

HCS-8316 Series Encoder

Excellent solutions for conferences



Installation and Operation Manual

V 1.1

Remark:

- All rights reserved for translation, reprint or reproduction
 - Contents may change without prior announcement
 - All technical specifications are guideline data and no guaranteed features
 - We are not responsible for any damage caused by improper use of this manual
 - The equipment must be connected to earth!
 - This product conforms to the rules of the European directive 2014/30/EU.
 - If any detailed information needed, please contact your local agent or **TAIDEN** service center in your region.
- Any feedback, advice and suggestion about the products is appreciated
- **TAIDEN** is the registered trademark of TAIDEN Co., Ltd.

Important Safety Instruction

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
6. The MAINS plug serving as a disconnection device, should be easy to operate.
7. The apparatus should be connected to the MAINS socket-outlet with protective earth.
8. Clean only with dry cloth.
9. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
10. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
11. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade and the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
12. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
13. Only use attachments/accessories specified by the manufacturer.
14. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
15. Unplug this apparatus during lightning storms or when unused for long periods of time.
16. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
17. Do not place the equipment on any uneven or unstable stand; original product package or

appropriate package should be used to avoid damage caused by strong impacts during transportation.

18. Power supply cords:
 - AC 100 V-120 V 60 Hz or AC 220 V-240 V 50 Hz
19. For service, please contact the nearest TAIDEN Service Center.
20. All TAIDEN products are guaranteed for definite time (see the WARRANTY CARD for details) excluding the following cases:
 - A. All damage or malfunction caused by human negligence;
 - B. Damage or malfunction caused by improper operating by operator;
 - C. Parts damage or loss caused by disassembling the product by non-authorized personnel.
21. Use ONLY specified connection cable to connect the system equipment.
22. Upon receipt of the product, please fill out the Warranty Card enclosed and post it to TAIDEN Service Center.



TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION: To reduce the risk of electric shock, DO NOT open covers, no user serviceable parts inside. Refer servicing to qualified service personnel only.

CAUTION: DO NOT use alcohol, ammonia or petroleum solvents or abrasive cleaners to clean the devices.



The lightning flash with an arrowhead symbol, with an equilateral triangle, is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Important Safety Instruction

WARNING: To reduce the risk of fire or electric shock, DO NOT expose units to rain or moisture.



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical or applicable local codes.



Power Disconnect: Units with or without ON – OFF switch have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON – OFF switch is in the ON position. The power cord is the main power disconnect for all units

WARNING: The apparatus should be connected to a mains socket outlet with a protective earthing connection.

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Installation & User Guide

About this manual:

This manual is a comprehensive guide to the installation and operation of **TAIDEN** HCS-8316 Series Encoder. It includes: operation and setup, installation and connection, software and protocol, etc.

This manual is applicable to:

HCS-8316VGA-H	VGA Encoder
HCS-8316AV-H	AV Encoder
HCS-8316SDI	SDI Encoder
HCS-8316HDMI	HDMI Encoder

The manual is divided into the following chapters:

Chapter 1: Functions and indications

Descriptions in detail of the functions and indications of the HCS-8316 Series Encoder.

Chapter2: Installation and connection

Descriptions in detail of the installation and the connection in congress System of the HCS-8316 Series Encoder.

Chapter3: Setup and Operation

Descriptions in detail of the setup and operation of the menus of the HCS-8316 Series Encoder.

Chapter 4: Technical data

Mechanical and electrical details of the HCS-8316 Series Encoder.

Chapter 1. Functions and indications

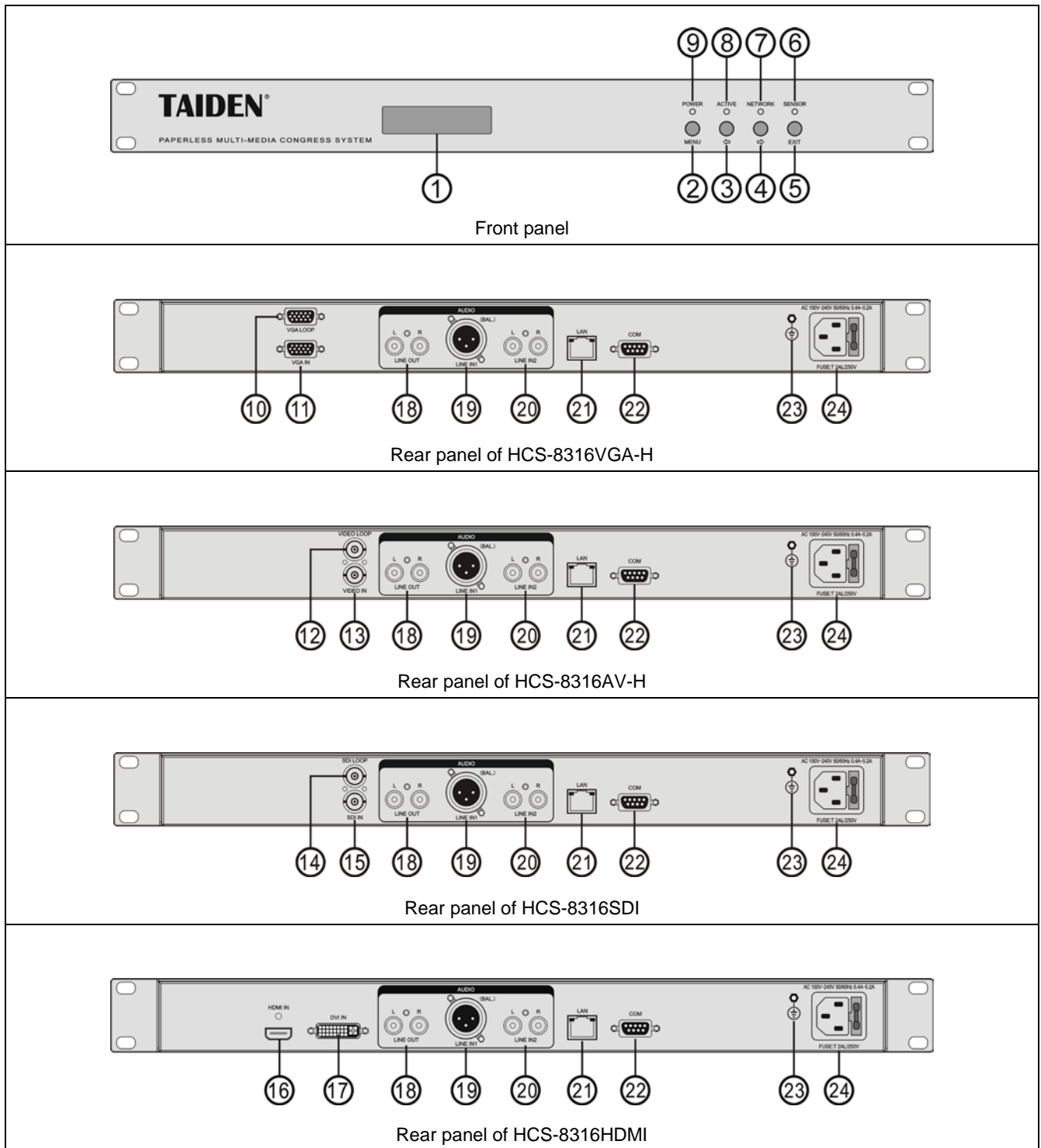


Figure 1.1 Panels of HCS-8316 Series Encoder

Figure 1.1:

1. **Menu display**
2. **“MENU” button**
3. **“←” (Left) button**
 - Press this button to cursor to the left or to decrease the parameter.
4. **“⇒” (Right) button**
 - Press this button to cursor to the right or to increase the parameter.
5. **“EXIT” button**
6. **Reserved**
7. **“NETWORK” indicator**
 - It will be turned on if data are received or transmitted at Ethernet port.
8. **“ACTIVE” indicator**

- It will be turned on when any signal is inputed.

9. Power indicator

- It will be turned on if the encoder powers on.

10. VGA output

11. VGA input

12. Video output

13. Video input

14. SDI output

15. SDI input

16. HDMI input

17. DVI input

18. Line output (RCA)

19. Microphone input (XLR)

20. Line input (RCA)

21. Ethernet (RJ45)

22. Control interface (RS-232)

23. GND

24. Power input

Chapter 2. Installation and connection

2.1 Installation

1U HCS-8316 Series Encoder just needs to put it into the cabinet, and fix it by screws. As figure 1.2.

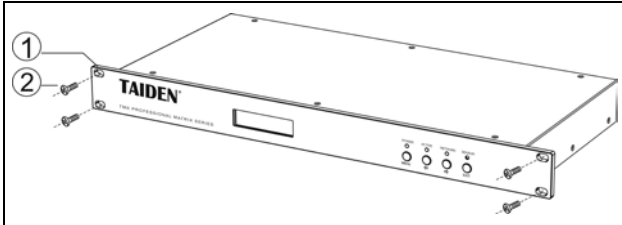


Figure 1.2 Installation

2.2 Connection

HCS-8316SDI Encoder is the special hardware equipment for encoding and network transmitting SDI signal (720p/1080i/1080p). The HCS-8316SDI encoder has SDI input and output interface and Ethernet interface, input SDI signal can be transmitted on IP network after encoding. Widely used in multimedia broadcasting system for various occasions of SDI signal acquisition, SDI signal remote network transmission, dual stream transmission of video and conferencing, MMI monitoring.

HCS-8316VGA-H Encoder is the special hardware equipment for encoding and network transmitting VGA signal. The HCS-8316VGA-H encoder has VGA input and output interface and Ethernet interface, input VGA signal can be transmitted on IP network after encoding. Widely used in multimedia broadcasting system for various occasions of VGA signal acquisition, VGA signal remote network transmission, dual stream transmission.

HCS-8316AV-H Encoder is the special hardware equipment for encoding and network transmitting standard definition video signals (D1/CIF). The HCS-8316AV-H encoder has standard definition video input and output interface and Ethernet interface, input standard definition video signal can be transmitted on IP network after encoding. Widely used in various occasions of standard definition video signal acquisition and transmission based on IP network, to meet the needs of standard definition video conferencing applications.

HCS-8316HDMI encoder is the special hardware equipment for encoding and network transmitting HDMI signal. The HCS-8316HDMI encoder has HDMI input, DVI input and Ethernet interface, input HDMI signal can be transmitted on IP network after encoding. Widely used in multimedia broadcasting system for various occasions of HDMI signal acquisition, HDMI signal remote network transmission, dual stream transmission of video and conferencing, MMI monitoring.

HCS-8316 Series Encoders is the special hardware equipment for the Paperless Multi-media Congress System as video encoders. As figure 1.3 Paperless Multi-media Congress System connection diagram (dual main unit hot spare + "Closed Loop – Daisy Chain" connection).

Control Interface:

Control	
RS-232	9 pin female D connector
COM	Baudrate: 9600, data: 8 bits, stop: 1 bit, no parity
Interface	2=TX,3=RX,5=GND
Ethernet	RJ-45 female connector
Ethernet protocol	TCP/IP
Ethernet speed	10M/100M/1000M

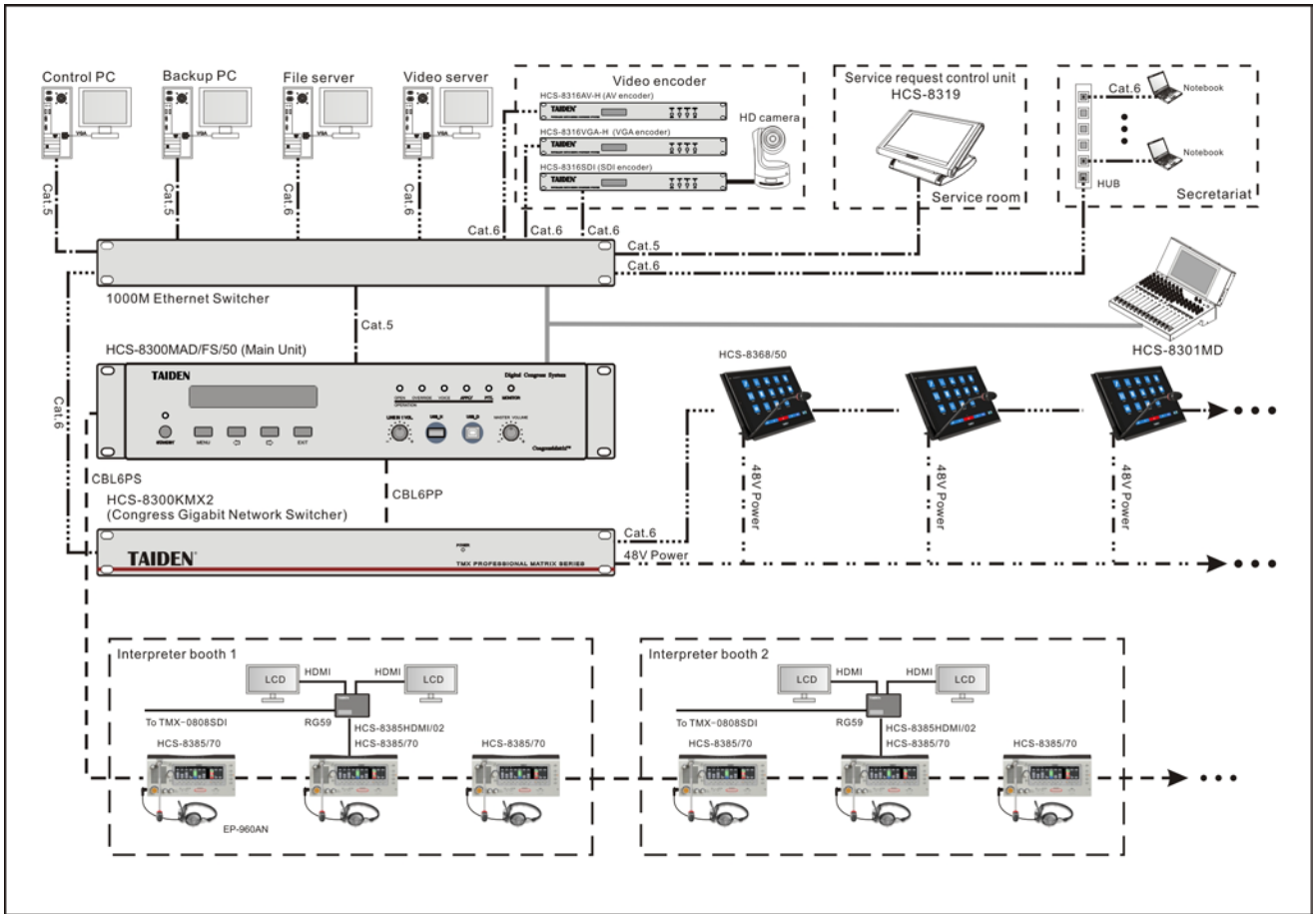


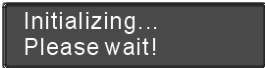
Figure 1.3 Paperless Multi-media Congress System connection diagram

Chapter 3. Setup and Operation

After installation and connection and prior to the meeting, the encoder should be configured through the dialog menu and button. The term “interface” used hereinafter means the information displayed on the LCD as the user interface.

A) Starting initialization

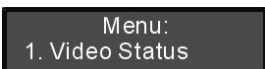
If power is supplied, the recorder will start initialization:



B) LCD menu

When the initialization is finished, press the “MENU” button to go to the menu on the LCD, includes ten items:

- “1. Video Status”
- “2. Reserved”
- “3. Net Status”
- “4. Net Setting”
- “5. Select LineIn”
(for HCS-8316VGA-H/AV-H/SDI only)
- “6. Line in Volume”
- “7. Rename”
- “8. Save Parameter”
- “9. Set SDI loop” (for HCS-8316SDI only)
- “10. Video Input” (for HCS-8316HDMI only)
- “11. Audio Input” (for HCS-8316HDMI only)
- “12. Default” (for HCS-8316HDMI only)
- “13. About”



- Press the “MENU” button to go to the corresponding submenu;
- Use the “↔” button to switch from term to term.

3.1 Video Status



Display the video input status, press the “EXIT” button to return to the upper level menu.

- “Input Lost!” stands for no signal input;
- “Input Normal!” stands for normal signal input.

3.2 Reserved

3.3 Net Status

Encoder network information includes: type, IP address, subnet mask and gateway, press the “EXIT” button to return to the upper level menu.



- Use the “↔” button to switch from term to term;
- Use the “EXIT” button to return to the upper level menu.

3.4 Net Setting



Use the “↔” button to enable DHCP or not;

- If “Y” is selected, it stands for obtain a dynamic IP address automatically, use the “MENU” button to save and return to the upper level menu;
- If “N” is selected, it stands for set a static IP address manually, use the “MENU” button to go to step a).

a). Setup unique “IP Address” for the encoder:

- 1). Select “IP Address” and press the “MENU” button to go to setup IP address interface:



- 2). Use the “↔” button to switch between the four numbers;
- 3). Use the “MENU” button to edit selected number;
- 4). Use the “↔” button to decrease/increase the number;
- 5). Press the “EXIT” button and “Press ‘MENU’, then “Enable Setting” will be displayed on the LCD;
- 6). Press the “MENU” button to save and return to the upper level menu.

b). Setup “Subnet Mask” and “Gateway”

Same chronological order as for “IP Address” set up.

3.5 Select LineIn (for HCS-8316VGA-H/AV-H/SDI only)



- Use the “↔” button to switch between “LINE IN1” and “LINE IN2”;
- Press the “MENU” button to confirm and to return to the upper level menu.

3.6 Line in Volume

Adjust line in volume, range: MUTE, -30 dB - 0 dB.



- Press the “↔” button to adjust volume;
- Press the “MENU” button to save and return to the upper level menu.

3.7 Rename

Set alias for the encoder with a maximum length of 16 characters or less. It is convenient to identify them on the operation of room combiner.



- Press the “MENU” button to enter the name setting interface, the cursor blinks under the first character;
- Press the “↔” button to move the cursor;
- Press the “MENU” button to modify the character;
 - Press “↔” clear all the characters after the cursor;
 - press the “↔” button to select the new character;
- Press the “MENU” button to save at each character;
- Press the “EXIT” button to return to the upper level menu after setting finished.

3.8 Save Parameter



- Press “↔” to select save parameter or not;
 - If “Y” is selected, system parameters can be saved;
 - If “N” is selected, system parameters cannot be saved;
- Press the “MENU” button to confirm and to return to the upper level menu.

3.9 Set SDI loop (for HCS-8316SDI only)



- Use the “↔” button to enable SDI loop or not;
- Press the “MENU” button to confirm and to return to the upper level menu.

3.10 Video Input (for HCS-8316HDMI only)



- Use the “↔” button to switch between “HDMI” and “DVI”;
- Press the “MENU” button to confirm and to return to the upper level menu.

3.11 Audio Input (for HCS-8316HDMI only)



- Use the “↔” button to switch among “a. Line In 1”, “b. Line In 2” and “c. HDMI”;
- Press the “MENU” button to confirm and to return to the upper level menu.

3.12 Default (for HCS-8316HDMI only)



- Use the “↔” button to select default or not;
- Press the “MENU” button to confirm and to return to the upper level menu.

3.13 About

Encoder information includes: firmware version and series number, shown as in the following figure - press the “MENU” or “EXIT” button to return to the upper level menu.



Chapter 4. Technical data

4.1 Physical Characteristics

Type	HCS-8316SDI/VGA-H/AV-H/HDMI
Installation	Tabletop / standard 19-inch rack mount
Dimensions (mm)	<p>Technical drawing showing dimensions: 483 mm (width), 430 mm (width), 213 mm (height), and 45 mm (depth).</p>
Color	Black
Weight	2.7 kg

4.2 Electrical Characteristics

Type	HCS-8316SDI
Mains power supply	100 V - 240 V AC, 50/60 Hz
Maximum power consumption	10 W
Network interface	LAN: Local area network interface, supports 10M/100M/1000M Ethernet
Video encoding	H.264
SDI input	720P(1280x720)@25@30@50@60 1080I(1920x1080)@50@60 1080P(1920x1080)@25@30@50@60
Frame rate	1-30 fps
Bitrate range	128 kbps - 4 Mbps
Audio encoding	AAC
Audio sampling rate	48 KHz

Type	HCS-8316AV-H
Mains power supply	100 V - 240 V AC, 50/60 Hz
Maximum power consumption	8.4 W
Network interface	LAN: Local area network interface, supports 10M/100M/1000M Ethernet
Video encoding	H.264
Video standard	PAL, NTSC
Video definition	CIF, D1
Frame rate	1-30 fps
Bitrate range	128 kbps - 4 Mbps
Audio encoding	AAC
Audio sampling rate	48 KHz

Type		HCS-8316VGA-H
Mains power supply		100 V - 240 V AC, 50/60 Hz
Maximum power consumption		8.4 W
Network interface		LAN: Local area network interface, supports 10M/100M/1000M Ethernet
Video encoding		H.264
Video definition, computer screen resolution	Common screen mode	640x480@60@75@85 800x600@60@75@85 1024x768@60@75@85 1280x960@60 1280x1024@60@75 1400x1050@60
	Widescreen mode	1280x720@60 1280x768@60 1280x800@60 1366x768@60 1400x900@60
VGA signal recording frame rate		1-30 fps
Bitrate range		128 kbps - 4 Mbps
Audio encoding		AAC
Audio sampling rate		48 kHz

Type		HCS-8316HDMI
Mains power supply		100 V - 240 V AC, 50/60 Hz
Maximum power consumption		10 W
Network interface		LAN: Local area network interface, supports 10M/100M/1000M Ethernet
Video encoding		H.264
HDMI/DVI input		480P(720x480)@25@30@50@60 720P(1280x720)@25@30@50@60 1080I(1920x1080)@50@60 1080P(1920x1080)@25@30@50@60 640x480@60,800x600@60,1024x768@60, 1280x1024@60,1600x1200@60,1920x1200@60
Frame rate		1-30 fps
Bitrate range		128 kbps - 4 Mbps
Audio encoding		AAC
simulation Audio input sampling rate		48 kHz
HDMI Audio input sampling rate		48 kHz,44.1kHz,32kHz

TAIDEN INDUSTRIAL CO., LTD.

6/F, Block B, Future Plaza, 6060 Qiaoxiang Rd, Nanshan District, Shenzhen, China

P.C.: 518053

Website: <http://www.aiden.com>

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