



8K

8K IP-based Distribution System D6900

System Solution_D6900 8K
Visualized Distributed Integrated
Management Platform for
Command Centers



Solution Overview

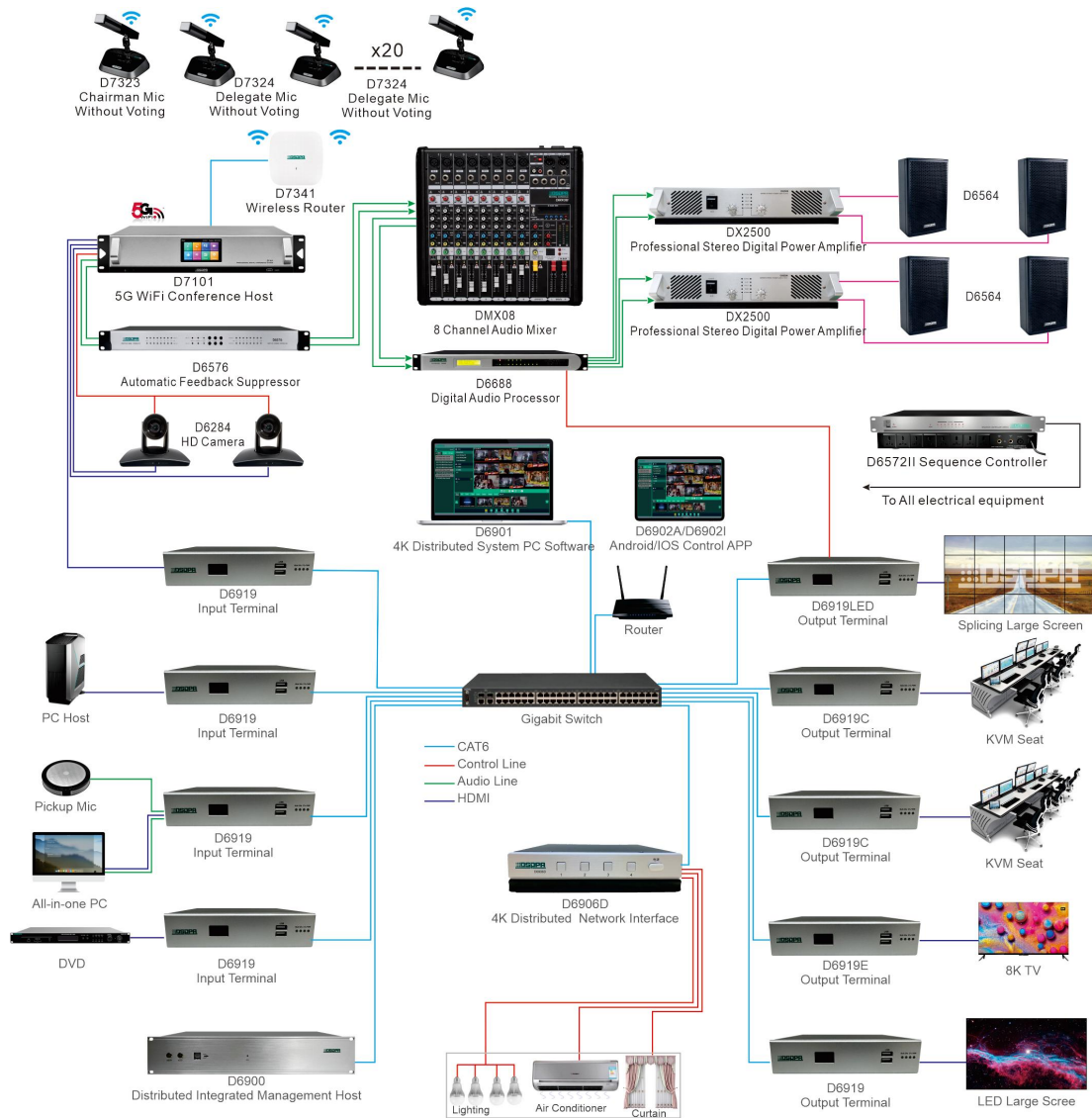
- Command centers are typically tasked with critical responsibilities such as monitoring, dispatching, coordination, and decision-making, all of which involve managing and processing a vast number of video signals. With the increasing resolution of surveillance equipment and the growing complexity of video content, command centers require a highly efficient, stable, and flexible audio-visual matrix management system to achieve seamless switching and display of high-definition, multi-channel signals, enabling operators to view, analyze, and make decisions in real time.
- The DSPPA 8K Visualized Distributed Integrated Management System is designed around the needs of industry users, integrating advanced and reliable technologies such as AV transmission and control, graphical signal switching, multi-screen image processing, networking, and intelligent control. It meets users' comprehensive requirements for a smart management platform that is secure, stable, scalable, interoperable, and easy to operate through visualized interfaces. The system enhances the efficiency of command and decision-making, improves the timeliness of resource distribution and fault prevention, and ensures effective communication during meetings.



Design Objectives

- **Efficient and Reliable Audiovisual Signal Processing:** Ensures high-quality transmission and switching of 4K/8K ultra-high-definition video, supporting seamless management and switching across various input sources and output devices.
- **Distributed Architecture with Flexible Scalability:** Built on a distributed architecture, the system enables signal sharing and management across different devices and zones, allowing for flexible and scalable deployment.
- **Compatibility with Multiple Devices and Systems:** Designed to integrate smoothly with existing equipment and systems in the command center, facilitating system integration and data sharing.
- **Data Security and Privacy Protection:** Provides robust safeguards to ensure the security of data during AV signal transmission and system operation.
- **Flexible Adaptation to Business Scenarios:** Offers customizable solutions tailored to the diverse operational requirements of different command center applications.

8K Distributed Solution Configuration for Command Centers



No.	Model	Product Name	Quantity
4K Distributed System			
1	D6900	Condenser Microphone with 2 Chimes	1 pc
2	D6901	Emergency Audio Decoder	1 pc
3	D6902A	4K Distributed System Android Software	1 pc
4	D6902I	4K Distributed System IOS Software	1 pc
5	D6919	Distributed Digital HD Integrated Terminal	1 pc
6	D6919C	Distributed Digital HD Integrated Terminal	1 pc
7	D6919E	Distributed Digital HD Output Terminal	1 pc
8	D6919LED	Distributed Digital HD Output Terminal	1 pc
9	D6906D	4K Distributed Network Electricity Control Interface Unit	1 pc
10	D6572II	8 Channel Power Supply Sequency Controller	1 pc
Conference System			
1	D7101	Full Digital Conference System Host	1 pc
2	D7341	5G WiFi Wireless Router	1 pc
3	D7323	5G WiFi Conference Chairman Microphone	1 pc
4	D7324	5G WiFi Conference Delegate Microphone	20 pcs
5	D6284	HD Conference Camera	2pcs
Pro Sound System			
1	D6576	Automatic Feedback Suppressor	1 pc
2	DMX08	8 Channel Audio Mixer	1 pc
3	D6688	8x8 Professional Audio Processor	1 pc
4	DX2500	Professional Stereo Digital Power Amplifier (8Ω; 2x400W)	2pcs
5	D6564	250W 10" Two-way Full Range Speaker	4pcs



Configuration Details of the 8K Distributed Solution for Command Centers



- **Command Center Size:** 15 × 20 square meters
- **System Configuration:** DSPPA has provided the command center with a 8K distributed integrated management platform, a 5G WiFi digital conference system, a central control system, a sound reinforcement system, and related peripheral equipment to fulfill its operational needs.

- **Detailed Solution Description:**

The platform adopts a distributed architecture enabling seamless HD video signal acquisition and lossless compression transmission. It faithfully reproduces display information from all systems, effectively enhancing the efficiency of command and dispatch decision-making, timely resource allocation, fault prevention, and simplifying meeting communications.

- **5G WiFi Conference System (D7301):**

In order to meet the needs of the personnel in the command and dispatch center to speak and discuss, the command and dispatch center is equipped with an intelligent digital conference system, which can not only freely switch five speech modes, but also support automatic camera tracking, conference recording and other functions to ensure the safety, stability and order of the conference.

The D7301 5G WiFi conference system enables command center personnel to connect wirelessly from any location, breaking the constraints of traditional fixed connections and offering greater flexibility. Additionally, the system is scalable, allowing for easy expansion of participants and meeting functions to accommodate the evolving needs of the command center.

- **8K Distributed Audiovisual Management System (D6900):**

The distributed system enables seamless interconnection and communication of signals across different zones. Signals from all meeting rooms can be accessed in real time, and the central control room can monitor and manage signals from all venues instantly, with real-time control over equipment in each meeting room. Users can easily link and control signal sources and peripheral devices located in different areas using a wireless touch control device, achieving unified management with just one click. With lossless, zero-compression, and zero-latency transmission, the system reduces unnecessary labor and resource costs during installation, management, control, and after-sales service, making the overall management smarter and more user-friendly.

- **Sound Reinforcement and Central Control Systems:** Additionally, the command center is equipped with a professional sound reinforcement system featuring advanced audio processing and feedback suppression, ensuring clear, loud sound and high voice fidelity on-site. A central control system is also included to unify control over meeting room equipment, lighting, air conditioning, projectors, and projection screens.

Function Introduction of 8K Distributed Integrated Management Platform

- ◆ The 8K Visualized Distributed Integrated Management Platform connects two or more command halls, meeting rooms, or branch offices to enable real-time scheduling, audiovisual interaction, and data coordination across the command center. It integrates advanced technologies such as AV transmission and control, graphical signal switching, multi-screen image processing, network handling, intelligent control, and visualized operation management. This enables high-definition signal acquisition, lossless visual reproduction, environmental control, and seamless interconnection across different zones.
- ◆ The platform is suitable for various application scenarios, including 8K distributed conference systems, 8K distributed command and dispatch systems, and 8K distributed multimedia systems.



Distributed Architecture

Decentralized and fully distributed structure for high system efficiency and stability.



8K Ultra HD

Supports 8K/8K high-resolution output.



Centralized Control

Enables control of third-party devices (via RS232, IR, relay) without requiring a central control host.



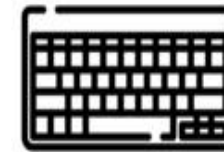
Image Processing

Supports video wall splicing, roaming, cross-screen, and picture-in-picture display modes.



Seamless IPC Integration

Compatible with IP cameras of all major brands for signal acquisition and distribution.



Efficient KVM

Supports KVM workstation management, enabling “operator-device separation” and “one operator, multiple systems” control.



Simplified Installation and Maintenance

Decentralized installation with only one network cable required per node.

D6900 8K Distributed Integrated Management Platform Architecture

Acquisition Layer



HD Input Terminal



IP Monitor

RTSP

RTSP Streaming Address

Platform Layer



Audiovisual Service, Video Surveillance Integration Service,
Conference Recording & Storage Server

Output & Control Layer



HD Output Terminal



Display Wall



Distributed Network Electricity
Control Interface Unit (D6906D)

Application Management Layer



Distributed PC Management
Software

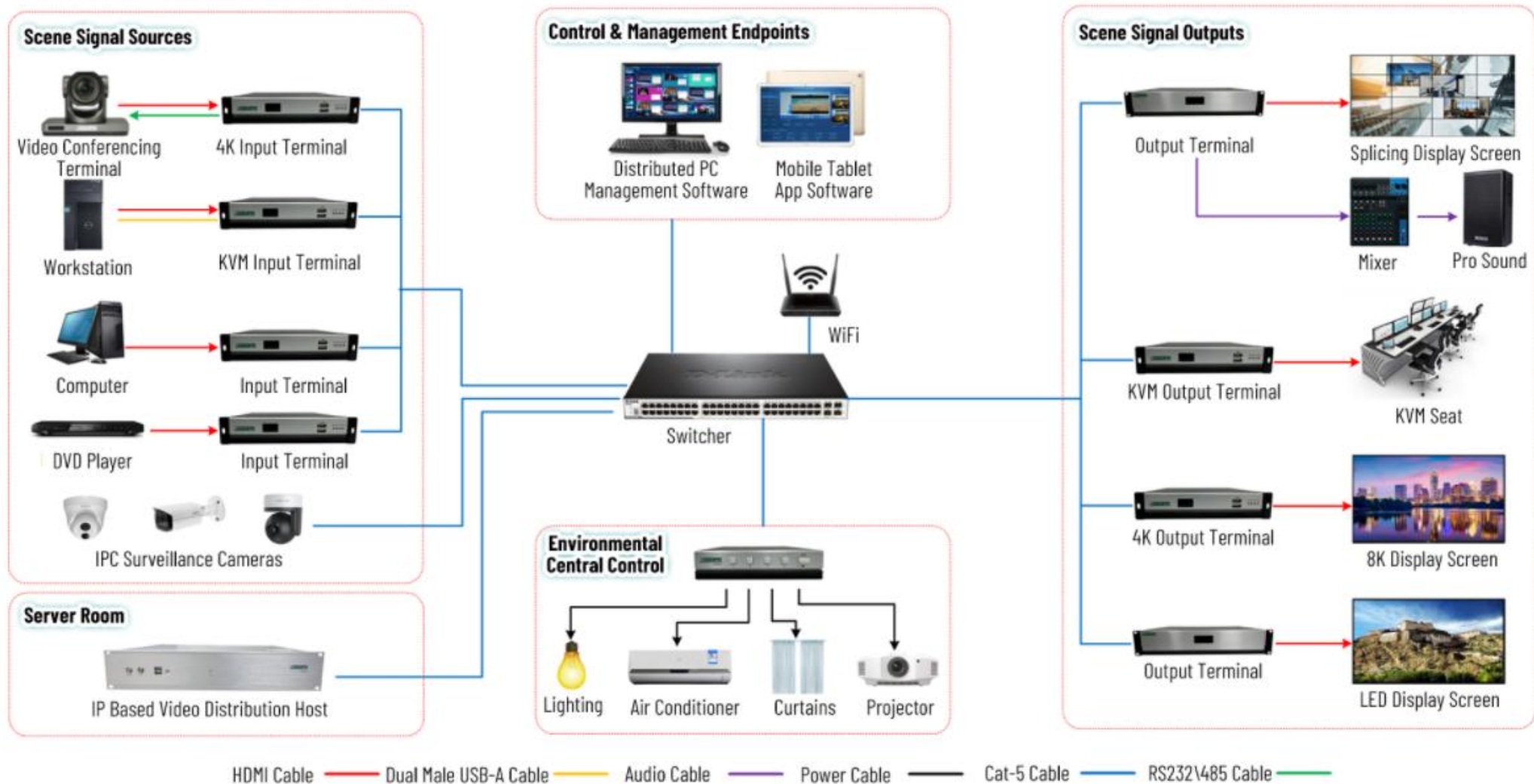


Distributed Tablet Control
Software (Support Android/iOS)



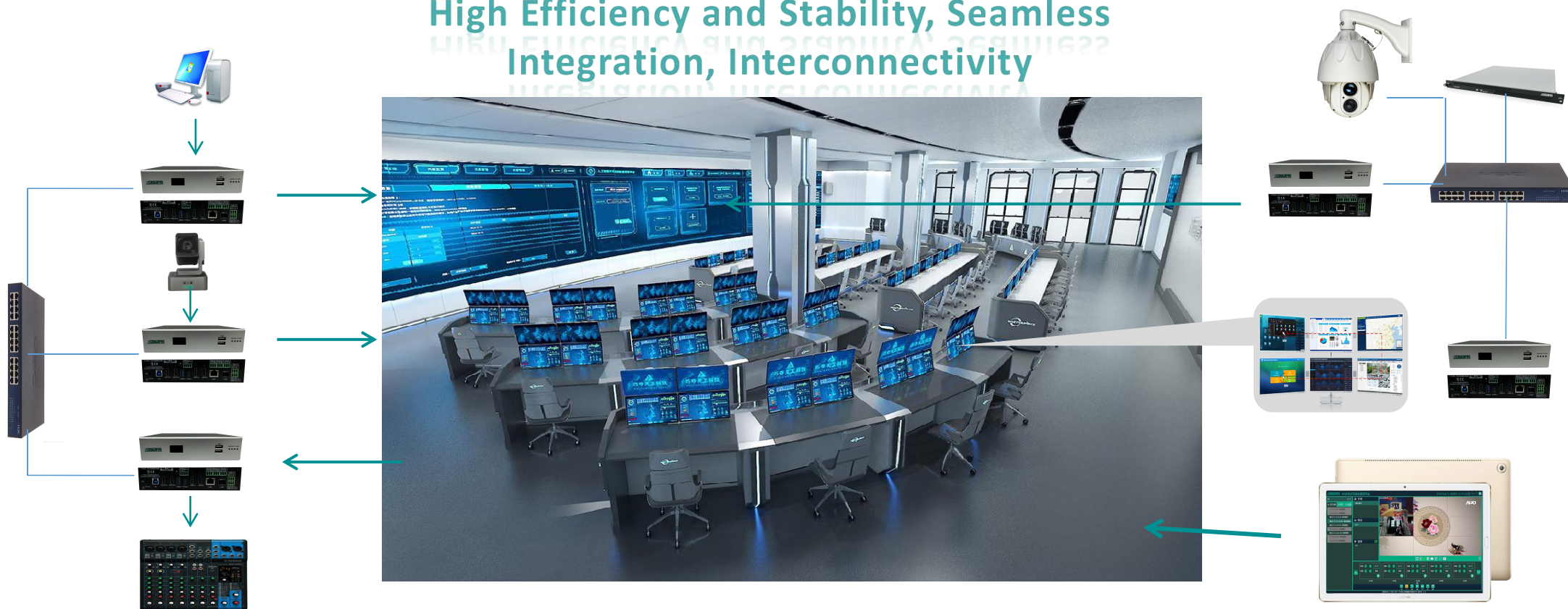
KVM-based Console
Management

D6900 8K Distributed Integrated System Topology Diagram



■ Key Features of the D6900 8K Distributed Integrated System

High Efficiency and Stability, Seamless Integration, Interconnectivity



- An integrated distributed AV HD matrix combining functions such as recording and playback, centralized control, IP camera decoding, image splicing, roaming, cross-screen display, and KVM console management.
- Featuring ultra-high-performance audio and video processing, it supports 8K ultra-high definition, ultra-low latency, visually lossless transmission, high-fidelity restoration, and real-time synchronization with large screens.

■ D6900 8K Distributed Integrated System Product Overview

D6900

Distributed Integrated Management Platform



- Standard 1U rack-mounted server running on a secure and stable Linux system
- Built-in distributed video software supporting IPC access management and NVR control
- Integrated recording applications supporting recording, live streaming, and on-demand playback
- Comes with a standard 1TB storage drive, expandable based on requirements
- User authorization and permission management, environment linkage control, and KVM seat user management

D6901

Distributed PC Management Software



- **Real-time Monitoring:** What you see is what you get — the system provides real-time image previews for video input sources, delivering clear visuals with ultra-low latency.
- **Visualized Operation:** The software supports intuitive drag-and-drop operation and can be managed via touch screen, mouse, or keyboard.
- **Customizable Interface:** The software features a customizable control interface design, allowing functions to be tailored to specific on-site application needs, creating a unique software system.
- The software includes access control settings for managing user permissions.

D6902A

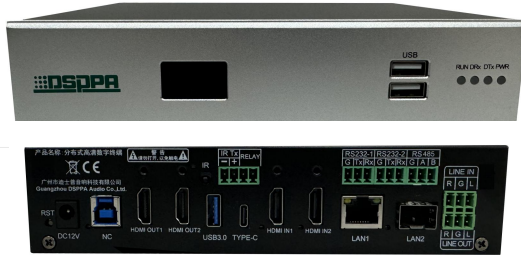
Mobile Control Software



- Quickly view incoming signals with a WYSIWYG (What You See Is What You Get) management image preview, allowing direct monitoring of the video input in real time with clear images and ultra-low latency.
- Supports preview and playback on various terminal devices;
- One-click operations for signal display, zoom, and roaming;
- Quick access to scene presets, environment control, and linkage;
- Comprehensive permission management.

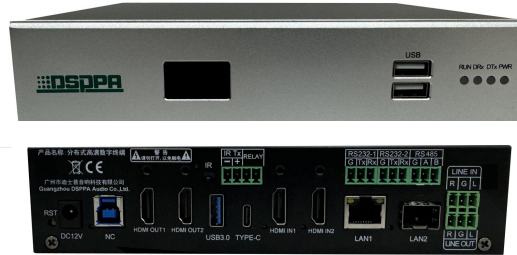
D6900 8K Distributed Integrated System Product Overview

Distributed Digital High-Definition Integrated Terminal (D6919, D6919C, D6919S, D6919D)



- Adopt the latest H.265/H.264 encoding and decoding; built-in audio input and output modules
- The output terminal supports up to 3840×2160@60fps, while the input terminal supports up to 4096×2160@60fps with downward compatibility (input and output are mutually exclusive).
- Optional built-in central control interface (models D6919C, D6919D).
- Equipped with dual gigabit network ports (one optical and one electrical), supporting intelligent dual-backup switching (models D6919S, D6919D).
- Built-in KVM functionality (models D6919C, D6919D), allowing remote device access via the terminal for collaborative operations.

8K60 Output Terminal (D6919E, D6919ES)



- Adopts the latest H.265/H.264 encoding and decoding technology; built-in audio input and output modules.
- Output terminal supports 7680×4320@60fps resolution.
- In splicing mode, supports windowing, overlay, roaming, and scaling on any screen.
- Capable of handling 30 channels of 1080P@30 (4:2:0), 4 channels of 8K@60 (4:2:0), or 1 channel of 8K@60 (4:4:4).
- Equipped with dual Gigabit network ports (1 fiber port + 1 RJ45 port) with intelligent backup switching. (Model: D6919ES)

LED Splicing Output Terminal (D6919LED)



- Adopts the latest H.265/H.264 encoding and decoding technology, with built-in audio input and output modules.
- Supports seamless LED splicing, dual-channel precise synchronization output, and multi-device single-channel synchronized output.
- Output terminal supports up to 3840×2160@60fps.
- In splicing mode, enables windowing, overlay, roaming, and scaling on any screen; supports 30 channels of 1080P@30 (4:2:0), 4 channels of 8K@60 (4:2:0), or 1 channel of 8K@60 (4:4:4).
- Equipped with 1 Gigabit Ethernet port.

■ D6900 8K Distributed Integrated System Product Overview

Distributed Splicing Output Terminal

(D6950/D6951/D6952/D6953/D6954/D6955/D6956/D6957)

- Supports up to 4/8/12/16/20/24/28/32 HDMI output channels, with a maximum resolution of 1920×1080 or 2048×1024 per channel; custom resolutions are supported downward.
- Built-in advanced image processing platform with H.265/H.264 encoding and decoding.
- Supports synchronized display across multiple outputs.
- Allows windowing, overlay, roaming, and scaling on any screen.
- Supports image splitting and overlay, with up to 8/16/32/48/64 layers of overlay.
- Supports Genlock for video source synchronization, ensuring frame-level synchronization between any input source and all output ports.
- Video interface: 4/8/12/16/20/24/28/32 HDMI outputs.
- Audio interface: 1/2/4/6/8 audio outputs (3-pin Phoenix connectors).
- Network interface: 2/3/5/7/9 Gigabit Ethernet ports.



D6900 8K Distributed Integrated System Product Overview

Distributed Digital HD Echo Terminal (D6905/D6905S)

- Supports up to 64 video signal sources for flexible combination, splicing, and echo output to video walls.
- Effectively addresses latency issues in large-scale distributed systems where PC software manages multiple sources for video wall display.
- Equipped with loop-out interfaces, enabling input signal display at the input terminal.
- Supports multimedia video input preview and large-screen echo output across the system, with synchronized operation on PCs, tablets, and all-in-one devices.
- The D6905S model supports dual Gigabit network interfaces (one fiber port and one RJ45 port) with intelligent redundancy and auto-switching.



Distributed Network Electricity Control Interface Unit (D6906D)

- Supports control via network commands.
- Allows local button control for 4-channel high-power relay switches, enabling manual operation in emergencies.
- Status indicators display the on/off state of each high-power relay channel.
- Supports serial port data forwarding.
- Compatible with RS-232, RS-485, and IO interface control, enabling high-power switching control for devices such as projectors, projection screens, curtains, and lighting systems.
- Each high-power control channel supports a maximum load of up to 5000W.





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