DS-C80N-01HI
Distributed HDMI input Node

Rely on the company's strong research strength and deep technical accumulation, the Hikvision distributed control system (hereinafter referred as the system) is a professional video and audio control system that realizes the collection, access, transmission, changing, analysis, processing, scheduling and displaying of the video and audio signals. The system adopts the advanced distributed core technology and the overall architecture without center server to ensure the stability of the overall operation. The system uses two engines and YUV 444 image sampling technology to bring the extremely low latency operation experience of the entire system and industry-leading image color reproduction. Based on all-IP architecture, the system can break the geographical limitation and achieve unlimited expansion in theory. The system can connect with the KVM system to achieve signal interconnection, and converged communication and seamless connection between the KVM seats and splicing system. The system can be widely used in the command centers of the energy, government, public security, electric power and other industries, and various exhibition halls.

- The distributed video wall controller consists of input nodes and output nodes, and can be used together with centralized video wall controllers, multi-functional video centers, and decoders. Thus, the command center system can be constructed flexibly.
- Through network connection, all devices can realize long-range transmission of signals, break the geographical limitation, and achieve any signal connection and easy capacity expanding. In theory, the system scale can be extended limitlessly.
- The system adopts decentralization and does not need a center server. All nodes work independently, and failure of single node will not affect the running of the entire system.
- The system uses dual-engine system, including DSP and FPGA signal processing systems. The system supports deep compression and shallow compression for signals. In an environment with good network, the shallow compression for signals can achieve high-quality image effect on the video wall. In an environment with average network, the deep compression for signals can achieve smooth transmission and processing of signals.

- The system uses YUV 444 for image sampling, transmission and processing to achieve high-quality color restoration and meet user requirements for high quality images.
- The system has a complete product specification system. The system supports up to 4K 60 fps signal input and output.
- Supports audio matrix, audio and video switching by channels, and audio independent switching. The audio uses 48 KHz and 24-bit sampling encoding and restoration, and the audio quality is high.
- The node conforms to the 802.3at standard protocol, supports POE, and supports the dual power supply system by using the device together with the external power supply.
- The system supports switching between unicast and multicast protocols, and has good third-party network compatibility.
- Each node uses the half-width structure and the width of two nodes equals to the width of one rack. This design is elegant and supports standard rack installation.
- Each node has its own OLED screen to show the device configuration and running status.
- Each node provides one Gigabit SFP optical port and one Gigabit electrical port. The node supports multiple forms of network access and hot backup between the optical port and electrical port.
- Supports the access of network signal source, including network cameras and NVRs.
- Supports ultra high definition fusion and 16 channels of 4K signal input.
- The 2K input node supports 1 channel of 1080p 60 fps input and custom resolution input.
- The 4K input node supports 1 channel of 4K 60 fps input and custom resolution input.
- Supports the HDMI composite audio input and the external audio input. The audio input supports 24 bit and 48 KHz sampling, dual channel, and stereo.
- Supports YUV 444 image collection and output without image quality loss.
- Supports up to 2 OSDs on the input.
- Supports input image clipping and the maximum clipping value at the top, bottom, left, or right can be 200 pixels.
- The HDMI port supports outputting the video signals and audio signals simultaneously. You can use the 3.5 mm audio port to output audio signals, or use the HDMI port and 3.5 mm audio port simultaneously to output the audio signals.
- The output node supports connecting to LCD and DLP screens, and supports custom output resolution and custom refresh rate.
- The output node supports connecting to LED screens, and horizontal and vertical resolution customization. For a 2K output node, the horizontal resolution ranges from 288 to 3840, the vertical resolution ranges from 288 to 2160, and the overall resolution cannot exceed 2.6 MP. For a 4K output node, the horizontal resolution ranges from 288 to 8192, the vertical resolution ranges from 288 to 4320, and the overall resolution cannot exceed 8.8 MP.
- Adopts the frame synchronization technology to ensure that the images of all output ports are fully synced with complete image, smooth playing, no stuttering, no tearing and no seams.
- Supports decoding the network signal sources including network cameras and NVRs. Supports main stream decoding, sub-stream decoding and sub-stream auto-switch.
- Provides powerful decoding capacity. One output node can decode 16 channels of 1080p network camera signals, 8 channels of 4 MP network camera signals, 2 channels of 16 MP network camera signals, and 1 channels of 32 MP network camera signals. The output node has good decoding compatibility and stability.
- Supports decoding and output in H.264, H.265, SMART 264, SMART 265, MJPEG, and etc.
- Supports editing and switching stream, and displaying prompt of decoding exception.
- Supports controlling and displaying multiple video walls. By default, up to 32 video walls can be managed.
- Provides powerful screen control functions, including window opening, floating window, and window splicing. One output port supports up to 16 open windows. In splicing scenarios, the device has good sync performance, the time

difference between images is within 10 us, and no tearing exists in the high-speed motion images.

- Supports 1/4/9/16 window division.
- Supports four 8K background images.
- Supports setting a maximum of 1024 scenes and changing scenes without blue screen or black screen.
- Supports setting a maximum of 256 plans and calling plans to realize dynamic scene auto-switching and scheduling.
- Supports 3 subtitles on a single video wall. Supports setting background color/transparency, font type/color/size/direction, and scrolling speed, and adding clock subtitles. The scrolling subtitle of 60 Hz high refresh rate can be managed together with the video wall contents.
- Supports connecting to the mainstream splicing screes, including LCD, DLP, and small pixel pitch LED screens.
- Supports using the ONVIF protocol to access devices.
- Supports central control to realize the environment control for lighting, curtains, and infrared devices, and supports the control of LCD and LED screens.
- Supports PTZ control to realize rotation and zooming of conference cameras and monitoring cameras.
- Support the access and operation via the control client and web client. The web browser should be IE8 or Chrome 45 and higher version.
- Support the access and operation via the mobile client (Android or iOS).
- Supports obtaining and configuring parameters remotely, importing parameters remotely, and exporting parameters remotely.
- Supports 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 exception, temperature exception, fan exception, and signal exception. Supports alarm for device exception, including network disconnection, IP conflict, invalid access, temperature threshold exceeding, and fan exception.
- Supports visualization operation and maintenance. The maintenance interface displays the status information of main control node and sub-nodes.
- Supports manual time sync or NTP time sync.

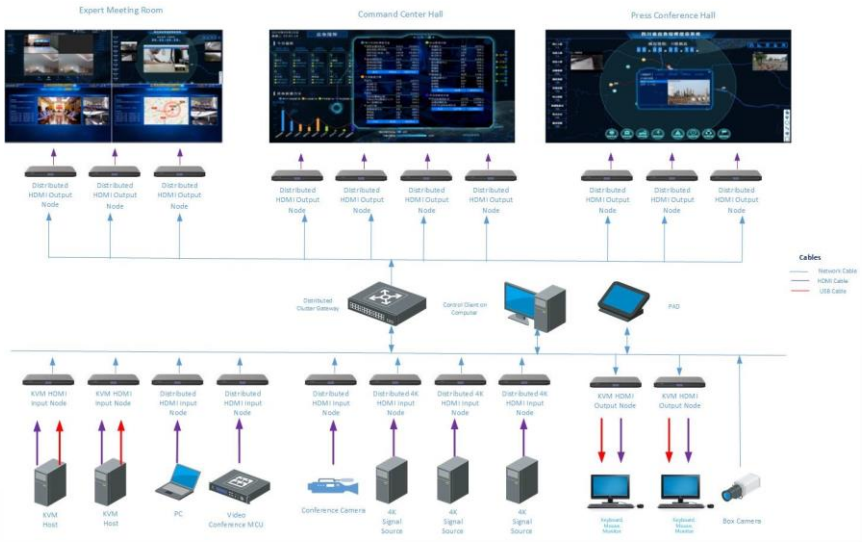
▪ Specification

Device Feature	
Device Type	Input node
KVM Function	No
Signal Source Live View	Supported
Dual Device Hot Backup	Supported, customized
Interface	
Optical Interface	1 channel of 1000 Mbps SFP port
Electrical Interface	1 channel of 1000 Mbps Ethernet port
USB Interface	1 × USB 2.0 port
Screen Type	OLED 128 × 64 dot-matrix screen
Other Interfaces	1 × Console port for debugging
RS-232 Interface	1 channel, Phoenix terminal
RS-485 Interface	1 channel, Phoenix terminal
IO/IR IN Interface	1 channel, Phoenix terminal, customized by software
IO/IR OUT Interface	1 channel, Phoenix terminal, customized by software
IR POWER Interface	1 channel, 3.3 V, Phoenix terminal
RELAY Interface	1 channel, Phoenix terminal
RESET Interface	1 channel
General	
Working Temperature	0 °C to 50 °C
Working Humidity	0% to 95%
Indicator	1 × single double base color light indicator, 1 × optical port indicator, 1 × network port indicator
Net Weight	1.35 kg (2.98 lb.)
Gross Weight	1.50 kg (3.31 lb.)
Dimensions (W × H × D)	210 mm × 42 mm × 180 mm (8.27 inch × 1.65 inch × 7.09 inch)
Installation Method	Magnetic installation (optional), planar arrangement, rack installation
Packing List	1 × DS-C80N-01HI, 1 × regulatory compliance and safety information manual, 1 × power cord, 1 × mounting bracket, 1 × connecting bracket
Power Consumption	≤ 30 W
Power Supply	Power supply: 110 VAC to 240 VAC, 0.7 A POE: 802.3at protocol
Video	
Video Input Interface Type	HDMI 1.4
Video Input Interfaces	1
Max. Video Input Resolution	1080p
Image Sampling	YUV 444
Loop Output Interface	1 channel of HDMI 1.4
Video Input Resolution	1024 × 768@60 Hz, 1280 × 1024@60 Hz, 1360 × 768@60 Hz, 1440 × 900@60 Hz, 1280 × 960@60 Hz, 1600 × 1200@60 Hz, 1280 × 720p@60 Hz, 1920 × 1080p@60 Hz, 1920 × 1200@60 Hz, custom resolution in the range of 1280 × 720 to 1920 × 1200
Audio	
Audio Input Interfaces	1
Audio Input Interface Type	3.5 mm coaxial audio jack

Audio Channel	Dual audio channel
Audio Output Interfaces	1
Audio Output Interface Type	3.5 mm coaxial audio jack
Audio Talk	Use the audio input port and audio output port
Audio Sampling Rate	24 bit, 48 KHz
Video Encoding	
Video Encoding Format	H.265 (default), H.264
Video Encoding Channels	1
Video Encoding Capability	Sub-stream and main stream encoding; Sub-stream encoding contains: CIF(352 × 288), FCIF(704 × 576), 720p(1280 × 720) Main stream encoding contains: 720p(1280 × 720), XGA(1024 × 768), XVGA(1280 × 960), SXGA(1280 × 1024), WXGA(1360 × 768), WSXGA(1440 × 900), UXGA(1600 × 1200), 1080p(1920 × 1080), 1920 × 1200, custom resolution in the range of 1280 × 720 to 1920 × 1200
Input Logo Overlay	Not supported
Input OSD	Supported, 2 OSDs
Input Image Clipping	Supported, clipping value range at the top, bottom, left and right: 0 to 200 pixels
Live View Channels	6 simultaneous channels
Audio Encoding	
Audio Encoding Format	G711A, G711U, G722.1, AAC_LC
Audio Encoding Channels	1

▪ Typical Application

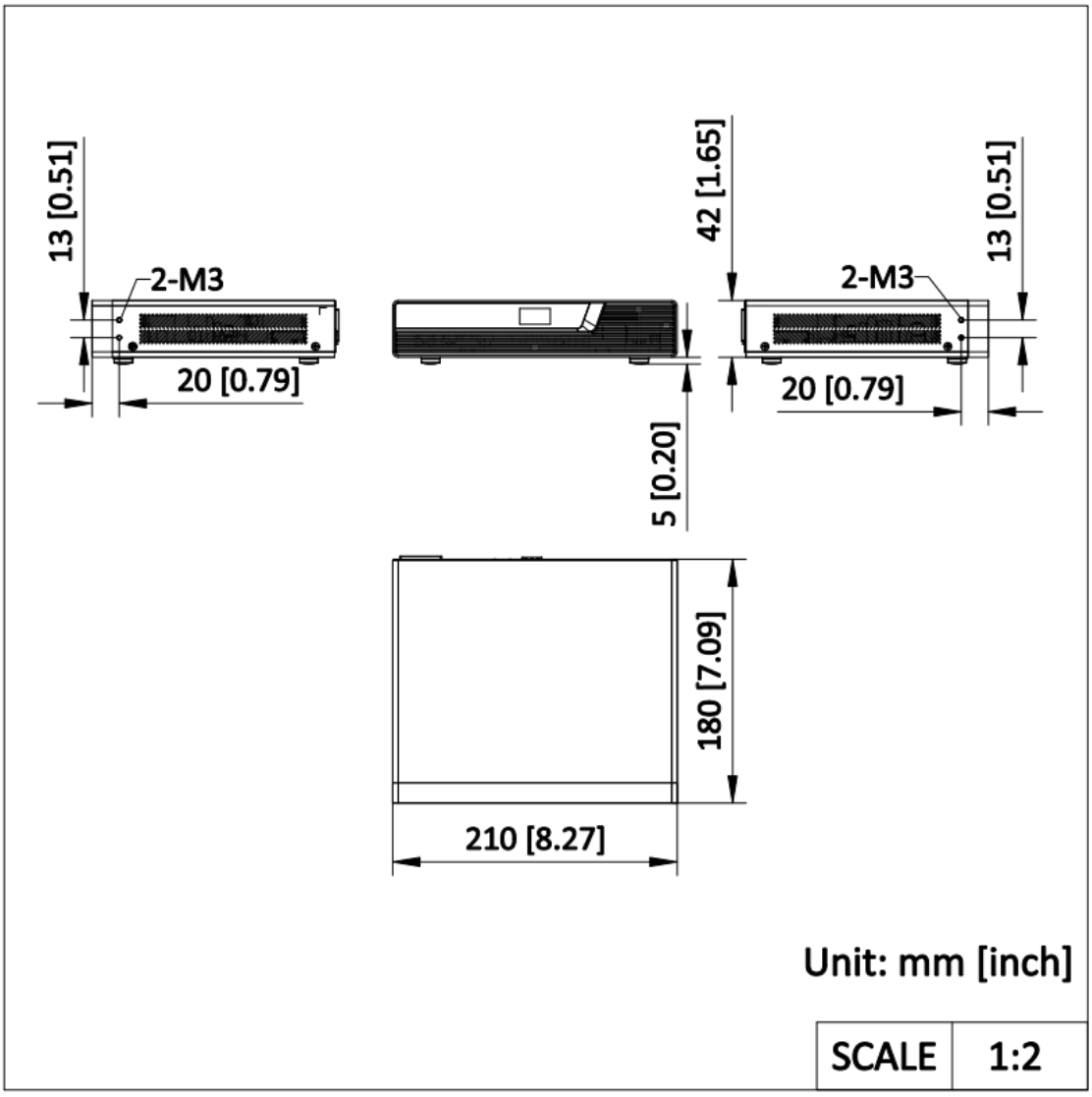
Distributed System Topology



▪ Available Model

DS-C80N-01HI

▪ Dimension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2-M3
20 [0.79]
42 [1.65]
5 [0.20]
2-M3
13 [0.51]
20 [0.79]
180 [7.09]
210 [8.27]
Unit: mm [inch]
SCALE
1:2

See Far, Go Further

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