

D7111

IP Digital Conference System Host



Description

The full digital conference system is built on an ARM + FPGA platform, integrating high-performance DSP digital audio processing technology and high-fidelity circuit design. It seamlessly combines advanced control and audio processing technologies, delivering digitalized control, high-quality audio transmission, and intuitive visual operation, providing a comprehensive solution for high-end conference applications.

The IP Digital Conference System Host features a full digital distributed architecture with network-based transmission, integrating functions such as speaking, sign-in, voting, and messaging. It supports multi-channel audio matrix outputs with independent control, flexible routing, and high-quality processing including feedback suppression and EQ adjustment. Designed for scalability, it accommodates large-scale wired and wireless deployments with flexible mixed use, while ensuring system reliability through redundancy switching and low-latency synchronized transmission. With support for PC and web-based management, camera tracking, and seamless integration via multiple interfaces, it provides a powerful, flexible, and efficient core for modern conference systems.

Features

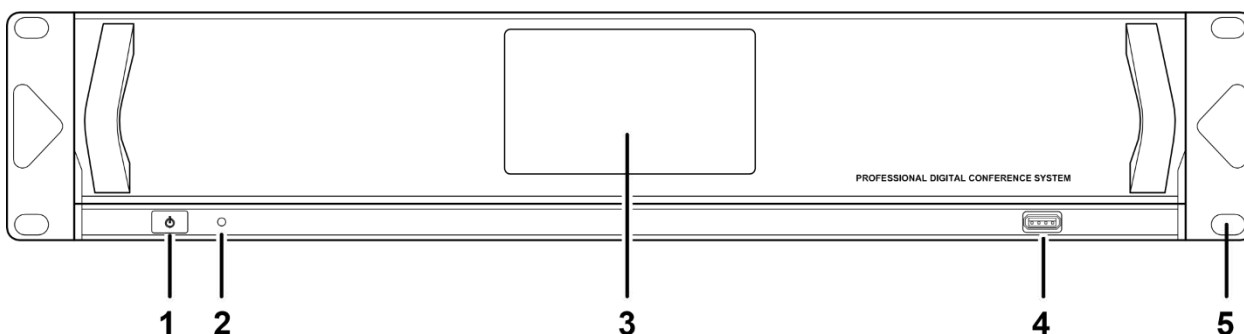
- Full digital distributed conference system, adopting an ARM + FPGA + DSP audio processing architecture with network-based digital transmission.
- Integrates multiple functions including speaking, sign-in, voting, rating, messaging, tea service, and zone output.
- Equipped with DSP + FPGA processors, supporting 20-channel audio matrix zone outputs + 1 mixed output. Features include feedback suppression, 12-band EQ adjustment, and volume/delay control, with gain sharing available on the mixed output.
- Supports ≥ 20 channels of wired and wireless role-based separated outputs. Each wired or wireless conference unit can be independently output based on its ID, enabling individual recording via recording software or integration with speech transcription systems.

- Supports ≥ 20 channels of simultaneous interpretation outputs, with audio independently output by zone channels for recording or monitoring purposes.
- Supports ≥ 20 channels of phased output, with a built-in $\geq n \times 20$ audio matrix processor enabling grouped output. Input sources (including LINE / EMC / MP3 and all active conference units) can be flexibly routed to any output channel.
- Utilizes audio clock synchronization transmission technology, with latency < 5 ms and 48 kHz uncompressed audio transmission for high-fidelity sound quality.
- Supports mixed use of wired and wireless conference units.
- Supports up to 6 chairman units and 32 VIP units.
- With expansion via PoE network switches, a single system supports up to 4096 wired conference units; via WiFi AP, up to 300 wireless conference units can be connected.
- When only wired conference units are connected, up to 24 units can speak simultaneously; when only wireless conference units are connected, up to 6 units can speak simultaneously; when both wired and wireless conference units are connected, up to 18 wired units and 6 wireless units can speak simultaneously.
- Supports main/backup redundancy switching, automatically switching to the backup host in case of failure to enhance system reliability.
- Supports hand-in-hand (daisy-chain) connection and ring topology dual-link backup.
- Supports independent recording and mixed recording of conference discussions; allows recording of a single conference unit or the mixed audio of all units; supports recording via USB storage on the main unit or through PC software.
- Compatible with interpretation units, supporting up to 6 languages for simultaneous interpretation.
- Supports single or dual meeting room modes; dual meeting room mode enables discussion function. Two conference rooms can share one main unit without interference.
- Supports LAN port +48V power control, allowing LAN1, LAN2, and WiFi ports to output or cut off +48V power.
- Supports RS232 connection for seamless integration with central control systems; chairman units can control devices connected to central control modules.
- Main unit integrates a camera tracking system; RS422 interface centrally controls cameras, enabling automatic camera tracking.
- Uses TCP/IP network protocol and supports both C/S and B/S architectures.
- PC or web interface allows adjustment of 20-channel audio zone matrix parameters (including EQ, volume, and delay), and individual conference unit EQ, volume, and unit sync switch; supports scene function with up to 10 preset scenes.
- PC or web interface allows the main unit to initiate sign-in, voting, and rating.
- PC software can monitor online wireless conference unit battery levels, WiFi signals, etc.; supports one-click power-off for all wireless units or individual unit control, and modification of UHF transmission frequency.
- Supports five conference modes: FIFO, normal, voice, free, and apply.
- Features unit detection function with automatic or manual detection.
- Supports speech timing and countdown reminders. the timer can be set for each unit or turned off.
- Supports three expansion module slots (two sizes); optional modules include 2K seamless matrix, 4K seamless matrix, UHF transmission, USB interface, central control, and audio input modules.
- Audio interfaces: 1 \times RCA stereo auxiliary input, 1 \times RCA stereo alarm input, 2 \times XLR balanced outputs.
- +5V alarm trigger input, combined with alarm audio input, enables emergency override function.
- Main unit and chassis reinforced with grounding; withstands 4kV contact discharge and 8kV air discharge.
- 4.3-inch full-color touchscreen with modular interface design, displaying system information at a glance.
- 2U standard chassis, compatible with 19-inch standard racks.

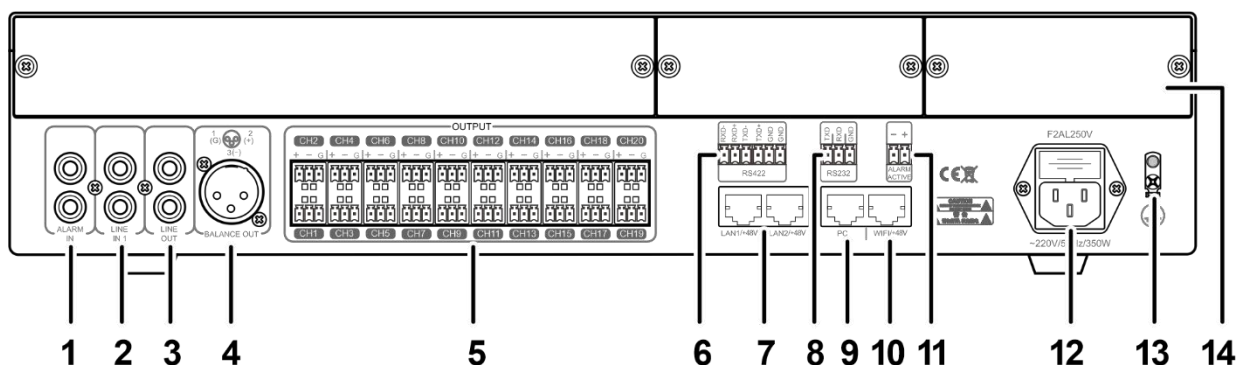
Specifications

Model	D7111
LINE Input Sensitivity	250mV
ALARM Input Sensitivity	250mV
LINE Output	1000mV
Zone Output	1000mV
Frequency Response	20Hz-20kHz
SNR	≥80dB
Total Harmonic Distortion	≤0.3%
Port Output Power	LAN1, LAN2, and WiFi ports support a maximum output of 75W per port, with +48V power supply.
Static Power Consumption	≤30W
UHF Frequency	675MHz-679MHz
Power Supply	AC220V/50Hz/350W
Product Dimensions (L × W × H)	483×390×88mm
Net Weight	6.5kg

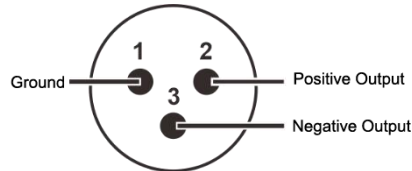
Front / Rear Panel



1. Power Switch.
2. Power Indicator.
3. 4.3-Inch LCD Touch Screen.
4. Front USB Port
5. Rack-mounting Holes

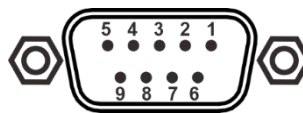


1. Alarm Audio Input: Connects alarm audio signals from the fire control center and links with the alarm trigger signal.
2. Line audio input: Connects audio source devices or mixers to provide line-level audio signals to this unit.
3. Mixed audio output: Connects to an amplifier; output includes line audio, alarm signals, and microphone signals.
4. Mixed audio output (balanced): Parallels the LINE OUT interface for balanced output. The signal of the three pins is shown in the diagram below:



3-pin XLR Male Connector

5. 20-channel balanced output
6. Camera control interface (RS422): Connects camera control signals; cameras are linked in a daisy-chain configuration for control.
7. 100 Mbps +48 V PoE RJ45 network ports (LAN1, LAN2): Support 100 Mbps data transmission and +48 V power supply, used to connect conference units of the system.
8. Central control interface: Connects to intelligent central control systems for centralized management of the conference system (e.g., IR control). RS-232 serial port is 9-pin female (DB9/F); interface definition as shown.

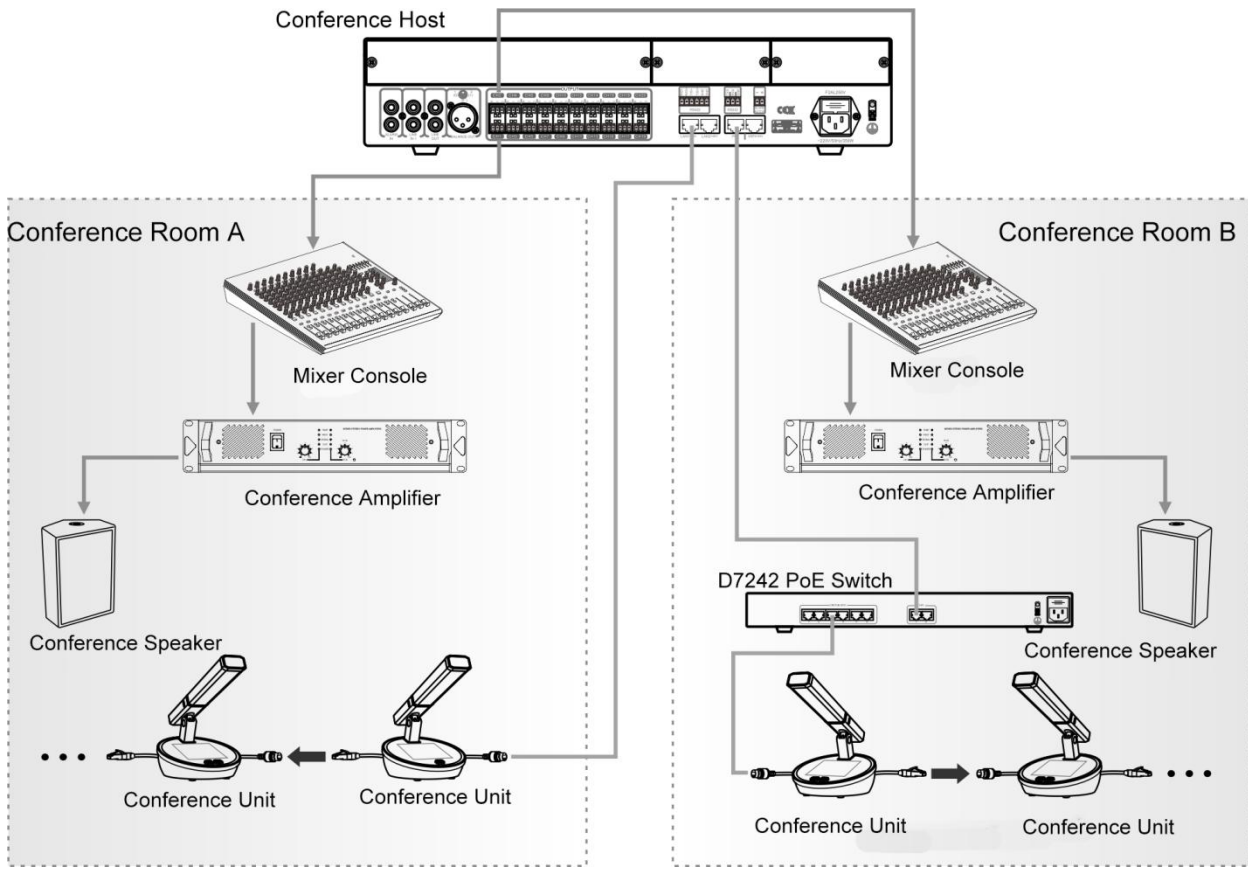


Pin No.	1	2	3	4	5	6	7	8	9
Function	N/U	TXD	RXD	N/U	GND	N/U	N/U	N/U	N/U

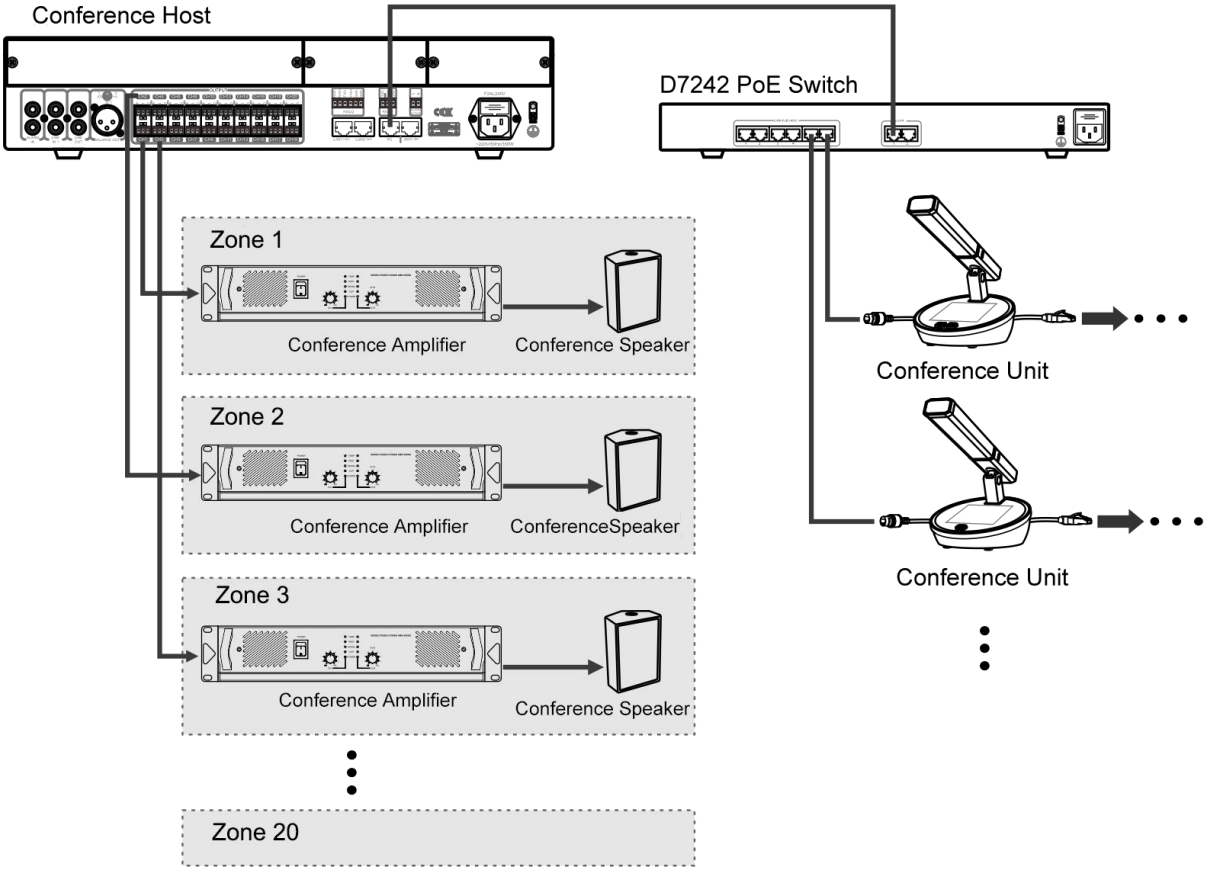
9. 100 Mbps RJ45 network port (PC): Port speed 100 Mbps; used to connect to a PC.
10. 100 Mbps RJ45 network port: Port speed 100 Mbps; used to connect to a wireless AP.
11. Fire alarm trigger interface: External +5V voltage triggers alarm linkage; when the +5V signal is removed, the system automatically returns to its pre-alarm state.
12. Power input: AC 220V / 50Hz / 350W; equipped with F2AL250V fuse holder.
13. Grounding terminal: Connects the unit to earth ground to prevent electric shock or equipment damage caused by leakage or static electricity.
14. Reserved slots for 3 expansion modules.

System Diagram

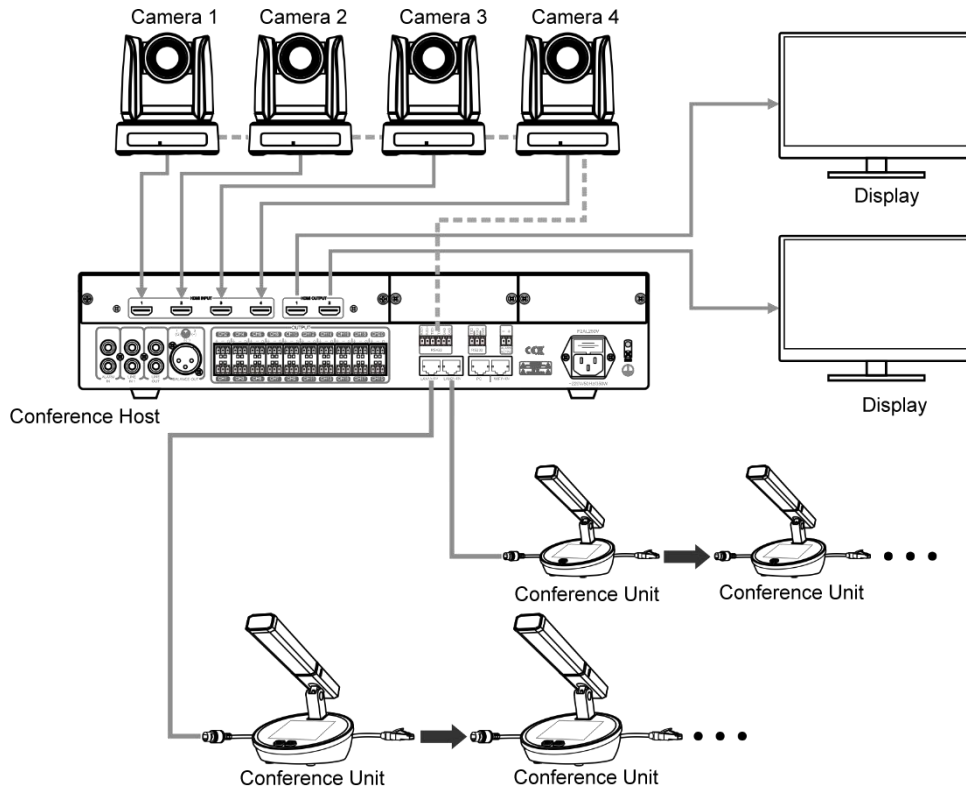
Dual-Room Application



Multi-Zone Application



Video Matrix Application



Note: The expansion module slots are optional, and modules can be selected and purchased according to project requirements.