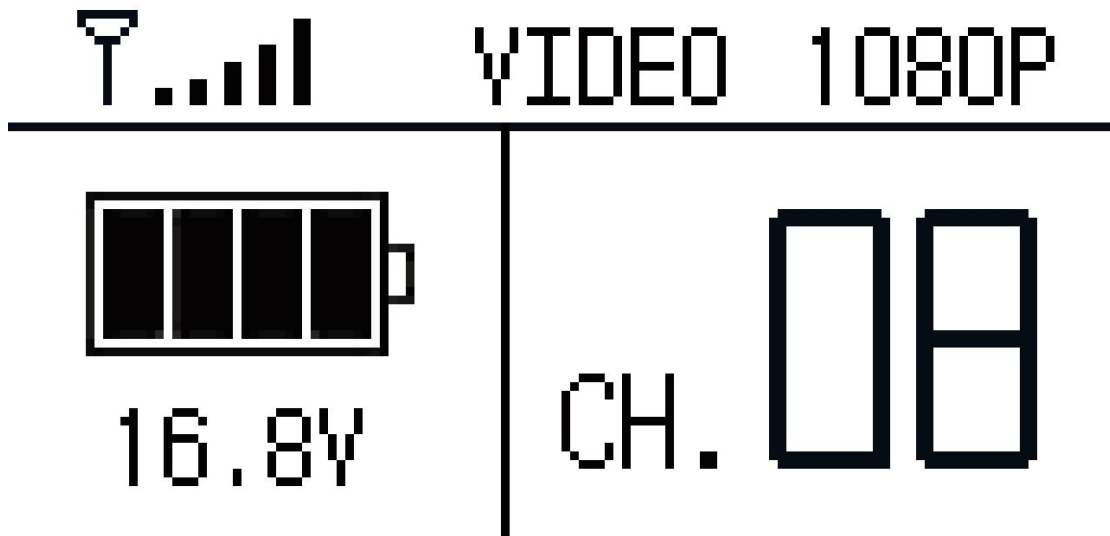
■ **Frequency Selection**

The wireless suite can work in 5.1-5.9GHz frequency band and be flexibly software configured to licensed or ISM band of global different regions. Meanwhile,on the side of both transmitter and receiver Set aside the manual communication channel selection knob, can use the random screwdriver to adjust the channel.Please note: Transmitter and Receiver should keep in the same channel(Similar to the intercom principle).When working together with multiple sets of products (up to 4 sets of work), please stagger the communication channels of each product to ensure performance.Please refer to the following picture:

5. Maintenance

■**Storage conditions**

Products storage temperature should be -20°C~60°C. For long time storage requirement, please use original carbon boxes, and avoid from high humid, acid base or dusty place.

■**Maintenance**

Warning

To ensure your safety, place choose well-known brand DC batteries, and guarantee suitable work conditions that battery manual mentioned.

6.Trouble shooting

■Normal problems

a) No output on display

Please check the TX and RX power first, if TX or RX is powered from battery or external power,please ensure the battery or external power source can supply the power.Then check if TX antennas and RX antennas are installed right. After that, check the Transmitter's OLED screen, if haven't show the signal, then check SDI or HDMI cable is plugged in and video source is ready please. Finally may check input video format is compatible with this product.

b) Poor output video quality

Please check if SDI or HDMI input or output cable is plugged well, then checks the OLED screen for wireless signal strength, there should be at least 2-3 frames lit if the user want to get better video quality.If there is only 1 frames lit, that means the received wireless signal is weak, and should shorten the transmission distance or change the wireless communication channel.