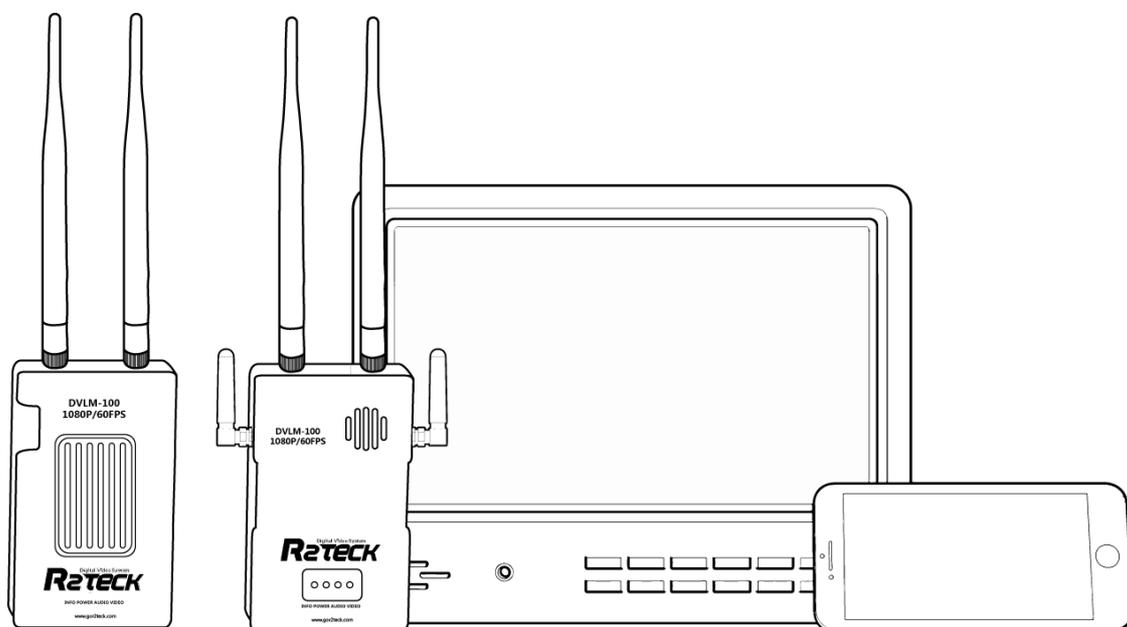




Digital Video Transmission System

DVLM-100

USER MANUAL



Wuxi R2TECK Co.,Ltd.

Content

1. EASY WAY TO START THE DEVICE	1
1.1 Operating steps and instructions	1
1.1.1 Monitor	1
1.1.2 Transmitter	1
1.1.3 Receiver	1
1.1.4 Mobile	1
2. SPECIFICATION	3
3. INTRODUCTION	4
3.1 Disclaimer.....	4
3.2 Profile	4
3.3 Intended usage.....	4
3.4 Caution.....	4
4. PRODUCT OVERVIEW	6
4.1 Brief introduction	6
4.2 Standard spec.....	6
5. INTERFACE DEFINITION	7
5.1 Transmitter port	7
5.2 Receiver port.....	10
6. Installation	12
6.1 Transmitter installation	12
6.2 Receiver installation.....	12
7. BIND AND FREQUENCY SWITCH	14
7.1 Frequency switch	14
7.2 Bind	14
8. SOFTWARE UPGRADE INSTRUCTIONS	15
8.1 Function description	15
8.2 Operating steps.....	15
8.3 Display content.....	15
8.4 Trouble symptoms / solution	15
9. APP instruction	15
9.1 INFO setting	16
9.2 Power setting	16
10. TROUBLES SOLUTION	17
10.1 Trouble symptoms / diagnosis / solution	17
11. APPENDIX	18
11.1 Video input format requirement.....	18
11.2 Monitor INFO content	18
12. CONTACT INFO	21

1. Easy way to start the device

1.1 Operating steps and instructions

1.1.1 Monitor

- Connect monitor to the power

1.1.1 Transmitter

- Install the antennas.
- Install the HDMI camera cable.
- Connect camera to the power, select the correct video format.
- Connect Transmitter to the power.

There should be below instructions if the Transmitter works well.

WORK light flash regularly.

HDMI light turn-on

LINK light turn-on if the Transmitter connect to Receiver.

1.1.2 Receiver

- Install the antennas
- Install the monitor by HDMI cable. (optional)
- Turn off the Receiver power button, then connect to the power (DC-12V power), turn on the receiver power button again.
- Turn on the power.

There should be below instructions if the receiver works well.

WORK light flash regularly

HDMI light turn-on(if installed the HDMI monitor).

LINK light turn-on if the receiver connect to transmitter.

HDMI monitor instruction (if installed the HDMI monitor):

The monitor shows logo "R2TECK" after receiver connect to the power.

After that, the monitor shows progress bar: Start-up / Selfcheck / Link.

Monitor real-time display the camera video when the transmitter connect to the receiver.

1.1.3 Mobile

- The mobile connect the wifi network "R2TECK ", WIFI password "12345688"
- wait for connecting
- Run the APP (if the APP is already running, turn off it first then run again)
- The mobile real-time display the camera video, the MOBILE light on the receiver turn-on.

Attention: Currently only allow working one mobile, if want to change the mobile, please follow below process:

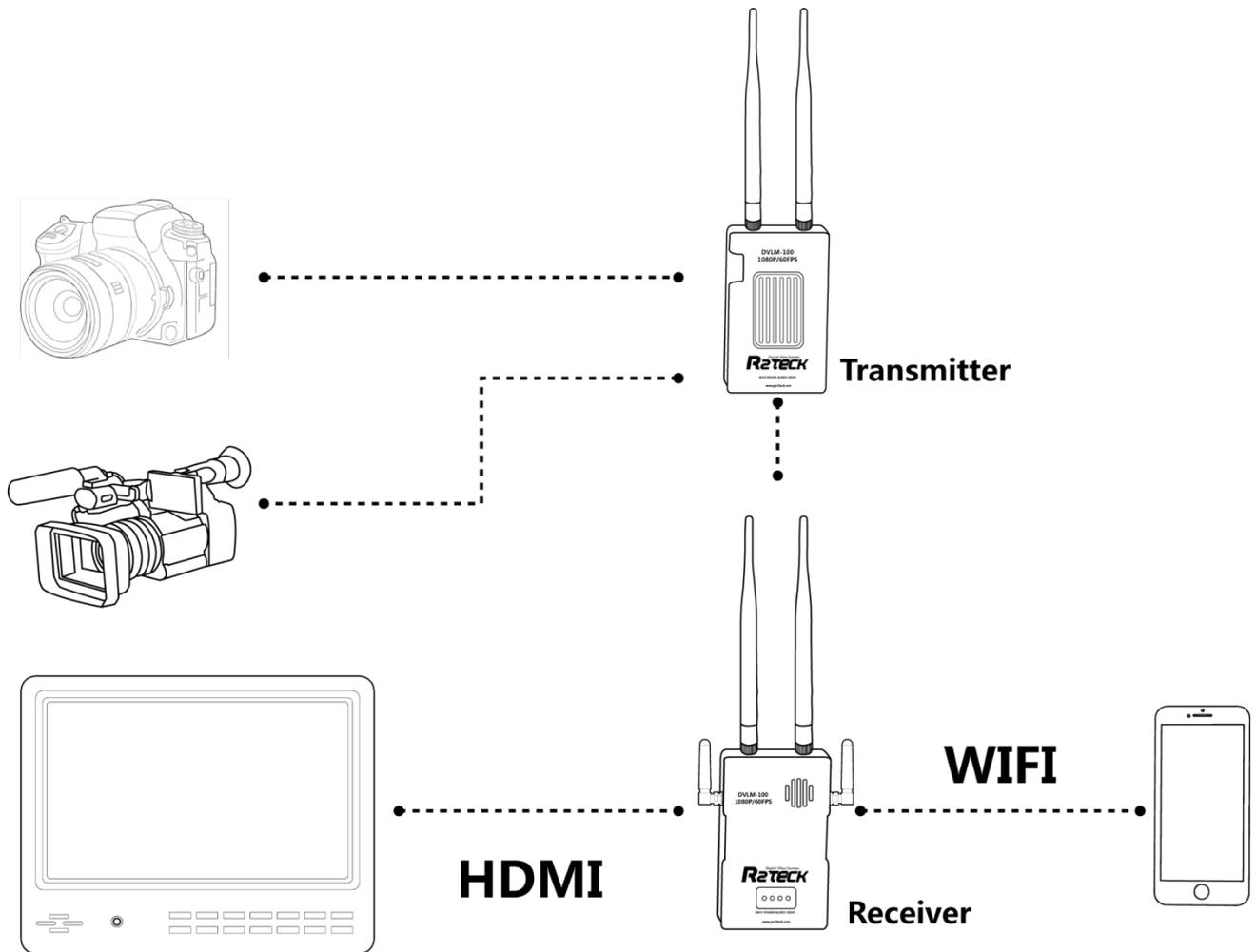
Disconnect the mobile with receiver wifi network.

Wait receiver MOBILE light turn off.

Repeat the above 4 steps.

iOS App installation: In App store, search the key word "DVLx" and download.

Android installation: Refer to <http://www.gor2teck.com/download/> ->DVLX android mobile client (apply for DVLM-100/DVL-1/DVL-C).



1.1.3.1

2. Specification

Here list the detailed specification about DVLM-100

Function specification	
Communication distance (outdoor, no obstruction)	100mw transmission distance \geq 800m 800mw transmission distance \geq 1500m
Wall Penetration ability	3 cement walls; 1 ferroconcrete wall
Output Power	25mw-800mw adjustable
Sensitivity	-95dbm \pm 2dbm
Frequency	5G
Physics specification	
working temperature	-10~60°C
storage temperature	-20~50°C
dimension (including the shell, not including the antennas)	Transmitter: L. 114mm x W. 70mm x H. 25mm Receiver: L. 127mm x W. 72mm x H. 28mm
Weight (including the shell, not including the antennas)	Transmitter: 178g Receiver: 233g
Hardware function support	
Transmitter working voltage	DC-12V, 6V~17.1V, suggest the output power is more than 2A
Receiver working voltage	DC-12V, 7V~22V, suggest the output power is more than 2A

3 Introduction

3.1 Disclaimer

Thanks for purchasing the DVLM-100 from Wuxi R2TECK. Everyone need to read and understand this disclaimer before using the DVLM-100. You are supposed to be accepted the disclaimer once the product is started to use. Please comply with the installation and using process indicated in this use manual. Wuxi R2TECK will not be responsible for the consequence of the improper use, improper install, improper modify.

The product name, brand mentioned here are belong to R2TECK.

3.2 Profile

This use manual as the instruction of Full-HD Digital Video Transmission system DVLM-100, the components and functions mentioned here may not be the standard spec. please check the enclosed list with the product, please contact with the dealer if you have any question

The right of the manual write, modify and release only belong to Wuxi R2TECK, Without the authorization of Wuxi R2TECK, this use manual could not be copied or modified or released

The information in this manual is only for DVLM-100 Full-HD Digital Video Transmission System.

This manual is subject to change without prior notice.

Version	
profile code & version	release date
RR.H.0003. 0017. V01	2017.10

3.3 Intended usage

DVLM-100 use for wireless Full-HD Digital Video transmission

3.4 Caution



The effectiveness of the use product is subject to if comply with operate and maintain direction in this manual.

Before start the product, the staff must make sure the operate process and condition is correct. specially to check the product cables are good or not, if the cable is damaged, please change it before start the product.



DVM-100 is intended to use on the film and other Full-HD digital video transmission. DVLM-1 may not be reached the defined function if it works in the improper temperature, improper humidity and improper air pressure.

DVLM-100 should not work when it is wet. Have to make sure it is dry when you use it.



DVLM-100 is the high precise product, it is forbid to beat and clash.



Product life time is 2 years, quality warranty is 1 year.



Manufacture and dealer are responsible for the product maintenance, without the authorization, please don't fix the product and don't modify the product.

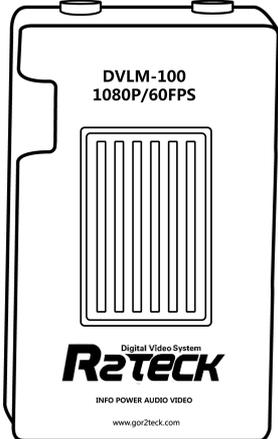
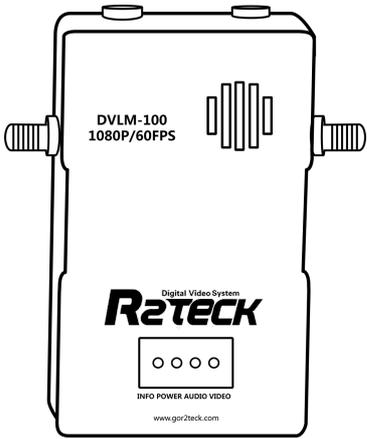
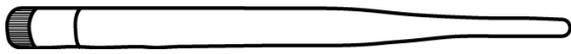
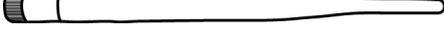
4. Product overview

4.1 Brief introduction

DVLM-100 is the 1080p full-HD Digital Video transmission system which including transmitter and receiver, it transmit the video, audio, image and more information by the wireless communication mode. DVLM-100 is perfect for all fields video transmission because of the light weight, low power, long distance, low latency.

4.2 Standard spec

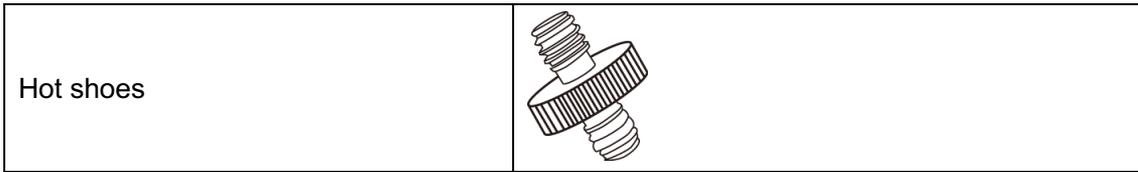
4.2.1 product main part

<p style="text-align: center;">Transmitter x 1</p> 	<p style="text-align: center;">Receiver x 1</p> 
<p style="text-align: center;">Transmitter antenna x 2</p>	<p style="text-align: center;">Receiver antenna x 2</p>
	
	<p style="text-align: center;">Receiver mobile antenna x 2</p>
	

4.2.2 Transmitter cable

<p>HDMI cable (D-D) x 1</p>	
<p>Camera HDMI cable</p>	

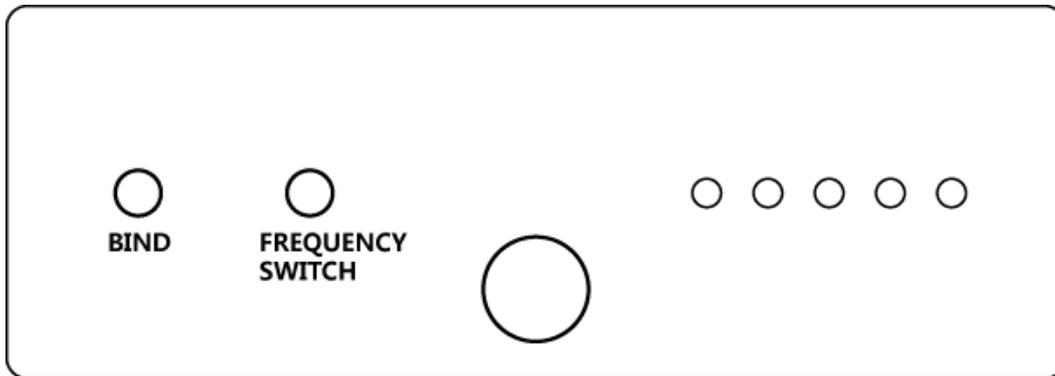
4.2.3 Receiver cable



5. Port definition

5.1 Transmitter port

5.1.1 Back side



5.1.1.1

[1]: For frequency switch setting

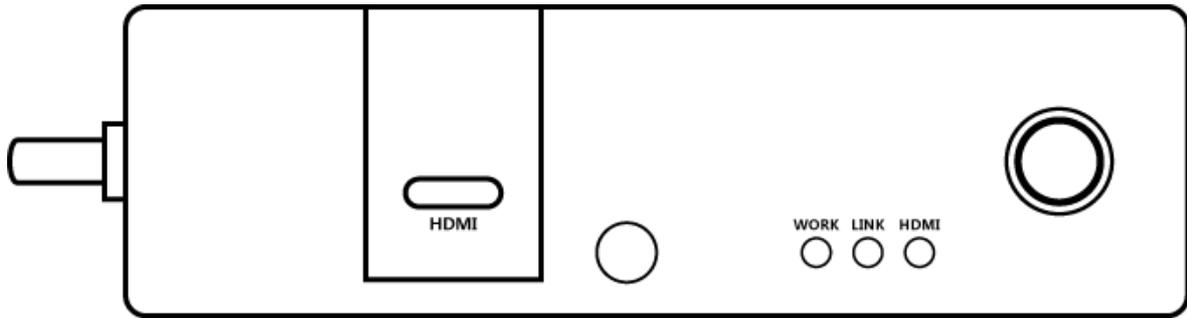
Press the button more than 5 seconds, 3 lights (HDMI, LINK, WORK) are all turn-off, release the key, 3 lights flash as 0.5Hz frequency, and then 3 lights back to normal state, that means channel change is finished. If devices not connected yet after 10 seconds of frequency switch process, please switch again. The frequency supported by device as below:

5180	5220	5260	5320	5520	5540	5560
5580	5600	5620	5640	5660	5680	5700

[2]: For bind the Transmitter and receiver.

Press the button more than 5 seconds, 3 lights (HDMI, LINK, WORK) are all turn-off, then 3 lights flash one by one, when the LED light works well that means they are well bind. This may takes 2 minutes. If the connection has not been resumed after 2 minutes, repower on both ends, and don't need rebind.

5.1.2 Right side port



5.1.2.1

HDMI port: for connecting with the camera.

Power port: Power button.

Work light: for monitoring the Transmitter working status.

Light status	Description	Action
Flash regularly	Transmitter works well	NA
other status	Transmitter does not work	Connect the system to the power again, or contact with the customer service.

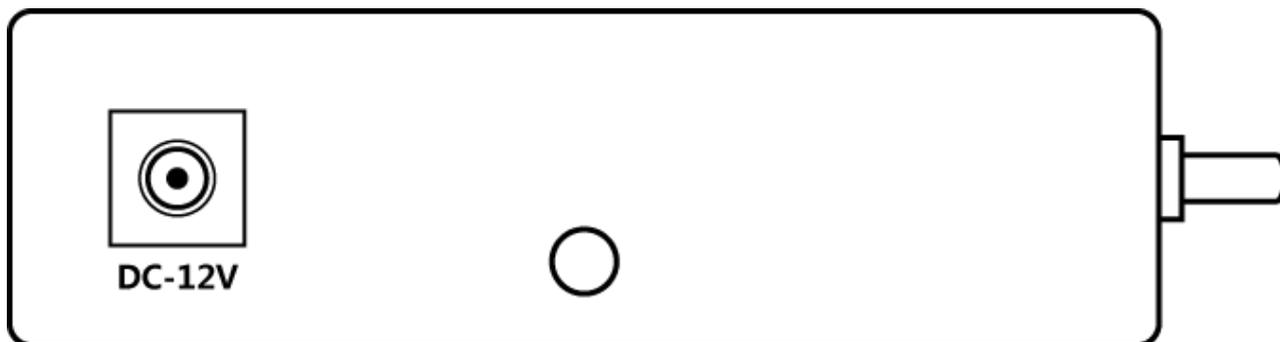
Link light, for monitoring the status of connect with the receiver.

Light status	Description	Action
Turn-on	Connect with receiver well	NA
Turn-off	Does not connect with receiver	<ol style="list-style-type: none"> 1. Please wait for connecting 2. Make sure the receiver is connected the power. 3. Bind the Transmitter and receiver again 4. Connect the power again

HDMI light, for monitoring the camera status.

Light status	Description	Action
Turn-on	Camera connect well	NA
Turn-off	Camera does not connect	check camera cable position
Flash	Camera output format is not correct	check camera output format setting

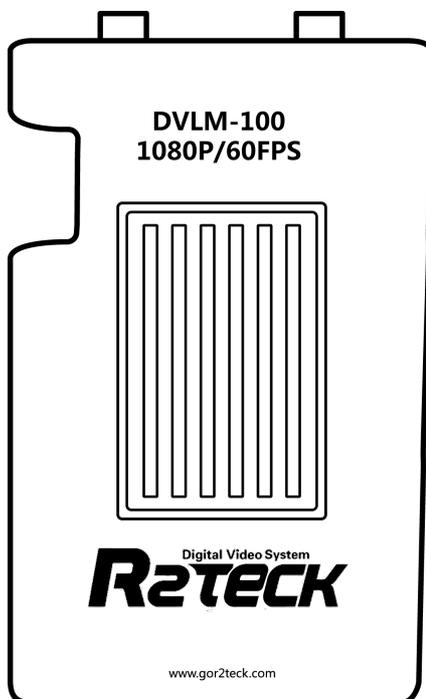
5.1.3 Left side port



5.1.3.1

DC-12V port: 12V-DC power.

5.1.4 Front side port

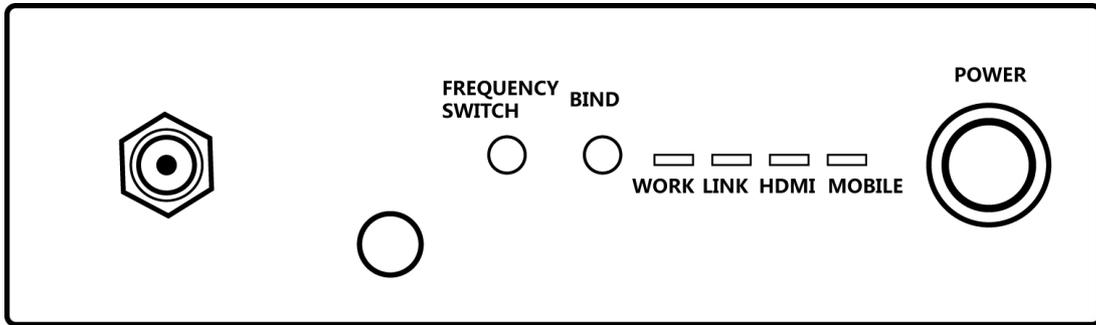


5.1.4.1

Cooling fan: Pay attention to not cover the cooling fan.

5.2 Receiver port

5.2.1 Left side port



5.2.1.1

[1]:For frequency switch setting

Press the button more than 5 seconds, 4 lights (HDMI, LINK, WORK, MOBILE) are all turn-off, release the key, 4 lights flash as 0.5Hz frequency, and then 4 lights back to normal state, that means channel change is finished. If devices not connected yet after 10 seconds of frequency switch process, please switch again. The frequency supported by device as below:

[2]:For bind the air part and ground part.

Press the button more than 5 seconds, 4 lights (HDMI, LINK, WORK, MOBILE) are all turn-off, then stop press the button, 4 lights flash one by one, when the LED light works well that means they are well binded. This may takes 2 minutes. If the connection has not been resumed after 2 minutes, repower on both ends, and do not need to rebind.

[3]: Monitor the receiver work status.

Light status	Description	Action
Flash regularly	Receiver works well	NA
Other status	Receiver does not work well	Connect the power again or contact with the customer service

[4]: Monitor Transmitter and receiver connect status.

Light status	Description	Action
Turn-on	Connect with Transmitter	NA
Turn-off	Des not connect with Transmitter	<ol style="list-style-type: none"> 1. Please wait for connecting 2. Make sure the Transmitter is connecting the power. 3. Bind the Transmitter and receiver again. 4. Connect the power again

[5]: monitor the display device status.

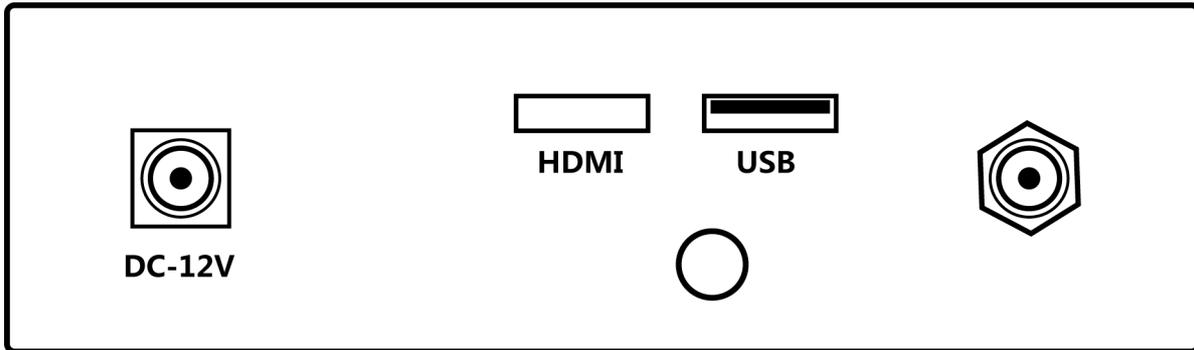
Light status	Description	Action
Turn-on	Display device connect well	NA
Turn-off	Display device does not connect	Check Display device cable

		position
--	--	----------

[6]: Monitor mobile connect status.

Light status	Description	Action
Turn-on	Mobile connect well	NA
Turn-off	No mobile connect	Make sure the mobile connect with the network, turn off the software then turn on again.

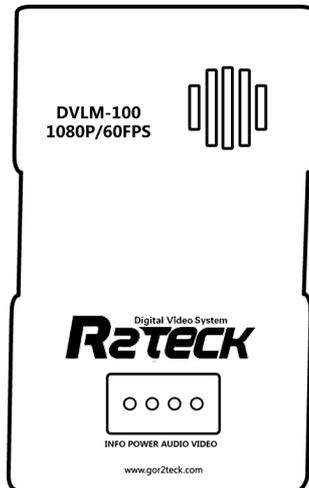
5.2.3 Right side port



5.2.3.1

- [1]: DC-12V power button
- [2]: HDMI port, for connect with the monitor.
- [3]: USB port, software upgrade.

5.2.4 Front side port



5.2.4.1

Air vent: Pay attention to not cover the air vent.

- [1]: INFO port, for specification display.
- [2]: Power port, for switch signal reception sensitivity.
- [3]: For audio button.
- [4]: Video port, for switch the picture quality, have 3 level for choose.

6. Installation

6.1 Transmitter installation

6.1.1 Antenna installation

Take out two pcs Transmitter antenna and fix them on the transmitter.

6.1.2 HDMI cable installation

One end of cable connect to the camera, another end of cable connect to the Transmitter.

6.1.3 power cable installation

Both of DC and AC power are supported by the receiver.

Support Sony NP-F970/770 battery.

Support DC-12V power, suggest the output power is more than 2A.

Connect to the power according to the requirement.

6.2 Receiver installation

6.2.1 Antennas installation

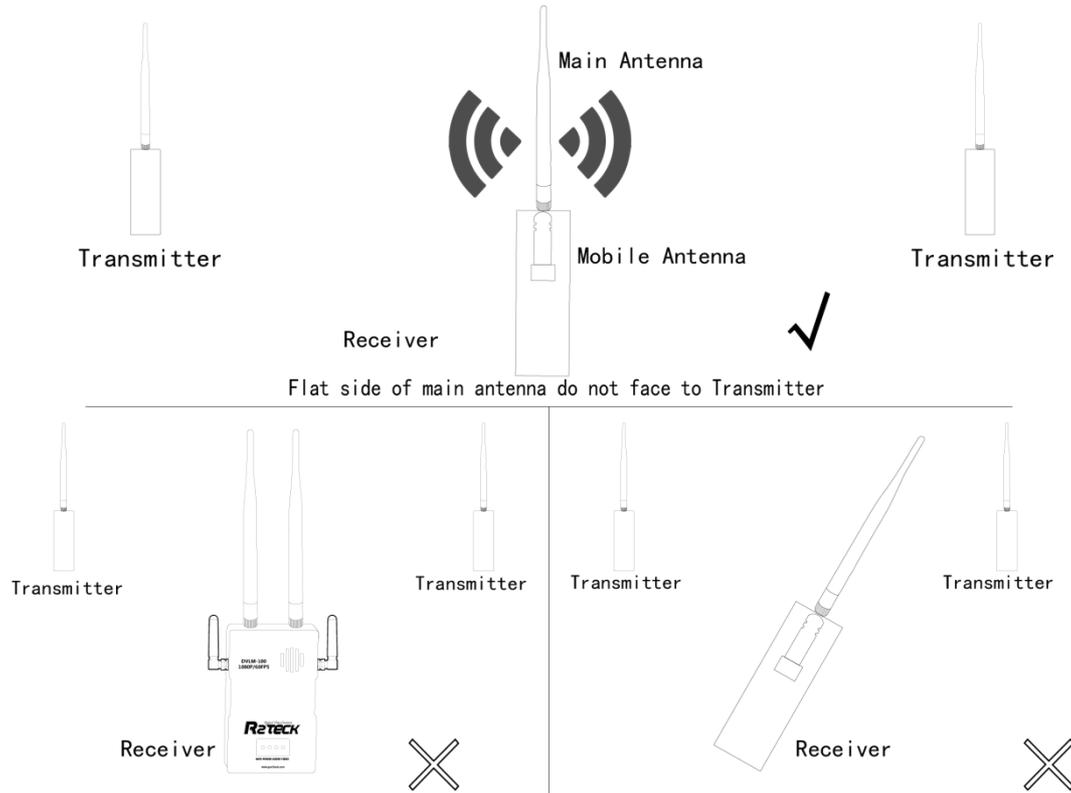
Prepared 4pcs receiver antennas, 2pcs of each style, fix them on the receiver according the photo below:

Attention:

The receiver antenna is not a full direction antenna ,

For better transmit result, please make sure the antennas perpendicular to the ground.

Please operate refer to blow pictures .



6.2.1.1

6.2.2 HDMI cable installation

One end of HDMI connect to the monitor, another end of HDMI connect to the receiver.

6.2.3 Power cable installation

Both of DC and AC power are supported by the receiver.

Support Sony NP-F970 battery

Support 12V-DC power, suggest the output power is more than 2A.

Connect to the power according to the requirement. Suggest use AC power.

6.2.4 Mobile APP installation

iOS App installation: In App store, search the key word “DVLx” and download.

Android installation: Refer to <http://www.gor2teck.com/download/> ->DVLX android mobile client (apply for DVLM-100/DVL-1/DVL-C).

7. Bind and Frequency switch

7.1 Frequency switch

This feature is implemented at the transmitter or receiver, there is not required to implemented it at the same time. Please make sure the transmitter and receiver connection status is well when implemented at the receiver.

For channel switch setting

Transmitter: Press the button more than 5 seconds, 3 lights (HDMI, LINK, WORK) are all turn-off, release the key, 3 lights flash as 0.5Hz frequency, and then 4 lights back to normal state, that means channel change is finished.

Receiver: Press the button more than 5 seconds, 4 lights (HDMI, LINK, MOBILE, WORK) are all turn-off, release the key, 4 lights flash as 0.5Hz frequency, and then 4 lights back to normal state, that means channel change is finished.

7.2 Bind

Function explanation: bind function bind one Transmitter with one receiver.

Process: the device LED light shows correctly, press two BIND buttons on Transmitter and receiver together and keep more than 5 seconds, all the LED light turn off, release the button. All the LED light flash one by one regularly, means the device start the bind progress. when all the LED lights of both side shows correctly that means bind progress is finished.

Attention:

When the Transmitter is connecting with the receiver, the video will be paused two times during the bind progress, the video will work correctly when the progress is finished.

One Transmitter only work together with the bind receiver after processed the bind function. Bind progress should be worked on the Transmitter and receiver at same time, please turn off other devices during bind progress in order to avoid mismatching errors.

All the buttons on the Transmitter and receiver will be worked after the device started 30 seconds later, the LED lights flash high speed means the buttons are not available now.

8. Software upgrade instructions

8.1 Function description

This feature is software upgraded at transmitter and receiver. Please make sure the transmitter and receiver connection status is well which have display transmission/ work light flash/ link light flash.

8.2 Operating steps

- Prepare 1Set of DVLM-100 video transmission system.
- 1PC of monitor for monitoring the processes.
- Prepare 1 PC of U-disk which is FAT32 format.
- Copy the software upgrade package (uograde.des3) which is provided by R2TECK to U-disk

- Connect the monitor with Receiver and charge the monitor.
- Connect the U-disk with USB port.
- Charge the Transmitter.
- Charge the Receiver.
- The receiver will be in the process of Auto upgrade.
- The device will work normally after 10 seconds when software upgrade is successfully conducted.
- Remove the U-disk.

8.3 Display content

- Display the boot logo.
- Display the system upgrade interface logo.
- Display the upgrade processes.
- Display the upgrade completed.
- Display the video on the monitor.

8.4 Trouble symptoms / solution

Interface	Description	Action
Couldn't link the upgrade interface	No upgrade package	Copy the software upgrade package to U-disk.
Process: U-Disk Err, Please Format to FAT32。	U-disk format is incorrect	Formatting the U-disk into FAT32 format.
Process: Failed	Upgrade failed	Upgrade again. Copy the upgrade package and upgrade again. If the above solutions do not work, please contact with the customer service.

Attention: The device will detect whether the U disk is assembled at startup. If the U disk is installed, the device will automatically upgrade. In order to ensure the normal use of the device, please remove the U disk after upgrading, and avoid unnecessary upgrade at the next start.

For upgrade successful, please power the transmitter and receiver.

9. APP instruction

9.1 INFO setting

Click OSD button, select "Turn-on" or "Turn off", match to the "Display" or "Not display"



8.1.1

9.2 Power setting

Click "setting" button to adjust the power, if click 100mw, then the video top right corner shows "PW: 100 OK", means output power setting is succeed.



8.2.1

10. Troubles solution

Below is the device maintenances about DVLM-100, to help the users whom don't have professional testing equipments and technology to solve the simply troubles.

10.1 Trouble symptoms / diagnosis / solution

Symptoms	Diagnosis		Solution
No video	Did not follow the process		Follow the process as chapter 1. Confirm the power process is correct.
	Transmitter	HDMI light flash	1. video format does not correct, check if the camera is supported by DVLM-100 and select the correct video format, the camera list as appendix 2. Camera HDMI cable bad contacted, connect the HDMI cable again.
		HDMI light turn-off	Camera HDMI cable is bad contacted, connect the HDMI cable again.
		WORK light is abnormal (not flash regularly)	Connect the power again.
		LINK light turn-off	Connect the power again
	Receiver	HDMI light turn-off	Camera HDMI cable is bad contacted, connect the HDMI cable again.
		WORK light is abnormal (not flash regularly)	Connect the power again.
		LINK light turn-off	Connect the power again.
	Bind abnormal	LINK light turn-off	If the above solutions do not work, please restore factory setting Restore factory setting succeed, suggest to process the bind progress. Action and instruction as chapter 7
	Blue screen	Transmitter HDMI bad contact	
Video pause	HDMI cable problem		Change a new HDMI cable
	Out of allowed distance		Back to the allowed distance

If the above solutions do not work, please contact with the customer service.

11. Appendix

11.1 Video input/Output format requirement

Video input/ format requirement

Signal type	Video format	Video Input Resolution	Remark
HDMI	PAL, NTSC	1080p@60/50/30/25/24fps; 1080i@60/50fps; 720p@60/50/30/25/24fps;	IF want to change the resolution, you have to re-start the both of the Transmitter and receiver.

Video Output format requirement

Signal type	Video output format	Video Output Resolution	Remark
HDMI	PAL, NTSC	1080p@60/50/30/25/24fps; 1080i@60/50fps; 720p@60/50/30/25/24fps;	IF want to change the resolution, you have to re-start the both of the Transmitter and receiver.

11.2 Monitor INFO content

Beside the video, on the top side and bottom side of the monitor display the OSD data.



Video signal intensity



Transmitter power voltage

POWER: Transmitting power



Current frequency



Receiver power voltage



Current Picture Quality



Audio button state

12 contact info

Thanks for purchasing our device again. If you have any suggestion or need technical support, please visit our website or send us the email, also welcome to call us.

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