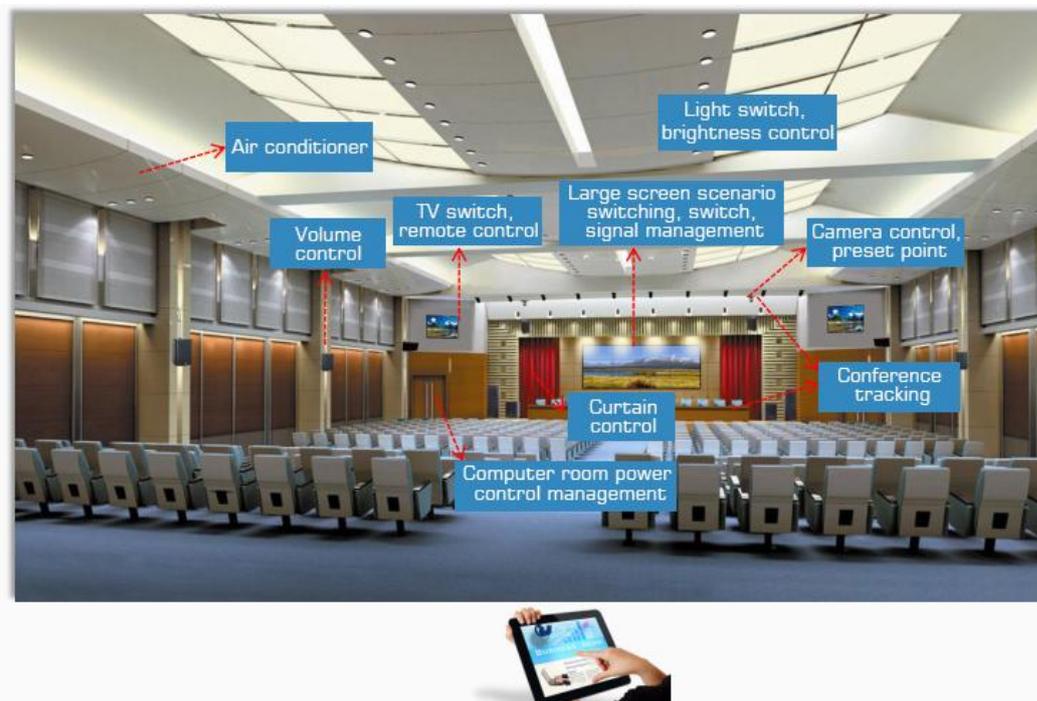


Multifunctional Intelligent Conference Hall

(Paperless Conference system+Video Matrix System +Central Control System)

I. Solution Description

Intelligent Conference System generally consists of conference speech system, central control system, video matrix system, data distribution display equipment, sound reinforcement system and application software. It provides flexible management for all types of meetings, has the advantage of multi-functional, high sound quality, data transmission confidentiality, etc, which can realize comprehensive control for whole process of meetings.



There are 4 subsystems in Intelligent Conference System. The intelligent system of this project consists of Paperless Conference System (D7600), Central Control System (D6401), Video Seamless Switch System(D6108), Sound System (Mixer, AMP, Speaker)

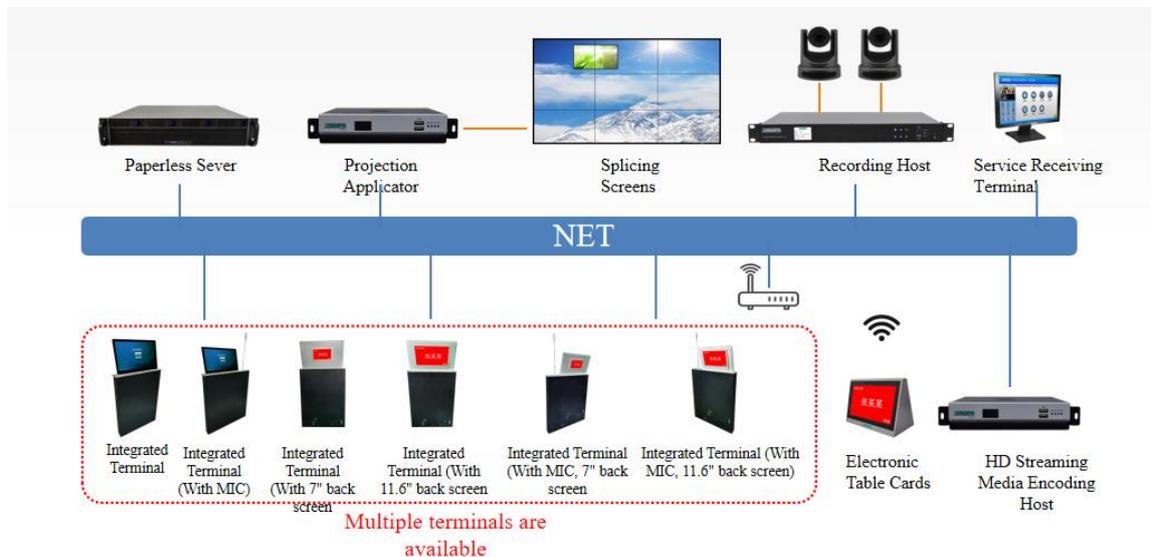
➤ Paperless Conference System (D7600)

DSPPA [paperless conference system](#) is a paperless conference system tailored for government party and government organs, enterprises and institutions, and large group enterprises, providing powerful conference application functions. It includes meeting information upload, document distribution, reading and viewing, document

annotation, meeting sign-in, voting, electronic whiteboard, document interactive transmission, video interactive transmission, meeting communication, information notification, meeting services, information recording, etc. With rich functions, simple and intuitive interface, convenient, stable and reliable operation, it can help meeting organizer greatly reduce work pressure, easily conduce conference site management and control and improve the meeting efficiency of participants. Besides, it also saves a lot of material printing costs and projection equipment, which is fully in line with the national low-carbon and environmental protection concept.



Diagram of Paperless Conference System (D7600)

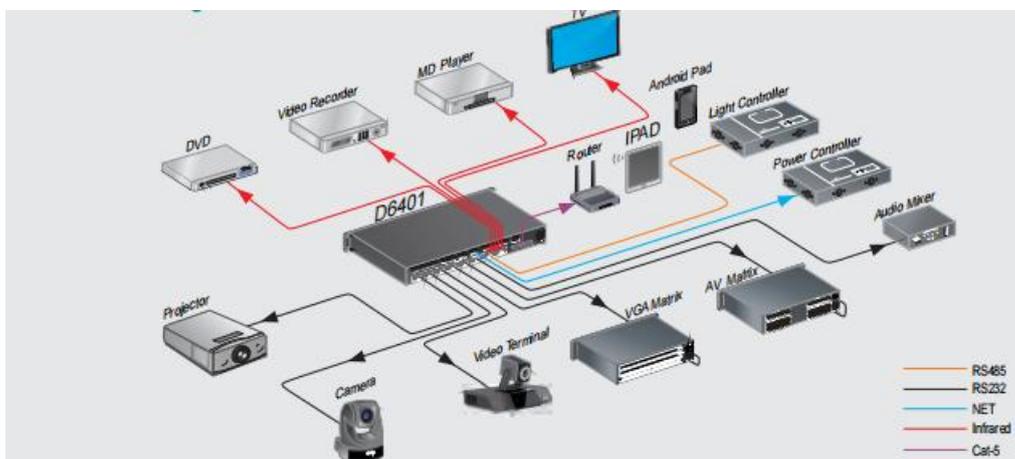


➤ **Central Control System (D6401)**

DSPPA Central Control System is the core of the audio and video system. It can be operated independently to achieve automatic conference control, or controlled by staff via computer for more complex management. It is operated by wireless touch screen (IPAD or mobile phone control) to realize environmental control (air conditioning temperature control, curtain control, lighting control), camera tracking and projector control, projection screen and hanger lift control, audio and video switching control, digital audio processor volume adjustment, etc.



Diagram of Central Control System (D6401)



➤ **Video Seamless Switch System (D6108)**

With the process of science and technology and improvement of people’s living standard, the demand and popularity of electronic devices are increasing. For example, signal conversion on stage, signal display and storage in security systems, video and audio signal processing in multimedia conference rooms, etc. DSPPA 2K HD Seamless Hybrid Matrix adopts EMI chassis structure design, which is compatible with input/output signal cards of different signal types; The integrated signal cards include HDMI, DVI, VGA, SDI and AV seamless input/output signal cards. Combining the functions of different signal cards can solve the problem of comprehensive audiovisual. It supports multiple signal input and output cross matrix switching, each video signal, audio and video signals are transmitted and switched separately, so that the signal transmission attenuation is reduced to a minimum, full seamless switching. It enables high-fidelity output of image and sound signals, and can be paired with any of the input and output signal cards.

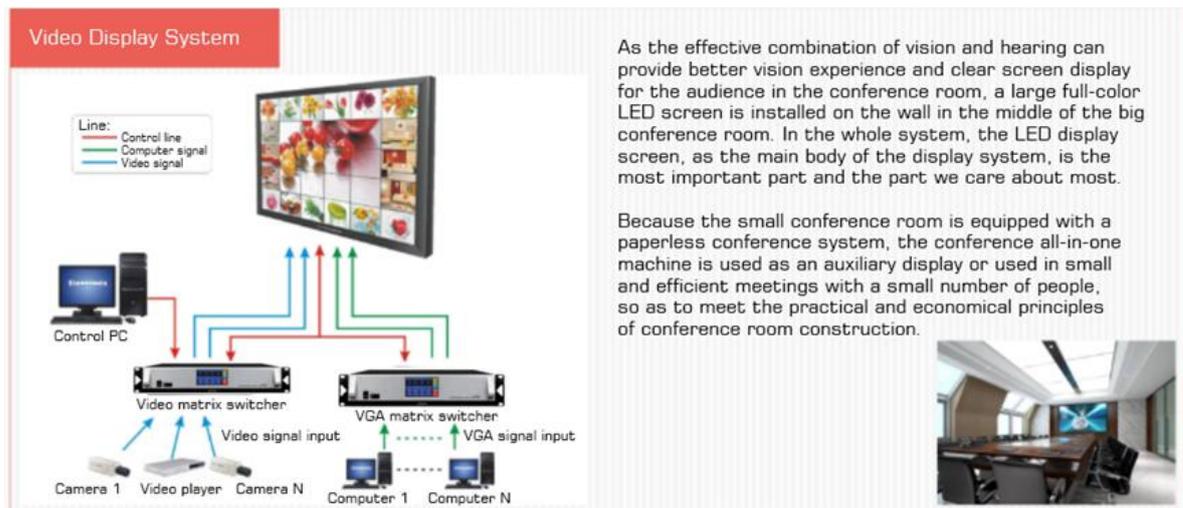
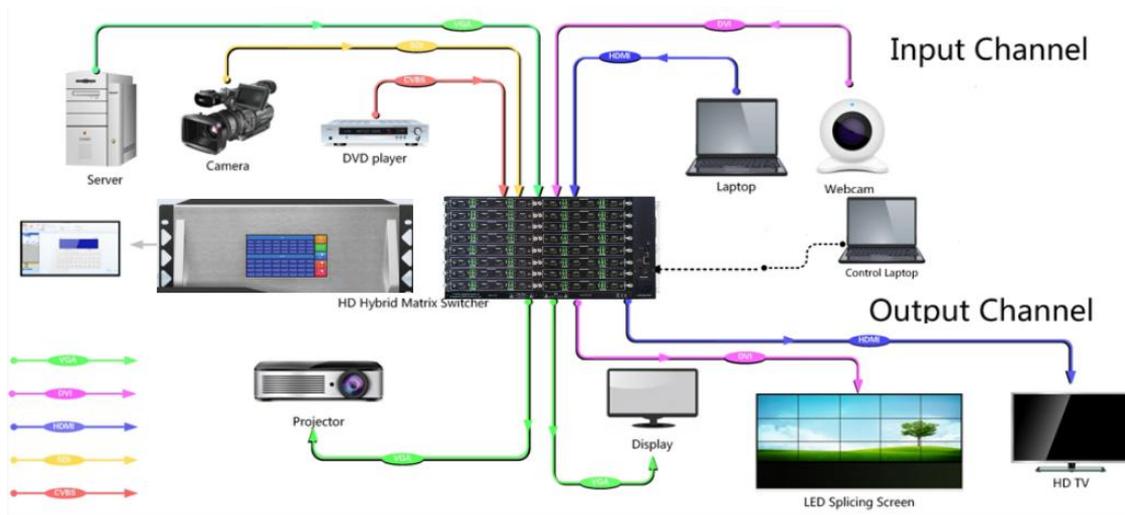


Diagram of Video Seamless Switch System (D6108)

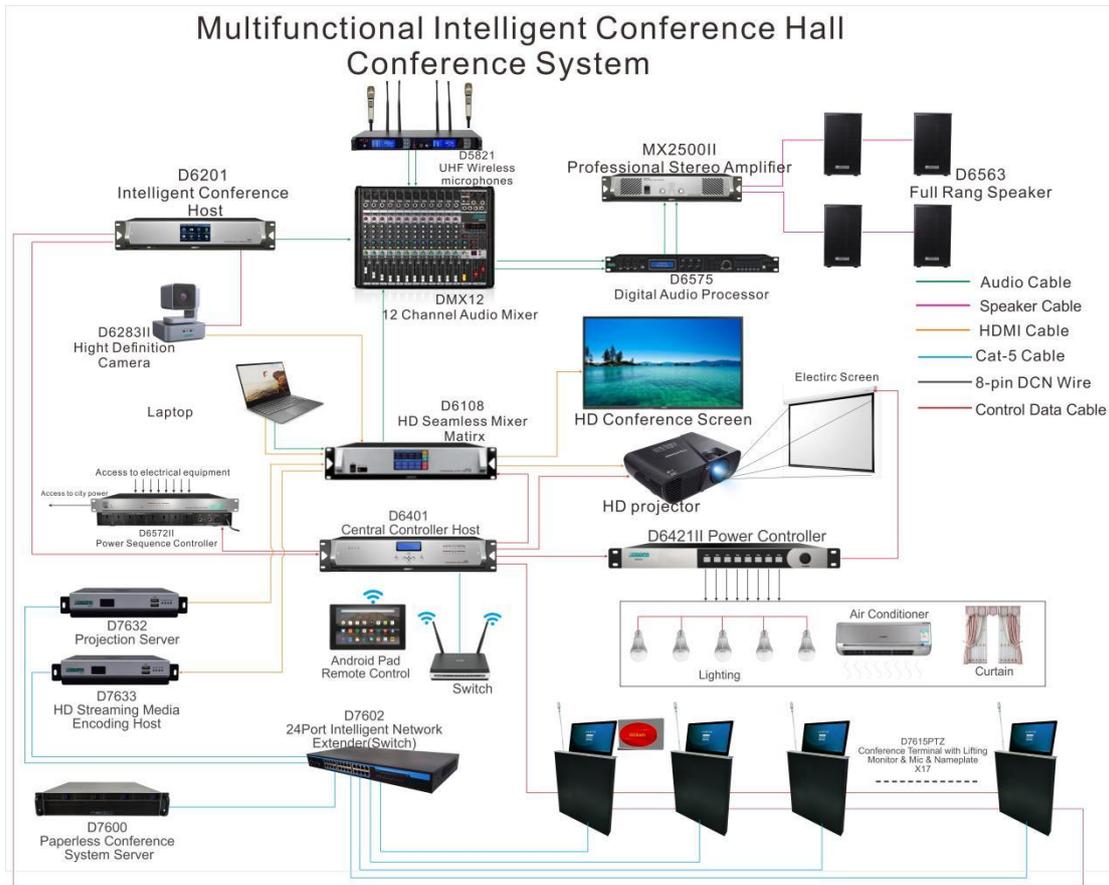


➤ Sound System (Mixer, AMP, Speaker)

Sound Equipment System is mainly composed of loudspeaker, amplifier, mixer, microphone, audio source and other equipment. It can realize simple meeting, presentation, special topic report etc. Professional audio processing equipment like mixer, audio processor and others can make the on-site language clear, distortion-free, silent feedback whistle, etc. Combined with meeting area appropriate professional audio is configured to make the sound pressure margin sufficient. The sound field will be evenly distributed and the sound image positioning will be accurate.



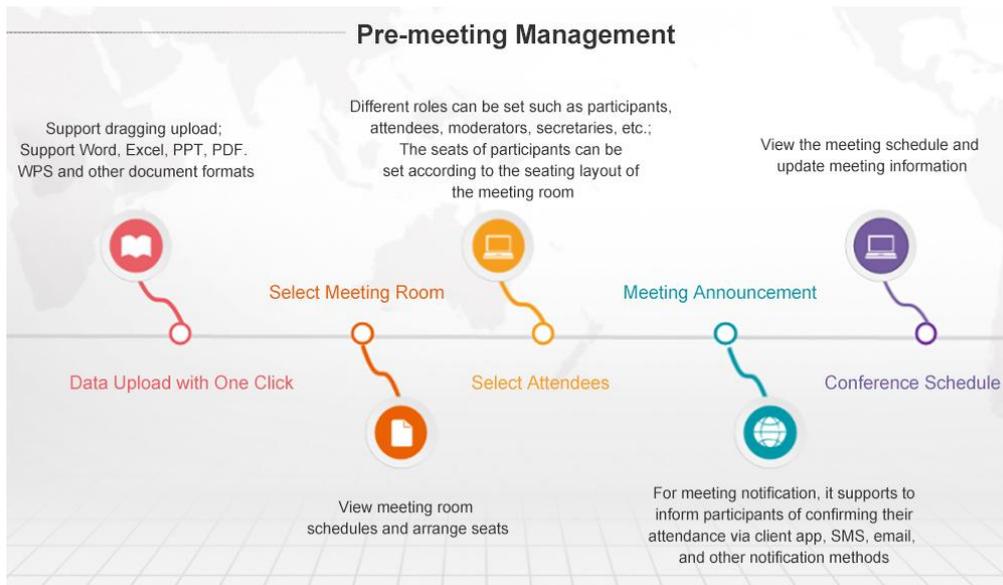
II. Overall system connection diagram



III. System Functions

➤ Paperless conference system section





Function Modules: You can choose from function modules such as personnel management, meeting agenda, topic management, meeting minutes, voting, meeting communication, centralized control, personnel arrangement, etc. Paperless to match with meeting terminals.

Meeting Establishment: Meeting topics, hosts, secretaries, begin time and expected end time, meeting location and other meeting information can be set. Paperless to be matched with meeting terminal.

Conference Presets: The system supports conference presets, which allow users to set up meeting information and topic files in advance according to meeting conditions, has one-touch start function, supports multiple conference information presets and default conference settings.

Staff Management: Information entry for participants; One-to-one settings; Bulk import of staff's information; Permissions setting for staff; Chairman function; Broadcast permissions; Export permissions; Visa-free features; Bid permissions; File viewing permissions.

Topic Management: Set topics before the meeting; Multiple topics can be set simultaneously; Setting of topic permissions; Unlimited topic file formats, including WORD, Excel, PPT, PDF, CAD, etc.; Support audio format MP3/WMA, image format JPG/JPEG/BMP/GIF/PNG, and original file upload (no reformatting).

Smart Sign-in: One key to join the meeting and sign-in, and the information is summarized and stored in the background host.



Voting Management: Voting content; Voting methods, real name or anonymous; Scored voting, customized voting, selective voting are supported.

Handouts: Documents of various types and formats can be handed out (documents, pictures, PPT, PDF) amid meeting; Supporting original document distribution, temporary document and fixed document distribution; Securing the whole meeting Paperless.

Browse: Intuitive display of meeting topics; Support multiple topics synchronized display; Search and browse with one click; Support PPT dynamic playback and topics viewing permissions.

Document Annotation: During the meeting, you can annotate the meeting issue document; Support one key to start the annotation, the original document annotation and comments; Save the original document annotation and automatically upload the background host; Support common office files: WORD, PDF.

Whiteboard: Support personal and interactive use; Allow people to write on the same whiteboard; Support archiving and loading of whiteboard content and its synchronizing to the projector.

File Upload: Paperless The conference terminal panel with USB interface can read USB files and upload them to the host.

Voting: Edit the conference voting title, options, description, type; One-click voting; Voting terminals can output real-time voting results to a large screen.

Signal Interaction: Conference documents, electronic whiteboard, video playback, computer desktop, and document annotations can be broadcast to other terminals with one click on the same screen. Paperless, supporting asynchronous browsing and tracking of the main speaker function, and supporting synchronous broadcast permission setting.

Connectivity: Various HD images and videos from remote video, cameras, laptops, computers, DVDs, etc. of the meeting venue can be broadcast to each conference terminal. Paperless, the projector or large screen for synchronous display.

Asynchronous Browsing: When the presenter starts the same screen broadcast amid the meeting, any conference terminal can browse asynchronously and exit the same screen broadcast to enter the free template, supporting tracking of the presenter with one click to quickly enter the same screen broadcast state, and permission restrictions setting.



Information Record: After meeting, you can record and view a variety of information, including check-in, voting, annotations, staff, conference and other information with one-click.

Information Export: The meeting information can be exported to the local hard disk of the background host for storage or transmission to other meeting terminals for storage.

Conference Clearing: Clear the conference information automatically or manually; Support the server to automatically clear all the conference terminal information; Paperless; Support the conference terminal to automatically clear all the conference information.

➤ Central Control System section



The diagram shows a central 'Control System' unit connected to various components: Ceiling light, Air conditioner, Display screen, Curtain, Power supply, Sound reinforcement, and Camera.

The centralized control system is the core of the audio and video system. It can be operated independently to achieve automatic conference control, or it can be controlled by the staff through a computer to achieve more complex management.

All conference room equipment, such as: digital audio processor, video switching matrix, projector, camera, video conference terminal, lighting, etc. can be controlled by iPad or iPhone. The intelligent central control system can also be connected with other systems like curtains to enable participants to experience the efficiency and convenience brought by information technology.

The central control equipment is the core of the system design, integrating lighting, machinery, projection, and audio and video control methods to provide users with simple and direct control schemes, so that users can easily grasp the status and function of each device in the entire space environment.



- 1. Audio-Video Switching:** Through the 8-channel control panel and the voice control panel, the audio/video of the control matrix is freely switched, ensuring the unified control and management.
- 2. Camera Tracking:** Connected with digital Conference System to achieve camera tracking, which can provide close-ups of the speakers.
- 3. Projector Control:** The central control panel controls the projector power switch, display screen switch via serial RS232 protocol or infrared transmitter.
- 4. Power Management:** Projected curtain, electric curtain, HD TV and other consumer devices can be controlled and managed in a unified way, such as up and down, on and off etc.
- 5. Volume Control:** Control and adjust the volume of the microphone, DVD, etc. of the conference room; All volume levels and numerical percentages are displayed on the touch screen, so that the user can see at a glance the volume control of the system.

6. Infrared Control: DVD, air conditioner and other devices with infrared probes can discard cumbersome remote control by infrared learning of the central control host.

And then Control and manage can be achieved with a single wireless touch screen.

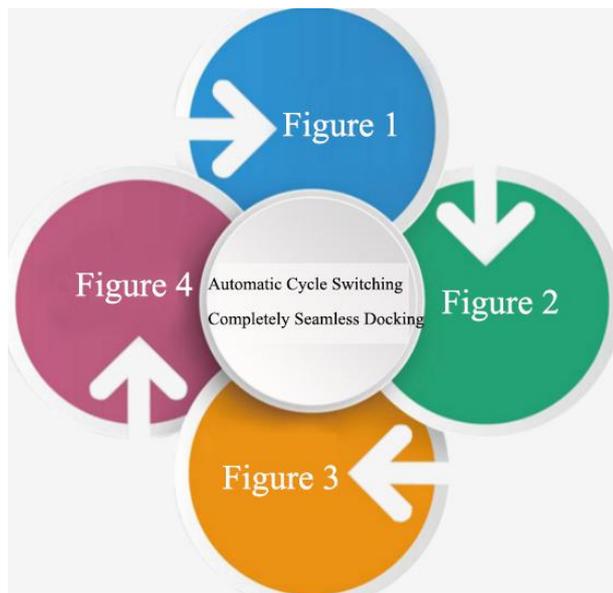
7. Scene Switching: Several scenes can be set in the central control program, and one-click switching can be achieved through the wireless touch screen.

8. Light Control: Control the brightness/status of the lights.

➤ **Video Seamless Switch System section**

Automatic rotation cycle switching: HD matrix system can set cycle channel, cycle time and interval, which can easily realize automatic signal interval switching.

Full Seamless switching function: Built-in seamless switching card, switching without black screen, no splash screen, no special effect transition. Seamless output supports VGA/SDI/HDMI/DVI/AV signal formats, HDMI perfectly supports interlaced and progressive scan output.



1. Adopt EMI chassis structure design: The chassis all use EMI structure design, effective prevention of electromagnetic radiation and electromagnetic wave interference, more stable performance.

2. Ultra-long time non-stop operation: the matrix system can be 7 * 24 hours of ultra-long time non-stop operation, the average time of failure more than 10000 hours.

3. Multifunctional control software: HD matrix multi-functional control software can be applied to a variety of operating systems, can be achieved on the HD matrix signal switching, rotation settings, system settings, easy to install. Ready to use after installation, no debugging required.

4. ESE protection: The increasing number of highly integrated electronic component devices has also led to the use of sensitive and expensive chips. ESD protection is particularly important

5. Automatic rotation function: It comes with a rotation function, which can be switched according to user requirements. Users can set parameters such as rotation switch, rotation time and rotation channel to meet your various display needs. It provides up to 32 user-defined output channel configuration schemes, and can store and recall the schemes at any time, and switch to your saved display state with one click.

6. Power failure protection: the so-called power failure protection function, that is, switching equipment in normal operation can store the last channel switching command, when the power failure occurs due to unexpected circumstances, the device will still save this command. After being powered on, the device will automatically return to the original switching state.

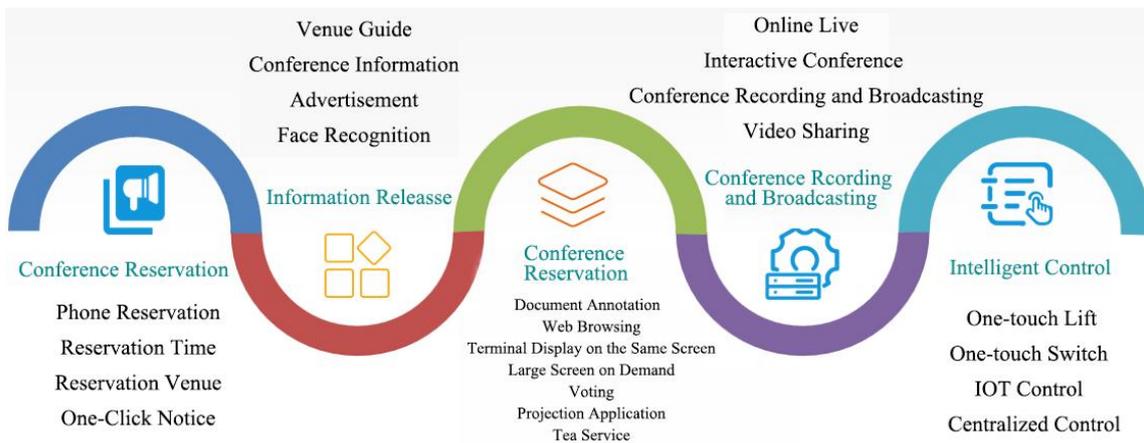
7. Various audio and video matrix switching control: for video, HDMI, VGA image and audio signal switching control function. It will realize the convenient and fast switching of video signal sources from satellite signals, cameras, remote conference system, HDMI, VGA signals, and audio signal sources from mixers, computers, conference microphones, remote terminals, etc. to video and audio terminal output.

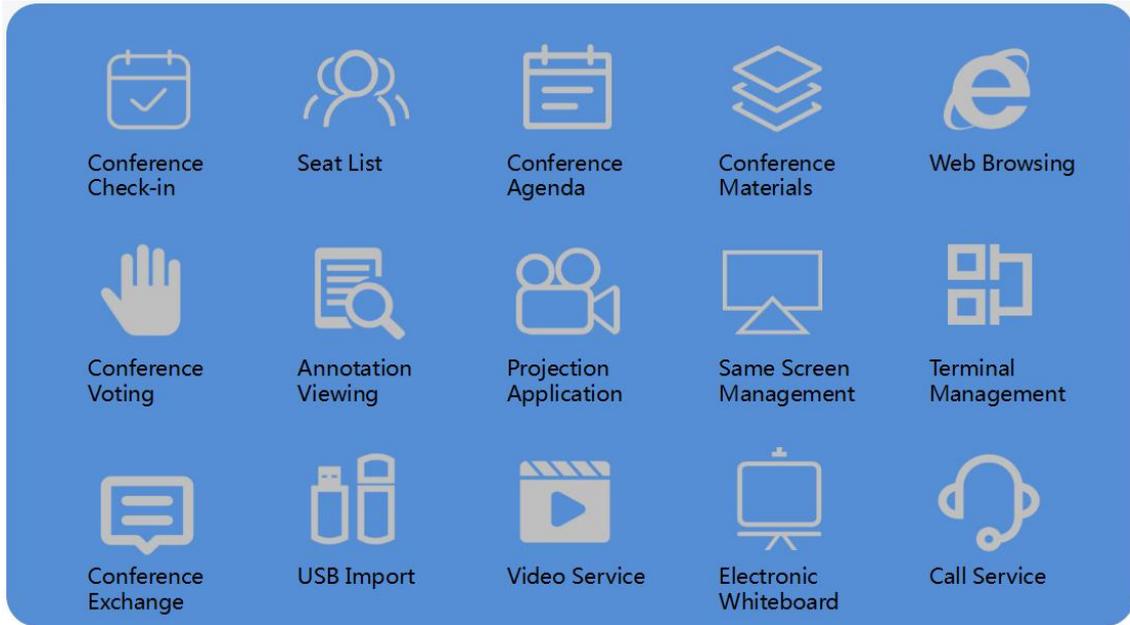
8. Video signal processing function (seamless switching): high-bandwidth professional switching chip, built-in seamless switching card, switching without black screen, no flicker screen, 120" main projection screen, large splicing screen, brightness 6500 lumens engineering projector.

It works with two camera D6283II, which can realize the coordination, processing and switching of input and output signals. The input signal can be arbitrarily switched and combined to achieve a very flexible signal central processing function.

IV. Main Devices:

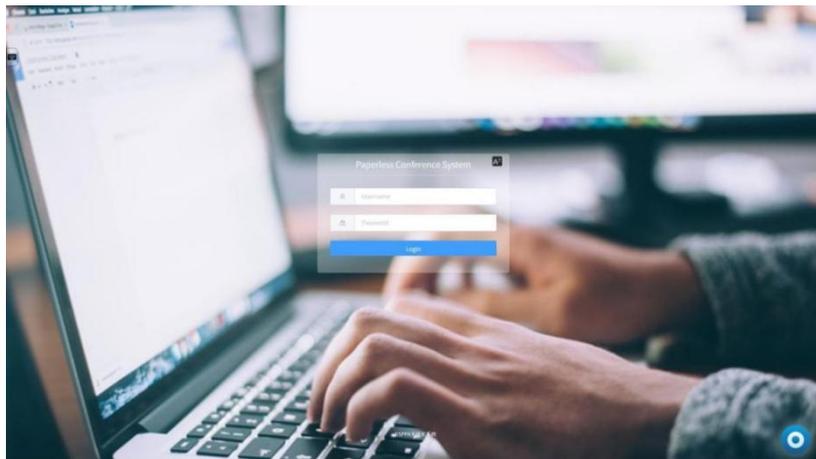
➤ Paperless Conference Series Products and Function





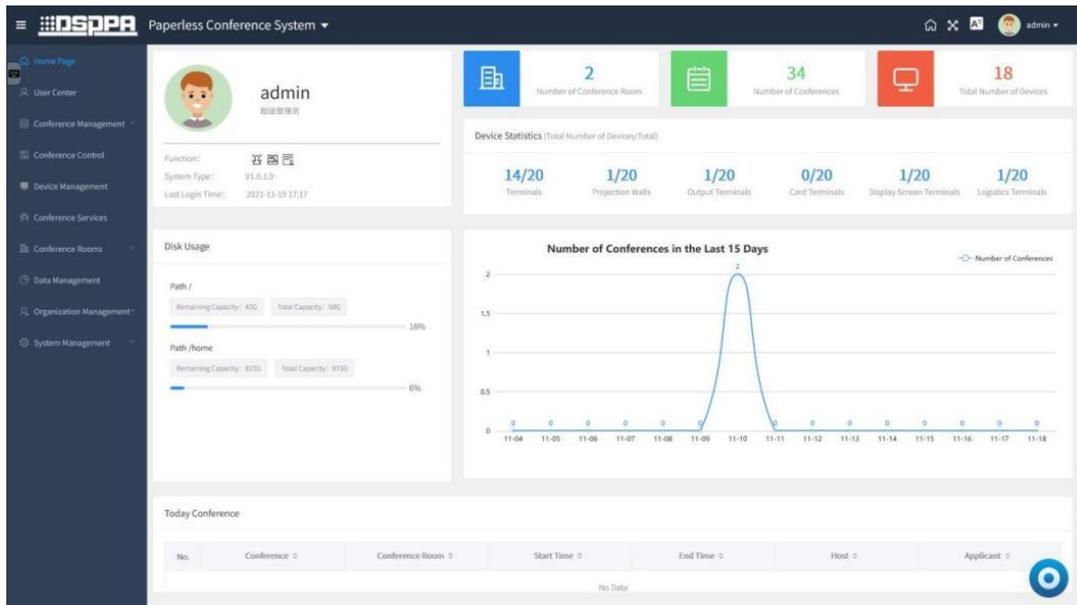
➤ Backstage Software Operation Instruction

1. Login Interface



The default user name is admin and the password is admin as well.

2. Main Interface



D6108/6116/6132 2K HD Seamless Mixed Matrix



D6108 8 Input & 8 Output



D6116 16 Input & 16 Output



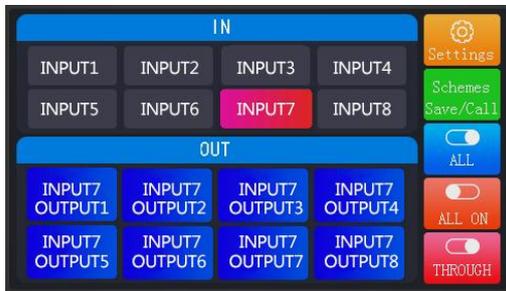
D6132 32 Input & 32 Output

Hybrid Matrix Boards

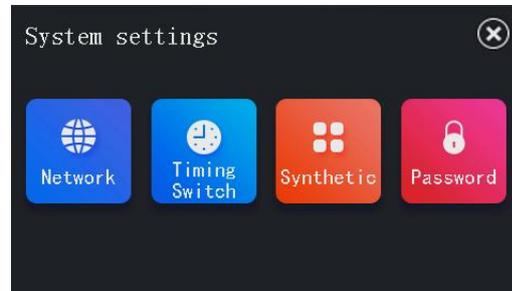
DSPPA 2K HD Seamless Hybrid Matrix adopts EMI chassis structure design, which is compatible with input/output signal cards of different signal types; The integrated signal cards include HDMI, DVI, VGA, SDI and AV seamless input/output signal cards. (Each board has 4 channels, and there are each-way video signal board, audio and video signal separate transmission board, separate switching board). Combining the functions of different signal cards can solve the problem of comprehensive audiovisual.



Hybrid Matrix Device Operation Interface: Take D6108 as an example



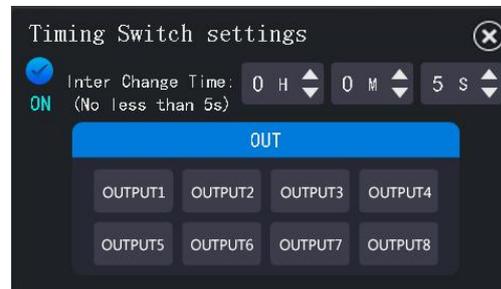
All Interface



System settings interface



Audio settings interface

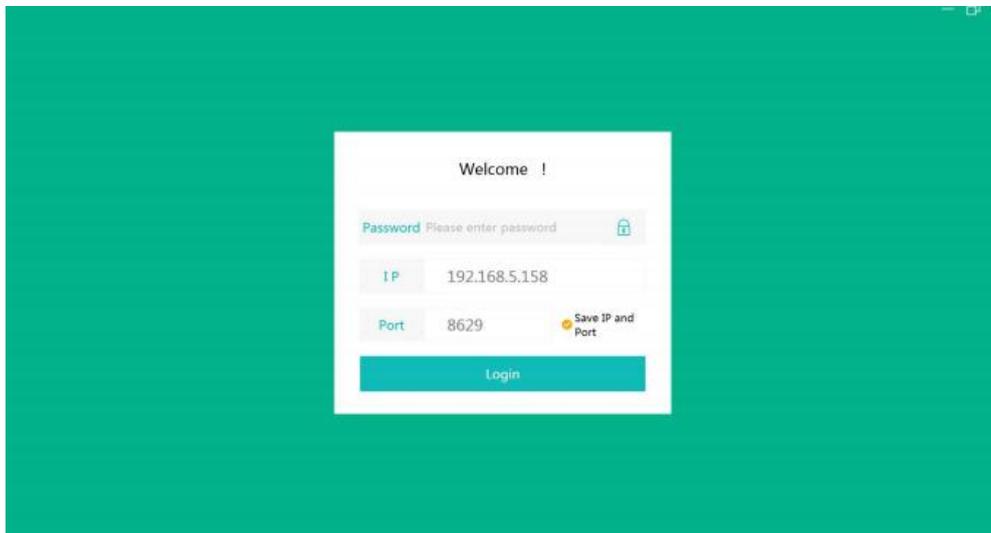


Timing switch settings interface

PC Software Operation Interface: Take D6108 as an example

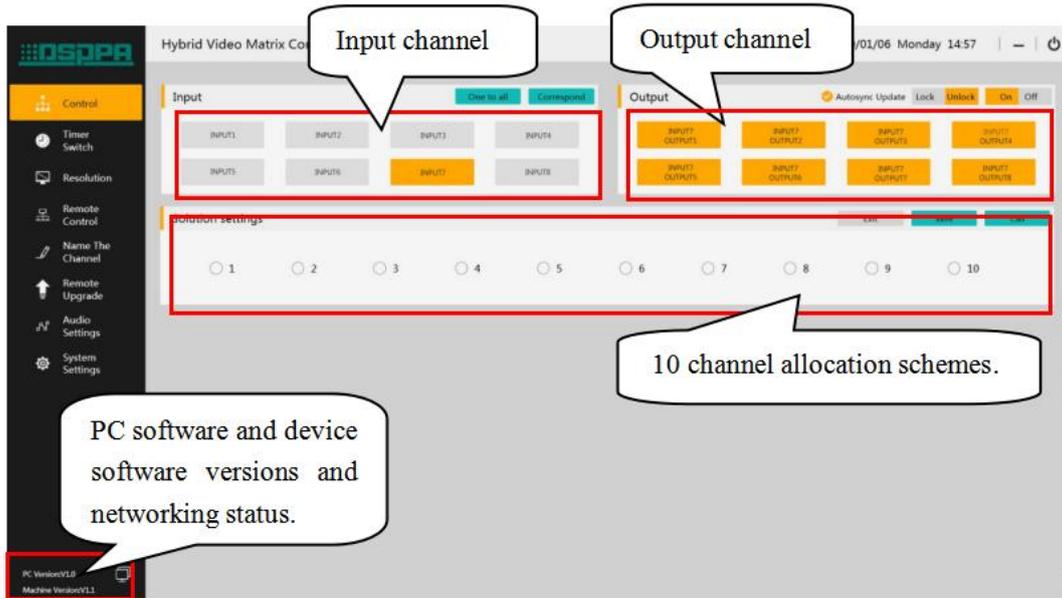
Run the PC software, and enter the Login interface as shown below. The user can enter the factory IP address and port, then enter the original password 123, and click the “Login” button to enter the main interface. The “

Run the PC software



Main interface:

The left side of the main interface is the input channel, and the right side is the output channel. Numbers 1-10 are 10 channel allocation schemes set by the user



D6401 Central Control System



The software of the central control system will program the control commands according to the equipment to be controlled at the customer's venue.

Take 4 way strong incandescent lamp dimmer control, as a case study for the central control system programming.

The screenshot shows the DSPPA software interface. On the left is a 'Device List' table with columns for device type, IP address, and other parameters. A right-click context menu is open over a '4-way strong incandescent lamp dimmer' device, showing options like 'Modify 1', 'Delete 1', and 'Add Single Step Command'. On the right is a 'Modify 4 way strong incandescent lamp dimmer' dialog box with the following fields:

| Field | Value |
|-------------|----------------|
| Device Name | 1 |
| Device ID | 5933824 |
| IP Address | 192.168.90.139 |

Step description:

1. Modify the device name.
2. Right-click on the selected device and click "Add Single Step Command"

V. Application:

Mainly used in radio and television engineering, multimedia conference halls, large-screen display engineering, television teaching, command and control centers and other occasions

