

# CMP310HC

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Media Platform

User Guide



V1.1-W

## Revision History

Date	Version	Description	Author
2019-09-02	1.0	First Draft	MC
2024-03-20	1.1	Fix some editing errors and format errors	JS

This guide contains some symbols to call your attention.



DANGER

The DANGER symbol calls your attention to a situation that, if ignored, may cause physical harm to the user.



CAUTION

The CAUTION symbol calls your attention to a situation that, if ignored, may cause damage to Our product.



NOTE

The NOTE symbol calls your attention to important information.



TIP

The TIP symbol calls your attention to additional information that, if followed, can make procedures more efficient.



Red Arrow

The Red Arrow symbols point to important details mention the context above or below an image.

This guide also contains the following text conventions.

***Bold Italic***

The bold Italic text indicates a button to click, an item in the drop-down menu to select, or a certain item in the UI.

## Safety Instructions

- Read these instructions
- Keep these instructions
- Follow all instructions
- Heed all warnings
- Do not use this unit near water.
- Only use a damp cloth to clean chassis
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions
- This unit is grounded through the power cord grounding conductor. To avoid electrocution, do not remove the power cord before the outlet is switched off or unplugged. If the plug does not fit into your outlet, consult an electrician for replacement of the outlet.
- Route power cords and other cables so that they are not likely to be damaged.
- Only use attachments/accessories specified by the manufacturer.
- Do not wear hand jewelry or watch when troubleshooting high current circuits.
- Do not work on the system during periods of lightning.
- Refer all servicing to qualified service personnel. Servicing is required when this unit has been damaged in any way.
- **Damage Requiring Service:** Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - When the power-supply cord or plug is damaged.
  - If liquid has been spilled, or objects have fallen into the product.
  - If the product has been exposed to rain or water.
  - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. As an improper adjustment of the controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
  - If the product has been damaged in any way.
- **Replacement Parts:** When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer. Unauthorized part substitutions may result in fire, electric shock or other hazards.

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# 1 Chassis Overview

## 1.1 Front Panel

CMP310HC series is a brand of multi-channel HD encoder which is specially designed for Hotel television system with its high integration and cost effective. It supports up to 8 channels of HDMI input and 8 channels of IP output. It is very suitable for hotels, clubs, hospitals, baths, schools and other IPTV and digital TV systems.



1. Reserve for future use port
2. Management port and Data Port
3. Status and Power Indicators
4. Reset Button



Long press the reset button on the front panel would make two changes: First, reset the IP address to 192.168.1.10. Second, reset both username and password to admin.

## 1.2 Back Panel



1. HDMI 1
2. HDMI 2
3. HDMI 3
4. HDMI 4

5. Power Outlet

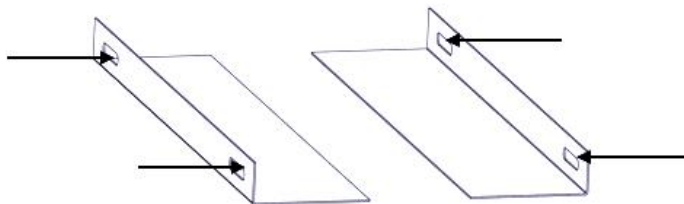
6. Power Switch

## 2 Installation

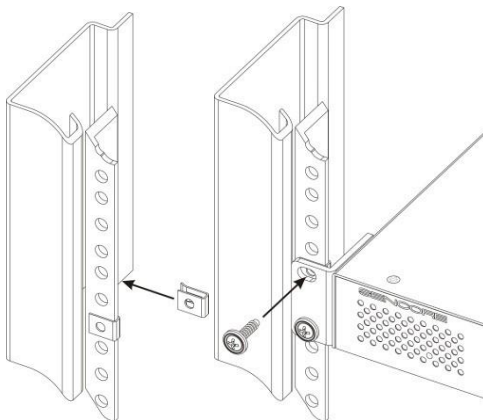
### 2.1 Rack Installation

The CMP310HC is designed to be mounted in a standard 19" rack. It takes 1RU of rack space. To install it into a rack, please use the following steps:

1. Determine the desired position in the rack for the CMP310HC. Make sure that the air intake on the top of the unit and the exhausts on the back of the unit will not be blocked.
2. Install the brackets at desired position if there's no supporting plate in the rack.



3. Insert the rack mount clips into place over the mounting holes in the rack.
4. Slide the CMP310HC into the position in the rack.
5. Secure the chassis to the rack by installing four screws through the front mounting holes and tightening.



## 2.2 AC Power Connection

Please only use the supplied 3-prong power connector or one with equal specifications. NEVER tamper with or remove the grounding pin. This could cause damage to CMP310HC, personnel, or property. Make sure the power outlet is switched off before plug or unplug the power cable from the panel of CMP310HC.



When take the equipment from a cold condition into a much warmer and humid condition, the equipment should be acclimated to the warm and humidity condition for at least 30 minutes. Powering up a non-acclimated unit may lead to shortcut or other damage to electronic components.

# 3 Web GUI

## 3.1 Web GUI Overview

### 3.1.1 Connect the Management Port

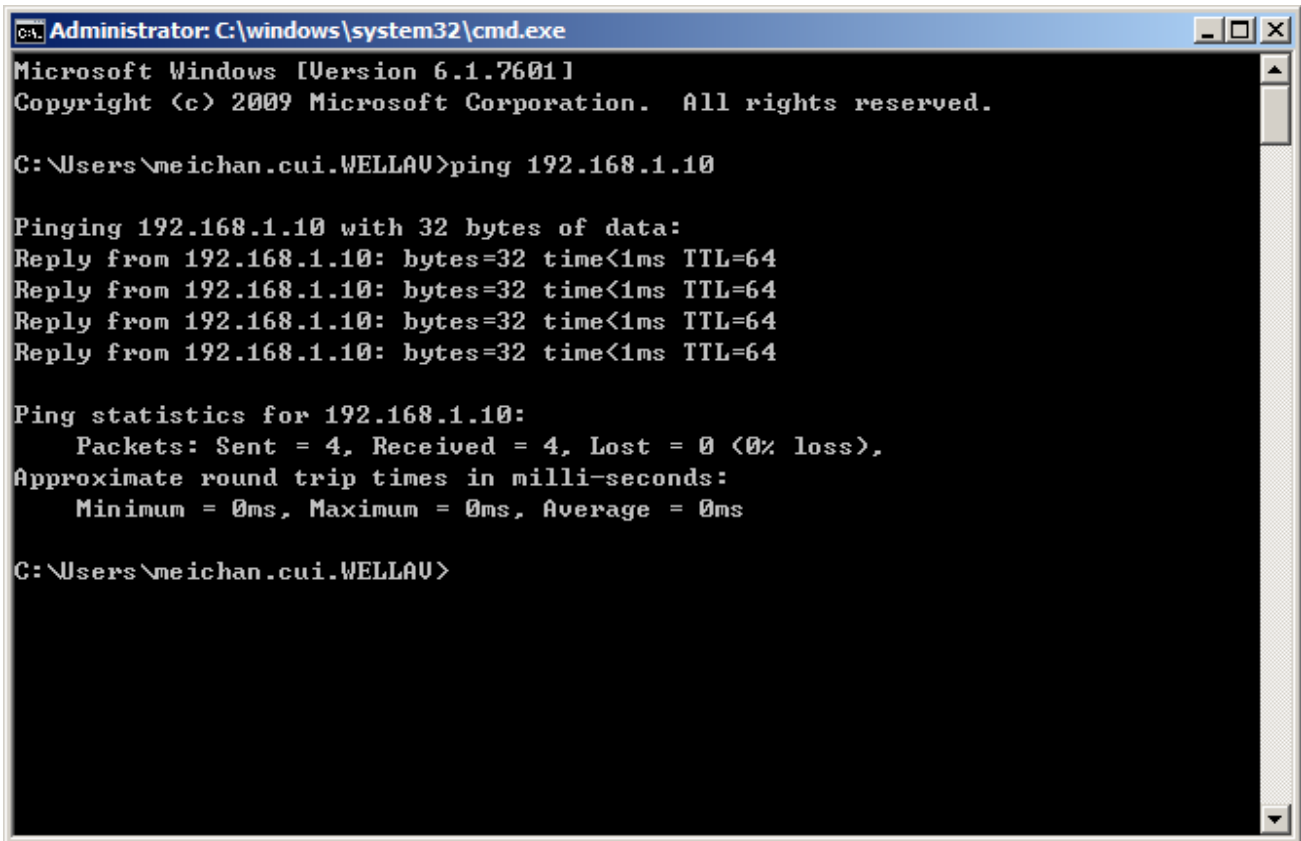
Factory network settings of the Management Port and Data Port:

- IP address                      192.168.1.10
- Subnet Mask                    255.255.255.0
- Gateway                        192.168.1.254

Take the following steps to access the Web GUI in a browser.

- Connect PC to CMP310HC management port directly.
- Set the IP address of the laptop/computer to the same network segment with the CMP310HC baseboard IP address. For exmaple, you can set the the computer's IP address to 192.168.1.200.
- Check the physical connection by ping command.



A screenshot of a Windows command prompt window titled "Administrator: C:\windows\system32\cmd.exe". The window shows the output of a ping command. The text in the window is as follows:

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\meichan.cui.WELLAU>ping 192.168.1.10

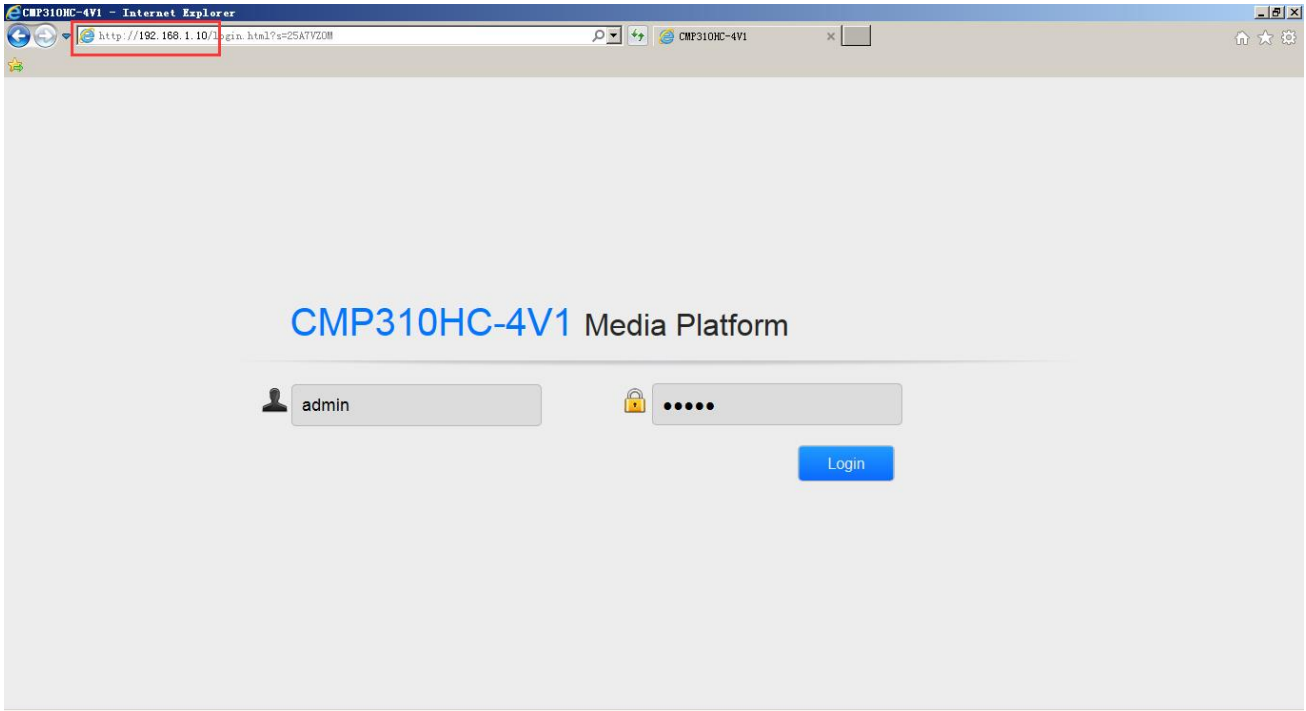
Pinging 192.168.1.10 with 32 bytes of data:
Reply from 192.168.1.10: bytes=32 time<1ms TTL=64
Reply from 192.168.1.10: bytes=32 time<1ms TTL=64
Reply from 192.168.1.10: bytes=32 time<1ms TTL=64
Reply from 192.168.1.10: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\meichan.cui.WELLAU>
```

### 3.1.2 Log into the Web GUI

Enter the CMP310HC baseboard IP address into the URL field of any recommended Web browsers (IE8 or above, Firefox, and Google Chrome) to access the login page. The default user name and password is admin/admin. Click **Login** to log into the GUI.



## 3.2 Status

### 3.2.1 Device Status

After a successful login, we will always enter the status overview page, where we can check the device status of:

- a) Module list: shows the embedded encode module.
- b) Device host operating status in **Device status** options and the **Device information** option.
- c) Setting buttons.





We use only IE, Firefox and Chrome for testing procedures. If use other browsers, like Microsoft Edge, you may encounter incomplete UI layouts, and configure setting in these browsers may lead to errors.

## 3.2.2 Device Information

**Device Information** page shows the firmware version, software version, and hardware version of baseboard.

Module	Firmware Version	Software Version	Hardware Version
CE-HDMI-01	V9.0.22	V1.2.4	V1

## 3.3 System Settings

### 3.3.1 Network

In **Network** page, we can configure the IP address, subnet mask and default gateway of management port and data port. Click the **Apply** button in the right side to make the change take effect.

Module Name	IP Address	Subnet Mask	Default Gateway	MAC Address
1.NMS/Data	192.168.1.10	255.255.255.0	192.168.1.254	A0:69:86:02:3A:AC


### 3.3.2 System

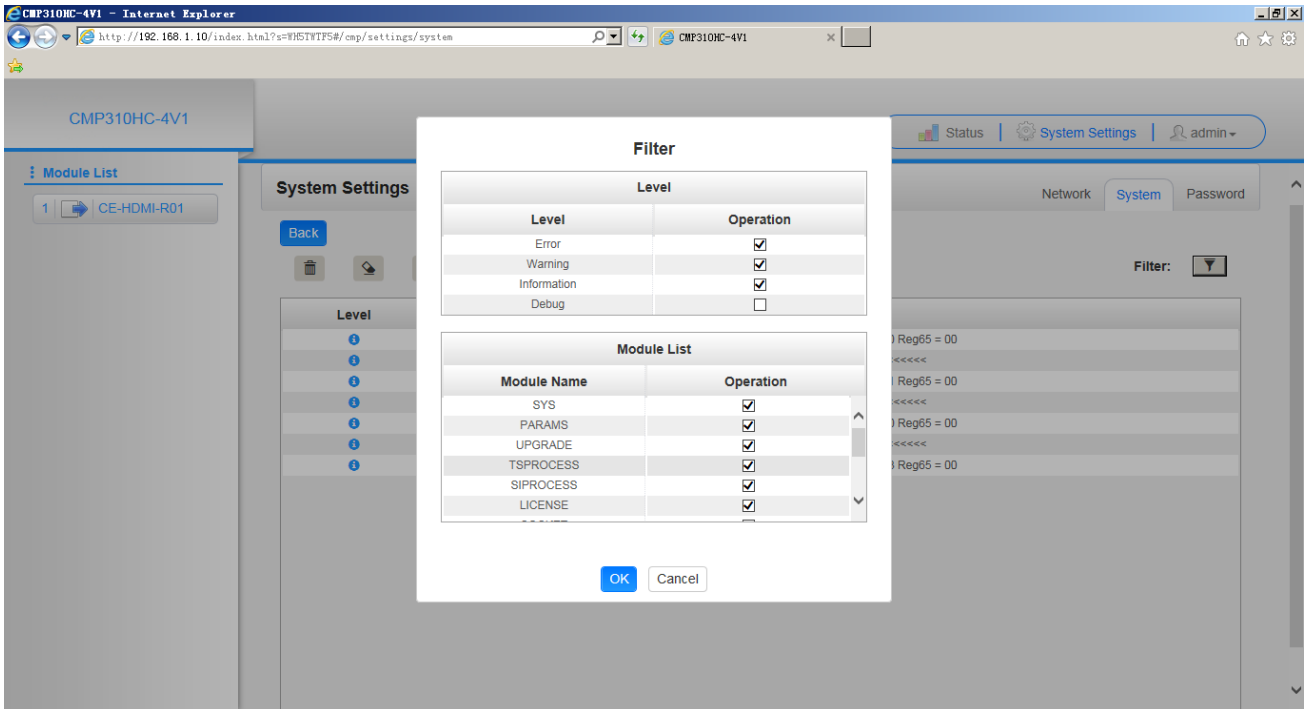
In this page, the following functions are available: upgrade, import or export configuration, import or export license, manage Log, reboot the whole unit and restore to factory setting.



Click Factory Default here only reset the configuration to factory settings. It would make no change to IP address and Web language.



➤ Click  to filter desired log message.



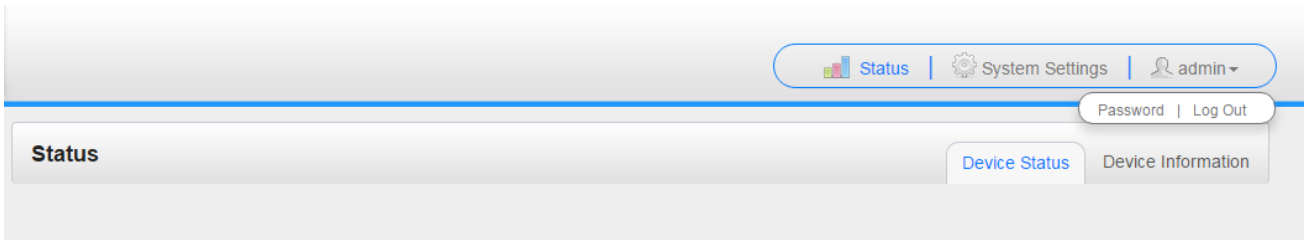
### 3.3.3 Password

Reset the login password in this page. Enter the original password first to reset your password. After reset, need to login again.

Current Password	<input type="text"/>	
New Password	<input type="text"/>	
Confirm Password	<input type="text"/>	

### 3.4 Admin

Click **admin** to change password or log out.



## 3.5 Module List

CE-HDMI-R01 is a 4-channel HDMI input encoder which support H.264 SD/HD encoding. The module supports MPEG1-L2, AAC and AC3 audio encoding.

### 3.5.1 Status

Choose the module, it will automatically show the module's status, including total bitrate, effective bitrate, input/output video resolution, signal status and encryption status.

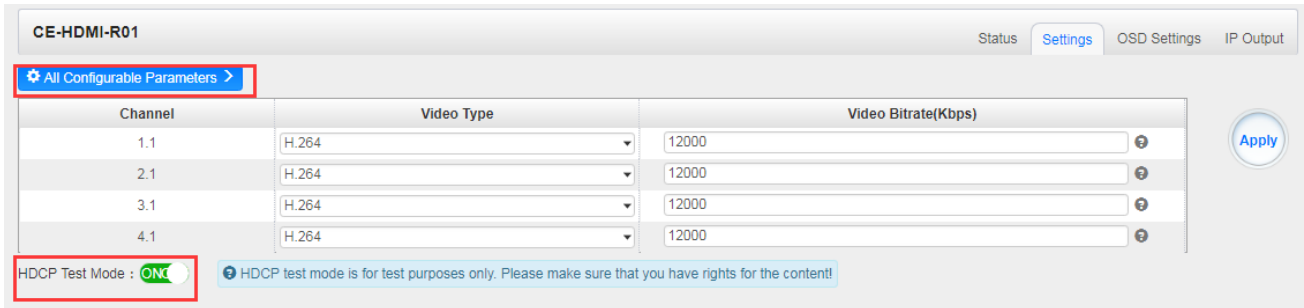
Channel	Total Bitrate(Mbps)	Effective Bitrate(Mbps)	Input Video Resolution	Output Video Resolution	Signal	Encryption	TS Analy...
1.1	13.308	13.308	1920x1080_24p	1920x1080_24p	HDMI	Encrypted	
2.1	13.254	13.254	1920x1080_60p	1920x1080_30p	HDMI	Encrypted	
3.1	0.000	0.000	No_Video	No_Video	Not inserted	Unencrypted	
4.1	0.000	0.000	No_Video	No_Video	Not inserted	Unencrypted	

Click the icon ( ) below **TS Analysis** to see the TS analyzing result of this channel.

PID	Bitrate(Mbps)	Bandwidth(%)	Continuity Count Error	Type
0x0(0)	0.030	0.225	0	PAT
0x3e8(1000)	0.030	0.225	0	PMT
0x3f2(1010)	0.049	0.368	0	PCR
0x3fc(1020)	12.898	96.926	0	Video
0x406(1030)	0.249	1.871	0	Audio

Click **Reset Counter** to clear **continuity count error** and restart counting. Fill the key words of PID, bitrate, bandwidth, table type in the search bar to check the info wanted.

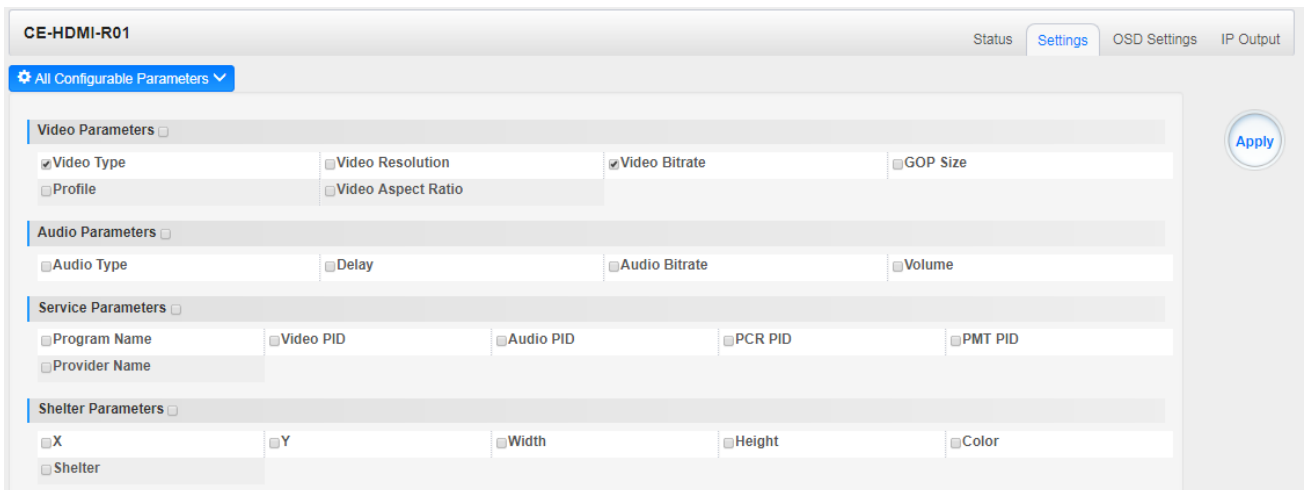
### 3.5.2 Settings



Enable **HDCP Test Mode** if the video content was protected by HDCP.

Click **All Configurable Parameters** to see all parameters you can modify and check what specific parameters you want to set and see.

Click the **Apply** button in the right side to make the change take effect.



Refer to the following tables for setting parameters

Video Parameters	Range			Note
Video Type	H.264			
Video Resolution	Resolution Mode	Auto		
		Manual	Horizontal Pixels 1920,1440,1280,960, 720,704,640,480,352,	The output resolution cannot be set higher than

				320,160	the input resolution
			Vertical Pixels	1080,720,576,480, 288,240,180,120	
			Framerate	60,50,30,25,24	The output framerate cannot be set higher than the input framerate, and the highest output framerate is 30.
			Scan Type	Progressive	
Video Bitrate(Kbps)	600~12000				
GOP Size	1~60				
Profile	High, Main				
Video Aspect Ratio	Automatic				
	16 x 9(SD), 4 x 3(SD)			Will take effect only output resolution is SD	

Audio Parameters	Range
Audio Type	MPEG1_Layer2, AC3, AAC
Delay(ms)	-1000~2000
Audio Bitrate(Kbps)	32, 64,80, 96, 112, 128, 160, 192
Volume(dB)	-20~20

Service Parameters	Range
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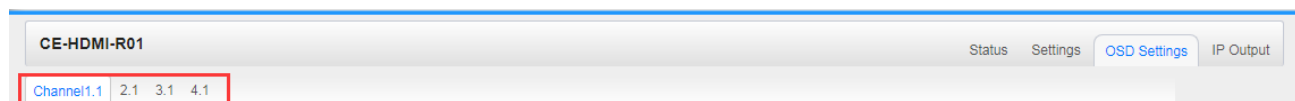


Program Name	Length is 1~31
Provider Name	Length is 1~31
Video PID	32~8190
Audio PID	32~8190
PCR PID	32~8190
PMT PID	32~8190

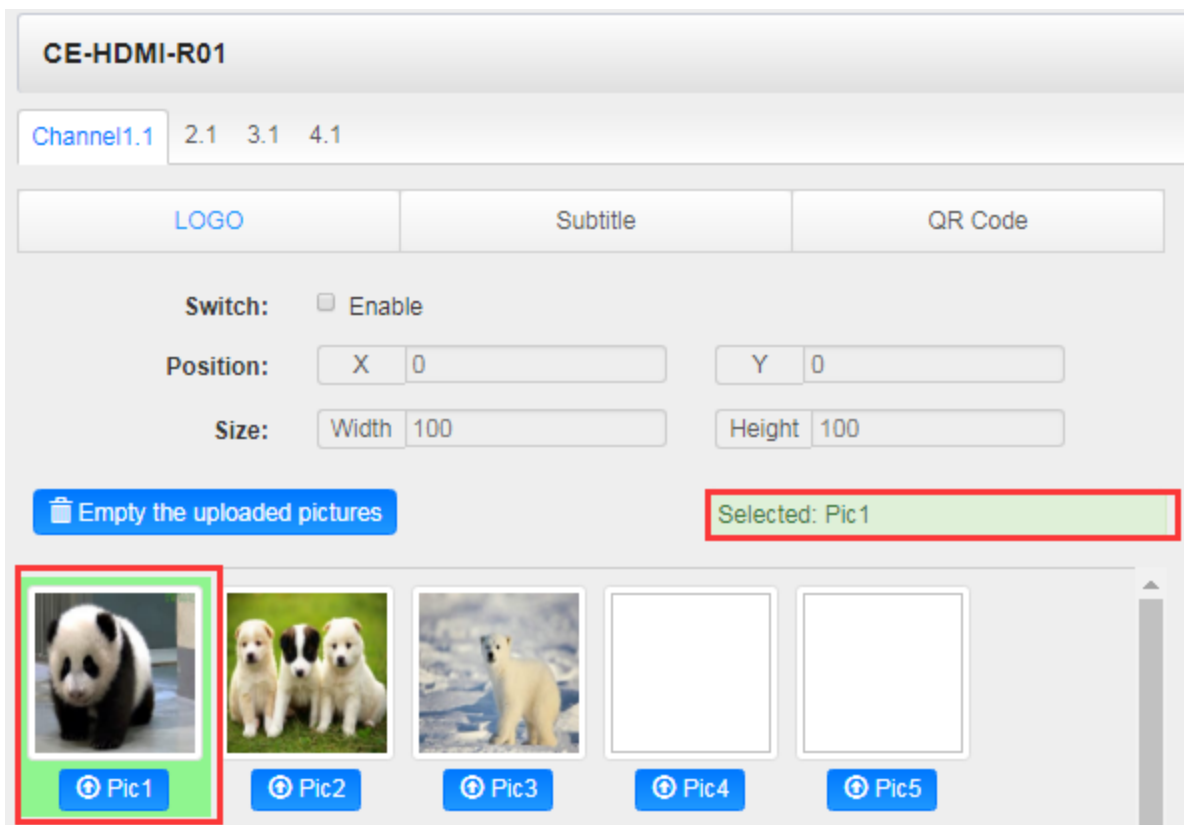
Shelter Parameters	Range
Shelter	Enable/Disable
X	0~1920 (Dual)
Y	0~1080 (Dual)
Width	2~1920 (Dual)
Height	2~1080 (Dual)
Color	White/Black/Blue/Green/Red

### 3.5.3 OSD Settings

Choose channel first before setting OSD.



- LOGO setting: you can upload several pictures at the same time and pick one to show on the screen. When click the one desired to be showed, that picture field will turn to green.



Enable **Switch** to set logo parameters.

LOGO Parameter	Range	LOGO Parameter	Range
Position X	0~1920 (Dual)	Position Y	0~1080 (Dual)
Size width	2~1920 (Dual)	Size Height	2~1080 (Dual)

- Subtitle setting: enable **Switch** to set logo parameters.

**CE-HDMI-R01**

Channel1.1
2.1
3.1
4.1

LOGO
Subtitle
QR Code

**Switch:**  Enable

**Position:** Bottom ▼

**Position Offset:** 0 [-200~200]

**Size:** Width 1920

**Font Size:** 30

**Display Interval:** 3

**Subtitle:**

伟乐科技欢迎您

Subtitle Parameter	Range	Subtitle Parameter	Range
<b>Position</b>	Bottom/Top/Middle	<b>Position Offset</b>	-200~200(dual)
<b>Size</b>	10~1920 (Dual)	<b>Font Size</b>	0~100
<b>Display Interval</b>	1~30	<b>Subtitle</b>	Length is 0~512

- QR Code setting: QR Code setting is the same with LOGO setting.

**CE-HDMI-R01**

Channel1.1 2.1 3.1 4.1

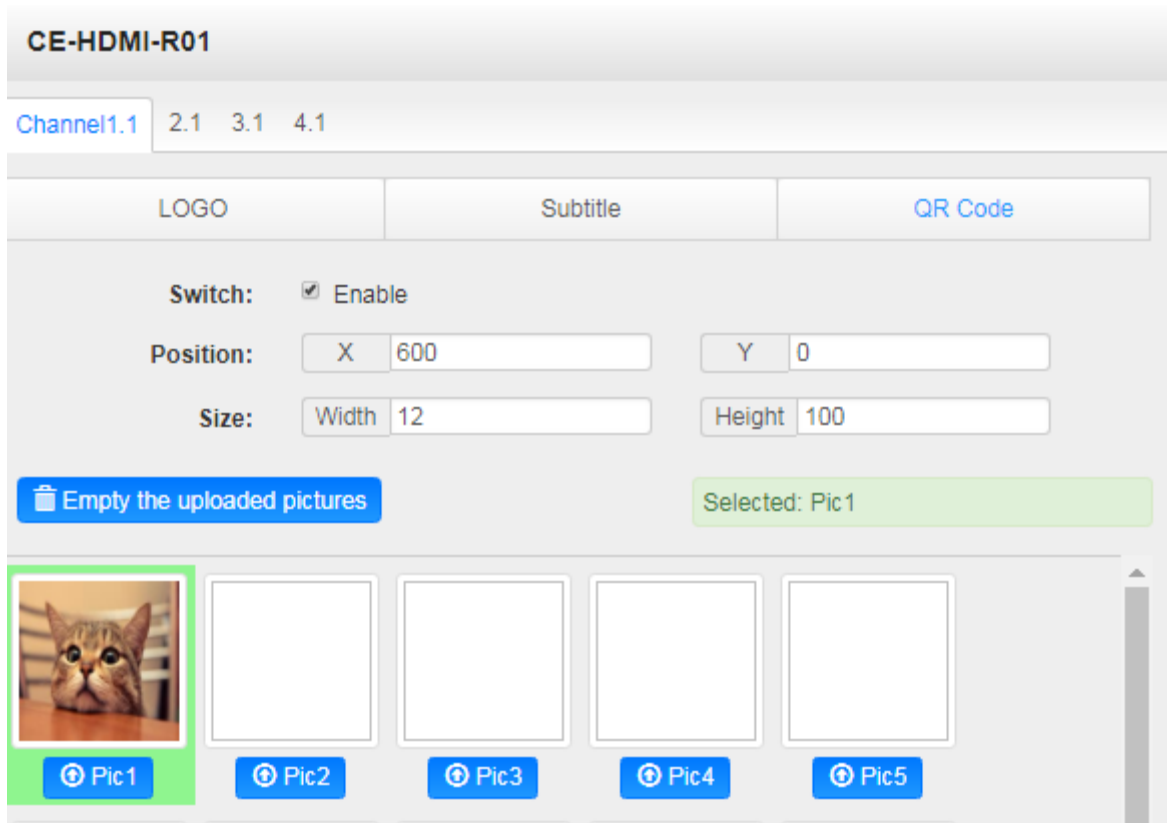
LOGO Subtitle QR Code

Switch:  Enable

Position: X 600 Y 0

Size: Width 12 Height 100

Empty the uploaded pictures Selected: Pic1



### 3.5.4 IP Output

Configure IP output parameters on this page. After setting, click **Apply** to make changes take effect.

**CE-HDMI-R01** Status Settings OSD Settings **IP Output**


Channel	Enable	Destination IP Address	Destination Port	Enable Destination MAC	Destination MAC
1.1	<input checked="" type="checkbox"/>	227.10.20.30	1234	Disable	01:00:5E:0A:14:1E
2.1	<input type="checkbox"/>	227.108.208.98	1235	Disable	01:00:5E:6C:D0:62
3.1	<input type="checkbox"/>	227.108.208.98	1236	Disable	01:00:5E:6C:D0:62
4.1	<input type="checkbox"/>	227.108.208.98	1237	Disable	01:00:5E:6C:D0:62

Apply

- **Enable:** enable this channel.
- **Destination IP Address and Destination Port:** Using for multicast IP addresses or unicast IP addresses and ports.
- **Enable Destination MAC:** Generally, you do not need to enable this option. This is reserved for exceptional case when the unicast stream cannot be received by using unicast IP addresses, you can enable destination MAC and streaming out by setting Destination MAC.

## 4 Appendices

### Appendix A - Abbreviations

<b>AAC</b>	Advanced Audio Coding
<b>AC-3</b>	Also known as Dolby Digital
<b>AV</b>	Audio Video
<b>BAT</b>	Bouquet Association Table
<b>BER</b>	Bit Error Ratio
<b>Bit Rate</b>	The rate at which the compressed bit stream is delivered
<b>BNC</b>	British Naval Connector
<b>CAM</b>	Conditional Access Module
<b>CAT</b>	Conditional Access Table
<b>CBR</b>	Constant Bitrate
<b>CI</b>	Common Interface
<b>CVBS</b>	Composite Video Broadcast Signal
<b>dB</b>	Decibel
<b>DVB</b>	Digital Video Broadcasting
<b>EIT</b>	Event Information Table
<b>EPG</b>	Electronic Program Guide
<b>FEC</b>	Forward Error Correction
<b>GOP</b>	Group of Pictures
<b>HD</b>	High Definition
<b> HDCP</b>	High-bandwidth Digital Content Protection
<b>HDMI</b>	High Definition Multimedia Interface
	The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.
<b>Kbps</b>	1000 bit per second

<b>LNB</b>	Low-Noise Block
<b>Mbps</b>	1,000,000 bits per second
<b>MER</b>	Modulation Error Ratio
<b>MPTS</b>	Multi-program Transport Stream
<b>NIT</b>	Network Information Table
<b>OFDM</b>	Orthogonal Frequency-Division Multiplexing
<b>PAT</b>	Program Association Table
<b>PCR</b>	Program Clock Reference
<b>PID</b>	Packet Identifier
<b>PMT</b>	Program Map Table
<b>PSI</b>	Program Specific Information
<b>PSU</b>	Power Supply Unit
<b>QAM</b>	Quadrature Amplitude Modulation
<b>QPSK</b>	Quadrature Phase-Shift Keying
<b>SD</b>	Standard Definition
<b>SDT</b>	Service Description Table
<b>SI</b>	Service Information
<b>SNMP</b>	Simple Network Management Protocol
<b>SNR</b>	Signal Noise Ration
<b>SPTS</b>	Single Program Transport Stream
<b>TDT</b>	Time and Date Table
<b>TS</b>	Transport Stream
<b>VBR</b>	Variable Bitrate

## Appendix B- Warranty

We warrants this instrument against defects from any cause, except acts of God and abusive use, for a period of 1 (one) year from date of purchase. During this warranty period, we will correct any covered defects without charge.

## Appendix C- After-Sales Support

Please contact our sales/regional representatives for any help, product information, and troubleshooting.

### **Returning Products for Service**

The CMP310HC is a delicate piece of equipment and needs to be serviced and repaired by the manufacturer. In order to expedite this process please carefully read the following items.

- Confirm the required component

Before any product can be returned for service, the client ought to contact our sales representatives and after-sales support department by means of email to confirm the need to return the product or parts of the product.

- Collect the Serial Numbers to obtain RMA Number

Serial Number (SN) is printed on a label on the chassis and modules. To create a RMA number, SN must be submitted to support department. Once the RMA number has been issued to the client, the unit/component needs to be packaged and shipped back to the manufacturer. It's best to use the original box and packaging for the product but if this not available, check with the service department for the proper packaging instructions. RMA Number should be specified in the delivery bill or written on the package.



Do not return any power cables or accessories unless instructed to do so.