



DS HELIX

**AV OVER IP
VIDEO WALL CONTROLLER**

KEY FEATURES

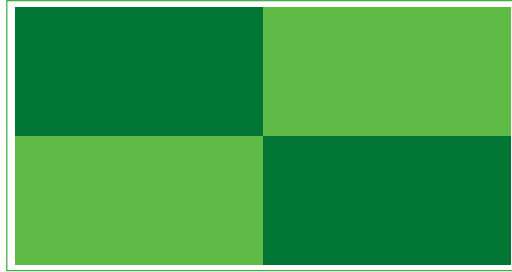
Distributed Linux System Architecture	Pre-Operation Mode
User-friendly GUI	Remote KVM Control
Multi-Video Wall support	Signal Request and Push
Fan-less Quiet Design	Multiple Login Methods
H.264 Codec Chip	Message Queue Prompt
Video Support	OSD Menu Bar
Audio Input	One-Click Scenario Recall
Comprehensive Connectivity	Local Node Status View
KVM Functionality	Channel Status Mode
High-Resolution Support	One-Click Same-Screen
Unicast and Multicast	Tablet and Agent Linkage
Direct IPC Signal Output	Banner Function
Agent-Pushed Large Screen	Separate Audio Display
Flexible Window Layout	



SCHEMATIC



2X2 VIDEO WALL



**DS HELIX
AV OVER IP
DECODER**



**IP/STREAMING
VIDEO/RTSP
SOURCES**



CONTROL PC

RJ45



IP SWITCH

RTSP

**DS HELIX
AV OVER IP
ENCODER**



WORK
STATION



LAPTOP



VC CAMERA



DISH TV

TECHNICAL SPECIFICATION

DIGITAL SIGNAL HELIX MULTI-SCREEN WALL CONTROL

Decentralized architecture allows users to deploy nodes without a server or master node. Each node operates independently, reducing maintenance costs. Each node has an H.264 data stream codec chip with backward compatibility, ensuring smooth system operation.

Protocols: RTSP, RTMP, private protocols, 2 HDMI channels, embedded audio (synchronous or asynchronous) input, and port backup.

Upgrade mode with one HDMI input, one HDMI output, and one HDMI agent.

Connectivity: 3 USB 2.0 ports, a Gigabit network port, a Gigabit optical port, two HDMI ports (input/output), two 3.5mm audio ports, RS232, RS485, IR/IO, and IO ports.

KVM functionality via 3 USB ports for computer connection without additional hardware

HDMI, DVI, VGA with input/output resolutions up to 3840*2160@30Hz.

Adjustable fixed bit rate transmission ranging from 128kbps to 40Mbps.

Supports H.264 & H.265 IPC cameras, with direct output to large screens. PTZ control.

Agents can push video sources to a large screen for full-screen display, windowing, roaming, overlaying, and more. Real-time preview and virtual screen support.

One-to-one video voice text communication and inter-seat broadcast, enabling one-to-many or hall-wide communication.

Multi-party meetings with ≥ 9 operators, including 9-way audio mixing.

Supports layout adjustment in a virtual screen area without real-time display on the large screen.

Allows remote control of the computer room and switching up to 16 windows at the same time, with manual and automatic control modes.

Supports inter-seat signal request and push, three-level rights management, large-screen signal capture, partition management, and plan saving/retrieval.

Login options: Multiple login option via account password.

Agent message queue prompt, including signal on/offline reminders.

OSD top and bottom menu bars for mouse-controlled operations, providing a computer-like experience and supporting shortcut key operations.

Provides a one-click recovery function, restoring the system to its state before power failure, including volume, screen settings, signal positions, and lighting.

Local view of node status, including version information, device IP, server IP, CPU/memory usage, network speed, and runtime without additional software.

Channel status by frame color (e.g., takeover, control, no signal), with ≥11 color choices and adjustable border width (up to 3px). Borders can be hidden.

Allows setting the position and size of each signal channel's floating ball, with low, medium, and high settings for position, and large, medium, and small for size.

The same picture can be displayed on multiple screens with one click.

Supports signal source push from a tablet to an agent for linked operations (server version support, common version requires customization).

A clock, duty list, and other information can be displayed on the large screen for staff query and rotation (custom function).

Button Linkage for controlling multiple buttons via box control and network control

Supports separate audio display on the wall via magic software.

POWER HOT BACKUP	POE and DC 12V adapter power supply hot backup, one failure, the other automatic replacement
OPTICAL NETWORK MUTUAL BACKUP	Supports hot backup communication between optical ports and network ports. When one line fails, the other is automatically replaced
VIDEO INTERFACE	2 channels HDMI1.4, one in and one out
AUDIO INTERFACE	Two 3.5mm audio ports, one in and one out
NETWORK INTERFACE	1 RJ45 10M/100M/1000M adaptive Ethernet port with POE power supply
OPTICAL FIBER INTERFACE	1 SFP optical port
SERIAL PORT	1 programmable 232 serial port (Phoenix head) and 1 programmable 485 serial port (Phoenix head), 1 infrared input, 1 infrared output, 1 IO interface (Phoenix head)
USB	3 USB2.0
NOISE	Fanless silent design
OPERATING TEMPERATURE	10°C-50°C
WORKING HUMIDITY	10%-90% no condensation
EQUIPMENT SIZE	214mm*132mm*34mm
INSTALLATION MODE	Install two devices side-by-side in a 1U telecom standard cabinet



CONTACT US

DIGITAL SIGNAL AV, 454 Las Gallinas Ave. Suite # 1144, San Rafael, CA 94903
415 306 2354 | sales@digitalsignalav.com | www.digitalsignalav.com
