

# **HSC5831 Converter**

## **User Manual**





### **Product Information**

**Model:** HSC5831 Converter  
**Version:** V010001  
**Release Date:** March 12th, 2015

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### **Company**

OSEE TECHNOLOGY CO., LTD.

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# About this manual

## Important

The following symbols are used in this manual:

## Tips

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- The further information or know-how for described subjects above which helps user to understand them better.
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## Warning

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- The safety matters or operations that user must pay attention to when using this product.
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## Contents

The user manual applies to the following device types:

- ❖ **HSC5831**

The images of HSC5831 are adopted in the following descriptions.  
Any of the different specifications between the device types are elaborated.  
Before reading the manual, please confirm the device type.

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## Chapter 1 Product Overview

HSC5831 is a high quality video converter, the signal of HDMI or DVI can be converted to HD/SD-SDI with high quality. It is mainly applied to the broadcast system, high-speed railway, distance transmission of the military signals, and other fields which require high definitions.



*Figure 1-1 Illustration of HSC5831*

### Features

- High standard SDI output and accurate audio embedding can guarantee that the signals meet the broadcast requirements
- Compatible with DVI/HDMI format
- Standard audio sampling rate conversion, 48K sampling rate can achieve phase lock strictly
- Supports HDMI audio and external audio can be embedded to SDI signal, the embedded channel can be selected
- Supports multiple video formats: 3G, HD and SD etc.

## Functionality

- Supports conversion from 1080P to 1080i for the convenience of the transmission and monitoring
- Supports the input signal of DVI resolution
- WEB page control without fussy installation of control software
- Adopts the innovative detachable installation part, this unit can be installed on the rack or the wall
- Supports EDID detection
- Status memory when restarted

## **Chapter 2 Safety**

### **FCC Caution:**

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device 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.

Note: 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.

## Warnings:

Read, keep and follow all of these instructions for your safety. Heed all warnings.

### **Warning**

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- **Converter**

- Upgrading of the converter or its accessories are subject to change without notice.
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### **Warning**

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- **Position**

- Do not block any ventilation openings.
  - Do not use this unit near water.
  - Do not expose the unit to rain or moisture.
  - Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
  - A nameplate indicating operating voltage, etc., is located on the rear panel.
  - The socket-outlet shall be installed near the equipment and shall be easily accessible.
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**⚠ Warning**

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**• Power Cord with Adpter**

- Do not defeat the safety purpose of the polarized or grounding-type plug.
  - Do not damage the power cord, place the heavy objects on the power cord, stretch the power cord, or bend the power cord.
  - Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the unit.
  - If the power cord is damaged, turn off the power immediately. It is dangerous to use the unit with a damaged power cord. It may cause fire or electric shock.
  - Unplug this apparatus during lightning storms or when unused for long periods of time.
  - Disconnect the power cord from the AC outlet by grasping the plug, not by pulling the cord.
  - Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
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## Chapter 3 Unpack and Installation

### Unpack:

When unpacking the components of HSC5831 converter, please verify that none of the components listed in Table 3.1 are damaged or lack. If there is any missing, contact your distributors or OSEE for it.

**Table 3.1 Packing List**

No.	Item	Quantity
1	Converter	1
2	Power cord	1
3	adapter	1
4	User manual	1
5	warranty card	1

### Installation:

#### 1. Prepare for installation

Make sure you have prepared the followings before mount the HSC5831 converter:

- Inspect for any apparent physical damage that may have occurred in transit.
- Make sure you have received all the components listed in packing list.
- if there are any anti-static package or other packages, please take off them.
- Keep the package in case of future usage.

2. As shown in Figure 3-1, connect required cables for signal inputs and outputs.



**Figure 3-1** the interfaces of the Converter

3. Provide a 12V/2A DC power supply.
4. Connect the power supply to the power interface.
5. Screw the protection parts for power supply.
6. Finally, turn on the power switch, so that the device will be ready for work.

## Chapter 4 Parameter Settings

This chapter will introduce how to set the parameters of the converter in Internet Explorer.

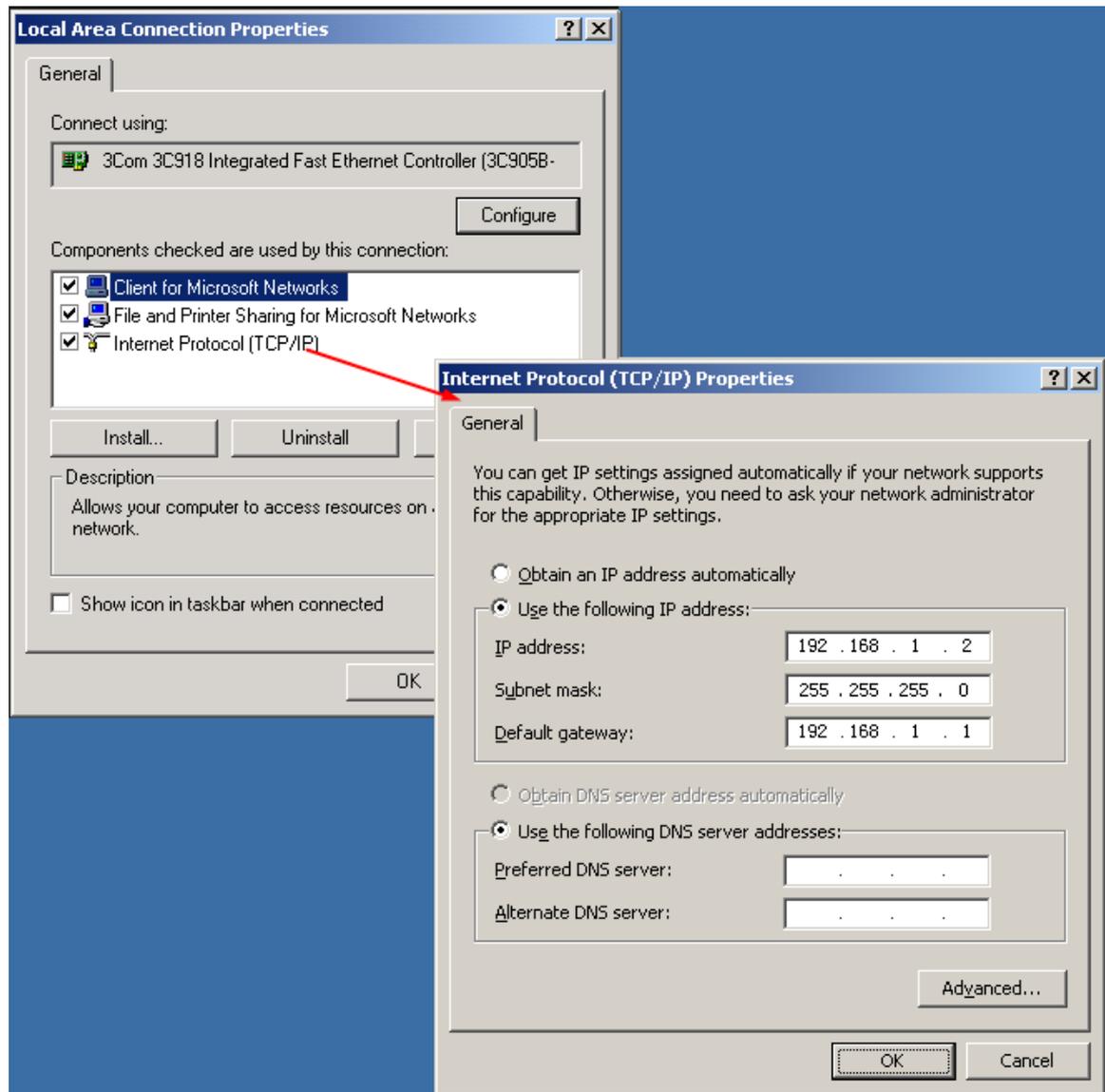
Open the Internet Explorer window firstly, and input 192.168.1.200 in the address bar, then, press Enter key, the management interface of HDMI-SDI converter is shown as in Figure 4-1:



**Figure 4-1 Load the Management Interface**

### Tips

- Use a twisted-pair cable to connect the network interface of a computer with the network interface of the converter before electrify the converter.
- The IP address of the computer and the converter must be in the same network segment, for example: as shown in Figure4-2, the IP address of the converter is 192.168.1.200, so the IP address of the computer is 192.168.1.2 and the subnet mask is 255.255.255.0.
- The Default button is used to reset the default settings to the product originals.

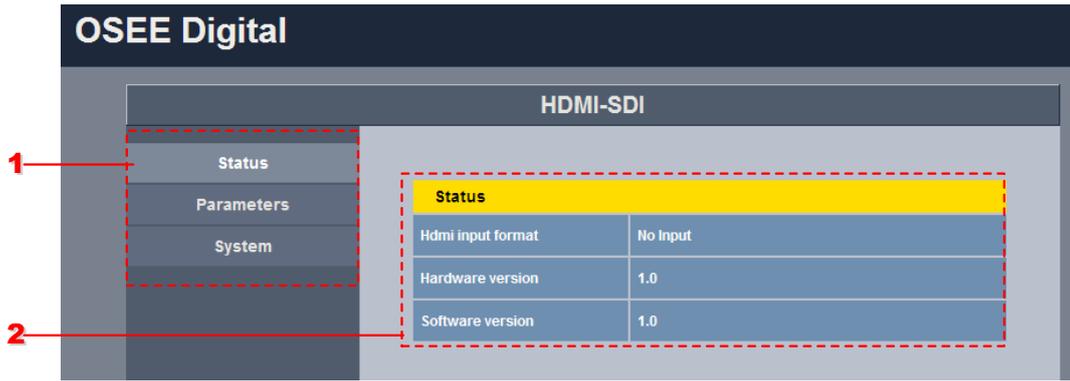


**Figure 4-2 Set the IP Address of the Computer**

You can check or modify the parameters in this management interface, the following will introduce these operations.

## 4.1 Management Interface

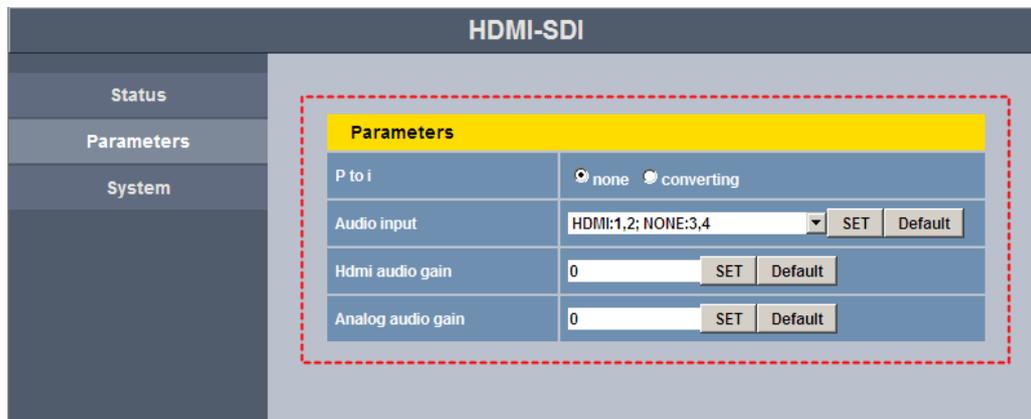
Open the management interface as shown in Figure 4.1-1:



**Figure 4.1-1 Management Interface**

As shown in Figure 4.1-1, the management interface is divided into two parts:

1. Navigation menu list: it shows the navigation menus: **Status**, **Parameters** and **System**. Click the navigation menu, it will show the corresponding settings on the right side.
2. Parameter list: it shows the parameter names, values and operation buttons of the selected navigation menu, as shown in the red rectangle in Figure 4.1-2. The title in the yellow rectangle of the parameter list and the parameter list will change with the navigation menu when switched.



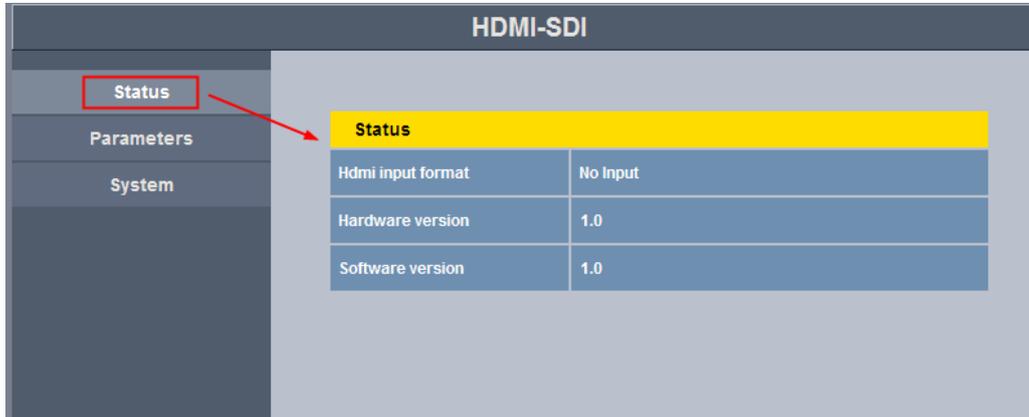
**Figure 4.1-2 Parameter List**

**i Tips**

- The SET button is used to confirm the modification of the parameter value.
- The Default button is used to reset the default settings to the product originals.

### 4.1.1 STATUS Menu

Click the **Status** button to show the STATUS menu as shown in Figure 4.1-3, it contains Hdmi input format, Hardware version and Software version.



**Figure 4.1-3 STATUS Menu**

The relationships of the menu items and the contents are as shown in Table 4.1-1:

**Table 4.1-1 STATUS Menu**

Menu Items	Defaults	Range	Description
Hdmi input format	No Input	As shown in Table 4.1-2	HDMI input format
Hardware version	1.0	-	Hardware version
Software version	1.0	-	Software version

The formats of the input signals are different with the formats of the displayed signals, the comparison is as shown in Table 4.1-2:

**Table 4.1-2 the Comparison of Signal Inputs and Displayed Formats**

Signal Formats	Supported Formats	Video Displayed Formats	Web Displayed Formats
1080P60	1080P60	1080P60	STD_1080P_60
	1080P59.94	1080P59.94	STD_1080P_60
1080p50	1080p50	1080p50	STD_1080P_50
1080I60	1080I60	1080I60	STD_1080I_60
	1080I59.94	1080I59.94	STD_1080I_60

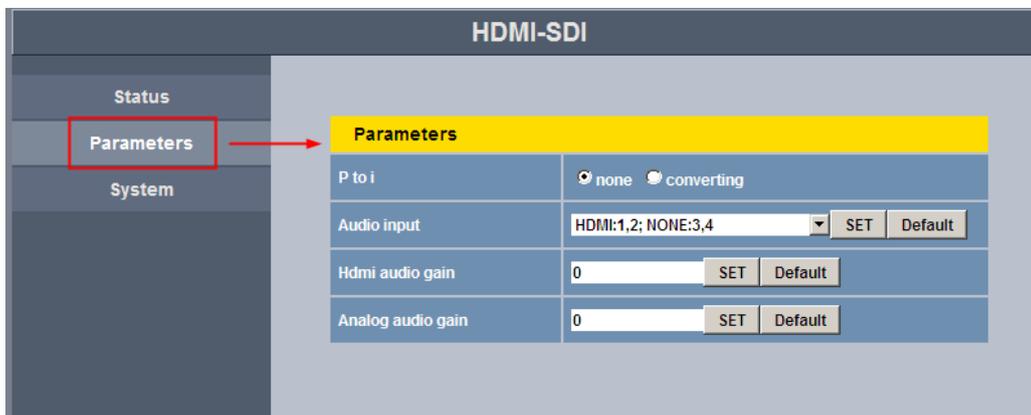
Signal Formats	Supported Formats	Video Displayed Formats	Web Displayed Formats
1080I50	1080I50	1080I50	STD_1080I_50
1080P30	1080P30	1080P30	STD_1080P_30
	1080P29.97	1080P29.97	STD_1080P_30
1080P25	1080P25	1080P25	STD_1080P_25
1080P24	1080P24	1080P24	STD_1080P_24
	1080P23.97	1080P23.97	STD_1080P_24
720P60	720P60	720P60	STD_720P_60
	720P59.94	720P59.94	STD_720P_60
720P50	720P50	720P50	STD_720P_50
480p60	480p60	480I60	STD_525P_60
576p50	576p50	576I50	STD_625P_50
480I60	480I60	480I60	STD_525I_60
576I50	576I50	576I50	STD_625I_50

### Tips

- The contents of Status menu can't be operated, but just to display the device information depending on the actual device.

## 4.1.2 Parameters Menu

Click the **Parameters** button to show the Parameters menu as shown in Figure 4.1-4, it shows the parameters corresponding with the converting operations.



**Figure 4.1-4 Parameters Menu**

The relationships of the menu items and the contents are as shown in Table 4.1-3:

**Table 4.1-3 Parameters Menu**

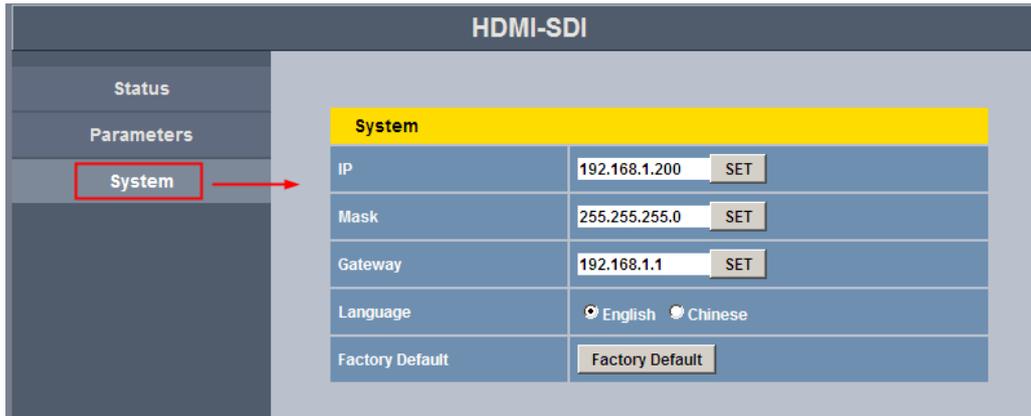
Menu Items	Defaults	Range	Description
P to i	none	none: not convert converting: signal convert	whether to convert the signal from 1080P(3G) to 1080I(HD)
Audio input	HDMI:1,2; NONE:3,4	HDMI:1,2; NONE:3,4 ANALOG:1,2; NONE:3,4 HDMI:1,2; ANALOG:3,4 ANALOG:1,2; HDMI:3,4	Set the channel of audio converting. HDMI means that it is HDMI embedded audio signal, NONE means there is no audio signal, ANALOG means it is external audio signal.
Hdmi audio gain	0	-96~12	HDMI audio gain
Analog audio gain	0	-96~10	Analog audio gain

### Tips

- Analog audio signal is prior to HDMI embedded audio signal. It means that when you have selected “HDMI:1,2; NONE:3,4” for **Audio input**, then you plug an analog audio signal in, the **Audio input** will change to “ANALOG:1,2; NONE:3,4” automatically, and the **Audio input** will change back to “HDMI:1,2; NONE:3,4” after you plug the analog audio signal out.

### 4.1.3 System Menu

Click the **System** button to show the System menu as shown in Figure 4.1-5, it shows the parameters corresponding with the system settings.



**Figure 4.1-5 System Menu**

The relationships of the menu items and the contents are as shown in Table 4.1-4:

**Table 4.1-4 System Menu**

Menu Items	Defaults	Range	Description
IP	192.168.1.200		IP Address
Mask	255.255.255.0		subnet mask
Gateway	192.168.1.1		gateway
Language	English	English/Chinese	language mode
Factory Default	OFF	OFF/ON	whether to restore the product originals.

### Tips

- Click **Factory Default** button in System menu list or press the **Default** button in the converter will both reset the default settings to the product originals.

## 4.2 Parameters Operations

When using this converter, you can adjust its functionality by setting its parameters.

### 1. Check parameters

After loading the management interface in the Internet Explorer window, click the navigation buttons on the left side of the management interface,

you can check the parameter settings.

## 2. Set parameters

Here, take setting the **Audio input** parameter for example. It will describe how to change its value. The settings of the other parameters are as the same, it will not be described any more.

Audio input is used to set the channel of audio converting. This converter supports both the embedded audio and the external analog audio, so it needs to set which channel will output the pointed audio signal.

- Select navigation menu: click **Parameters** button to display the menu list on the right side, as shown in Figure 4.2-1:

**Figure 4.2-1 Display the Drop Down Value List of Audio Input**

- Show item values: click  button, it will show the drop down value list of **Audio input**, select the value according to the actual situation;
- Confirm the selection: click  button to confirm the selection, and the selection will effect. Then, refresh the current page manually, you will see the value have been changed to the selected one.

## Tips

- After setting the parameter, please refresh the current page or switch menus to show the changed result.

## 3. Reset parameters

You can reset a pointed parameter or all parameters to the product originals.

- Reset a single parameter: click the  button at the right side of a parameter, you can reset it to its product original;
- Reset all parameters: click the  button in system menu list, you can reset all parameters, you can reset all parameters to the product originals.

**⚠ Warning**

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- Please keep the power on when restoring the product originals.
  - Please consider it seriously when reset parameters to the product originals by reset operation, because the customized parameters will not be restored any more.
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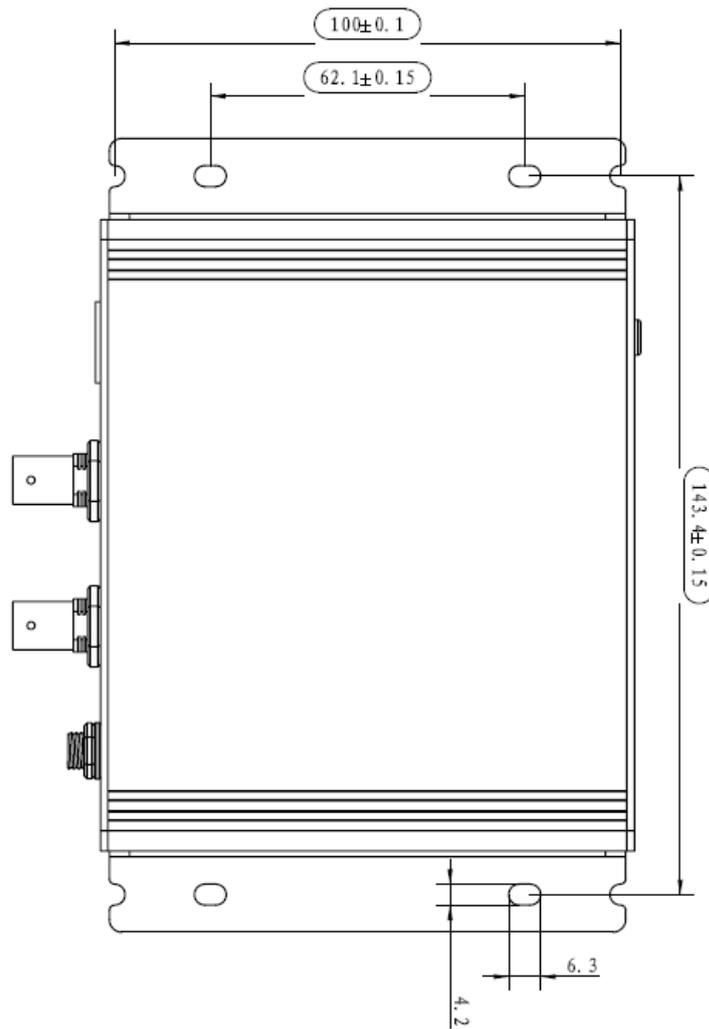
## Chapter 5 Specifications

### 1. Product detailed information

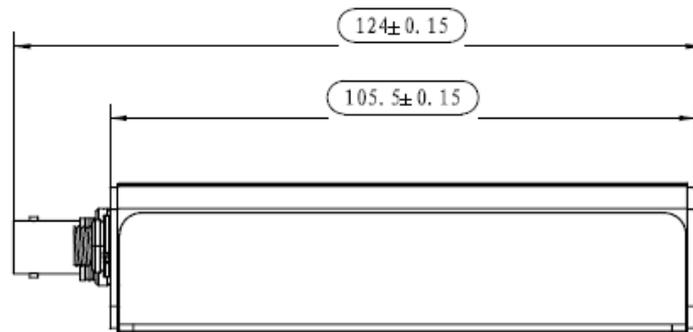
Specification	Values
Input Interface	Digital Video: 1*HDMI
	Analog Video: 3.5mm stereo
Input Resolution	1920*1080, 1920*1200, 1680*1050, 1600*900, 1400*1050, 1440*900, 1366*768, 1360*768, 1280*1024, 1280*960, 1280*800, 1280*768, 1280*720, 1152*864, 1024*768
Video Standard	SMPTE-259M;270Mbps
	SMPTE-292M;1.485Gps
	SMPTE-425M;2.97Gps
Supported Format	3G: 1080p 50/59.94/60Hz
	HD: 1080p 24/25/30Hz;1080i 50/59.94/60Hz; 720p 50/59.94/60Hz
	SD: 480p60, 576p50, 480I60, 576I50
Video Output	2*HD-SDI ;BNC
Impedance	75Ω
Power	5V~12V DC
Control	RJ45

### 2. Dimensions

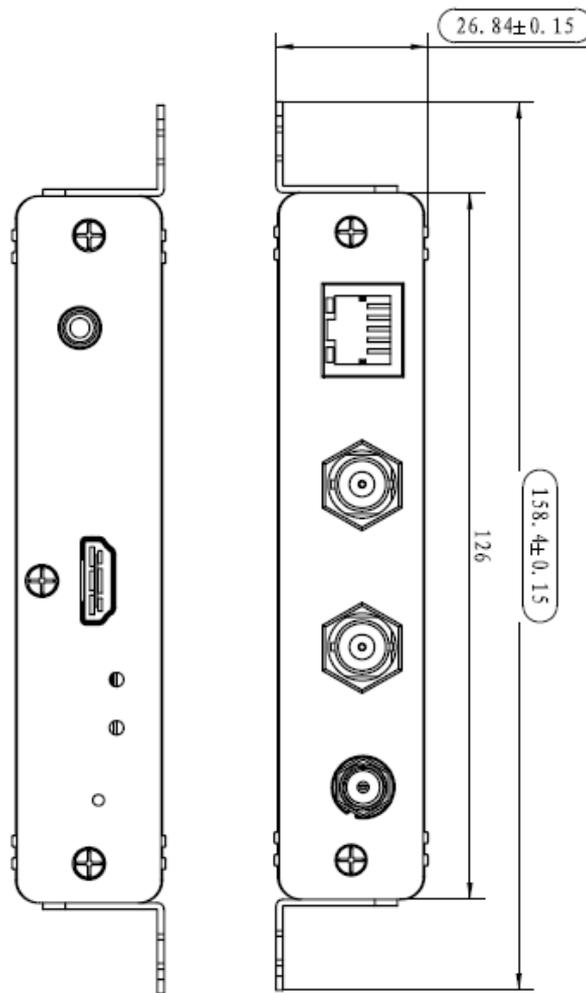
The description of the product dimensions of HSC5831 is shown as in the following figures:



**Figure 5-1 Rear Panel(Unit: mm)**



**Figure 5-2 Top View(Unit: mm)**



**Figure 5-3 Side View(Unit: mm)**

**i Tips**

- Specifications are subject to change without notice.

-----No Text Below-----





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