D6391

Digital Infrared Interpretation System

16 Channels Interpretation Host

Description

The Digital Infrared Simultaneous Interpretation System is a speech conference system designed for multilingual meetings requiring interpretation. It utilizes infrared radiation transmission, which offers a degree of confidentiality due to the shorter wavelength and weaker penetration of infrared signals in space. The system mainly consists of an interpretation host, IR radiator panel, infrared receiver, and interpreter unit. During a conference, interpreters provide real-time translation of the speaker's speech. These interpreted audio signals are processed by the interpretation host and transmitted via the IR radiator panel, allowing participants to select their preferred language and listen through headphones using the infrared receiver. The system can also be used for music transmission.

Features

- Complies with the international IEC 61603-7 standard, ensuring compatibility with other IEC 61603-7-compliant devices for cross-usage.
- Fully digital design for high audio quality and enhanced confidentiality.
- Utilizes a new FPGA architecture with high throughput and DQPSK modulation technology for superior stability.
- Operates in the 2–6 MHz carrier frequency band, free from interference caused by high-frequency light sources.
- Multiple selectable modes: Normal mode, Leisure mode, and Emergency mode, catering to diverse usage scenarios.
- Using infrared light for signal transmission, it has spatial enclosure and is not affected by radio interference.
- Supports both standard and high-quality audio modes.
- The host panel features a low-power infrared radiation signal area for easy debugging by engineers.
- 2.4-inch TFT display provides real-time system status and settings, with independent volume control for

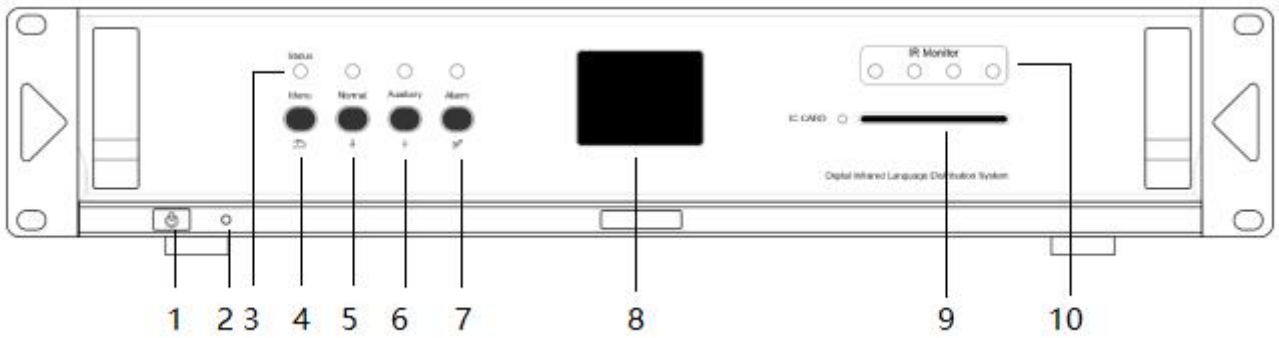
each channel.

- Supports up to 16 audio input channels with high scalability.
- Equipped with 16 RCA audio outputs for amplification and monitoring purposes.
- Features four HF OUT RF signal interfaces (BNC) for connecting additional radiator panels.
- One RJ45 port with 48V power supply, supporting up to five interpreter units in a daisy-chain connection.
- Two RJ45 ports for external PoE network switch connections to interpreter units.
- Features a high-end exterior design with a 2U chassis, suitable for installation in standard 19-inch racks.

Specifications

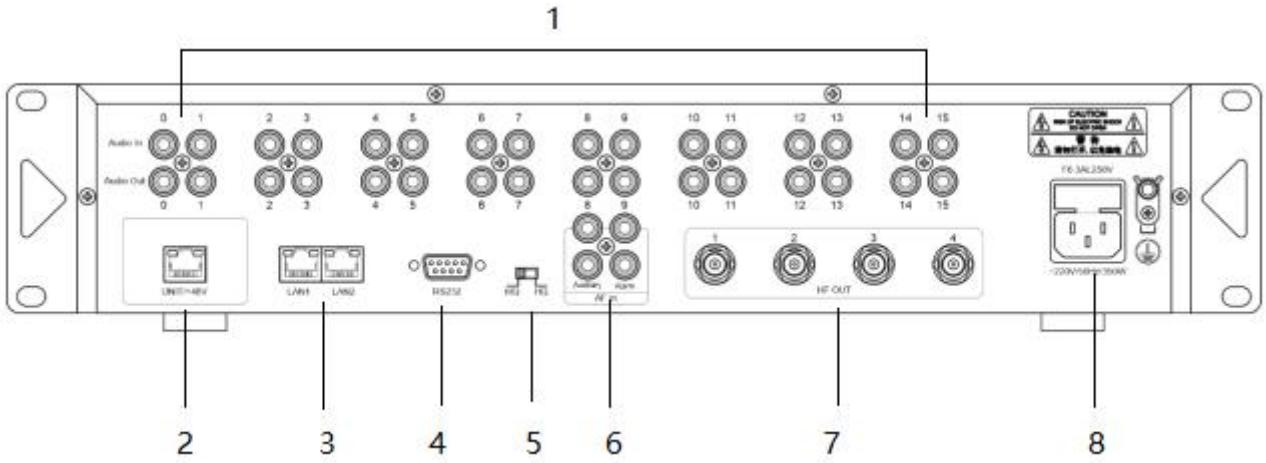
Model	D6391
Modulation Frequency	2 MHz - 5MHz
Protocol and Modulation	DQPSK
Frequency Response	20Hz-10kHz (-3 dB) (Standard Quality) 20Hz-20kHz (High Quality)
Total Harmonic Distortion at 1 kHz	＜0.05%
Crosstalk Attenuation at 1 kHz	＞80dB
Dynamic Range	>90dB(A)
SNR	>76dB(A)
Power Consumption	22W (No external power supply), 60W (48V PoE via network port for 5 connected Interpreter Units).
Unbalanced Audio Input	Rated 250mV, Maximum 1.8V
HF Output	1 Vpp, 50Ω
Interpreter Unit Interface	Internet Access
Audio Input	RCA Unbalanced ×16
Audio Output	RCA Unbalanced ×16
RF Output	RF Output TNC Plug×4
Power Supply	AC220V/50Hz
Product Dimension (L×W×H)	483×385×88mm
Package Size (L×W×H)	525×480×185mm
Net Weight	6.5kg
Gross Weight	8kg

Front / Rear Panel



1. Power On/Off Key;

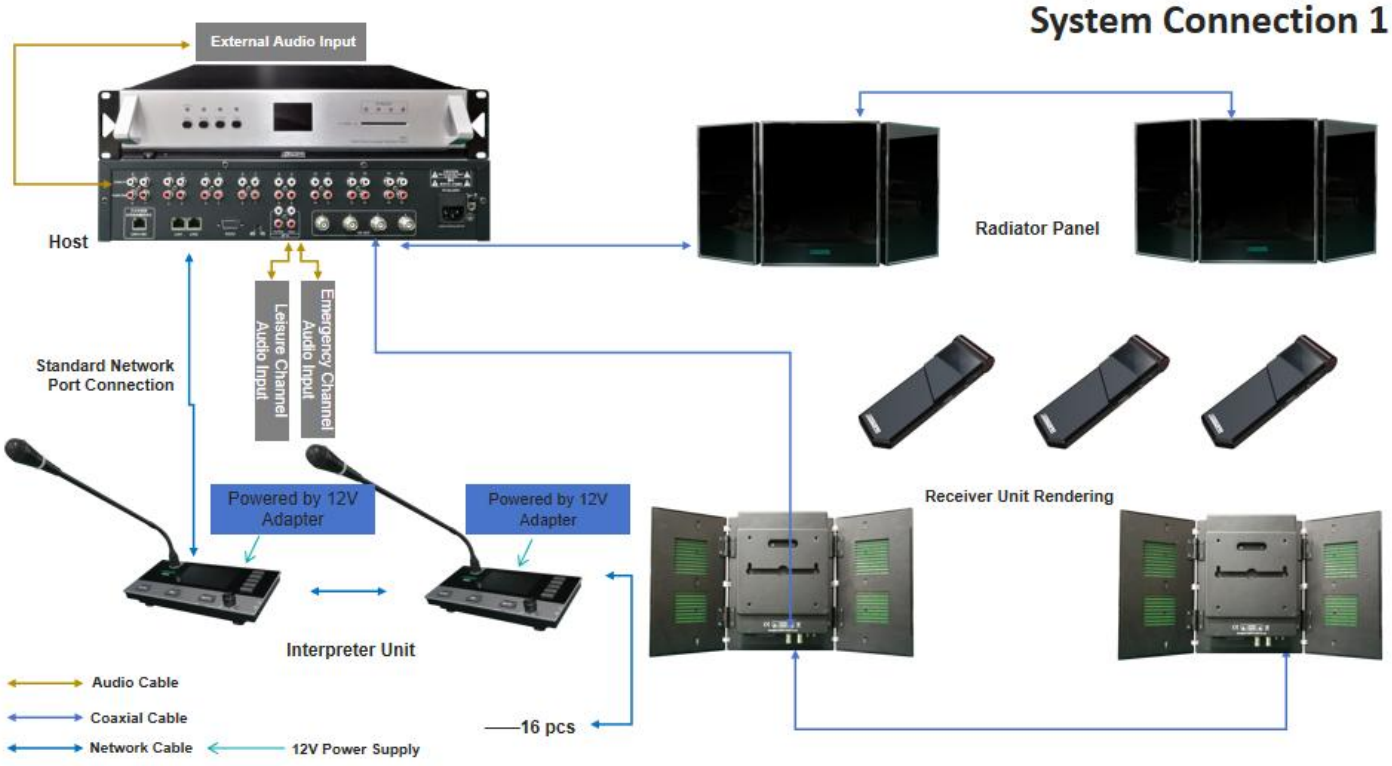
2. Power Indicator Light
3. Status Indicator light.
4. Menu/Exit Button – Allows access to the system configuration interface.
5. Normal Mode/Next Button (Green Indicator Light), Transmits audio data for channels 0–15.
6. Leisure Mode/Previous Button (Orange Indicator Light) – Transmits leisure channel audio data across all channels.
7. Emergency Mode / Confirm Button (Red Indicator Light): Transmits alarm channel audio to all channels.
8. LCD Display – Shows the current mode, interpreter unit connection status, and channel status.
9. IC Card Slot & Indicator Light – Enables system configuration using a management card.
10. Infrared Transmission Area – Facilitates short-range testing of infrared receiver units.



1. Audio Input/Output Interfaces (0–15 Groups)
2. Interpreter unit direct connection port (48V power supply), supporting up to 5 interpreter units in a daisy-chain connection.
3. Network interfaces ×2 (non-PoE), allowing multiple translation units to connect via an external PoE network switch.
4. RS232 Interface (Reserved)
5. Audio quality selection switch: standard quality (MQ) or high quality (HQ). HQ mode outputs on channels 0–7, while MQ mode outputs on channels 0–16.
6. Audio input for leisure mode and emergency mode.
7. RF signal outputs (1–4) for connection to infrared transmission panels.
8. Power input interface.

System Diagram

System Connection 1



System Connection 2