HCS-5300 Series New Generation Digital Infrared Wireless Conference System

Overview

Wireless conference systems – portable, easy to install and convenient to use – are currently trend-setting. Wireless systems do not require structural measures inside a venue.

Two kinds of wireless conference systems are prevailing: RF (radio frequency) and IR (infrared) technology with analog audio transmission.

RF systems may be interfered (ISM band) or intercepted and operation either needs license or is confined to the public domain IEC 802.11x band.

Analog IR systems feature frequency responses which are too small for good intelligibility and also show lower S/N ratio.

System Theory

The core of the TAIDEN digital infrared wireless conference system – dirATC (digital infrared Audio Transmitting and Control technologies) - is a new technology originated by TAIDEN. It encodes and modulates audio and data signals digitally for transmission via infrared light, achieving both multi-channel audio signals and bidirectional data transmission and control. Digitalization and wireless

Figure 1   TAIDEN TDIR04
digital infrared processing chip

transmission via infrared technology are combined to be an ideal solution for a wireless conference system. The digital infrared processing chip (TAIDEN TDIR04) originated by TAIDEN, integrates A/D (analog/digital) conversion circuit, digital encoding/decoding circuit, digital modulator/demodulator (DQPSK), as well as filtering and amplification circuit, and implements TAIDEN infrared audio transmission and control technology (dirATC). (figure 1)

TAIDEN digital infrared wireless conference system is composed of a main unit, one or more transceivers and conference units.

The infrared conference unit features built-in A/D and D/A conversion circuits, digital encoding/decoding and modulator / demodulator (DQPSK) circuits. The infrared conference system main unit has a built-in demodulator/modulator (DQPSK), a digital decoding/encoding circuit and a D/A converter circuit. A mixer circuit is inserted between the decoding circuit and the D/A converter. The main unit can be connected with several infrared transceivers, using a daisy chain or Y connection arrangement (figure 2 and figure 3)
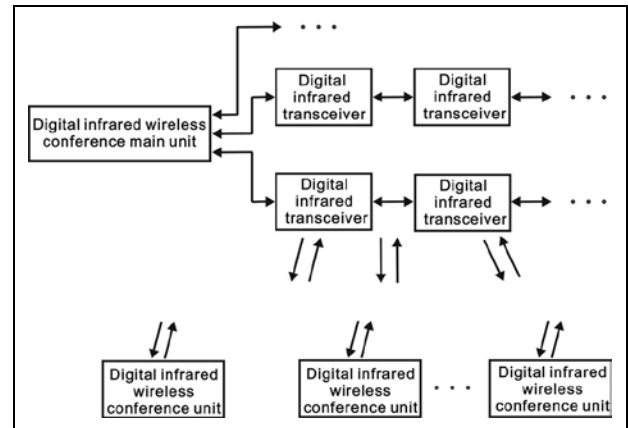

Figure 2   Block diagram of digital infrared conference system

The basic infrared conference unit version with discussion function includes microphone, microphone switch button, loudspeaker, battery, etc. The infrared discussion unit receives audio and control signals via infrared from the transceiver - signals previously generated by the main unit. The discussion unit transmits infrared control signals back to the transceiver which conveys all data to the main unit. When the microphone is turned on, the infrared discussion unit also sends infrared digital audio signals to the main unit. A system can consist of up to 1000 infrared discussion units with 4 units activated at the same time.
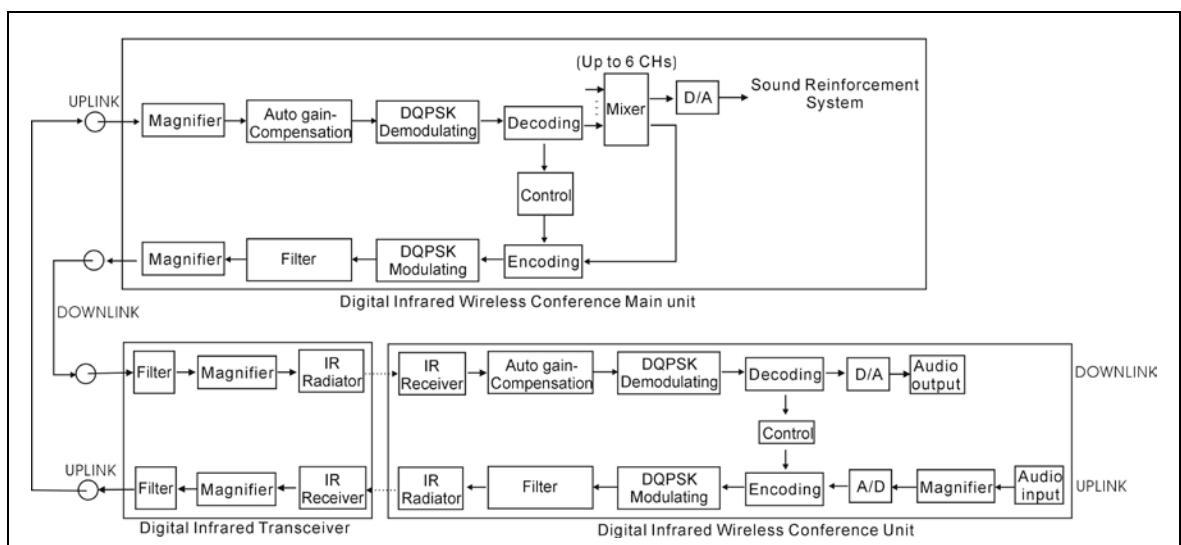

Figure 3   Schematic diagram of the digital infrared conference system

System Features

- The first digital infrared wireless conference system in the world
- Original dirATC -- digital infrared Audio Transmitting and Control technologies
- Wireless system, easy to set up and to remove
- Perfect sound quality as CD from the microphone
- Microphone sensitivity and EQ individually adjustable
- Isolated audio recording function for simultaneous interpretation (1+7 CHs)
- Privacy guarantee by infrared transmission
- Any quantity of infrared wireless conference systems within a building
- No worries about eavesdropping and radio interference, no radio radiation
- Full functions (discussion, voting and 1+7 CHs interpretation)
- No radio frequency license needed for operating an infrared system all over the world
- Adopts 1~8 MHz transmission frequency, undisturbed by HF driven light sources
- Excellent immunity to RF interference from mobile phones and RF devices

Wireless Conference System

- Quick setup and removal, free from troubles resulting from cable breaks and cable deteriorations
- Easy to set up a system for usage limited in time
- No impact on furniture, interior equipment or building structure

Infrared Transmission Technology

- Conference privacy is guaranteed as infrared signals do not pass through opaque walls or ceilings
- Wherever there is a partition between conference rooms, there is no interference

- Any quantity of infrared wireless conference systems within a building
- The infrared communication frees users from worries about eavesdropping and radio interference inherent to radio wave-based wireless communications
- No radio radiation
- No radio frequency license needed for operating an infrared system all over the world
- Adopts 1~8 MHz transmission frequency, undisturbed by HF driven light sources and mobile phones
- Works without errors, even in bright sunlight

Digital Infrared Audio Technology

- Digital infrared audio processing and transmitting technologies ensure superb sound quality:
  - Freq. Response: 20 Hz to 20 kHz
  - S/N: >85 dBA
  - THD: <0.06%

Full Functions

- Discussion
- Vote (5 keys)
- Simultaneous interpretation (1+7 CHs)
- Isolated audio recording function for simultaneous interpretation (1+7 CHs)
- Automatic video tracking
- USB interface realizing quality-lossless sound recording on PC and intact input of streaming audio into the system
- Compatible with HCS-5100Plus digital infrared language distribution system (HCS-5100R/F series digital infrared receivers can work with HCS-5300T/80 series transceivers)
- Built-in Web Server

Frequency response measurement diagram of a TAIDEN HCS-5300/80 digital infrared wireless conference system compared with a customary conventional analog infrared wireless conference system. The system frequency response bandwidth of the TAIDEN digital infrared wireless conference system is large and flat, thus ensuring a perfect sound performance of the conference system.
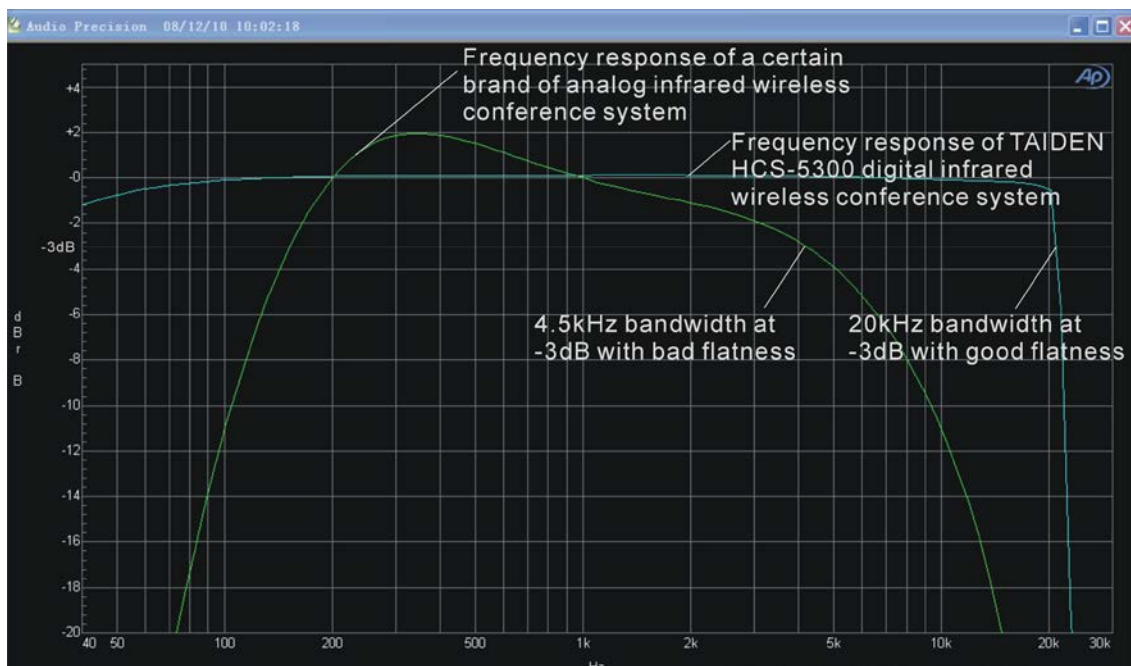
Digital infrared wireless conference systems can be operated in adjacent rooms (including the upstairs and downstairs). The users do not need to worry about mutual interference or about the breach of confidentiality.
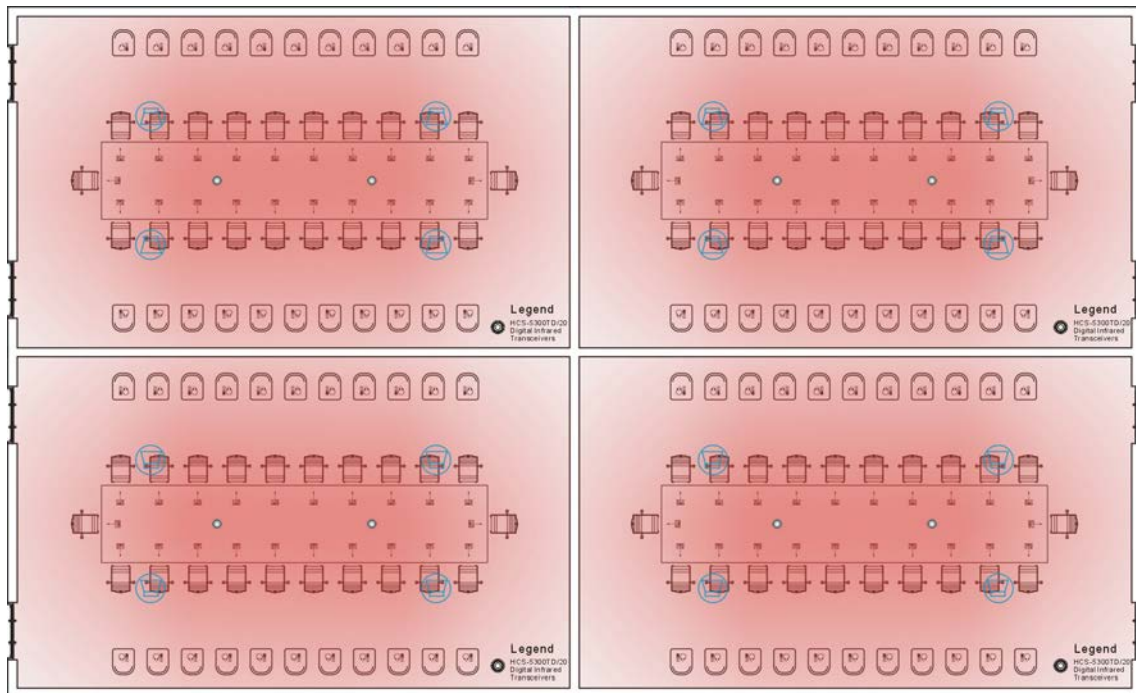

Figure 7   Conference rooms using IR systems free from interferences

Radio frequency (RF) systems in use in adjacent rooms (including the upstairs and downstairs) will interfere with each other. The more active units operated, the worse the interferences. As a result, a room could receive the signals of adjacent rooms, thus causing a breach of confidentiality.

In an existing application within a large Administration Center, nine installed RF wireless conference system sets often interfere with each other when operated. Therefore only alternating operation is possible - a great inconvenience for the user! RF wireless conference systems may interfere with WiFi devices, Bluetooth devices, wireless radio, cordless phones, wireless projectors, wireless mouses, wireless keyboards and wireless touch panels of central control systems. These interferences are both space- and time-varying and a cause for the instability of RF wireless conference systems.
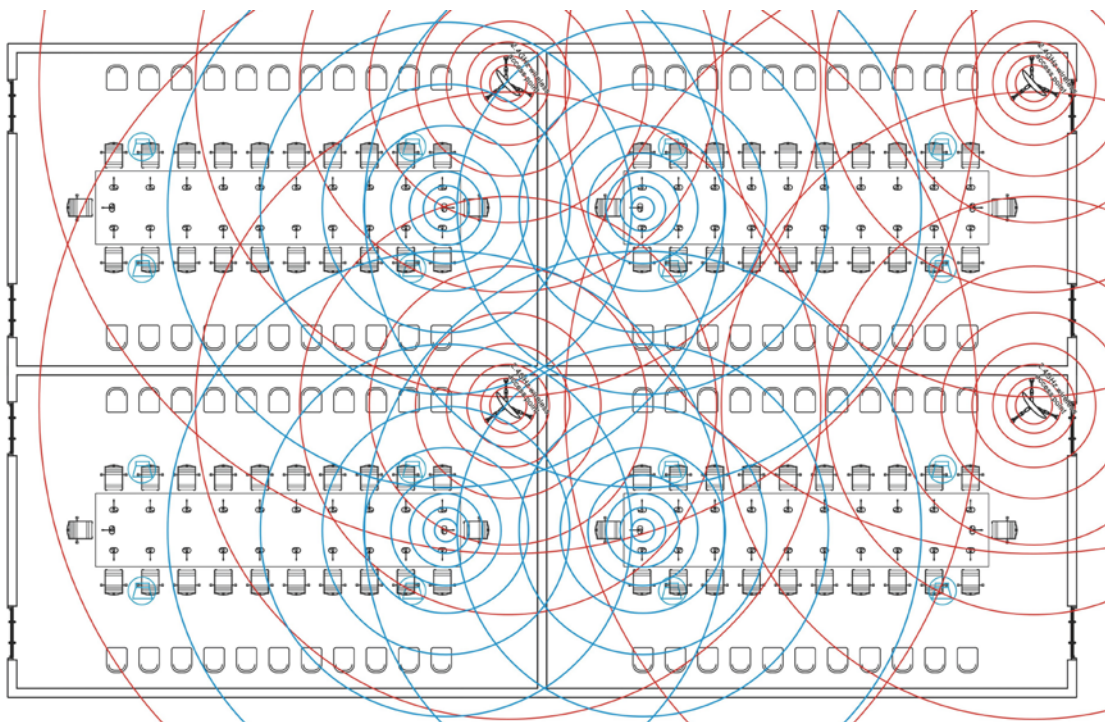

Figure 8   RF interference diagram

HCS-5300CE/80
Wireless Chairman Unit with Voting and Channel Selection

Features

- **Table, stylish and ergonomic design**
- **Wireless unit, easy setup and removal**
- **Hi-Fi loudspeaker**
- **Priority button**
- **Pluggable microphone**
- **System controls up to 1000 contribution units**
- **5 voting keys**
- **Transmitting up to 8 CHs high quality digital audio signals**
- **Built-in channel selector consists of up/down channel select keys and 2-digit channel indicator display**
- **Broadcast standard microphone and digital infrared audio processing and transmitting technologies ensure 20 Hz to 20 kHz perfect sound quality, extremely low distortion factor**
- **Digital infrared transmission technology guarantees privacy, no worries about eavesdropping and radio interference, no radiation, no radio frequency license needed**
- **Adopts 1~8 MHz transmission frequency, excellent immunity to RF interference from HF-driven lighting and mobile phones**
- **Microphone sensitivity and EQ individually adjustable**
- **Built-in rechargeable Lithium battery pack**

The stylish and ergonomically designed chairman unit has all the necessary facilities to enable the user to chair a conference. Similar in appearance and function to HCS-5300DE/80 Delegate Unit, the HCS-5300CE/80 Chairman Unit includes an extra microphone priority button. When pressed, the priority button causes all currently active microphones to be switched off temporarily or permanently, allowing the chairman to take control of the meeting. Separate rechargeable Lithium battery packs can be removed and replaced in a matter of seconds, providing maximum flexibility in recharge scheduling.

Functions

- Compliant with IEC 60914
- Based on TAIDEN originated dirATC-digital infrared Audio Transmitting and Control technologies
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- System controls up to 1000 contribution units
- Transmitting up to 8 CHs high quality digital audio signals
- Every delegate unit is assigned an individual ID for convenient setup and to avoid double ID forever
- Broadcast standard microphone and digital infrared audio processing and transmitting technologies ensure 20 Hz to 20 kHz perfect sound quality, extremely low distortion factor
- Digital infrared transmission technology guarantees privacy, no worries about eavesdropping and radio interference, no radiation, no radio frequency license needed
- Adopts 1~8 MHz transmission frequency, excellent immunity to RF interference from HF-driven lighting and mobile phones
- Stem microphone can be unplugged during adjournment, easy to maintain
- Mini-microphone, with foam windshield
- Hi-Fi loudspeaker, minimal feedback
- Ø 3.5 mm stereo headphone jack for headphone with controllable volume
- Microphone On/Off button, 5 voting keys
- Built-in channel selector (operable only when earphone is inserted)
- Microphone sensitivity and EQ individually adjustable
- System implements the following facilities when operated in stand-alone mode:
  - "ACTIVE MICS", set the number of delegates permitted to speak at the same time (1/2/3/4)
  - "OPEN" mode, if Mic. active limit has been reached, next microphone cannot be turned on when pressing "Mic. On/Off" button
  - "OVERRIDE" mode, if Mic. active limit has been reached, when pressing "Mic. On/Off" button, next microphone is turned on and the first active microphone is turned off
  - "VOICE" mode, Mic. sensitivity and close time adjustable, built-in "Flash-on" technology for quick voice control
  - Simultaneous interpretation
- In combination with the corresponding software modules, multiform voting can be implemented:
  - Parliamentary: YES/NO/ABSTAIN
  - Questionnaire: 1/2/3/4/5
  - Audience response: --/-/0/+/++
- Key-press sign-in
- Automatic video tracking, when cooperating with camera and video switcher unit
- Activatable at any time provided that the total number of active microphones (including the active microphone of the chairman) is within the maximum of 4 active microphones allowed by the system
- Priority button to switch off or to mute the speaking units according to preset
- System supports up to 20 chairman units, while only 1 chairman unit has the control facilities listed above

■ Built-in rechargeable Lithium battery operation duration: 14.4 hours when microphone is continuously on; 48 hours when microphone is off

Controls and Indicators

■ Graphic 64×48 LCD with back-lighting for displaying channel number, language name, battery capacity and signal icon
■ Built-in channel selector consists of up/down channel select keys and 2-digit channel indicator display
■ Uni-directional electret condenser microphone with two-color illuminated ring
■ Charging indicator
■ Fully charged indicator
■ Power switch
■ Headphone volume control button
■ Five voting keys with indicators
■ Microphone On/Off button with indicator
■ Priority button

Interconnections

■ Socket for pluggable microphone
■ Ø 3.5 mm stereo headphone jack
■ Power adapter interface

Technical Specifications

Electrical

Headphone connection

Frequency response	20 Hz to 20 kHz (-3dB)
Headphone load impedance	≥16 Ohm × 2
Headphone output	10 mW

Microphone

Transducer	Electret-condenser
Polar pattern	Uni-directional
Sensitivity	-46 dBV/Pa
Frequency response	30 Hz to 20 kHz
Directionality 0°/180°	>20 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Max.SPL	125 dB (THD<3%)

Interface data

Connector	Ø 3.5 mm stereo jack for headphone

Operation time of battery pack

When mic. is continuously on	Approx. 14.4 hours
When mic. is off	Approx. 48 hours

Mechanical

Mounting	Tabletop
Dimensions (h x w x d) (w/o Mic.)	73 x 184 x 134 mm
Weight	
Excl. battery	0.5 kg
Incl. battery	0.8 kg
Color	Silver (PANTONE 428C) / Charcoal gray (PANTONE Cool Gray 11C)

Ordering Information

HCS-5300CE_S/80 .... Digital IR Wireless Chairman Unit (discussion, voting, 1+7 CHs, silver, excl. battery)

HCS-5300CE_G/80 .... Digital IR Wireless Chairman Unit (discussion, voting, 1+7 CHs, charcoal gray, excl. battery)

HCS-5301D/80
Wireless Discussion Unit with Dual Channel Selection

Features

- **Table, stylish and ergonomic design**
- **Wireless unit, easy setup and removal**
- **Hi-Fi loudspeaker**
- **Pluggable microphone**
- **System controls up to 1000 contribution units**
- **Transmitting up to 8 CHs high quality digital audio signals**
- **Built-in dual channel selectors consist of up/down channel select keys and 2-digit channel indicator display**
- **The microphone on/off buttons provide dual delegate identification, used for individual delegate identification on the left and right respectively and easy for automatic video tracking**
- **Can be used as a dual delegate unit**
- **Broadcast standard microphone and digital infrared audio processing and transmitting technologies ensure 20 Hz to 20 kHz perfect sound quality, extremely low distortion factor**
- **Digital infrared transmission technology guarantees privacy, no worries about eavesdropping and radio interference, no radiation, no radio frequency license needed**
- **Excellent immunity to RF interference from HF-driven lighting and mobile phones**
- **Microphone sensitivity and EQ individually adjustable**
- **Built-in rechargeable Lithium battery pack**

The multi-functional wireless delegate unit can be used by two delegates. It provides facilities for speaking, listening and selecting language channels and has excellent immunity to RF interference from mobile phones. It features two separate headphone connections with individual volume control, two separate microphone on/off buttons and two separate channel selectors on both sides of the unit, allowing one unit to serve two delegates. The loudspeaker offers superior acoustics with minimal feedback, for enhanced intelligibility.

Separate rechargeable Lithium battery packs can be removed and replaced in a matter of seconds, providing maximum flexibility in recharge scheduling.

Functions

- Compliant with IEC 60914
- Based on TAIDEN originated dirATC-digital infrared Audio Transmitting and Control technologies
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- System controls up to 1000 contribution units
- Transmitting up to 8 CHs high quality digital audio signals
- Every delegate unit is assigned an individual ID for convenient setup and to avoid double ID forever
- Broadcast standard microphone and digital infrared audio processing and transmitting technologies ensure 20 Hz to 20 kHz perfect sound quality, extremely low distortion factor
- Digital infrared transmission technology guarantees privacy, no worries about eavesdropping and radio interference, no radiation, no radio frequency license needed
- Excellent immunity to RF interference from HF-driven light and mobile phones
- Stem microphone can be unplugged during adjournment, easy to maintain
- Mini-microphone, with foam windshield
- Hi-Fi loudspeaker, minimal feedback
- Two Ø 3.5 mm stereo headphone jacks for headphones with separate volume control
- With two separate microphone on/off buttons for individual microphone control and individual delegate identification
- Can be used as a dual delegate unit
- Built-in dual channel selectors (operable only when earphone is inserted)
- Microphone sensitivity and EQ individually adjustable
- System implements the following facilities when operated in stand-alone mode:
    - "ACTIVE MICS", set the number of delegates permitted to speak at the same time (1/2/3/4)
    - "OPEN" mode, if Mic. active limit has been reached, next microphone cannot be turned on when pressing "Mic. On/Off" button
    - "OVERRIDE" mode, if Mic. active limit has been reached, when pressing "Mic. On/Off" button, next microphone is turned on and the first active microphone is turned off
    - "VOICE" mode, Mic. sensitivity and close time adjustable, built-in "Flash-on" technology for quick voice control
    - Simultaneous interpretation
- Automatic video tracking, when cooperating with camera and video switcher unit

- Built-in rechargeable Lithium battery operation duration: 14.4 hours when microphone is continuously on; 48 hours when microphone is off

Controls and Indicators

- Two graphic 64×48 LCDs with back-lighting for channel number, language name, battery capacity and signal icon
- Built-in two channel selectors consist of up/down channel select keys and 2-digit channel indicator display
- Uni-directional electret condenser microphone with two-color illuminated ring
- Charging indicator
- Fully charged indicator
- Power switch
- Two headphone volume control buttons
- Two microphone On/Off buttons with indicator

Interconnections

- Socket for pluggable microphone
- 2 × Ø 3.5 mm stereo headphone jack
- Power adapter interface

Technical Specifications

Electrical

Headphone connection

Frequency response	20 Hz to 20 kHz (-3dB)
Headphone load impedance	≥16 Ohm × 2
Headphone output	10 mW

Microphone

Transducer	Electret-condenser
Polar pattern	Uni-directional
Sensitivity	-46 dBV/Pa
Frequency response	30 Hz to 20 kHz
Directionality 0°/180°	>20 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Max.SPL	125 dB (THD<3%)

Interface data

Connector	2 x Ø 3.5 mm stereo jack for headphone

Operation time of battery pack

When mic. is continuously on	Approx. 14.4 hours
When mic. is off	Approx. 48 hours

Mechanical

Mounting	Tabletop
Dimensions (h x w x d) (w/o Mic.)	73 x 184 x 134 mm
Weight	
Excl. battery	0.5 kg
Incl. battery	0.8 kg
Color	Silver (PANTONE 428C) / Charcoal gray (PANTONE Cool Gray 11C)

Ordering Information

HCS-5301D_S/80 — Digital IR Wireless Delegate Unit (discussion, 1+7 CHs, 2 channel selectors, dual predefined position, silver, excl. battery)

HCS-5301D_G/80 — Digital IR Wireless Delegate Unit (discussion, 1+7 CHs, 2 channel selectors, dual predefined position, charcoal gray, excl. battery)

HCS-5300TD/80
Digital Infrared Transceiver

Ceiling-mounting

Wall-mounting

Tripod-mounting

HCS-5300TD/80 digital infrared transceiver manages communication between main unit and conference units. It can be mounted onto the ceiling and wall for optional coverage or fixed onto a tripod at any appropriate spot.

Indicators

■ Power indicating light

Interconnections

■ Equipped with a 2.0 m specific cable with 6P-DIN male plug. For extension purposes, 6P-DIN extension cable can be used.

Technical Specifications

Electrical

Wavelength	870 nm
Modulation method	DQPSK
Carrier frequency	1~8 MHz
Voltage	33 V DC (supplied from HCS-5300M)
Current consumption	Max. 410 mA
Connector	6P-DIN
Cable	2.0 m specific cable with 6P-DIN male plug

Mechanical

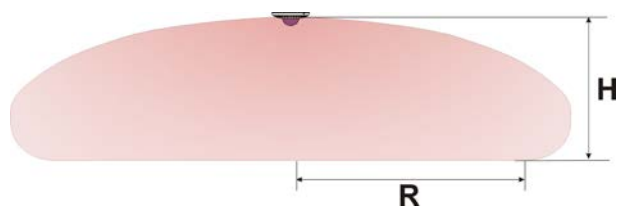|	
Mounting	Ceiling, wall or tripod mounting
Dimensions	Ø 181 mm, 63 mm (height)
Weight	0.5 kg
Color	Silver（PANTONE Cool Gray 6 C）/ Charcoal gray (PANTONE 426 C) / White (PANTONE Cool Gray 1 C)

Ordering Information

HCS-5300TD_S/80 ...... Digital Infrared Transceiver (ceiling, wall or tripod-mounted, ceiling height less than 6 m, powered from HCS-5300M, excl. tripod when ordered, silver)

HCS-5300TD_G/80 ...... Digital Infrared Transceiver (ceiling, wall or tripod-mounted, ceiling height less than 6 m, powered from HCS-5300M, excl. tripod when ordered, charcoal gray)

HCS-5300TD_W/80 ...... Digital Infrared Transceiver (ceiling, wall or tripod-mounted, ceiling height less than 6 m, powered from HCS-5300M, excl. tripod when ordered, white)

Features

■ **Compliant with IEC 60914**

■ **Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology**

■ **Transmitting in 1~8 MHz frequency band, eliminating the interference from HF-driven lights**

■ **Tripod, wall or ceiling mounting, easy to install**

■ **Inside the coverage area of infrared signals, also HCS-5100R/RA/F digital infrared receivers can be in operation simultaneously to receive (1+7 CHs) simultaneous interpretation**

Cutaway view of coverage area of HCS-5300TD/80 Digital Infrared Transceiver

Coverage area of HCS-5300TD/80 Digital Infrared Transceiver

Type No.	Mounting	Coverage area
HCS-5300TD_S/80	2.5 ~ 3.0 m	13 m
HCS-5300TD_G/80	3.5 ~ 4.5 m	11 m
HCS-5300TD_W/80	5.0 ~ 7.0 m	9 m

HCS-5300MB/80 Digital Infrared Wireless Conference Main Unit

Features

- **Original dirATC-digital infrared Audio Transmitting and Control technologies**
- **Supports up to 8 simultaneous interpretation language channels (incl. the original floor channel)**
- **Digital infrared audio processing and transmitting technologies ensure perfect sound quality**
- **Digital infrared transmission technology guarantees conference privacy. Users are released from worries about eavesdropping and radio interference inherent to radio wave-based wireless communications**
- **Operating the IR conference system does not require a radio frequency license all over the world**
- **Compatible with HCS-5100 series digital infrared language distribution system, when cooperating with digital infrared language distribution system, enabling a larger audience to join in the conference**
- **Can be connected to HCS-4100/50 series Wired Congress Unit or Interpreter Unit, to implement 1+3 CHs wired simultaneous interpretation system and 1+7 CHs wireless simultaneous interpretation system**
- **Microphone sensitivity and EQ individually adjustable**
- **TCP/IP communication protocol in PC controlled mode, easy to carry out remote control**
- **Excellent immunity to RF interference from mobile phones and comparable devices**

The digital infrared wireless conference main unit includes features for controlling delegate microphones and distributing simultaneous interpretation, without an operator.

With web page control function, the user can access the IP address of main unit from web browser to handle meeting management.

Functions

- Compliant with IEC 60914
- Based on TAIDEN originated dirATC-digital infrared Audio Transmitting and Control technologies
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Digital infrared audio processing and transmitting technologies ensure perfect sound quality

- Digital infrared transmission technology guarantees conference privacy. Users are released from worries about eavesdropping and radio interference inherent to radio wave-based wireless communications
- Operating the IR conference system does not require a radio frequency license all over the world
- Supports up to 8 simultaneous interpretation language channels (incl. the original floor channel)
- Controls up to 1000 contribution units
- Microphone sensitivity and EQ individually adjustable
- Compatible with HCS-5100Plus series digital infrared language distribution system, when cooperating with digital infrared radiator, enabling a larger audience to join in the conference
- Implemented features in stand-alone mode:
  - Set the number (1/2/3/4) of delegates permitted to speak at the same time
  - "OPEN" mode, if Mic. active limit has been reached, next microphone cannot be turned on when pressing "Mic. On/Off" button
  - "OVERRIDE" mode, if Mic. active limit has been reached, when pressing "Mic. On/Off" button, next microphone is turned on and the first active microphone is turned off
  - "VOICE" mode, Mic. sensitivity and close time adjustable, built-in "Flash-on" technology for quick voice control
  - Simultaneous interpretation
- USB interface realizing quality-lossless sound recording on PC and intact input of streaming audio into the system
- Automatic video tracking, when cooperating with camera and video switcher unit
- Advanced TCP/IP communication protocol in PC controlled mode, easy to carry out remote control
- Connection to central control system through RS232 interface for centralized control

Controls and Indicators

- Graphic LCD with back-lighting displays status and menu of the system configuration, supporting multi language menu
- Four buttons for configuration
- Power switch
- Standby switch with indicator
- Operation mode indicators
- LINE IN 1 electric level adjust knob
- Conference unit floor audio channel master volume adjust knob

Interconnections

- Multiple audio in/out interfaces:
  - Balanced LINE OUT 1 interface (XLR-M) and unbalanced LINE OUT 2 interfaces (RCA×2) for floor audio line out
  - 8 interpretation audio output interfaces (0~7)
  - Balanced LINE IN 1 interface (XLR-F) and unbalanced LINE IN 2 interfaces (RCA×2) for connection to external audio devices
  - Ø 3.5 mm jack for stereo monitor earphone
- USB_H interfaces at front panel to upgrade system and to save system parameters
- USB_D interfaces for digital audio input/output
- Ethernet interfac

- Video switcher interface
- Emergency signal interface: for connection to public emergency system. Pauses the conference automatically if the system is switched on and sends alarm signals to conference units
- 6 digital infrared transceiver interfaces, each interface can connect 4 transceivers if operating distributor HCS-5352, thus each HCS-5300MB/80 can connect up to 10 transceivers
- 1 interpreter unit / DCS interface: for connection to HCS-4100/50 series Wired Congress Unit or Interpreter Unit. By using HCS-8300MES, up to 200 congress units can be connected
- Power supply socket
- HF signal output interface (BNC socket) for connection to HCS-5100T/B Digital Infrared Radiator
- RS232 interface for connection to central control system

Ordering Information

HCS-5300MB/80 .... Digital IR Wireless Conference System Main Unit (discussion, 1+7 CHs, with interface for HCS-4100/50 series Wired Congress Unit and Interpreter Unit)

Technical Specifications

Electrical

Frequency response	20 Hz to 20 kHz (-3dB)
SNR	>85dBA
Dynamic range	>90 dB
THD at 1 kHz	<0.06%
Isolation	>80 dB
Power supply	AC 100 V-120 V 60 Hz or AC 220 V-240 V 50 Hz
Power consumption	Max. 160 W

Audio inputs

LINE IN 1	+10 dBu, BAL.
LINE IN 2	+15 dBu, UNBAL.

Audio outputs

|	
LINE OUT 1	+20 dBu, BAL.
LINE OUT 2	+20 dBu, UNBAL.
SI. OUTPUT (CH 0 ~ 7) RCA×8	+10 dBu, UNBAL.

Interface data

Transceivers I/O terminal	6P-DIN socket × 6 up to 10 transceivers
External control terminal	RS232 D-sub (9P, male), USB interface, RJ45 (ETHERNET)
Interpreter unit / DCS terminal	6P-DIN socket × 1
HF OUT (Radiator terminal)	BNC connector × 1
Alarm terminal	3.81 mm Phoenix connectors, 2-pole
Video switcher terminal	3.81 mm Phoenix connectors, 4-pole

Mechanical

Mounting	Tabletop or mounted in a 19" rack
Dimensions (h x w x d)	
For table use, with feet	99 x 430 x 325 mm
For 19" rack use, with brackets	89 x 478 x 350 mm
Weight	10.5 kg
Color	White（PANTONE 420 C）

System Connection

[Wired/wireless discussion + digital simultaneous interpretation + video tracking + central control]
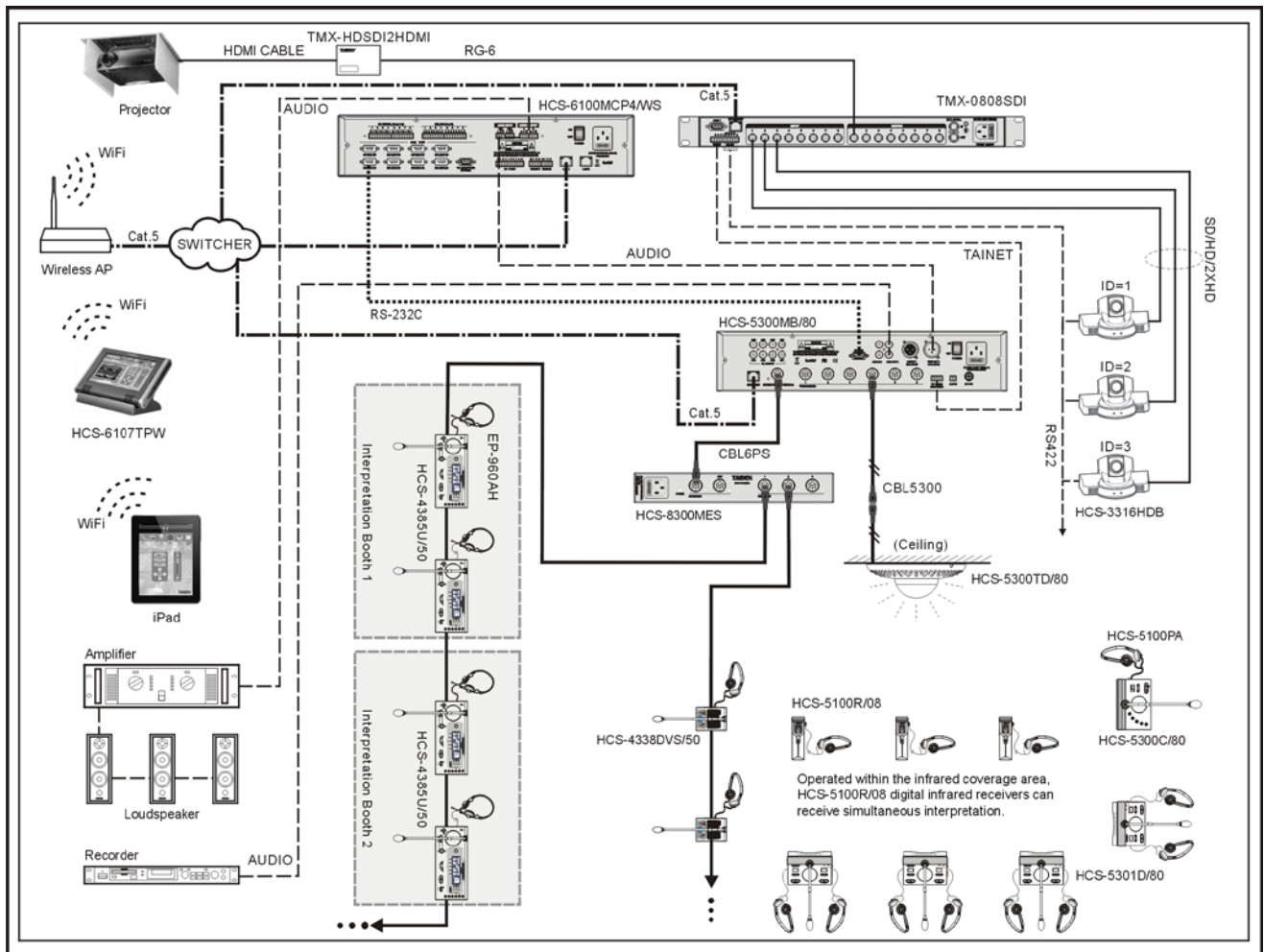
HCS-5300BAT
Lithium Rechargeable Battery Pack

Features

■ Lithium rechargeable battery pack

■ Used for supplying power to HCS-5300/80 series digital infrared wireless conference unit

Technical Specifications

Electrical

Nominal voltage .... 11.1 V DC
Nominal capacity .... 4400 mAh

Mechanical

Dimensions (h x w x d) .... 28 × 140 × 58 mm
Weight .... 0.3 kg
Color .... Black

Ordering Information

HCS-5300BAT .... Lithium Rechargeable Battery Pack
(11.1 V DC, for HCS-5300/01/02 series conference unit)

HCS-5300CHG/08 Charging Unit

Features

■ Used for charging HCS-5300BAT Lithium batteries

■ Charges 8 pcs of HCS-5300BAT batteries per charging

■ Uses universal power supply with automatic voltage matching

Controls and Indicators

■ Power switch

■ Charging indicator (red)

■ Fully charged indicator or battery not inserted (green)

Interconnections

■ Power output interface

■ Power input interface

■ Charging lattices

Technical Specifications

Electrical

Power supply .... AC 100 V -240 V 50 Hz/60 Hz
Power consumption .... Max. 380 W
Charging time .... Approx 6 hours
Charging capacity .... 8 HCS-5300BAT batteries

Mechanical

Dimensions (h x w x d) .... 74 × 288 × 300 mm
Weight .... 4.5 kg
Color .... White

Ordering Information

HCS-5300CHG/08 .... Charging Unit (8 pcs/case)

CBL5300
Dedicated Transceiver Cable

Features

- Dedicated cable for HCS-5300/80 series Digital Infrared Transceiver/Receiver
- 1 × 6P-DIN plug
- 1 × 6P-DIN socket
- Ø 6 mm
- Color: black

Ordering Information

CBL5300-05 .... 5 m Dedicated Transceiver Cable

CBL5300-10 .... 10 m Dedicated Transceiver Cable

CBL5300-20 .... 20 m Dedicated Transceiver Cable

CBL5300-30 .... 30 m Dedicated Transceiver Cable

CBL5300-40 .... 40 m Dedicated Transceiver Cable

CBL5300-50 .... 50 m Dedicated Transceiver Cable

CBL5300-05CMP .... 5 m Dedicated Transceiver Cable (CMP)

CBL5300-10CMP .... 10 m Dedicated Transceiver Cable (CMP)

CBL5300-20CMP .... 20 m Dedicated Transceiver Cable (CMP)

CBL5300-30CMP .... 30 m Dedicated Transceiver Cable (CMP)

CBL5300-40CMP .... 40 m Dedicated Transceiver Cable (CMP)

CBL5300-50CMP .... 50 m Dedicated Transceiver Cable (CMP)

HCS-5300 Series Application Software

HCS-5300 application software is comprehensive, reliable and user-friendly. But it is also an easy care software system which helps the operator to manage the conference efficiently from the very beginning of a meeting until the post-meeting work. With the PC installed HCS-5300 application software connected into the conference system, the operator is able manage all aspects of the conference centrally. The operation turns out to be easy and efficient.

HCS-5300 application software is a modularized software with various functional modules:

■ Basic System Setup Management Software Module (HCS-5310/80)

■ Microphone Management Software Module (HCS-5313/80)

■ Voting Management Software Module (HCS-5314/80)

■ Video Control Software Module (HCS-5315/80)

■ Simultaneous Interpretation Software Module (HCS-5316/80)

■ Synchronous Audio Recording Management Software Module (HCS-5319/80)

■ Multi-User Conference Control Software Module (HCS-5321/80)

■ Digital HD Video Recording Management Software Module (HCS-5343/80)
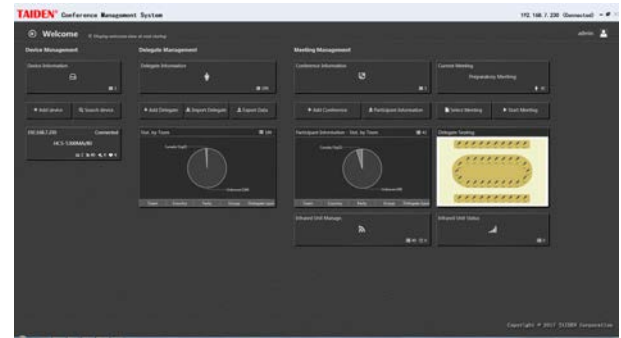
HCS-5310/80
Basic System Setup Management Module

The Basic Software Module consists of an amount of facilities, e.g. room management, meeting management, main unit configuration, contribution unit configuration, information display, report management and user management.

Room management
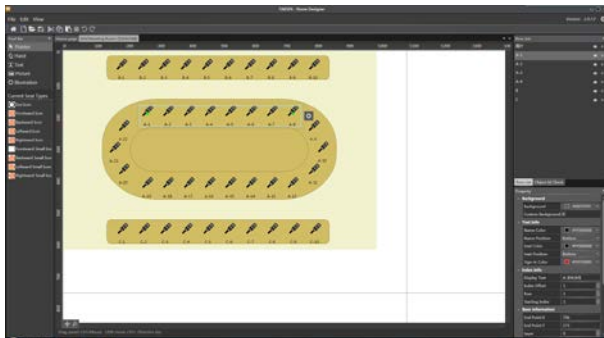
Room layout designer

Functions

Supports importing room layout and designing a new room layout.
Converts the venue seating into an intuitive, graphical and controllable interface as a basis for further use, according to the actual layout of the venue

- Self-designing the background picture and color, supporting pictures of any size
- Microphone number, amount of microphones per line, icon type - icon transparency optionally
- Freely drag and drop the microphone icon
- Save/open files for file management
- Suitable for any sized meeting room/hall

Main unit configuration facility
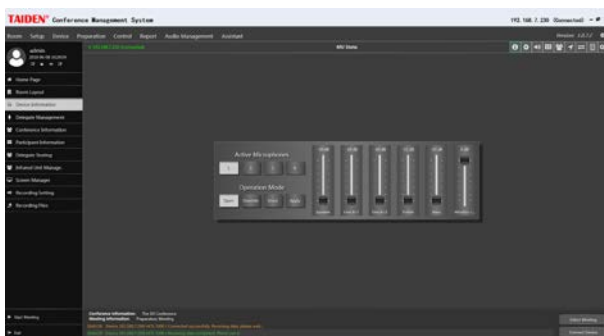
Main unit control panel
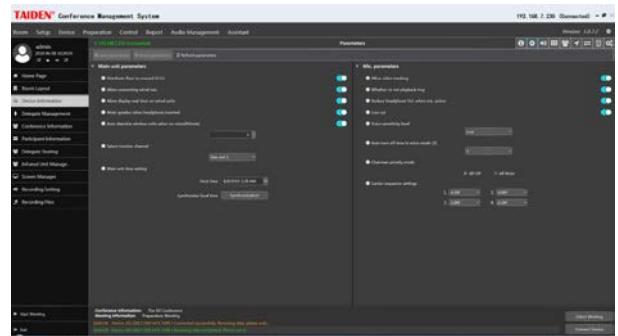
CMU parameters setup

Functions

Module provides **CMU control panel** and **CMU parameters setup** sub-modules.

- **CMU control panel**: synchronously display and adjust the status of the conference main unit, for flexible control of the CMU by the operator
  - Active Microphones (1/2/3/4)
  - Operation mode (OPEN/OVERRIDE/VOICE/APPLY)
  - Original floor channel volume of the contribution unit
  - Original floor channel treble of the contribution unit
  - Original floor channel bass of the contribution unit
  - Line-in volume
- **CMU parameters setup-Main unit:**
  - Distribute floor to unused SI CH
  - Allow connecting wired mic
  - Allow display real-time on wired units
  - Mute speaker when headphone inserted
  - Auto deactive when no voice: the microphone will be automatically switched off after a period of silence and the period shall be set up
  - Select monitor channel: select monitor channel
  - Main unit time setting
- **CMU parameters setup-Microphone:**
  - Allow video tracking
  - Playback ring when priority button pressed
  - Reduce headphone volume when microphone active
  - Low cut
  - Voice sensitivity (Low/Medium/High)
  - Auto off time in voice mode
  - Chairman priority mode (All Off / All Mute)
  - Carrier sequence settings

Conference information management

Conference information

Functions

Comprehensive conference information management facility, for clear and easy user management.

- ■ Includes conference name, meeting information and agenda information
- ■ Each conference consists of several meetings
- ■ Each meeting consists of several agendas
- ■ Creation of a new meeting for appointed conference
- ■ Creation of a new agenda for appointed meeting
- ■ Meeting:
  - ♦ Meeting content: meeting name, layout, meeting start time, sign-in mode, quorum and conference content
  - ♦ Locking a convoked meeting for meeting data protection
  - ♦ Speaking setup for appointed meeting
  - ♦ Freely switch between the meetings to manage
- ■ Agenda:
  - ♦ Agenda content: agenda name
  - ♦ Speaking setup for appointed agenda

Contribution unit configuration facility
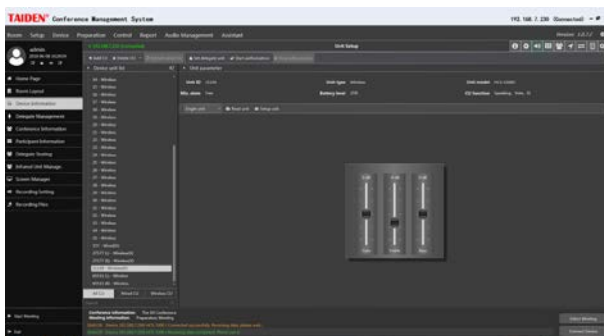
Set up contribution unit interface

Functions

Set up and reconfigure internal parameters of the contribution unit. Parameters include:

- ■ Select contribution unit to set up
- ■ Gain of the contribution unit
- ■ Treble of the contribution unit
- ■ Bass of the contribution unit

User management

User management interface

Functions

Module provides **User Information** and **User Role** sub-modules.

- ■ **User Information**
  - ♦ Create a new user, and set his/her account, password, and role
  - ♦ Change user's password and role
  - ♦ Supports deleting a user
- ■ **User Role**
  - ♦ Create a new role, and set its authority
  - ♦ Change role's name and authority
 - ♦ Supports deleting a role

Information display
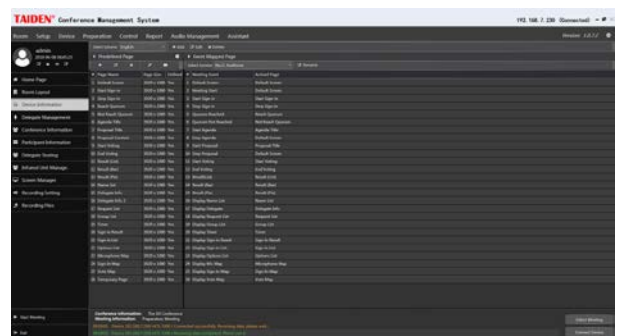
Screen management

Functions

Includes screen management: design of a screen and its related activated event.

- ■ Set distinct screen projects for distinct conferences and languages
- ■ Predetermination of screen page contents: includes page color, page name, page size, etc.
- ■ Editing screen page contents: includes add text, picture, delegate's photo, voting results, etc.
- ■ Select the page to display when conference event starts. Each conference event corresponds to a particular screen page
- ■ Rename each screen for more convenience

Report system
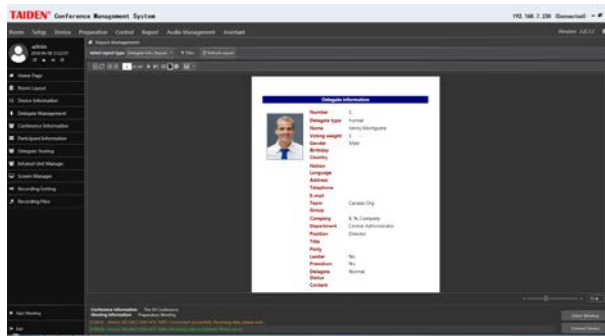
Report system

Functions

Conference information output from the software's database, for backup or printout purposes. The conference information includes:

■ Delegate information report

■ Seat sign-in report

■ Seat sign-in name list
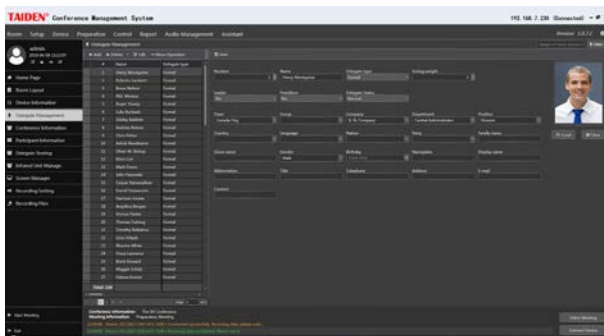
■ Vote result report

■ Vote name list

Ordering Information

HCS-5310/80 Basic System Setup Management Software Module

HCS-5313/80
Microphone Management Module

Seat arrangement

Delegate information

Microphone control

Functions

Seat arrangement, **delegate management** and **microphone control sub-modules**

- **Seat arrangement** facility includes delegate seating and unit arrangement function modules
  - ♦ Delegate seating is used to assign seats for the delegates, e.g.:
    - ▪ Assign a single seat for each delegate
    - ▪ Auto-arrange: automatically arrange the delegate to the room layout according to delegate number and seat number
    - ▪ Section seating, automatic seat assignment for a group of delegates, supports new assignment – in parts or entirely
    - ▪ Clear a single seat if required for a new assignment
    - ▪ Clear all seat if required for new assignment

- ♦ Unit arrangement: assign the conference units to the corresponding positions based on the true delegate seating, current cabling and layout:
  - ▪ Setup arrangement, assign the conference units to the true delegate seating
  - ▪ Delete arrangement, reassign the units
  - ▪ Locate seat position by menu operation
  - ▪ Operate the arranged units to check the arrangement
- **Delegate management** includes two sub-modules: delegate information and participant information
  - ♦ Delegate information: create and manage the delegate's database
    - ▪ Edit delegate information: number, type, name, voting weight, leader (yes or no), presidium (yes or no) etc. Supports individual picture in the database
    - ▪ Fast search and filter facility
    - ▪ Recover delegate from recycle bin
    - ▪ Database updatable
  - ♦ Participant information: select the delegates to participate in the conference from the database
    - ▪ Add participants by filter conditions (for example delegate type, team)
    - ▪ Check participant information by filter conditions (for example delegate type, team)
- **Microphone control**: combined with room layout design, seating arrangement, delegate management, meeting management and microphone setup, for controlling and monitoring current microphone status, as well as automatic video tracking. Facility includes:
  - ♦ Microphone on/off control
  - ♦ Close all active microphone
  - ♦ Delegate speech timing
  - ♦ Detailed information available from the delegate database for online display purposes
  - ♦ If cooperating with an automatic video tracking system, camera presets can be made for each discussion unit to transmit speaker's picture simultaneously to a hall display

Ordering Information

HCS-5313/80 .... Microphone Management Software Module

- ▪ Fast search and filter facility
- ▪ Recover delegate from recycle bin
- ▪ Database updatable
- ♦ Participant information: select the delegates to participate in the conference from the database
  - ▪ Add participants by filter conditions (for example delegate type, team)
  - ▪ Check participant information by filter conditions (for example delegate type, team)

Ordering Information

HCS-5314/80 ···· Voting Management Software Module (including delegate management, multiform voting

HCS-5315/80
Video Control Module
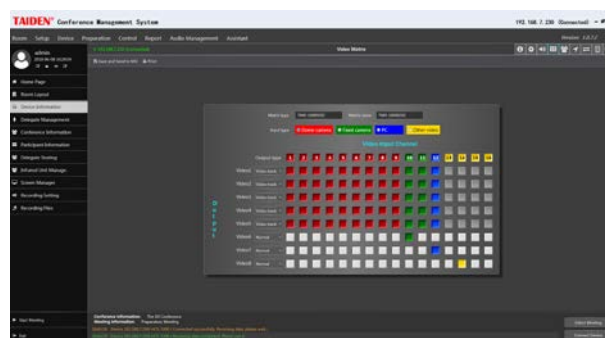
Video matrix
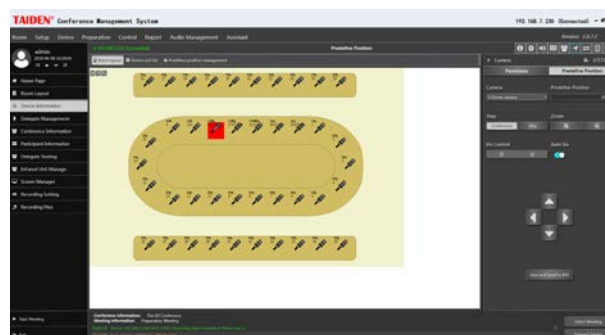
Camera control

Functions

Carries out automatic video tracking when cooperating with camera and video switch unit.

- ■ Set up video matrix: set input/output channels for computer, camera and other video apparatus according to the connections between video equipment and video switch unit. The configuration can be sent to the main unit for synchronization
- ■ Video switch: switch among different input and output video signals according to the video matrix
- ■ Camera preset: cooperating with microphone management module to set and adjust the camera preset for each seat/microphone and to transmit speaker's video picture simultaneously to a hall display
- ■ Camera control: preset the panorama of the conference venue
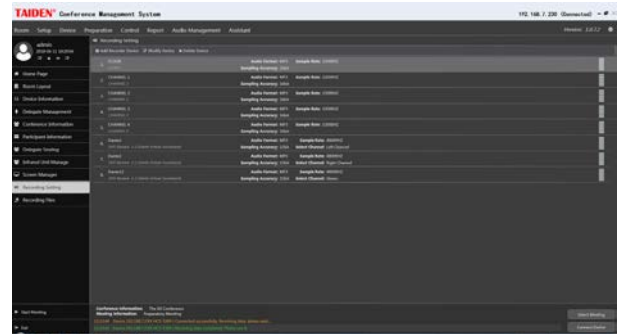
Ordering Information

HCS-5315/80 ···························· Video Control Software Module

HCS-5316/80
Simultaneous Interpretation Module


Interpretation channel setup

Booth management

Functions

Set up the simultaneous interpretation channels, interpreter booth(s) and booth management:

■ Simultaneous interpretation channel setup:
 ♦ Set the channel count and language for each channel and save into the database
 ♦ Set language and its abbreviation
 ♦ Send the configuration to the Congress Main Unit for synchronization
 ♦ Display Congress Main Unit configuration on the window
■ Set up interpreter booth(s)
 ♦ Set the count of interpreter booth, and save into database
 ♦ Set the outgoing for channel A, B and C of each booth
 ♦ Set the auto-relay booths for each interpreter booth
 ♦ Send configuration to the Congress Main Unit for synchronization
■ Booth management: synchronously control and communicate with the booth during the meeting, monitor booth state and SI channel state

Ordering Information

HCS-5316/80 .... Simultaneous Interpretation Software Module

HCS-5319/50
Synchronous Recording Module

Recording setting
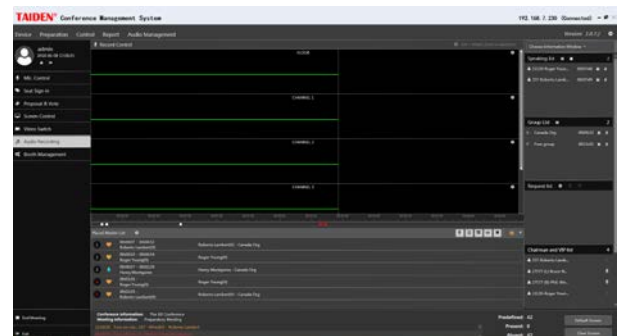
Recording files

Audio recording

Functions

Records speakers' audio information:

■ Integrated into **TAIDEN** conference management application software, easy to operate
■ Recording setting:
 ♦ Supporting local device and current main unit
 ♦ Local device: recording mixing audio of floor channel and interpreter audio of SI channels, Dante virtual soundcard on PC and Dante interface on main unit are needed
 ♦ Current main unit: recording mixing audio of floor and single microphone audio