

Vanguard

All-in-one Node for IP Based & KVM System



DS-VW-HH-JIN/JOUT



DS-VW-DD-JIN/JOUT



DS-IN-HDMI-JIN, DS-IN-HDMI/DVI-JIN



DSIII-DH-JOUT

Brief Introduction:

IP Based KVM Video Collaboration System, is built-in all features of video wall control, KVM, matrix switching, visualization and central control, which is based on 1 Gigabit Standard Network with distributed and decentralized architecture, for all-in-one Command Center and Meeting Room Solutions.

DSIII Node will be used as a KVM encoder for KVM source (i.e. dedicated workstations, servers, thin client's terminals) or a KVM decoder for monitor and keyboard & mouse at Workspace Console;

While DSII Node will be used as a video encoder for HDMI/DVI/VGA source or a video decoder for standalone display, screen of video wall, or LED sending box of fine pitch LED Wall.

Highlights & Benefits:

- ✓ No Video Wall Matrix or LED/LCD Wall Controller or KVM Server or Extender required.
- ✓ Decentralized architecture, no central processing server required, without single node of failure.
- ✓ Scalability & Connectivity, by the high coding tech and extraordinary algorithm.
- ✓ Follow Me tech, break workspace console desk appointed limitation for operator.
- ✓ HDMI+RS232/485+IO+IR transmission over CAT for 90 meters or over Fiber for 10 km.
- ✓ Lowest latency and good image quality
- ✓ Natively compatible with 3rd party system and advanced technology, I.E. 5G, CCTV VMS, AI etc.



Features of Video Wall Management Platform

- ✓ Control software UI can be custom made, in different language, such as English, Arabic, Español, Russian etc.
- ✓ Visualized Control: allow to preview all the source content and video wall content on UI, ensure the correct source can be always switched to the video wall intuitively.
- ✓ Friendly drag & drop control, drag the source from preview zone and drop to virtual video wall mirror on UI to switch video, what you see on virtual video wall of UI is what displaying on physical video wall.
- ✓ Free resize, re-position, overlap source windows on video wall, to make Picture-in-Picture, Picture-on-Picture.
- ✓ Video wall layout and control scenario can be preset as limitless scenarios and recall by One Touch, preset and recall control button can be re-named;
- ✓ Audio control: audio can be embedded from analog audio of phoenix port or transmitted over HDMI, any node can de-embed the audio from any source or mix audios from multiple source (up to 16 channels).
- ✓ Source Quick Search Feature: Operator can quickly search and find the video source by typing source ID, grouping source or dragging to favorite folder, which is important if there are lots of input source in system.
- ✓ Control Layout Preview: operator can switch sources and manage displaying layout on virtual video wall, then project them together to physical video wall by ONE TOUCH.
- ✓ Video Auto Scheduling: Flexible to schedule the sources and switch them on video wall, so that multiple sources can be switched automatically on time, scheduling time can be user-defined, IE. 5 minute, 1 hour or 1 day etc.
- ✓ Flexible Video Wall Layout Partition: operator configure video wall layout & partition on UI, and save as a preset, which can be recalled fastly by one touch. The source content can be interchanged between two partition by drag & drop. (DS Works only)
- ✓ Video Wall Annotation: Operator can annotate and highlight the content on video wall by controlling Tablet. (DS Works only)
- ✓ Video Wall Banner: allow to edit a banner overlapping on video wall. (DS Works only)
- ✓ Smart & Soft KVM Control: Allow to control source PC by multi-touch or mouse & keyboard on video wall controlling Tablet except switching it to video wall, such as opening the PPT slide, video etc. (Windows OS only)
- ✓ Video Wall Simultaneously Displaying: What displaying on control room's video wall can be simultaneously displayed on board room or other room's video wall. (DS Works only)
- ✓ Directly access, view and decode RTSP streaming with H.265/264, i.e. IP Camera etc., and control the camera by ONVIF protocol.
- ✓ 3rd party and environment control (temperature, lighting, humidity, alarm) via RS232, RS485, IR, IO, Relay, UDP etc (requires an additional IP Based Central Controller).
- ✓ Support to display ultrahigh resolution image pixel for pixel as video wall background by dot-to-dot displaying.
- ✓ Video wall can be controlled from multiple controlling Tablet, PC or iPad, the software can be run at iOS and Windows OS tablet. Allow to configure the permission for each controlling Pad.
- ✓ Video wall recording and playback feature, to record what displaying on video wall in real time and save as mp4 file for playback. (optional, extra cost)



Features of Smart KVM Platform (for Operator Workspace/Console Desk)

- ✓ Intuitive & user-friendly OSD (on screen display) Interface and Optional Visualized OSD interface, which allow to preview the source in real time.
- ✓ Source/Mini PC/Workstation PC can be separated from Operator Workspace desk and stored in data center, where they are air conditioned, safe and easy to maintain.
- ✓ Smart Mouse:
Each workspace console can be equipped with multiple monitors and one keyboard & mouse, then operator can switch and control between PCs intuitively just by moving mouse cursor from one monitor to another, monitor with KVM OSD mouse cursor will be marked by red box.
- ✓ Operator can switch monitor's source by keyboard hot-key on source-listed OSD interface or Visualized OS Interface, multiple operator has simultaneous access to same source.
- ✓ PC/Workstation with multiple head output can be accessed on corresponding monitors at same time by one hot-key, and operator can control each head output by one keyboard & mouse.
- ✓ Video Collaboration by PUSH: source/computer is allowed to push from one monitor to another or video wall by hot key.
- ✓ Visualized Collaboration by Video Call: operators can make video call with each other from different Workspace console for better collaboration.
- ✓ Permission assignment feature:
Four access permissions can be configured for every user for each PC: EXCLUSIVE, SHARE, VIEW ONLY and PRIVATE. Exclusive permission username will get all in control.
- ✓ Exclusive permission: Once the source PC is accessed by exclusive permission, another operator can view the source only, until previous operator release the exclusive access.
- ✓ System administrator can create several supervisor account with relative access permission for each source PC, and allow the supervisor to create more operators as a group.
- ✓ Temporary admin permission: a temporary account can be created for other operator, which will be invalid once original operator log in.
- ✓ Follow Me technology: break workspace console desk appointed limitation for operator, who can login his account whichever workspace to access his permission source and monitor layout.
- ✓ Multi-touch KVM feature: operator can access and control the PC by touch feature on multi-touch monitor, instead of physical keyboard & mouse.
- ✓ Login System by Biological Recognition: operator can login KVM system via fingerprint and facerecognition except the ID and password. [Optional, requiring additional device for fingerprint or face login]
- ✓ User Logs, all the operation by keyboard & mouse will be automatically recorded and stored in your dedicated server, including login, logout, get & push operations etc. [Optional, requires extra cost]



Technical Specification

Interface Port						
Item	DS-IN			DS-Out		
Codec Design	NO			YES (configurable as an encoder or a decoder)		
Model#	DS-IN-HDMI-JIN	DS-IN-DVI-JIN	DS-IN-DH-JOUT	DS-VW-Out-HH- JIN/JOUT	DS-VW-Out-DD-JIN/JOUT	DS-VW-Out-VD-JIN/JOUT-
Video Input	HDMI	DVI-D		HDMI	DVI-D	DVI-I
Video Output	HDMI (Loop)		DVI + HDMI	HDMI	DVI-I	DVI-I
USB	1 x USB		2 x USB	NONE		
RS232	1			1		
RS485	1			1		
IR & I/O	Totally 3			Totally 3		
Audio	1 in +1 out		1 out	3.5mm jack 1 in +1 out		
SPF(Optional)	SFP Duplex LC Connectors			SFP Duplex LC Connectors		
Power Adapter	5V3A (Optional)			5V3A (Optional)		
Ethernet(PoE)	RJ45			RJ45		
Technical Parameters						
Coding Technology	H.265 for DSIII, H.264 for DSII					
Protocol	HDCP, HDMI 1.4, RTSP					
Resolutions	Up to 1920x1200,1920x1080 downward compatibility					
Bitrates	Configurable 4-20Mb per video streaming					
Rated/Peak Power	20 Watt per Node					
Requirement of Ethernet Switch						
Switching Capacity	≥ 598Gbps (more than 40 node)					
Forwarding Performance	≥ 222Mpps (more than 40 node)					
POE Feature	Required (or choose 3 rd party POE injector)					
Recommend Model	HUAWEI S5720S-28P-SI-AC, S5720-36C-PWR-EI-AC, S5700-48TP-PWR-SI, S5720-56C-PWR-HI, and max 3-4pcs S5720-56C-PWR-HI to stack, for project that need more than 192 nodes, please use Core Switch, i.e. HUAWEI S6720S-26Q-EI-24S-AC or S6720-32C-SI-AC					



Physical Parameters			
✓ DS-VW-Out-HH- JIN/JOUT ✓ DS-VW-Out-DD- JIN/JOUT ✓ DS-VW-VD-JIN/JOUT-Out	Dimension/NW of node		172x86x44mm 0.5kg/node
	5U Rack Mount Kit		478x160x221mm Each rack mount kit can install 10 node 2.5kg/kit
	Carton of node	205x195x85mm per node	
✓ DS-IN-HDMI-JIN ✓ DS-IN-DVI-JIN ✓ DS--IN-DH-JOUT	Dimension/NW of node		220x138x29mm 0.7kg/node
	2/3U Rack Mount Ear		
	Carton of node	285x220x120mm per node	

System Topology

