D7201 Dante Conference System (Uganda Case)

1. Solution Description

A complete digital audio and video conference system includes the following main aspects: check-in, speech, voting, conference sound reinforcement, conference process control, conference camera tracking, and conference audio and video signal source matrix switching. According to user needs, this conference room uses DSPPA unique Dante digital conference system.
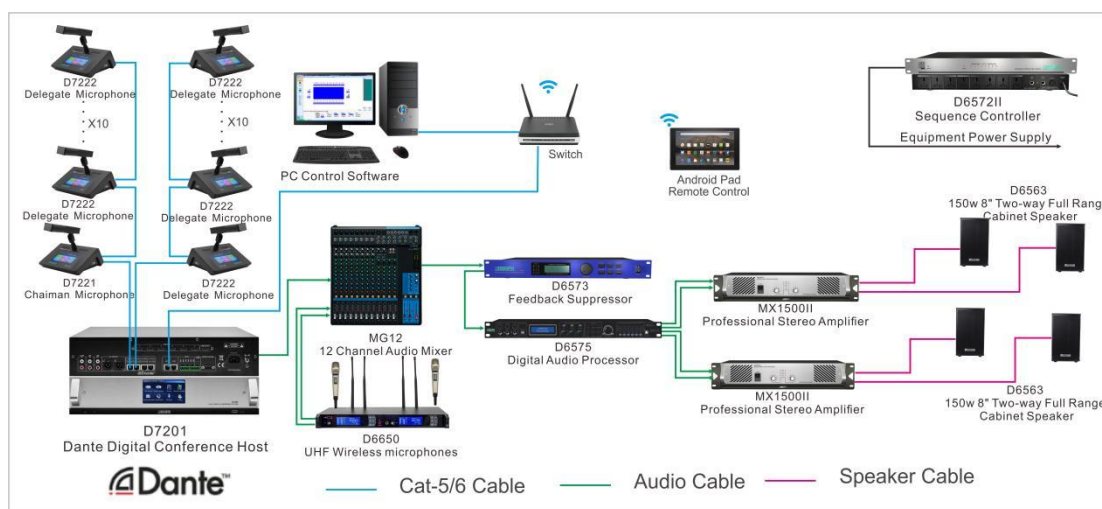
In this design, we are mainly based on years of design experience to realize the multimedia conference function of the conference room, and meet the requirements for simple and smooth conference process, low-latency vivid auditory effect, clear and comfortable video matrix switching display, and intelligent camera tracking, enabling an advanced and efficient conference.

2. Solution Highlight Functions

3. System Connection Diagram

4. Attainable Functions

1. High-fidelity sound quality, low-latency transmission: Exclusive Dante protocol integrated into the conference system, uncompressed audio transmission technology, 20Hz-20KHz perfect sound quality, 48K sampling rate; low audio transmission distortion, low-latency listening experience, can be used with any Dante equipment.

2. Abundant application functions: The system is composed of conference chairman unit, conference delegate unit, and conference host. It can realize conference check-in, conference speech, voting, speech timing, camera tracking, fire linkage, and short message broadcast; as well

as application functions such as tea application, time display, meeting recording, countdown or application for speaking.

3. Conference discussion and speech function: The chairman unit has the priority to speak, which supports four conference speech modes: first-in first-out mode, normal mode, free mode, and application mode.

4. Sound reinforcement system: In terms of sound reinforcement, it focuses on the clarity of speech sound reinforcement, sound transmission gain, sound pressure level, sound field uniformity, and music playback sound quality. In addition, professional audio processing equipment makes the language on the scene clear, no distortion and no feedback howling.

In this conference system, when the delegate units D7221 and 7222 speak, after being processed by the host D7201, the audio is sent to the mixer MG12, and then to the processor D6575, to the amplifier MX1500II, and to the speaker D6563 to achieve local sound reinforcement; 4 speakers D6563 enable sufficient on-site sound pressure margin, uniform sound field, and accurate sound image positioning.

5. Noise suppression processing: Embedded with a high-performance quad-core CPU processor, using soft mixing digital audio processing technology, and an ARM7 processing chip, the host can effectively prevent the sound from returning. The microphone has a built-in high-fidelity speaker, which will be automatically muted when the microphone is turned on, not easy to produce howling, ensuring the quality of the meeting. With 7-band EQ adjustment function (can be adjusted on the PC software), different sound effects can be adjusted according to the voice characteristics of the speaker for a perfect effect.

6. PC and mobile control functions

It supports TCP/IP protocol, and all functions of the system can be remotely controlled through PC software and mobile phone software for an efficient and convenient system.

7. Video signal processing function: The display system includes 120" main projection screen, 6500lux engineering projector; and 2 cameras D6283II, which can achieve the coordination, processing, and switching of input and output signals, and the input signal can be switched arbitrarily and combined to realize a extremely flexible signal central processing function.

5. Main Devices

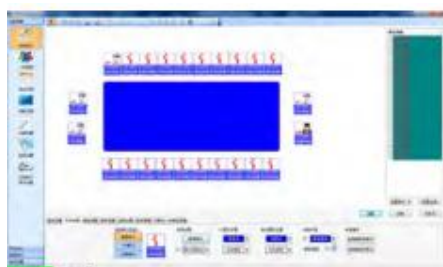### D7201　Dante Digital Conference System Host

Feature:
- Comply with the international standard IEC 60914
- Allow connection of a maximum number of 4096 conference units

- Simultaneous interpretation can be achieved by selecting 15+1 language channel and the channel can be extended to 63+1
- Limitation on number of speakers at a same time (1/2/3/4/5/6)
- 4.3" TFT display touch screen
- Can set speech units to be VIP units. And it supports up to 32 VIP units
- Support five conference modes: FIFO, NORMAL, VOICE, FREE and APPLY. Supports up to 6 units speaking at the same time
- With embedded DSP, including low cut and equalizer
- Recording of conference for the whole process and provides two recording modes, automatic recording and manual recording
- Speech timing and speech timing countdown function. With the speech timing function, the user can set a time limit for each speech or deactivate this function
- Camera tracking function through the 6 HDMI camera interfaces
- One RS232 serial port to connect the conference system to the central control system seamlessly. And one RS422 serial port for connection with camera control circuit to realize centralized control of the cameras
- Four 100 MB +48V power supply RJ45 network interfaces to offer Dante audio transmission protocol and +48V network power
- supply for the connected conference units. The units can be linked with each other one by one
- Two TCP/IP 100 MB RJ45 interfaces for connecting to the network. Support operate all functions of the system by PC software
- RCA ports: Two AUX inputs, for connection to audio sources, etc.; Two AUX outputs, for connection to professional amplifiers
- Two warning signal inputs, for connection to warning signals from the fire control center
- XLR ports: It is an AUX output port and is used to realize parallel output together with two AUX output of RCA ports (LINE OUT) and for connection to professional amplifiers

D7200
Dante Digital Dante Conference System Software (PC)

Conference layout design

Conference Mic setting

Conference host set-up

Cameras set-up

D7221/D7222

Dante Conference Chairman and Delegate Microphone

D7221   D7222

Feature:

- Compliant with IEC 60914 international standard
- Electret, Heart-shaped, directive, condenser type microphone, with double-color ring type indicating lights (red/green). The indicating light is red when speech is made and in green when an application has been sent
- Magnet Hifi speaker, not easy to produce howl
- 3.5mm stereo headphone jack for connection of headphones and the headphone volume is adjustable
- With microphone on/off key, 5 voting buttons, chairman unit has chairman priority button
- Each conference unit has a unique ID code
- LCD screen displays following information when the unit is working:
- ID number, number of delegates applying for speech, voting results, number of check-in participants ect. The information can be displayed in Simplified Chinese or English
- With cameras, after properly configured on the host or PC control software, it supports automatic camera tracking function
- When used with a host, the conference can realize self-checking function. The check items include: buttons, microphone,
- LED indicating lights and built-in speaker
- The unit is a passive equipment and is powered by the system host, with +48V POE input
- The chime is on when the microphone is powered on, and the chime can also be deactivated
- After settings on the host, the chairman unit can be with priority (to mute or turn off the delegate unit), and be in platform
- mode (the chairman unit is always on)
- The chairman unit can approve applications of delegates for speeches
- The use of chairman unit is free from restrictions of speaking persons. And the chairman unit are free from position limitations
- The chairman unit has the priority to maintain order of the conference

MX1500II
Professional Stereo Power Amplifier

Feature:

- Dual channels professional stereo power amplifier
- Multiple power range: 2x250W, 2x350W, 2x450W, 2x700W
- 3 output modes switchable: mono, stereo, BTL bridge
- Each channel with individual volume control
- With XLR and 6.35mm phone jack for audio input
- Each channel with LED indicator for working status
- With protection of short-circuit, DC current, high temperature, etc.
- With protection of power shock, avoid damage to electricity grid and audio equipment

D6563
8" Two-way Full Range Cabinet Speaker

Feature:

- Two way full range cabinet with reflex bass technology
- Equipped with high quality woofer and tweeter, ensure excellent performance
- Anti resonance designed cabinet, painted metal mesh with sound transmitting cotton
- Tweeter with advanced treble shock absorbing technology, making treble sound more clear and pleasant
- Woofer unit with strengthened paper coil, adopts unique magnetic circuit technology, making bass sound more resonant

Installation Effect