VHD-J1300T
HD Color Box Camera
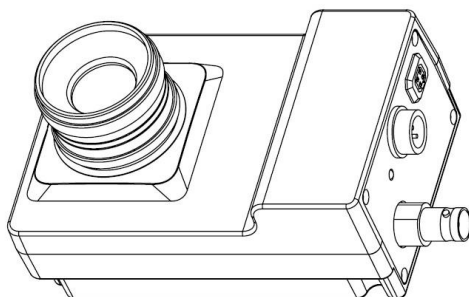
The user manual

V1.7 edition

（**English edition**）

ValueHD Corporation

Contents

1　Notes

● **Electric Safety**

Installation and operation must accord with electric safety standard.

● **Caution to transport**

Avoid stress, vibration and soakage in transport, storage and installation.

● **Polarity of power supply**

The power supply of the product is +12V, the max electrical current is 2A .Polarity of the power supply plug drawing as follows.

● **Careful of installation**

Do not grasp the camera head when carrying the camera. Don't turn camera head by hand. Doing so may result in mechanical damage.

Never power on before installation is not completed.

● **Don't dismantle the camera**

We are not responsible for any unauthorized modification or dismantl- eing.

⚠ **CAUTION!**

The specific frequency of electromagnetic field may affect the image of the camera!

2　Main Features

●**1080 p HD images**

Use the Japanese panasonic new a third of an inch, and 2.12 million pixels high quality HD CMOS sensor, which can realize the biggest 1920 x1080 high-resolution images with good quality and the output frame rate of 30 frames per second.

●**Low-light**

High SNR of CMOS sensor effectively reduce image noise, low illumination conditions and application of the noise reduction of 2D and 3D noise reduction algorithm based on motion estimation, effectively reduce the noise, even under low illumination conditions, keep clean and clear picture.

●**High-definition digital interface**

Support hd-sdi interface, the effective transmission distance up to 200 meters.

●**ultra-wide-angle distortion correction**

Unique ultra wide-angle camera distortion correction function, the perfect solution to the side effects caused by wide-angle lens distortion, maximum support to 120 ° wide-angle lens, the camera can be a full range of image rendering. Solve small spaces wide enough for a camera, mounted wide-angle lens

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and distortion dilemma.

●Wide dynamic range

Unique Iridix exposure dynamic control algorithm based on human eye model, uniform picture exposure, administrative levels feeling. By the support of the industry's most advanced WDR (wide dynamic range) CMOS sensor, cooperate Iridix processing, in strong contrast between light and shade environment (e.g., light), can capture imaging clearly all scenery.

●Support flip/mirror

Support the camera flip, mirror function, meet the demand of different scenarios.

●Motion Detection

Support motion detection function, reduce the cost of manual monitoring places of public institutions and enterprises, and to avoid staff fatigue caused by long-term unattended monitoring errors, greatly improve the efficiency of surveillance and monitoring accuracy.

●Back keyboard directly control

Camera back with 5 buttons, exposure compensation can be performed, white balance, automatic gain adjustment and save, do not need to borrow the RS485 and RS232 all basic operations can be realized.

●RS232 remote control

Using RS232 serial port command (VISCA) interface, all parameters of the camera may be remotely high-speed communications control.
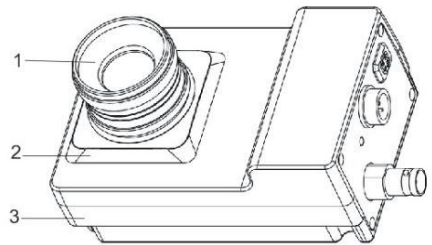
3 Standard Accessories

When opened the package, please check and confirm that all attachments shall be provided:

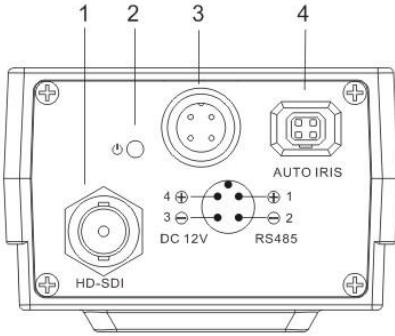|	
HD Color Box camera	x1
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Certificate/warranty card	x1

4 Interface description

● **Camera appearance**

1. Lens mounting position (only for C / CS lens *)

2. Fuselage top casing

3. Fuselage under casing

⚠**Notice**

● Use C camera lens, you need to use special adapter ring.The back of the interface specifications

1. HD-SDI interface
2. power light
3. Aviation connector

   Specific function shown in the table below:

编号	作用
1	RS 485+
2	RS 485-
3	DC12V-
4	DC12V+

4. Aperture control interface (for DC auto iris only)

☞ **Operating tips**

Press "OK" button and then to electricity and keep holding down the "OK" button 2 seconds, the camera will restore factory Settings.

5 OSD Menu Operation

●Key Description

The camera USES five buttons, respectively, to determine key [OK], select key 【▲▼】 up and down, left and right sides choose key "【◀▶】; Under normal image press "OK" key, the screen displays the main menu, press 【▲▼】、 from top to bottom cycle options menu item and press 【◀▶】 select menu options, use a scroll arrow or highlight the selected item, press menu button "OK" to highlight the menu item; Each menu page has a "Return" option, to Return to the superior menu or exit the menu.

●MENU（main menu）

Directly press "OK" button to enter the main menu.

MENU
▶ Exposure
 Color
 Image
 Noise Reduction
 Setting
 Version
 Restore Factory Settings
 Exit
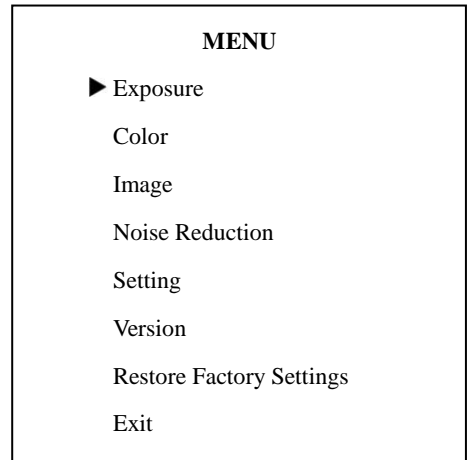
☞ **Operating tips**

Use the select key up and down 【▲▼】 Choose a menu item，press 【OK】 to enter submenu。

choose[Exit]press 【OK】 to exit menu。

● **EXPOSURE**

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EXPOSURE

▶ Mode	Full Auto
ExpCompMod	Off
Backlight	Off
DRC Strength	1
Anti Flicker	Off
Lens	Manual
Return	

☞ **Operating tips**

Mode：Set the camera exposure mode, can be set up：Full Auto、Manual、Shutter Priority、Iris Priority、Bright、WDR、LowLight。

Shutter：Set the Shutter values, only when the Mode for the Shutter Priority Mode effective, can be set up: 1/10000s、1/6000s、1/4000s、1/3000s、1/2000s、1/1500s、1/1000s、1/725s、1/500s、1/350s、1/250s、1/200s、1/125s、1/100s、1/90s、1/60s、1/30s。

Bright：Set the brightness values, only when the effective Mode for Bright Mode, can be set up: 0 ~ 17。

ExpCompMode ：Set the exposure compensation mode, can be installed,：On、Off。

ExpComp：Set the exposure compensation value, only when ExpCompMode item to On effective, can be set up: -7 ~ 7。

Backlight：Set the backlight compensation, can be set up: On、Off。

DRC Strength：Set up digital wide dynamic strength, can set up different levels of wide dynamic effect, can be set up: 0 ~ 8。

Anti Flicker：Set the flashing function, can be set up: 50Hz、60Hz、Off。

Lens: Lens options, items: Manual, DC

Return：get back

● **COLOR**

COLOR

▶ WB Mode	Auto
RG Tuning	0
BG Tuning	+2
Saturation	100%
Hue	7
CCM	Type1
AWB sens	Low
Return	

☞ **Operating tips**

WB Mode：Set the camera white balance mode, can be set up：Auto、Indoor、Outdoor、One Push WB、Manual。

R Gain：Adjust the camera white balance mode of red gain, are effective only when the white balance mode to Manual, can be set up: 0 ~ 255。

B Gain：Adjust the camera white balance mode of blue gain, are effective only when the white balance mode to Manual, can be set up: 0 ~ 255。

RG Tuning: Red gain fine-tuning, can be

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set up:-10~+10.

BG Tuning :Blue gain fine-tuning, can be set up: -10~+10.

Saturation：Color saturation adjustment, can be set up: 60% ~ 200%。

Hue：Chroma adjustment, can be set up：0 ~ 14。

CCM: Choose color matrix, can be set up：Type1, Type2.

AWB sens: The white balance sensitivity, can be set up：Low,Middle,High.

Return：get back。

● **IMAGE**

IMAGE	
▶ Luminance	7
Contrast	8
Sharpness	2
Flip-H	Off
Flip-V	Off
LDC	5
Return	

☞ **Operating tips**

Luminance：Brightness adjustment, can be set up: 0~14。

Contrast：Contrast adjustment, can be set up: 0~14。

Sharpness：Sharpness adjustment, can be set up：Auto，0~15。

Flip-H ： Image flipped horizontally. Optional items：On，Off。

Flip-V ： Image Flip Vertical. Optional items：On，Off。

LDC：Lens distortion correction，Optional items：1~10，Off。

Return：get back。

● **NOISE REDUCTION**

NOISE REDUCTION	
▶ 2D NR	3
3D NR	3
Return	

☞ Operating tips

2D NR：2D noise reduction, can be set up：1 ~ 5，Close，Auto。

3D NR：3D noise reduction, can be set up：1 ~ 8，Close。

Return：get back。

● **SETTING**

SETTING

▶ Language	English
Protocol	VISCA
Visca Address	1
Baudrate	9600
Video Format	1080P25
EPTZ	On
Zoom Limit	4x
Return	

☞ **Operating tips**

Language：Language Settings, can be set up：English,Chinese。

Protocol：Communication protocol Settings, can be set up:VISCA,P-D,P-P。

Visca Address ： Address of the Visca Settings, can be set up:0 ~ 7。

P-D Address：P-D address settings, valid in PELCO-D mode, can be set up: 0~254。

P-P Address：P-P address settings, valid in PELCO-P model, can be set up: 0~31。

Baudrate：Camera baud rate Settings, can be set up:38400、19200、9600、4800、2400。

Video Fromat：Camera system Settings, can be set up:1080P30 、 1080P25 、 1080I60 、 1080I50、720P60、720P50。

EPTZ：e-PTZ ，Optional items：On，Off。

Zoom Limit：Can be set up: 1.5x、2x、3x、 4x、 8x。

Return：get back。

● **VERSION**

VERSION

Version	1.30T
Data	2014-07-10
▶Return	

● RESTORE FACTORY SETTINGS

RESTORE FACTORY SETTINGS

▶ Yes	
No	
Return	

☞ **Operating tips**

Yes：verify，press【OK】to restore factory Settings。

No：cancel，press【OK】to back to menue。

Return：get back。

6 Serial port command description

● **Serial port control**

Camera on the electric initialization complete, available command (VISCA) with

RS485 and RS232 serial port for communication. The camera provides the following commands to control menu:

function	command packet	Notes
UP	8x 01 06 01 08 08 03 01 FF	Equivalent to the back four direction keys.
DOWN	8x 01 06 01 08 08 03 02 FF	
LEFT	8x 01 06 01 08 08 01 03 FF	
RIGHT	8x 01 06 01 08 08 02 03 FF	
OK	8x 01 04 0B 02 FF 或 8x 01 04 0B 03 FF	Equivalent to the back 【OK】 key。

x：Camera address number。

7　Maintenance and troubleshooting

●Maintenance of the camera

If the camera is not used for a long time, after use, please disconnect the power switch, at the same time the ac power adapter and ac socket to disconnect.

Clear the dust on the camera housing, please use soft cloth or cotton paper。

Clean the camera lens, please use dry soft cloth to wipe, such as dirt serious when, please use neutral detergent wipe gently. Don't use strong or with corrosive cleaner, so as to avoid the lens scratches, influence the image effect;

●Beyond the camera work intensity of illumination

Camera may be more than camera work intensity of illumination, the image cannot achieve the best effect.

● The camera should avoid using at the following specific situation

Camera should avoid shooting especially bright objects, such as sunshine, lamplight, etc。

The camera don't work in lighting conditions unstable environment, otherwise the image will happen.

Don't can launch a large power of the facilities around the use of radio waves, such as television or radio transmitters, etc。

8　Fault phenomenon and processing

● Images

Display shows no image

1、Check whether the camera power supply is connected and the voltage is normal, whether the power light shine。

2、Check whether video platform, TV cable connection is normal

3、Check for manual lens aperture and

open the aperture.

Sometimes there is no image

1、Check whether video platform, TV cable connection is normal。

2、check whether the camera installation safety, if there is a strong shock。

image blurring

1、Check whether the installation。

2 、 Check whether the lens focusing accurately。

- **Control**

Serial port can't control

1、The camera control parameters is set up correctly。

2、Check whether control line connection is good。

9 Standard Specification

Model parameter	VHD-J1300T
	2 million 1/3" CMOS Military HD Color Box Camera (SDI)
Camera	
Sensor Type	1/3" line-by-line CMOS
scanning mode	Progressive
minimal illumination	0.05 Lux @ (F1.2, AGC ON)
shutter	1/25s ~ 1/10000s
white balance	Auto, indoor and outdoor, manual, One Push
Day And Night	ICR Infrared filter plate

System	
Digital noise reduction	2D&3D Digital noise reduction
motion detection	support
backlight compensation	support
Len	
The camera interface type	C/CS port
Auto Iris	DC drive
Image	
Maximum image size	1920 x 1080
SDI The output format	1080p30, 1080p25 720p60, 720p50
SNR	≥55dB
Port	
video interface	One way HD-SDI（75Ω/BNC）
communication interface	RS485
Alarm input	Two way
Alarm output	Two way
Key	Five
Other Features	
Day & Night Convert	AGC Type
Anti-Flicker	Off, 50Hz, 60Hz
Image inversion	H, V, HV
Generic specification	

IP level	IP60
Power supply	DC12V±10%
Working temperature and humidity	-40℃ ~ 60℃ humidity <95% (No condensation)
power dissipation	3.3W
size	127.5mm x 72.0mm x 60.0mm
weight	1Kg
mean time between failures	60000h

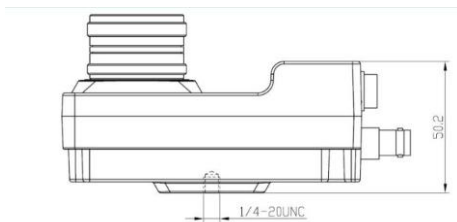# 10　Dimension
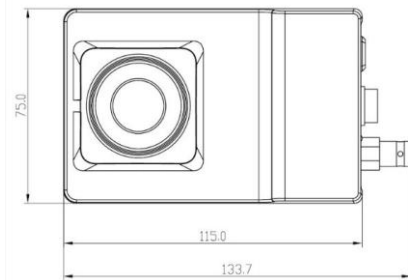
front view

top view

11　Copyright Notice