



LA1420+ LA1420S ProAV Sound System for Huge Banquets

Solution Overview

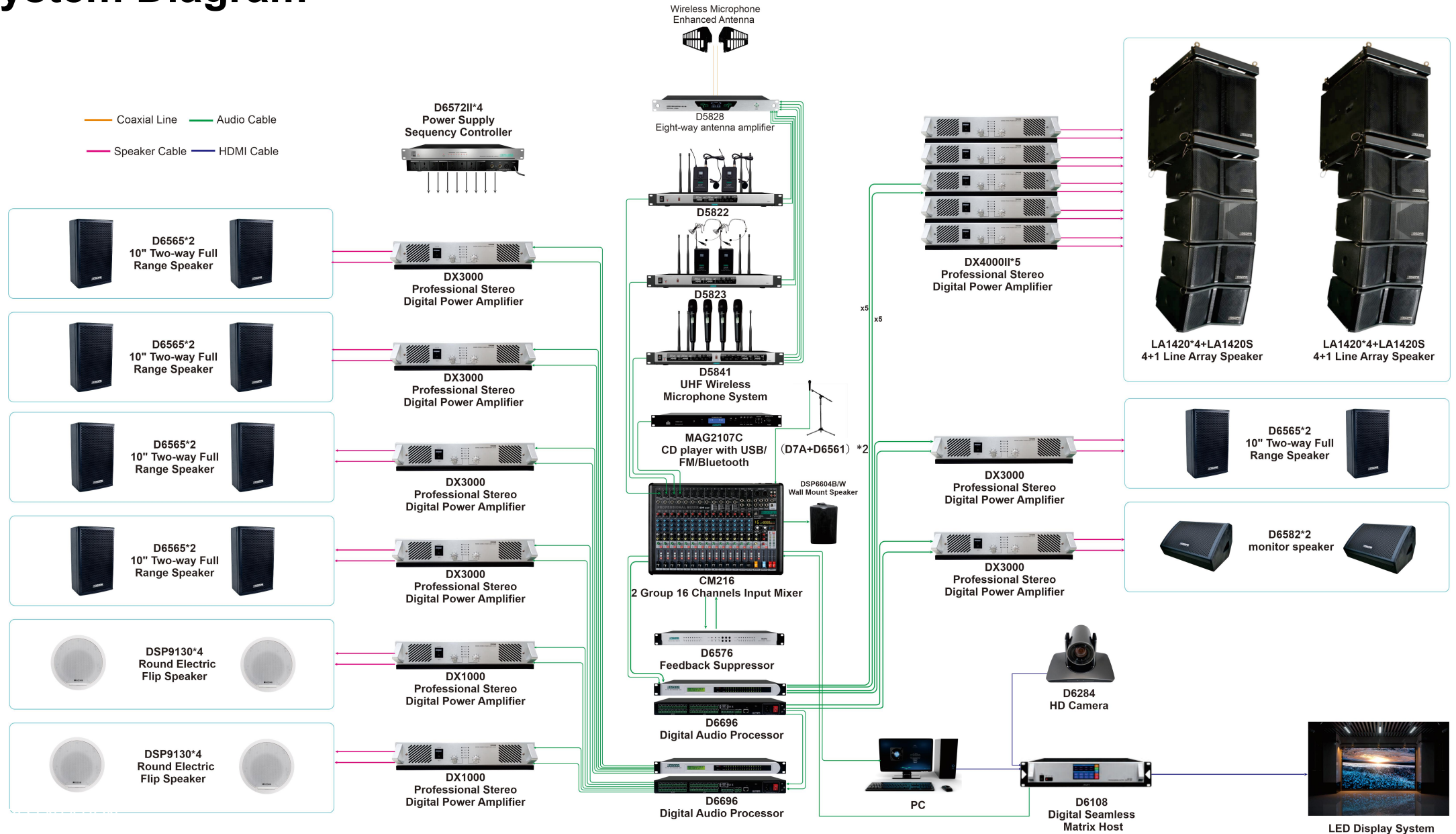
- The banquet hall can accommodate 700-800 people, with an area of 1,000 square meters, a length of 40 meters, a width of 25 meters, and a trapezoidal stage.
- The ballroom offers a wide range of events, including business banquets, wedding banquets and small musical performances. The system is designed to provide voice reinforcement, high-quality background music, and experiential acoustics for small musical performances.



Design Target

- **Quality Requirement:** High quality language balance and natural and smooth sound of background music can be presented its equalization effect.
- **Coverage:** The uniform sound of banquets should make sure that all regions can enjoy loud sound and avoid the sound distortion and some corners can not hear the voice.
- **Compatibility:** This system supports language sound reinforcement, background music and the need of small musical performances, it has high flexibility.
- **Aesthetics and Architecture:** We must focus on the installation of devices, because we should keep the aesthetic requirements of the hall to enjoy the food and avoid taking up too much space .

System Diagram



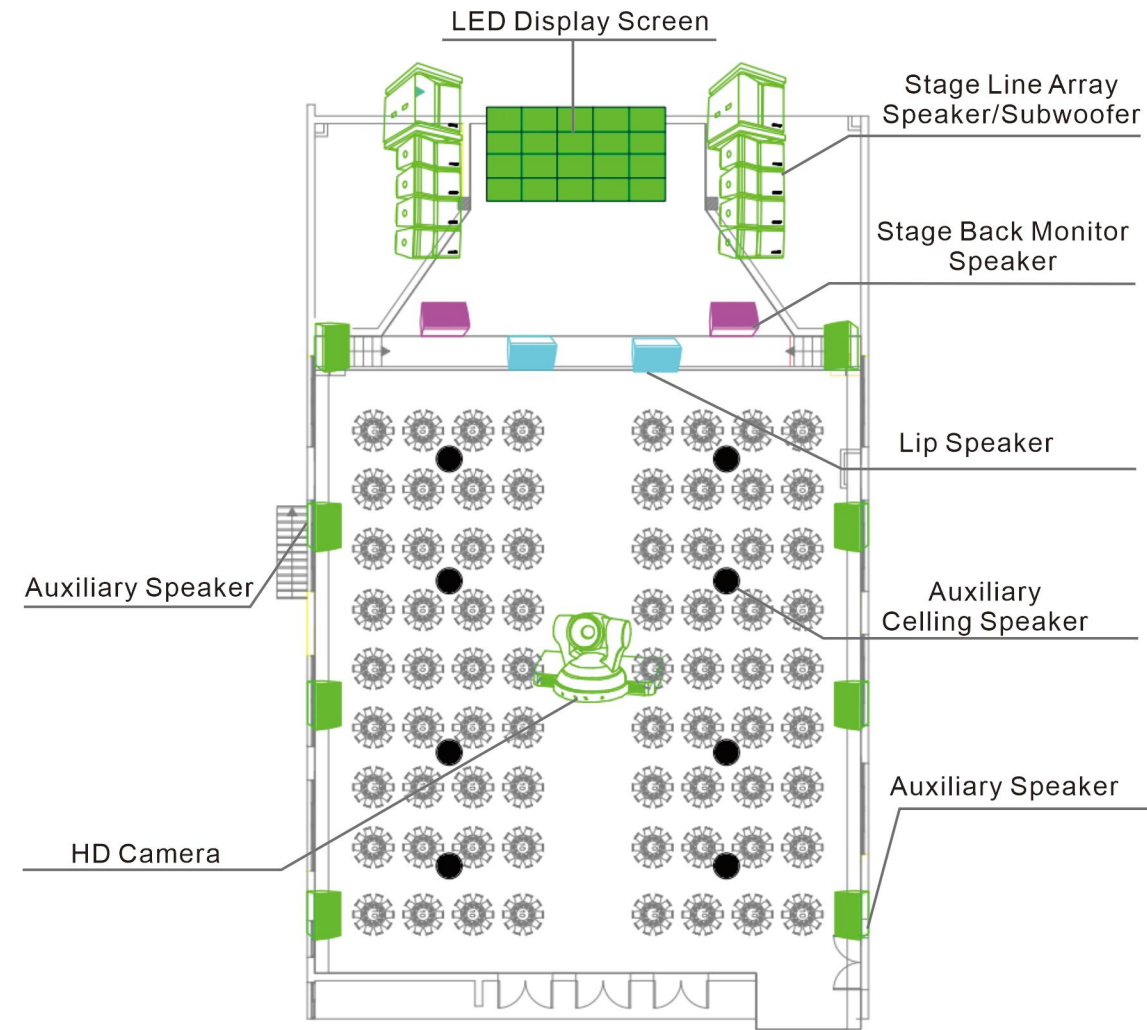
Note: This system solution is for reference only. Please contact us if needed.

Recommended Solution Configuration List

No.	Model	Product Name	Quantity
1	MAG2107C	1U CD player with USB/FM/Bluetooth	1
2	D5841	True Diversity UHF Wireless Microphone System (4 hand-held mic)	1
3	D5822	True Diversity UHF Wireless Microphone System (2 clip-type mic)	1
4	D5823	True Diversity UHF Wireless Microphone System (2 head-set mic)	1
5	D5828	8 Channels Outdoor Antenna Signal Amplification	1
6	D6561	Hand-held Dynamic Microphone	2
7	D7A	Microphone Stand	2
8	DSP8063P	Active Monitor Speaker	1
9	CM216	2 Group 16 Channels Input Mixer	1
10	D6576	Automatic Feedback Suppressor	1
11	D6696	16x16 Professional Audio Processor	2
12	LA1420	650W Passive Array Full Range Speaker (1 PCS)	8
13	LA1420S	1000W Passive Array Subwoofer	2
14	DX4000	Professional Stereo Digital Power Amplifier (8Ω; 2x1000W)	5
15	DX3000	Professional Stereo Digital Power Amplifier (8Ω; 2x650W)	1

No.	Model	Product Name	Quantity
16	D6565	12" Two-way Full Range Speaker	2
17	DX3000	Professional Stereo Digital Power Amplifier (8Ω; 2x650W)	1
18	D6582	Conference system dedicated monitor speaker	2
19	DX3000	Professional Stereo Digital Power Amplifier (8Ω; 2x650W)	4
20	D6565	12" Two-way Full Range Speaker	8
21	D5A	Professional Speaker Bracket (Wall Mount)	1
22	DX1000	Professional Stereo Digital Power Amplifier (8Ω; 2x150W)	2
23	DSP9130	30W Round Electric Flip Speaker	8
Video System(Optional)			
24	D6108	8 Channel Digital Modular Seamless Matrix Switcher	1
25	D6104HR	4 Channels HDMI Digital Input Card	2
26	D6104HC	4 Channels HDMI Digital Output Card	2
27	D6284	HD Conference Camera	1
28	D6572II	8 Channel Power Supply Sequency Controller	4
29	D1.2E	XLR plug Male-Female	42
30	MP30U	30U 19" Floor Stand Audio Rack with Electric Fan	2

■ Solution Configuration Description



Schematic Diagram

● Pickup Section:

- Different types of true diversity wireless microphones, including handheld, lavalier, and headset microphones, can be adjusted and used according to different needs to ensure that the speech is needed, and in order to ensure that the wireless signal will not be interrupted and cross-frequency and other failures, we are also equipped with an antenna amplification system

● Regulatory Part:

- A high-performance audio processor is used to fine-tune the system's frequency response, optimize the sound field, and adjust the delay to ensure that the sound throughout the hall is clear and natural. The system also integrates automatic feedback suppression to avoid feedback issues between the microphone and speaker. Equipped with a professional audio mixer to ensure accurate adjustment of the audio signal. The control system should be equipped with a well-developed operator interface that allows the sound engineer to quickly adjust the volume, frequency, and effects.

● Acoustic System:

- Due to the rectangular structure of the banquet hall, the line array speakers will be distributed in the front of the hall, using a strong directional dual 10-inch line array for decentralized sound amplification, the line array not only has a large sound pressure level, but also can adjust the vertical angle according to the listening surface, and each group is also equipped with a single 18-inch subwoofer to compensate for the lower limit of the low and medium frequencies. Make sure you can provide enough low-frequency energy during small musical performances.
- The auxiliary sound reinforcement system adopts 8 250W constant resistance speakers to fill the middle area, because the banquet hall is too large to prevent the uneven sound distribution in the middle area, and add eight ceiling speakers to fill the middle area to ensure the uniform distribution of sound pressure level, and meet the requirements of the auditorium in terms of aesthetics and functionality.
- Depending on the venue, there are 2 monitors and 2 lip speakers to fill the sound gap between the stage and the front row audience.
- Monitor speakers: Provide a monitoring system for the stage so that the performer or host can pre-listen to the music that will be played, preventing accidents from happening at the show.

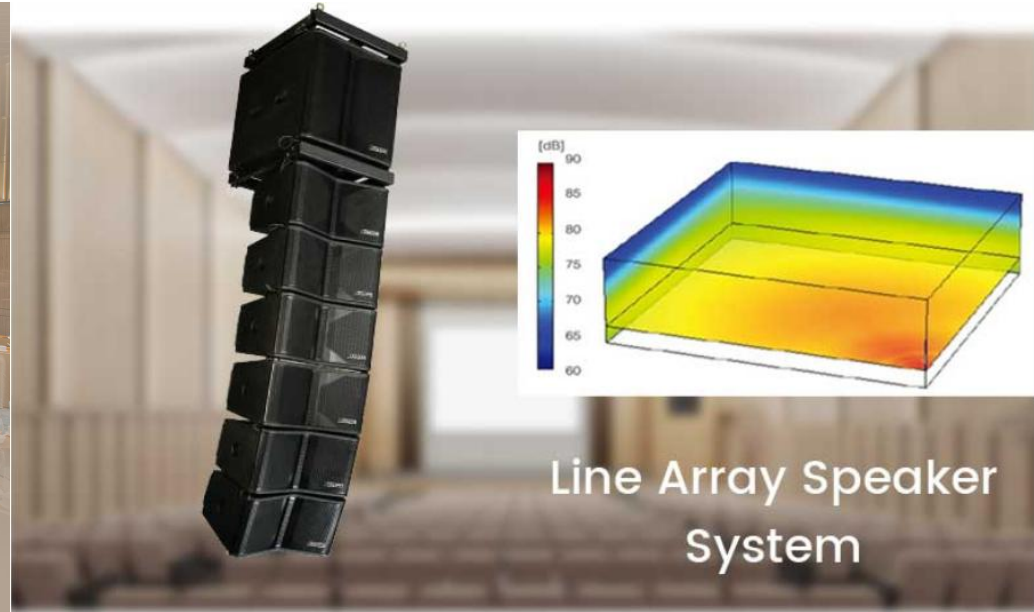
● Video System:

- Equipped with a PTZ camera, it can be remotely controlled during the event to ensure the capture of important scenes. In addition, it is equipped with an 8-channel video matrix host, which can process multiple signal sources at the same time, and can flexibly transmit video signals to different display devices.

● System Protection:

- In order to prevent the safety and reliability of system equipment during use, especially in the event of accidents, it can protect the equipment from damage. It is mainly equipped with a power sequencer.

LA1420 LA1420S Professional Line Array Speaker System



- The LA1420 features a rated-output 650W ahigh-frequency array speaker system with2x10"Bass+2x1.75"Treble and a large 18" subwoofer (LA1420S), producing best-in-class sound pressure levels of up to 128dB SPL . Offering an impressive 120° horizontal and 10° vertical coverage, the LA1420 delivers clear , high-quality sound consistently throughout a wide area.
- LA passive compact linear array system, with remarkable performance and easy installation characteristics, can be flexibly configured and used according to different acoustic amplification requirements

■ D6565 Professional Conference Speaker



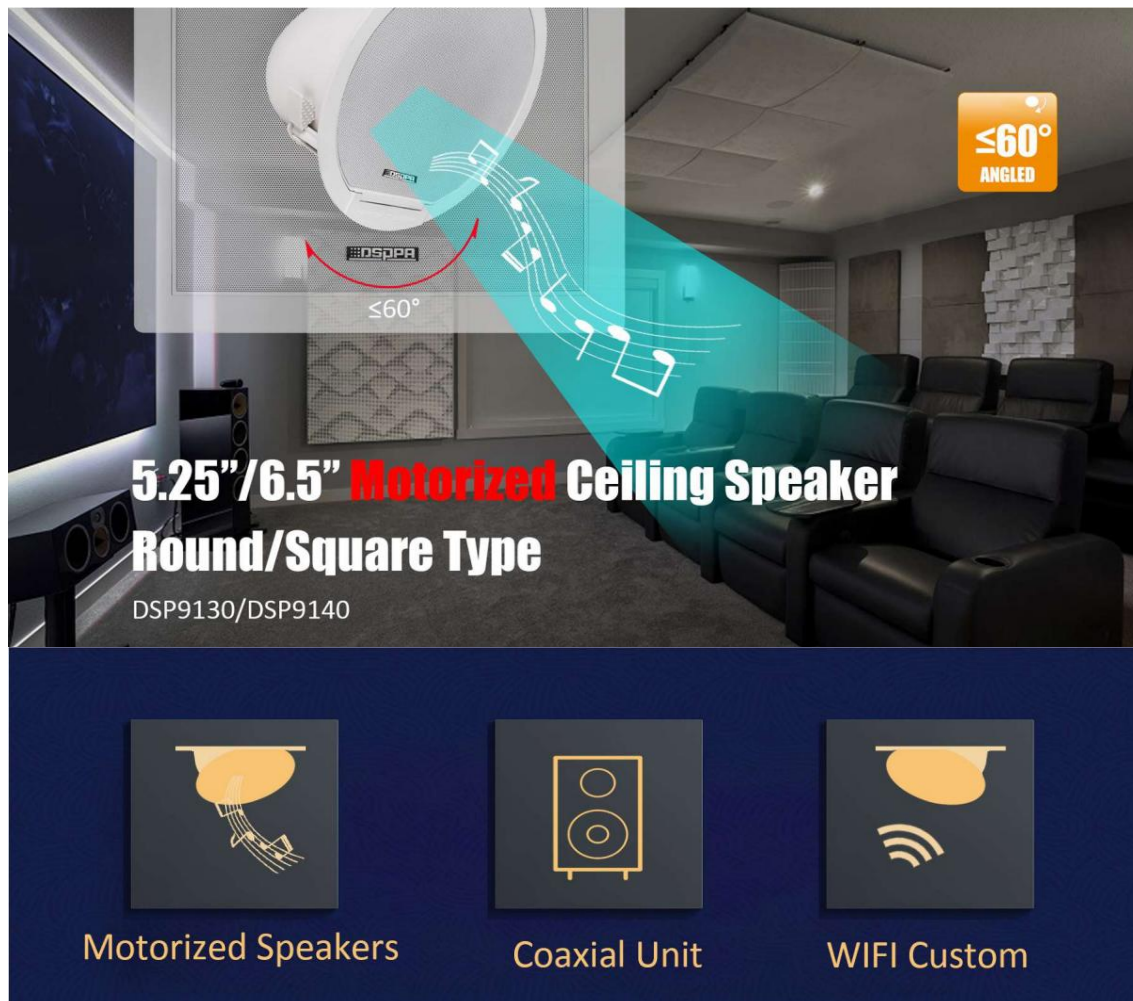
- Inverted low-frequency radiated and two-way full-range system: Delivers powerful low-end and loud high-end to ensure balanced sound for large spaces.
- Durable enclosure design: Black headlight water-based paint and acoustically transparent cotton enhance sound quality and effectively reduce noise and reflections.
- Efficient unit configuration: Ensure sound quality, stability, and adapt to long-term use.
- Hanging mounting: Saves space and ensures even sound distribution.

■ D6582 Conference-Specific Stage Monitor Speaker



- High performance and sound quality: The speaker system is equipped with high-quality drivers that provide efficient sound effects, ensuring that the sound covers the entire stage area, ensuring that the people on the stage can hear their feedback in time, and never adjust the white line
- Inverted low-frequency radiation: The inverted design can enhance the performance of low frequencies and improve the low frequency response of the sound system.
- Two-way design: A two-way system is able to separate the low and high frequencies to optimize the performance of each of them. It can ensure the accurate restoration of the sound and avoid mixing distortion
- Acoustic Sound Mesh and Metal Mesh Design: The horn wears a metal mesh and is attached to the acoustic sound mesh foam, which helps to reduce noise and improve the noise and accuracy of the sound.

■ DSP9130 Electric Flip Speaker



- Moderate power and high degree of heaviness, and make sure the volume is adequate and the sound is clear.
- Wide frequency response, delivers clear highs and loud bass to adapt to different audio needs.
- Sufficient maximum SPL to maintain good acoustics in larger spaces.
- The auto-flip function will automatically flip to a set angle according to the audio signal DSP9130 optimize the sound field effect
- High-quality coaxial driver with clear sound and deep bass.
- Rugged design for wall use and impact resistance.

■ D58 Series UHF Wireless Microphone System



- The D58 series wireless microphone system ensures flexibility and keyboard flexibility during events. Considering how many speakers or performers there may be on stage, multiple wireless lavalier microphones and handheld microphones can be equipped.

■ D6284-HD Conference Camera



- This high-definition IP conference camera, with a 2.14MP HD CMOS sensor and advanced image processing, ensures lifelike visuals and smooth video on low bandwidth.
- Equipping the ballroom with the D6284 HD conference camera provides clear video capture, enhances interactivity, and enhances the professionalism and viewing of the event.

■ D6108 2K HD Hybrid Matrix System



- The 2K HD seamless matrix system is a high-performance intelligent switching device designed for audio and video signal switching, supporting multiple input and output signals for seamless switching and blending, delivering clear and smooth video quality.



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