







Rugged Design

# Wireless HD Video Link



#### **EU Environmental Protection**

Waste electrical products should not be disposed of with household waste.Please recycle where facilities exist.Check with you local authority or retailer for recycling advice.





# This user manual applies to:

Transmitter: CC8980 Receiver: CC3865

# **USER MANUAL**

Version: 1.0 2014.09

#### **Important Information**

Please read this user manual before you use this product, it contains all the notes and important things regarding operating this product. In accordance with the safety precautions and operating instructions listed on this user manual, our applies provided the product is handled properly for its intended use, but may not apply to below cases:

- Repairs or product modification and alterations have been executed by unauthorized personnel.
- The damages are caused by accidents including but not limited to lightning, fire, exposed to rain or water, and moisture.
- Do not use provided power adapter with specific power voltage which are not compliant with the rated voltage range in the attached label of the power adapter in package.
- The model label on the product has been modified or the warranty tag has been removed by unauthorized personnel.



#### **Safety Precaution**



To reduce the risks of electricity, do not remove or open the cover. No user-serviceable parts are inside. Please return to original factory for maintenance



The high temperature in the process of operating the device may cause the high risk of scalding.



Please use our standard power adapter. Detailed information Please refer to the rated voltage range showed on the label at the back of package's power adapter.



#### Danger: Be careful with electricity.

- As connecting any equipment (such as any player or TV, etc.), please turn off the power to the product before any operation is undertaken.
- Power outlet: To prevent electric shock or fire, short circuit, please make sure the type of electrical plug used on the receiver's and transmitter's power cord are compliant with the rated voltage range in the attached label of the power adapter in package.
- Power cord: Do not place any heavy articles above on the power cord. To avoid being stepped on or pinched by heavy items, the power cord should not be located on the place where people pass by frequently.
- Power overloading: Avoid overloading wall's electrical outlets and extension cord or other multi-socket; otherwise could result in electric shock or fire.
- Lightning: For protection from lightning or when the product is left unattended for a long period, please disconnect it from the power source.
- Please disconnect the power cord from the power outlet when you are not using the receiver and transmitter, this will reduce the risk of electric shock or fire.



#### Warning

- This product should not be exposed to dripping or splashing. Do not place any object filled with liquid on the product(eq. vases).
- To avoid electric shock, please do not block or stick anything on the air vent of product; do not remove the cover or put the object just like pins, steel wire into the gap of the air vent.
- Please place the receiver/ transmitter on a flat with hard and stable surface.
- Ventilation: please do not block the air vents on the receiver/transmitter or place any heavy object on top of them. Blocking the air flow can damage the product itself. Please make sure that there is adequate ventilation distance between the receiver and TV, and also put the product away from direct sunlight or any source of heat.
- Water Exposure: To reduce the risk of electric shock or fire , please do not expose the receiver/transmitter to rain or moisture.
- We assume no responsibility for any damage or result caused by using other adapters instead of our standard adapters

#### **Special Notice**

- Although the product has provided the function of data encryption when transmitting, you still need to pay attention to deliberate signal interception. There will be the Possibility of a third party intentionally intercept the transmission signal since the product adopt wireless communication. Please do not use the product on confidential and important communications, or life-related communications The main concern is that the content of wireless communication might be received by the third party's wireless devices deliberately or accidentally.
- The impact of radio waves (such as the following environment may cause the abnormal audio and video(blocked image, noise ...etc.).
- 1) Transmit near the wall which is hard for the radio waves to get through.
- 2 ) Quite close to the refrigerator, metal fitment and appliances, or next to the crowded situation.
- This product has been tested and manufactured to comply with national electrical safety
  rules, however, there will be noise caused by the interference with other machines in rare
  cases. If the interference is happened, please keep a certain distance away from other
  machines.
- The product is susceptible to interference from 5GHz wireless local area network or other wireless devices.
- Optimal range between transmitter and receiver is between 1 meter and 300 meters within line of sight.
- Please do not set up the transmitter and receiver in metal shelf, or it will hinder the wireless communications.
- 1080P/60Hz Wireless transmitting.
- It will take 15-20 seconds to boot the system before wireless communication start, the media receiver can not be operated during this time.

# SHUMLINGS

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# **Foreword**

- Please read this manual carefully before you use this product and retain it properly for future reference.
- If there is any doubt or difficulty in the process of product usage, please feel free to contact us or the dealer.
- The company reserves the authority to amend the specification.

# Brief Introduction

The system is designed to replace the current widely used cables in the live broadcasting and production environments. Cables always suffer from wiring hassles and sometimes just impossible to have cables. This wireless HD video transmission system supports good wireless coverage, plug and play, industry standard power and video interfaces and will provide you State-Of-Art picture quality with very low latency in both indoor and outdoor applications.

The Wireless HD Video Link system can be used in film production, live broadcasting as well as many other applications which requires good quality wireless video connections such as wedding and conferences.

## **Features**

- 5GHz ISM Band Wireless HD Video transmission.
- Supports multiple channel switching and broadcast mode for 1 transmitter to multiple receivers.
- Supports up to 1080p/60Hz resolution, HDMI/HD-SDI/3G-SDI 4:2:2, 10bits color depth.
- Uncompromised picture quality with very low latency <30ms.
- Effective range: 300m/1000ft. (Line of sight).
- HDMI 1.3 with EDID support.
- Plug & Play fully hardware design, no software is required.
- AES128/256 Encryption.

# Packing List

Please check the packing list carefully after unpacking, if any part is missing, please contact your dealer.



<sup>\*</sup> Accessories in package may vary according to certain conditions in different country/region, please check out the content in detail with the local retailer.

# Specification

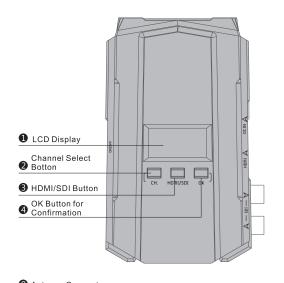
ITEM	Specification			
Frequency	5.1~5.9 (GHz) * Subject to different RF regulations in different regions			
Bandwidth	40MHz			
Video Formats Supported	1080p 23.98/24/25/30/50/60 1080psf 23.98/24/25 1080i 50/59.94/60 720p 50/59.94/60 576p 576i 480p 480i			
Audio Formats Supported	PCM, DTS-HD, Dolby TrueHD			
Time Code	SMPTE-12M			
Transmission range	> 300m (Line of sight)			
Transmitter				
Antenna	External Antenna X 2 pcs			
Transmission Power	20dBm			
Functional Interface	HDMI Input; SDI Input; SDI Loop Output; Mini USB; LEMO Power IN; Antenna RPSMA Socket, Power ON/OFF			
Mounting Structure	1/4" Hot-shoe connection; V-Mount * Optional			
LCD Display	Wireless Channel Info; SDI/HDMI Input Info; Signal status; Power Info			
Working Voltage	6V~17V			
Power Consumption	7~8W			
Dimensions	119x79x32 mm			
Temperature	-10 $\sim$ 60°C ( Operating ) ; -40 $\sim$ 80°C ( Storage)			
	Receiver			
Antenna	External Antenna X 5 pcs			
Receiving Sensitivity	-70dBm			
Functional Interface	SDI Dual Output; HDMI Output; Mini USB; LEMO Power IN; Antenna RPSMA Socket, Power ON/OFF			
Locating Structure	1/4" Hot-shoe connection; V-Mount * Optional			
LCD Display	Wireless Channel Info; SDI/HDMI Input Info; Signal status; Power Info			
Working Voltage	6V~17V			
Power Consumption	7~8W			
Dimensions	155x111x32 mm			
Temperature	-10 $\sim$ 60°C ( Operating ) ; -40 $\sim$ 80°C ( Storage)			

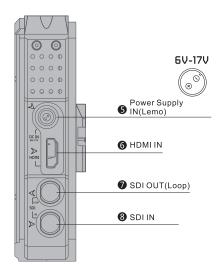
<sup>\*</sup> Since the product's improving process, all the performance, design and specifications of our products are subject to minor change without prior notice.

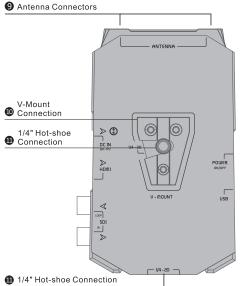
# Mechanic Information

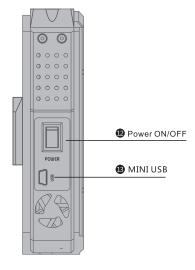
# TX

## Transmitter CC8980









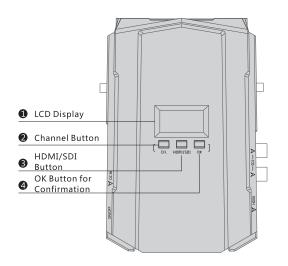
Structure					
1	LCD Display				
	Displays information of Channel, input selection, signal status and battery capacity				
2	Channel Select Botton				
	Select the same channel to RX				
3	HDMI/SDI Button				
	Select HDMI or SDI INPUT from signal source				
4	OK Button for Confirmation				
	Confirm the Selection				
5	Power Supply IN(Lemo) * Support 6-17V				
	Support connecting to the power supply of the camera, or power adaptor  Notice: BE AWARE OF POLARITY BEFORE APPLIES TO POWER SUPPLY!				
6	HDMIIN				
	Connect to the HD Video Source with HDMI Input				
7	SDI OUT(Loop)				
	Connect to the HD Digital Monitor which support 3G-SDI, HD-SDI				
8	SDI Input				
	Connect to the video source which support 3G-SDI, HD-SDI				
9	Antenna Connectors				
	RPSMA connectors for antennas				
10	V-Mount Connection * Optional				
	Supports V-Mount Connection				
11	1/4" Hot-shoe Connection				
	Supports Hot-shoe Mounting				
12	Power ON/OFF				
	Power ON/OFF				
13	Mini USB				
	For System Upgrading				

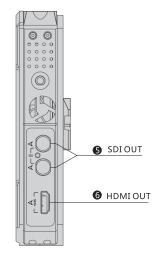
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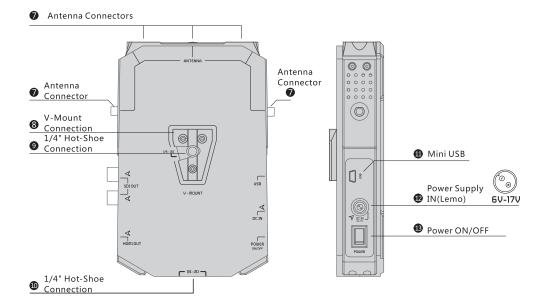
# Mechanic Information

# RX

## Receiver CC3865







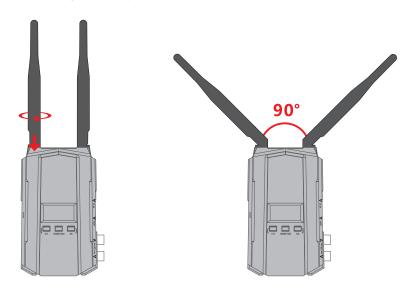
	Structure
1	LCD Display
	Displays information of Channel, input selection, signal status and battery capacity
2	Channel Select Button
	Select the same channel to TX
3	HDMI/SDI Button
	Select HDMI or SDI OUTPUT to the display device.
4	OK Button for Confirmation
	Confirm the Selection
5	SDI OUT
	Connect to the HD Digital Monitor which support 3G-SDI, HD-SDI
6	HDMI OUT
	Connect to the HD Display TV/Monitor with HDMI Input
7	Antenna Connectors
	RPSMA Connectors for Antennas
8	V-Mount Connection * Optional
	Support V-Mount Connection
9,10	1/4" Hot-shoe Connection
	Supports Hot-shoe Mounting
11	Mini USB
	For System Upgrading
12	Power Supply IN(Lemo) * Support 6-17V
	Support connecting to the power supply of the camera, or power adaptor
	Notice: BE AWARE OF POLARITY BEFORE APPLIES TO POWER SUPPLY!
13	Power ON/OFF
	Power ON/OFF



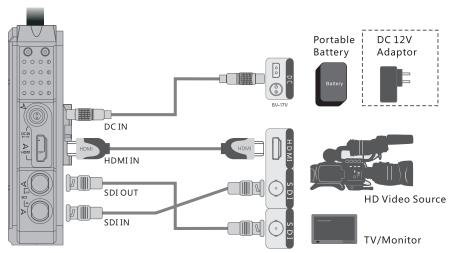
# TX

## For transmitter

1. Fix the antennas to the transmitter, and arrange them to be right angle as figured below to get better performance.



2. Connect the transmitter to the power supply. Connect the SDI/HDMI cable to the Video Source.



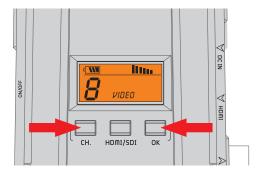
3. Turn ON the power supply and make sure the transmitter start to work.



4. Press the "CH" button to select the wireless channel that corresponding to the Receiver, then press the "OK" button to confirm.

When the video is transferred, the LCD Screen will display "VIDEO".

**Note:** The devices support broadcasting mode as factory setting. User just need to set the TX & RX to the same channel and the RX device will be linked wirelessly to TX.

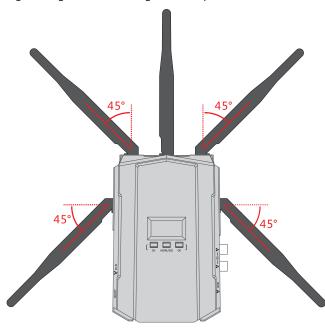


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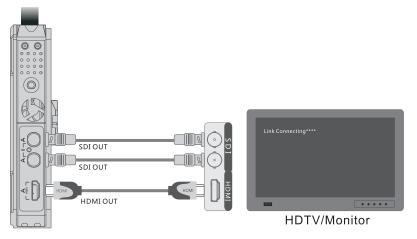


# For Receiver **RX**

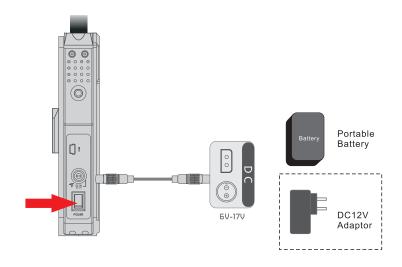
1. Fix the antennas to the transmitter, and arrange them to be right angle as figured below to get better performance.



2. Connect the SDI/HDMI cable to the TV/Monitor.



3. Connect the receiver to the power supply via the power cable. then turn ON the power supply and make sure the receiver start to work.

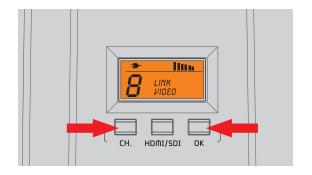


4. Press the "CH" button to select the wireless channel that be the same to the Transmitter, then press the "OK" button to confirm.

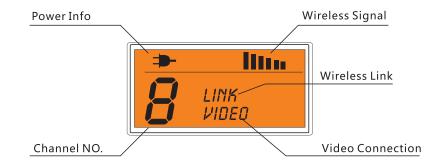
When the Networking is connected, the LCD Screen will display "LINK".

When the video is transferred, the LCD Screen will display "VIDEO";

Then the screen of TV/Monitor will display the HD images simultaneously from the video source.



# **LCD Display**



Power Info: Display the current power supply status

Channel NO.: Display the current Channel NO. of device

Wireless Signal: Display the network signal strength

LINK: LINK means the wireless connection is OK (\* Only for RX)

VIDEO: VIDEO means the video input/output is OK

# Trouble Shooting

	Troubles & Possible Reasons:	Solutions:	
	Displaying "Link Connecting" for a long time		
nTV	Transmitter is not powered up.	Power on the transmitter.	
	Transmitter or receiver is not placed correctly.	Place the TX or RX correctly.	
	The transmitter and receiver are too far away.	Move the receiver closer to the transmitter.	
	Several solid wall partition TX and RX.	Reduce the number of solid walls between TX and RX.	
	There are too many obstacles between TX and RX.	Move the receiver closer to the transmitter.	
o u o	Other transmitter is working on the same or	Turn off other transmitter, or change channel.	
mat	adjacent channel		
OSD Information on TV	No Video Signal received		
SDI	Transmitter and video source are not connected.	Connect the transmitter to video source by SDI/HDMI cable.	
	The video source is turned OFF.	Power ON the video source.	
	${\it Video  source  were  NOT  switched  to  SDI/HDMI  output.}$	Switch the Video source to SDI/HDMI output.	
	Bad contact of cable of transmitter	Remove and then re-plug the cable of transmitter	
	Abnormal working of transmitter	Reboot the transmitter.	
	Problem with cable between TX and video source	Change the SDI/HDMI cable.	
	Player NOT support the output resolution format.	$Switch \ the \ output \ video \ resolution \ to \ other \ modes.$	
	The  TV/Monitor  NOT  support  HDCP  authentication.	$Replaced\ with\ HDCP-certified\ TV/Monitor.$	
	No signal input to Receiver or TV/Monitor		
	Receiver is turned OFF.	Power on receiver.	
	Receiver and TV are not connected.	${\sf Connect} {\sf receiver} {\sf to} {\sf TV/Monitor} {\sf via} {\sf SDI/HDMI} {\sf cable}.$	
	TV/MonitorNOTswitchedtoSDI/HDMIinput.	Switch TV/Monitor to SDI/HDMI input.	
	Bad contact of the cable of receiver or TV/monitor	Remove then re-plug the SDI/HDMI cable.	
a	TV/Monitor turn into standby mode	Switch the TV/Monitor to normal operation mode.	
Image	Abnormal working of receiver.	Reboot the receiver.	
_	No image appear on TV/Monitor		
	Bad contact of receiver or cable.	Re-plug the cable of the receiver or TV/Monitor	
	Abnormal working of receiver	Reboot the receiver	
	Receiver failure	Please contact your retailer	
	Abnormal color on TV screen		
	Bad contact of cable of receiver or TV/moniter.	Unplug and then plug the HDMI cable of the receiver or TV.	
	Bad contact of cable of transmitter or video source.	Unplug and then plug the HDMI cable of the TX $$ and player.	
	Abnormal working of transmitter or receiver	Reboot the transmitter and receiver.	

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#### **FCC Statement**

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. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:-Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help. To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example use only shielded interface cables when connecting to computer or peripheral devices).

## FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- $(1)\,This\,device\,may\,not\,cause\,harmful\,interference, and$
- (2) This device must accept any interference received, including interference that may cause undesired operation.

#### **Cautions!**

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.