

DS-C30S/UHK

Multi-Screen Video Wall Controller

The DS-C30S/UHK video wall controller is a new-generation pure hardware image processing device based on FPGA. Compared with the traditional controller, the device has a brand-new system structure and adopts data dual exchange technology to support large-capacity data transmission and processing. With high image processing performance, the device supports the access and real-time processing of multi-channel high definition and ultra-high definition signals. Adopting the structure of main control board plus input and output board, which can be configured as required, the device supports multi-screen management. This product is mainly used in large-screen splicing control system and considered the core control device of the system.



Features and Functions

- Adopting the structure of PCI-e main control board plus input and output board, and supporting mixed insertion of input and output boards, supports displaying multiple dynamic images on multiple display terminals at the same time.
- A signal source can be displayed on the $M \times N$ ($M \geq 1, N \geq 1$) display units.
- Multiple signal sources are supported, including VGA, DVI, HDMI, DP and IP. Supports 4K@60 Hz input, transmission and output.
- Supports decoding national standard stream. The decoding board supports h.264/h.265 encoding format. Support non-compressed digital signal encoding output. Supports 16 channels 1080P@30 network signal decoding and displaying on the wall, and the local video file playback displaying on the wall.
- Supports 1/4/9/16 image division of a single output interface, and the full screen switching of sub windows.
- Up to 8+2 image layers can be displayed on one screen, including one caption layer and a background layer. The virtual LED font and the background color is adjustable. Supports the scrolling mode. The resolution of background layer is up to 16384 × 8192.
- Users have the permission to manage the signal sources and video wall.
- Built-in matrix feature for opening a signal source on several windows simultaneously.
- Supports crossing-window video roaming.
- Supports SADP searching active IP address and resetting the password of administrator.
- Supports the adjustment of display wall connection to match the virtual display wall window of client software with the output interface of controller.
- The client software supports the preview of the signal displaying on the wall. Users can conveniently call the signal.
- A single device supports 8 video wall management.
- Supports the front and rear ventilation of the chassis. Self-adaptive heat dissipation according to the temperature.
- Supports video wall echo and signal source list preview.
- Fluent video output without frame extraction to guarantee the lossless output of 60 frames.



Available Model

Host System (Standard)		
Name	Model	Description
Main Chassis	DS-C30S-S11	11, sub board slots, 1, switch board slot, 2, main control slots
Main Chassis	DS-C30S-S23	23, sub board slots, 1, switch board slot, 2, main control slots
Main Control Board	DS-C30S-MCU	1, RS232 interfaces, 1, USB, 1, UTP network interface, Supports dual main control hot backups.
Switch Board	DS-C30S-SW	2, RS232serial interfaces, 1, RS485 serial interface, 1, USB, 2, UTP network interfaces, 1, 10 Gigabit optical port
Functional Sub Boards		
Name	Model	Description
HDMI Input Board	DS-C30S-04HI	4, HDMI input interfaces
VGA Input Board	DS-C30S-04VI	4, VGA input interfaces, 1, Mini-DP four-in-one Line-in video input interface, The external adapter is required to input audio.

DVI Input Board	DS-C30S-04DI	4, DVI-D input interfaces, 1, Mini-DP four-in-one Line-in audio input interface, The external adapter is required to input audio.
HDMI UHD Input Board	DS-C30S-02HI/4K	2, HDMI UHD input interfaces
DP Input Board	DS-C30S-02DPI/4K	2, DP input interfaces, Supports audio composite input.
DVI Output Board	DS-C30S-04DO	4, DVI-D input interfaces, 1, Mini-DP four-in-one Line-in audio input interfaces, The external adapter is required to input audio.
HDMI Output Board	DS-C30S-04HO	4, HDMI output interfaces
LED Sending Card Output Board	DS-C30S-L104	4, Mini SAS output interfaces, 20, 1G optical output interfaces, 1, 3.5 mm audio output interface
Decoding Board	DS-C30S-DEC	32, decoding channels, Supports up to 1600 w decoding (only one channel is available), 32, audio decoding

Specifications

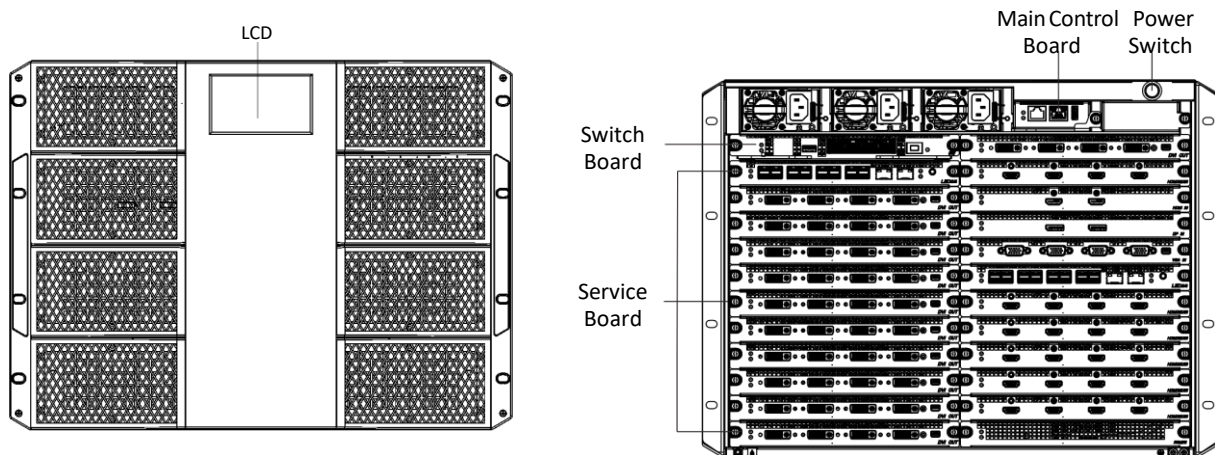
DS-C30S			
Model		DS-C30S-S11	DS-C30S-S23
Device Features	Screen Size	105.42 mm (length) × 67.07 mm (width)	105.42 mm (length) × 67.07 mm (width)
	Screen Resolution	480 × 272	480 × 272
Device Parameters	Power Interface	AC 100 ~ 240 V, 50/60 Hz	AC 100 ~ 240 V, 50/60 Hz
	Dimension	447 mm (depth) × 207.8 mm (height) × 442 mm (width)	447 mm (depth) × 354.8 mm (height) × 442 mm (width)
	Chassis Height	4.5 U	8 U
	Power Supply Number	1+2 redundant power supplies	2+1 redundant power supplies
	Power Waste	≤600 W (full-loaded)	≤1000 W (full-loaded)
Chassis Parameters	Bus Type	10 Gigabit network switching	10 Gigabit network switching
	Slot Number	sub board slot × 11, switching board slot × 1, main control board slot × 2	sub board slot × 23, switching board slot × 1, main control board slot × 2
	Management Network Interface	2, 10 M/100 M/1000 M self-adaptive Ethernet interfaces 1, 10 Gigabit optical interface	2, 10 M/100 M/1000 M self-adaptive Ethernet interfaces 1, 10 Gigabit optical interface

	Weight (full-loaded)	≤40 KG (full-loaded)	≤60 KG (full-loaded)
Environment Parameters	Working Temperature	0 °C ~ 50 °C	0 °C ~ 50 °C
	Working Humidity	10 ~ 90% (non-condensing)	10 ~ 90% (non-condensing)
Main Control Board (DS-C30S-MCU)	Serial Interface	RS232	
	USB	USB c	
	Network Interface	UTP Network Interface x 1	
Switch Board (DS-C30S-SW)	Serial Interface Number	3	
	Serial Interface	RS232, RS232, RS485	
	USB	USB x 1	
	Network Interface	UTP x 2, 10 Gigabit optical interfaces	
	Exchange Capability	total broadband 1.2Tb	
HDMI Input Board (DS-C30S-04HI/UHK)	Input Resolution	1024 x 768@60 Hz, 1280 x 1024@60 Hz, 1366 x 768@60 Hz, 1400 x 1050@60Hz, 1440 x 900@60 Hz, 1680 x 1050@60 Hz, 1280 x 960@60 Hz, 1600 x 1200@60 Hz, 1280 x 720P@50 Hz, 800 x 600@60 Hz, 640 x 480@60 Hz, 1280 x 720P@60 Hz, 1920 x 1080P@50 Hz, 1920 x 1080P@60 Hz, 1920 x 1200@60 Hz HDMI1.4 HDCP & I-System * 4	
	Video Input Interface Number	4	
	Video Input Interface Type	HDMI	
	Audio Input Interface Number	4	
	Audio Input Interface Type	miniDP to 4 x 3.5 mm	
VGA Input Board (DS-C30S-04VI)	Input Resolution	1024 x 768@60 Hz, 1280 x 1024@60 Hz, 1366 x 768@60 Hz, 1440 x 900@60 Hz, 1680 x 1050@60 Hz, 1280 x 960@60 Hz, 1600 x 1200@60 Hz, 1280 x 720P@50 Hz, 1280 x 720P@60 Hz, 1920 x 1080P@50 Hz, 1920 x 1080P@60 Hz, 1920 x 1200@60 Hz	
	Video Input Interface Number	4	
	Video Input Interface Type	VGA	
	Audio Input Interface Number	4	
	Audio Input Interface Type	miniDP to 4 x 3.5 mm	
DVI Input Board (DS-C30S-04DI)	Input Resolution	1024 x 768@60 Hz, 1280 x 1024@60 Hz, 1366 x 768@60 Hz, 1440 x 900@60 Hz, 1680 x 1050@60 Hz, 1280 x 960@60 Hz, 1600 x 1200@60 Hz, 1280 x 720P@50 Hz, 1280 x 720P@60 Hz, 1920x1080P@50 Hz, 1920 x 1080P@60 Hz, 1920 x 1200@60 Hz	
	Video Input Interface Number	4	
	Video Input Interface Type	DVI-D	

	Audio Input Interface Number	4
	Audio Input Interface Type	miniDP to 4 x 3.5 mm
HDMI UHD Input Board (DS-C30S-02HI/4K)	Input Resolution	1920 x 1080P@60 Hz, 1920 x 1200@60 Hz, 3840 x 2160@30 Hz, 4096 x 2160@30 Hz, 3840 x 2160@60 Hz (only supported by interface 1), 4096 x 2160@60 Hz (only supported by interface 1) Supports custom resolution: width 1920 ~ 4092, height 1080 ~ 2160, frame rate 30/60. Only supports frame rate of 60 when the width is less than 2560 or the height is less than 1940.
	Video Input Interface Number	2
	Video Input Interface Type	HDMI
DP Input Board (DS-C30S-02DPI/4K)	Input Resolution	1920 x 1080P@50 Hz, 1920 x 1080P@60 Hz, 1920 x 1200@60 Hz, 3840 x 2160@30 Hz, 3840 x 2160@60 Hz (only supported by interface 1), 4096 x 2160@30 Hz, 4096 x 2160@60 Hz (only supported by interface 1) Supports custom resolution: width 1920 ~ 4092, height 1080 ~ 2160, frame rate 30/60. Only supports frame rate of 60 when the width is less than 2560 or the height is less than 1940.
	Video Input Interface Number	2
	Video Input Interface Type	DP
DVI Output Board (DS-C30S-04DO)	Output Resolution	1920 x 1200@60 HZ, 1600 x 1200@60 HZ, 1920 x 1080@60 Hz, 1680 x 1050@60 Hz, 1280 x 720@60 Hz, 1280 x 1024@60 Hz, 1024 x 768@60 Hz Supports LED screen and custom resolution output. Can be configured with maximum area length x width less than 260 W.
	Video Output Interface Number	4
	Video Output Interface Type	DVI-D
	Audio Output Interface Number	4
	Audio Output Interface Number	miniDP to 4 x 3.5 mm
HDMI Output Board (DS-C30S-04HO/UHK)	Output Resolution	3840x2160@30 Hz, 1920 x 1200@60 HZ, 1600 x 1200@60 Hz, 1920 x 1080@60 Hz, 1680 x 1050@60 Hz, 1440 x 900@60 Hz, 1280 x 720@60 Hz, 1280 x 1024@60 Hz, 800 x 600@60 Hz, 640 x 480@60 Hz, 1024 x 768@60 Hz Supports LED screen and custom resolution output. Can be configured with maximum area length x width less than 260 W. Supports screen splitting 1/4/9/16/32 Externally decoded signals output capability with 2ch@12MP(15Hz), 64ch@1080p(25Hz)
	Video Output Interface Number	4
	Video Output Interface Type	HDMI
LED Sending Card	Output Resolution	width (144 ~ 8192), height (144 ~ 4320), the total pixel point should be less than 1040 W

Output Board (DS-C30S-L104)	Video Output Interface Number	4 x miniSAS to 20 x 1G electrical interfaces, 2 x 10G optical interfaces
	Video Output Interface Type	miniSAS to 5 x RJ45, 10G optical port
	Audio Output Interface Number	1
	Audio Output Interface Type	3.5 mm audio terminal
Decoding Board (DS-C30S-DEC)	Audio Decoding Channel Number	32
	Audio Decoding Performance	audio encoding format G711-A, G711-U, G722.1, G726-16/U/A, MPEG, AAC-LC
	Audio Decoding Format	audio encoding format G711-A, G711-U, G722.1, G726-16/U/A, MPEG, AAC-LC
	Decoding Resolution	Supports decoding up to 1600W pixels (one channel)
	Decoding Channel	Supports Up to 32 decoding channels.
	Decoding Performance	A single board supports 16 x 1080P30, 32 x 720P@30. Supports decoding up to 1600W pixels.

Physical Interface



Dimension

DS-C30S-S11

DS-C30S-S23

