DS-6904UDI(C)
4K Decoder



Developed on the basis of embedded hardware platform, the DS-69XXUDI(C) ultra high definition (UHD) decoder is a new generation decoder for HD network cameras and can be widely used in various video security system projects. It uses the HDMI 1.4 port and DB15-to-BNC port for decoded data output, supports various decoding formats including H.265, H.264, MJPEG, Smart264, and Smart265, supports decoding the H.265 or H.264 video of no more than 32 MP, and supports 4K video output.

Video Input

- Supports the video input from the computers and video conference terminals, and 4K HDMI signal input.
- Supports using network cameras, NVRs, and other devices as network signal sources.
- Supports embedded HDMI audio input. The audio input supports 16 bit, 48 KHz or 32 KHz sampling rate, dual audio channel, and stereo.
- Supports signal input via the HDMI 1.4 port, 2 channels of 1080p@50/60 Hz input, or 1 channel of 4K@30 Hz input.

Video Output

- Supports signal output via the HDMI 1.4 port, and 4K (3840 × 2160@30 Hz) UHD video output.
- Supports embedded HDMI audio output and external audio output.
- Adopts frame synchronization technology to ensure that the images of all HDMI output ports are completely synchronized, with complete picture and smooth playback, and without lag, frame loss, tearing, or splicing.
- Supports the maximum LED loading capacity of 2.6 MP per port.

Video Encoding and Decoding

- Supports H.264 encoding format (the default), H.265 encoding formats, sub-stream encoding, and main stream encoding.
- Supports decoding the network cameras, NVRs and other network sources, decoding sub-stream and main stream, and auto-switching to sub-stream when the window division reaches the threshold.
- Provides 64 video decoding channels and supports simultaneously decoding 32 channels of 2 MP video or 64 channels of 720p video to the video wall.
- Supports decoding streams of no more than 32 MP resolution.
- Supports the mainstream decoding formats such as H.264, H.265, Smart264, Smart265, MJPEG, and HIK264, and mainstream encapsulation formats such as PS, TS, ES, and RTP.
- Supports audio decoding of G.722, G.711A, G.726, G.711U, MPEG2-L2, AAC, MP3, and PCM.
- Supports rotate mode decoding of front-end camera videos that are of no more than 2560 × 1440 resolution.
- Supports active decoding and passive decoding.
- Supports decoding the encrypted stream, multi-channel stream, and smart stream, editing and switching stream, and prompting for decoding exceptions.
- Supports decoding the recorded video files to the video wall.

Video Wall Function

- Supports splicing signal sources on the video wall, opening the signal source window, and performing signal source window roaming, scene switching, and window switching. Each screen supports four 1080p signal source windows or two 4K signal source windows.
- Each signal source window can be divided into 1, 2, 4, 6, 8, 9, 12, 16, 25, and 36 windows.
- Supports up to 64 scenes. You can customize the video wall layout and save it as a scene.
- Supports the auto-switching of up to 100 view groups on the HCP client. You can customize the camera location, scenes and time for each view group.
- Supports double clicking the divided sub-window to zoom in and double clicking again to zoom out.
- Supports displaying output channel number.
- Supports PTZ control of network signal sources, including 8-direction control, auto-scanning, aperture adjustment, focal length change, focusing, and preset calling.
- Supports setting the live view status, decoding status, switching status, audio status, and location of the signal source window.
- Supports video recording playback. You can set the playback status and select time to play back.
- Supports using the HCP client to capture images on the screen and display the captured images on the video wall.
- Supports the live view of network signal sources over RTP or RTSP.

Device Access

- Supports docking with 32 MP PanoVu series cameras, fisheye cameras, conventional front-end network cameras, DVRs, NVRs, XVRs, and mainstream third-party security devices.
- Supports integrating multiple decoding devices into one decoding device on the platform by using the software development kit (SDK).
- Supports using the ONVIF protocol to access the decoder.
- Supports interaction with LCD screen, including the screen information acquisition, image mode configuration, serial port control, time synchronization, backlight parameters configuration and acquisition, output port auto-binding, and error code reporting.
- Supports IPv4 and IPv6 protocols and the simultaneous access of IPv4 network sources and IPv6 network sources.
- Supports using the network keyboard or serial port keyboard to control the device, and to realize sub-window changing, group operation and auto-switching, scene changing, PTZ control, and video wall playback.

Maintanence

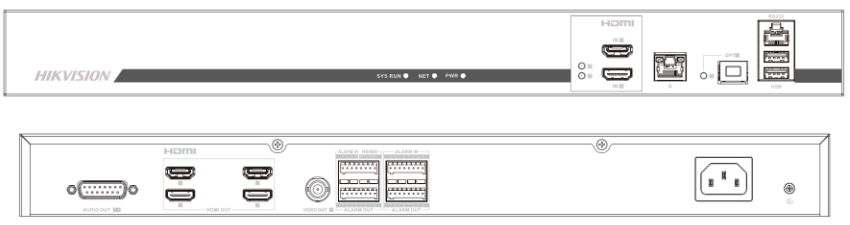
- Supports using the PC client and web browser of Chrome 45 and higher version to access and control the device.
- Provides built-in Gigabit switching network, and supports auto-adaption between the optical port and electrical port, and supports NAT.
- Supports obtaining and configuring parameters remotely, importing and exporting parameters remotely, and obtaining system running status and system logs remotely.
- Supports restarting the device remotely, restoring the default settings, and upgrading the device.
- Supports auto detection and alarm for failures, including network disconnection, IP conflict, illegal access, temperature threshold exceeding, decoding signal source exception and device exception.
- Supports user permission management, allowing users with different permissions to use designated resources and operate designated video wall modules.
- Supports visualization maintenance. The maintenance interface displays the network topology structure and keynote network status of main control system and subsystems.
- Supports manual time synchronization and NTP time synchronization.

▪ Specification

Product Model	
Product Model	DS-6904UDI(C)
Interface	
USB Interface	2 × USB 2.0 port
Serial Interface	1 × RS-232 serial port (RJ-45) + 1 × RS-485 serial port
Network Interface	1 × 10/100/1000 Mbps self-adaptive Ethernet interface (RJ-45) 1 × 100 BASE-FX/1000 BASE-X port Supports the self-adaption between the optical port and electrical port.
Alarm In Interface No.	8 channels of alarm input
Alarm Out Interface No.	8 channels of alarm output
Power	
Power Interface	100 VAC to 240 VAC, 50/60 Hz
Device Consumption	< 50 W
Video Wall	
Video Walls	1
Video Wall Scale	≤ 4
Split Window	Supported
Layers Per Screen	4 × 1080p or 2 × 4K
Layers per Device	Layers Per Screen × Output Interface(s)
Scenes	64
Plans	100 view groups on the HCP client
Window Division	1, 2, 4, 6, 8, 9, 12, 16, 25, 36
General	
Working Temperature	-10 °C to 55 °C (14 °F to 131 °F)
Working Humidity	0% RH to 90% RH
Net Weight	≤ 5.2 kg (11.46 lb)
Gross Weight	≤ 6.3 kg (13.89 lb)
Dimensions (W × H × D)	440 mm × 44.5 mm × 320.8 mm (17.32 inch × 1.75 inch × 12.63 inch)
Packing List	1 × decoder, 1 × regulatory compliance and safety information manual, 1 × mounting bracket, 1 × power cord, 4 × pads, 1 × grounding cable
Audio Input	
Audio Input Interfaces	2
Audio Input Interface Type	Embedded HDMI
Video Input	
Video Input Interface Type	HDMI 1.4
Video Input Interfaces	2
Max. Video Input Resolution	4K (only in odd-numbered port)
Video Input Resolution	3840 × 2160@30 Hz, 1920 × 1200@60 Hz, 1920 × 1080@60 Hz, 1920 × 1080@50 Hz, 1280 × 720@60 Hz, 1280 × 720@50 Hz, 1600 × 1200@60 Hz, 1280 × 960@60 Hz, 1680 × 1050@60 Hz, 1440 × 900@60 Hz, 1366 × 768@60 Hz, 1280 × 1024@60 Hz, 1024 × 768@60 Hz Supports custom resolution. For 60 Hz input, width ranges from 800 to 1920, and height ranges from 600 to 1200. For 30 Hz input, width ranges from 800 to 3840, and height ranges from 600 to 2160. Width: 4 alignment, height: 2 alignment.

Video Encoding	
Video Encoding Format	H.264 (default), H.265
Video Encoding Channels	2
Video Encoding Capability	1 channel of 4K@30 Hz or 2 channels of 1080p@60 Hz
Video Output	
Video Output Interface Type	HDMI 1.4
Video Output Interfaces	4
Max. Video Output Resolution	4K
Video Output Resolution	3840 × 2160@30 Hz, 2560 × 1440@30 Hz, 1920 × 1200@60 Hz, 1920 × 1080@60 Hz, 1920 × 1080@50 Hz, 1680 × 1050@60 Hz, 1600 × 1200@60 Hz, 1280 × 1024@60 Hz, 1280 × 720@60 Hz, 1280 × 720@50 Hz, 1024 × 768@60 Hz
Loading Capacity for Video Output to LED	Single port load 2600000, Width 144 - 4096, Height 144 - 2160, Width must be a multiple of 2 and height must be a multiple of 2.
Video Output Interface (BNC)	1 channels of CVBS output (BNC port)
Video Output Resolution (BNC)	PAL: 704 × 576@25 Hz NTSC: 704 × 480@30 Hz
Video Decoding	
Video Decoding Format	H.264, H.265, Smart264, Smart265, MJPEG
Video Decoding Channels	64
Video Decoding Capability	1) H.264/H.265 format: Supports decoding 2-channel 32 MP/24 MP, 4-channel 12 MP, 8-channel 8 MP, 10-channel 6 MP, 16-channel 4 MP, 32-channel 1080p, 64-channel 720p and lower resolution in real time. Four output ports (HDMI output ports 1 to 4) form a group. The group supports up to 4-channel smart decoding or 4-channel encrypted stream decoding. Smart decoding allows for processing smart alarm events from network cameras. 2) MJPEG format: 4-channel of 1080p and lower resolution 3) HIK264 format: 2-channel of 720p and lower resolution
Video Decoding Resolution	Up to 32 MP
Audio Output	
Audio Output Interface Type	Embedded HDMI audio output port or independent DB15-to-BNC audio output port
Audio Output Interfaces	4
Audio Decoding	
Audio Decoding Format	G711A, G711U, G722.1, G726-16/U/A, MPEG, AAC-LC, PCM

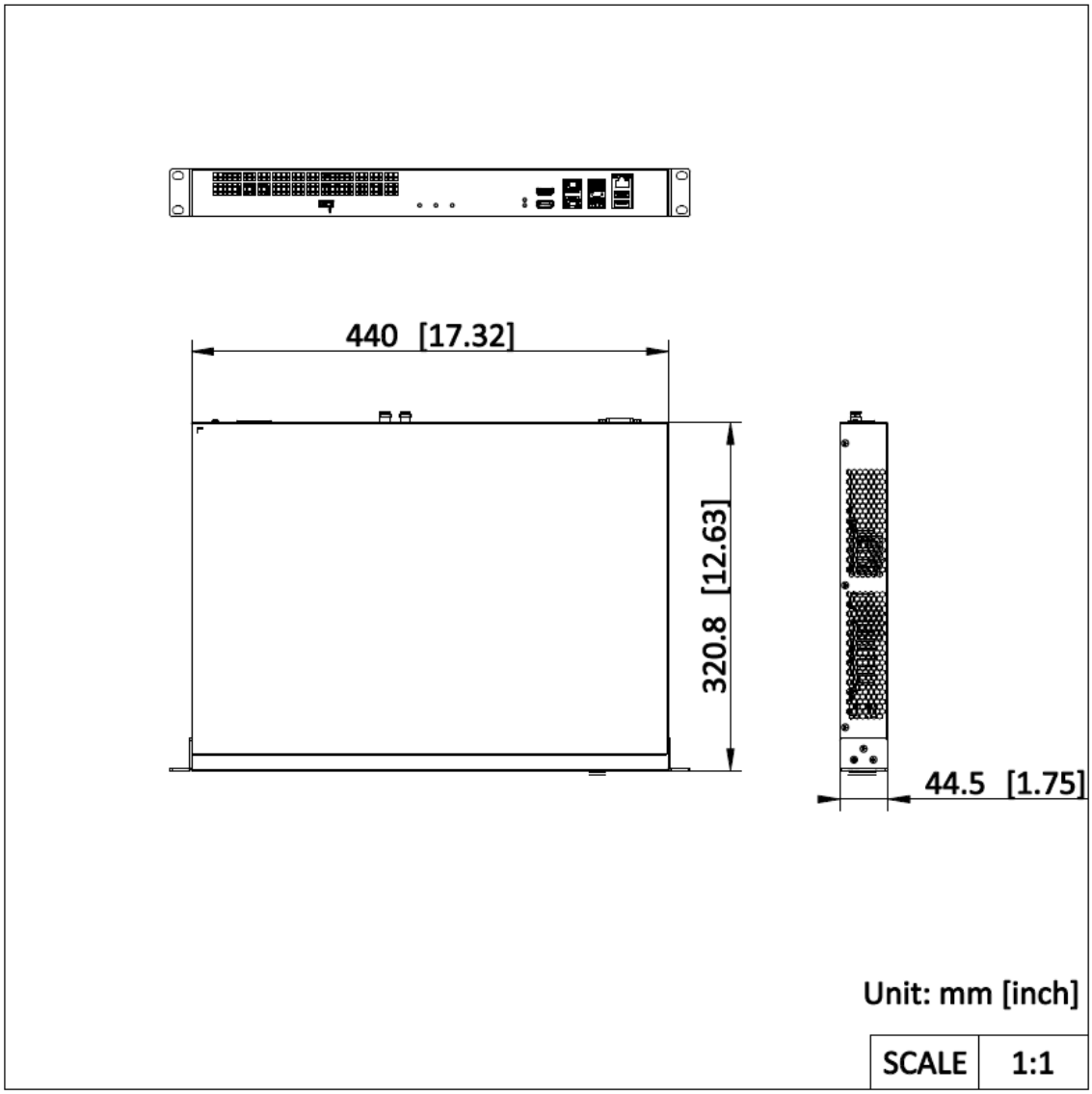
▪ Physical Interface



Front Panel	Description	Rear Panel	Description
SYS RUN	System running LED. It is	AUDIO OUT	Audio output port

	steady green when the system runs normally.		
NET	Internal network LED. It is steady green when the internal network of the device is normal.	HDMI OUT	HDMI output port
PWR	Power status LED. It is steady green when the device is powered on.	VIDEO OUT	Video output port
HDMI IN1	HDMI input port 1. Its LED is steady green when the signal is connected.	RS485	RS-485 port
HDMI IN2	HDMI input port 2. Its LED is steady green when the signal is connected.	ALARM IN	Alarm input port
G	1000 Mbps electrical port 1	ALARM OUT	Alarm output port
OPT 1	1000 Mbps optical port 1		
RS232	Device debug serial port		
USB	USB 2.0 port		

▪ Dimension


440 [17.32]
320.8 [12.63]
44.5 [1.75]
Unit: mm [inch]
SCALE 1:1

See Far, Go Further

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