TAIDEN

Digital Infrared Classroom Audio Reinforcement System

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21

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System overview

TAIDEN, one of the world's renowned suppliers of digital conference systems and simultaneous interpretation system, has equipped prestigious international institutions and high profile events including the UN headquarters in New York, Council of Europe, G20 Summits, APEC Summits, Asia-Europe Meeting, and IMF-World Bank Annual Meetings.

In 2015, TAIDEN introduced its worldwide pioneering digital infrared technology into the field of multimedia teaching and released a series of classroom audio systems which can be categorized as Digital IR Wireless Classroom Audio Reinforcement System, Interactive Recording and Webcasting Audio System and Lecture Recording Management Platform. The audio systems featuring excellent audio clarity, great immunity to interference and convenient management fully satisfy the need for sound reinforcement, interactive recording and webcasting, and centralized management of all the multimedia equipment in classrooms. In addition, the wireless microphone of digital IR technology provides safe and RF radiation free use. What's more, the e-lock charging station for wireless microphones frees school AV/IT teams from keeping and charging the microphones.

System theory

TAIDEN TDIR04 digital infrared processing chip

The core of the TAIDEN digital infrared wireless classroom audio 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 transmission via infrared technology are integrated to make an ideal solution for a wireless conference system. TAIDEN's infrared audio transmission and control technology (dirATC) is built on its processing chip by integrating A/D (analog/digital) conversion circuit, digital encoding/decoding circuit, digital modulator/demodulator (DQPSK), and filtering and amplification circuit.

System features

Excellent Audio Clarity

- Crystal-clear audio everywhere within an operating range of 20 meters
  - Freq. response: main unit to main unit: 50 Hz to 20 kHz
    Mic. to main unit: 100 Hz to 20 kHz
  - SNR: Mic. to main unit: ≥90 dBA
  - THD: Mic. to main unit: ≤0.05%
- Better audio acoustics protects lecturers from hoarse voice
- Clearer audio facilitates learning efficiency by helping students stay focus

Immunity to Interferences

- No crosstalk and interference between classrooms even when their systems are used at the same time
- Free from radio interference and electromagnetic radiation
- Insusceptible to interferences from HF-driven lighting and works perfectly in sunlight

Convenient Operation and Management

- Digital infrared microphones can be used in different classrooms without channel matching. Simply switch on and talk
- Integrated charging dock to park the microphone when it is not in use
- Electronic lock built in the dock to secure the microphone. Authorized users can scan QR code or swipe IC card to talk

No Electromagnetic Radiation

- Zero radio transmission
- Unaffected by radio frequency licensing

TES-5602A_G
Digital Infrared Wireless Microphone (handheld type)

Functions

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Excellent immunity to RF interferences from HF-driven lighting and it works in sunlight
- Digital infrared audio processing and transmitting technologies enable excellent audio quality
- Superior extension capability supports external audio input (Ø 3.5 mm AUDIO IN) and flexible transfer of signal with other audio devices (MP3, mobile phone, etc.)
- Microphone channel and sensitivity adjustable
- Mute facility prevents constrained voice being transmitted
- Simple and comfortable handling
- Emission angle: vertical: 0°~ 90°, horizontal: 360°
- With rechargeable Li-ion battery, operation duration when microphone is continuously on about 6 hours
- LED battery capability indicator, could be charged via USB port or change battery
- Gravity Sensing
  - Detect the spatial location of the handheld microphone, enabling intellectual control of infrared emission angle, this ensures efficient coverage of infrared signal and can prolong the battery runtime
  - When the handheld microphone is detected being placed horizontally (no Audio In input) for a preset period of time, it will shut down automatically

Controls and Indicators

- Charging indicator
- Power On/Off switch with indicator
- Mute button with indicator

Interconnections

- Ø 3.5 mm jack for auxiliary audio input
- Two charging contacts
- USB port for charging

Technical Specifications

Electrical

Power adapter	DC 5 V, 2 A
Frequency response	50 Hz to 20 kHz
SNR	＞85 dBA
THD	＜0.06%

Interface data

Connector	Ø 3.5 mm jack for auxiliary audio input

Operation time of battery

When mic. is continuously on	Approx. 6 hours

Microphone

Type	Uni-directional electret condenser microphone
Sensitivity	-46 dB at 680 Ohm (0 dB = 1 V/Pa at 1 kHz)
Frequency response	75 Hz ~ 20 kHz
Directivity 0°/180°	⩾ 20 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	115 dB (THD < 3%)

Mechanical

Dimensions	225 × Ø 40 mm
Weight	
Excl. battery	146 g
Incl. battery	182 g
Color	Charcoal gray (PANTONE Cool Gray 11C)

Ordering Information

TES-5602A_G	Digital Infrared Wireless Microphone (handheld type, charcoal gray, with rechargeable battery, excl. adapter)

TES-5604N_W
Digital Infrared Wireless Microphone

Functions

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Insusceptible to interferences from HF-driven lighting and works perfectly in sunlight
- Superior scalability, supporting audio input (Ø 3.5 mm AUDIO IN) from devices such as MP3 and mobile phone
- Supports audio input from external microphones
- Volume adjustment of the (fixed/external) microphone
- Remote control of PPT slides
- Supports laser pointer
- Supports PTT (push to talk)
- Transmitter powers off automatically when no voice is detected for a preset period of time
- Microphone channel adjustable
- Ergonomically compact and elegant design, can be held in hand or hung around the neck via a nice strap or fit on the necktie
- Emission angle: vertical: 0°~ 90°, horizontal: 120°
- Emission range: linear transmitting distance: over 25 m
- Built-in rechargeable lithium battery, operation duration when microphone is continuously on about 7 hours
- Charge via USB port (compatible with mobile phone charger) or via charging station

Controls and Indicators

- Microphone on/off button
- Microphone volume up/down button
- Microphone on (MIC) indicator
- PPT mode indicator
- Charging indicator
- "**...**" button: select MIC/PPT mode
- Laser pointer button and transmitter

Interconnections

- Ø 3.5 mm jack for auxiliary audio input
- Two charging contacts
- USB port for charging

Technical Specifications

Electrical

IR transmission wavelength	870 nm
Modulation method	DQPSK
Power	DC 5 V, 2 A
Carrier frequency	Audio channel 1: 1.00 MHz
	Audio channel 2: 1.67 MHz
	Audio channel 3: 2.33 MHz
	Audio channel 4: 3.00 MHz
	Audio channel 5: 3.67 MHz
Capacity of battery	2300 mAh
When mic. is continuously on	Approx. 7 hours

Interface data

Connector	Ø 3.5 mm jack for auxiliary audio input
	USB port for charging

Microphone

Type	Uni-directional electret condenser microphone
Sensitivity	-46 dB at 680 Ohm (0 dB = 1 V/Pa at 1 kHz)
Frequency response	75 Hz ~ 20 kHz
Directivity 0°/180°	⩾20 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	115 dB (THD < 3%)

Mechanical

Dimensions (h x w x d)	145 × 41 × 22 mm
Color	White (PANTONE 420 C)
Weight	80 g

Ordering Information

TES-5604N_W	Digital Infrared Wireless Microphone (white, built-in rechargeable lithium battery, with laser pointer, excl. adapter, used with TES-5600NS_W/20 neck lanyard or TES-5600CLP clip)

TES-5608/20 Series Digital IR Smart Teaching Microphone

Functions

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Insusceptible to interferences from HF-driven lighting and works perfectly in sunlight
- Superior scalability, supporting audio input (Ø 3.5 mm AUDIO IN) from devices such as MP3 and mobile phone
- Volume adjustment of the microphone
- Remote control of PPT slides
- Supports laser pointer
- Transmitter powers off automatically when no voice is detected for a preset period of time
- Microphone channel adjustable
- TES-5608CN/20 has one USB Type-C port on the top which can connect to and power the TES-5608AN,
- TES-5608AN is a light-weight clip microphone, the clip is for fitting on the lapel or necktie, 1.5 meter USB cable is for connecting to the USB Type-C port on the top of TES-5608CN/20
- Ergonomically compact and elegant design, can be held in hand or hung around the neck via a nice strap or fit at the waist via a belt case
- Emission angle: vertical: 0°~ 90°, horizontal: 120°
- Emission range: linear transmitting distance: over 25 m
- Built-in rechargeable lithium battery, operation duration when microphone is continuously on about 7 hours
- One USB Type-C port, 5V DC, for charging
- Two charging contacts, can be charged via charging station

Controls and Indicators

- Power/ "**...**" button: Power/ select MIC/PPT mode button
- Microphone volume up/down button
- Microphone on (MIC) indicator
- PPT mode indicator
- Battery indicator
- Laser pointer button and transmitter

Interconnections

- Ø 3.5 mm jack for auxiliary audio input
- Two charging contacts
- USB Type-C port for charging
- USB Type-C port for connecting to TES-5608AN

Technical Specifications

Electrical

IR transmission wavelength	870 nm
Modulation method	DQPSK
Power	DC 5 V, 2 A
Carrier frequency	Audio channel 1：1.0 MHz
	Audio channel 2：1.67 MHz
	Audio channel 3：2.33 MHz
	Audio channel 4：3.0 MHz
	Audio channel 5：3.67MHz
Capacity of battery	2300 mAh
When mic. is continuously on	Approx. 7 hours

Interface data

Connector	Ø 3.5 mm jack for auxiliary audio input
	USB port for charging/ connecting to microphone

Microphone

Type	Uni-directional electret condenser microphone
Sensitivity	-46 dB at 680 Ohm (0 dB = 1 V/Pa at 1 kHz)
Frequency response	75 Hz ~ 20 kHz
Directivity 0°/180°	≥ 20 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	115 dB (THD < 3%)

Mechanical

Color	dark red (TES-5608AN)
	space grey (TES-5608CN)
Dimensions (h x w x d)	47x43x14(TES-5608AN)
	41×13×123 (TES-5608CN/20)
Weight	20 g (TES-5608AN)
	90 g (TES-5608CN/20)

Ordering Information

TES-5608AN	Digital Infrared Clip Microphone
TES-5608CN/20	Digital Infrared Wireless Presenter (space grey, with laser pointer, built-in rechargeable lithium battery, with neck lanyard and belt case, excl. adapter)

TES-5609
Digital Infrared Wireless Microphone

Functions

- Original dirATC—digital infrared audio transmission and control technology
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Insusceptible to interferences from HF-driven lighting and works perfectly in sunlight
- Supports audio input from external microphones
- Volume adjustment of the (fixed/external) microphone
- Remote control of PPT click
- Supports laser pointer
- Supports PTT (push to talk)
- Transmitter powers off automatically when no voice is detected for a preset period of time
- Microphone channel adjustable
- Ergonomically compact and elegant design, can be held in hand or hung around the neck via a nice strap
- Emission angle: vertical: 0°~ 90°, horizontal: 120°
- Emission range: linear transmitting distance: over 25 m
- Supports Lithium battery, battery life: 7 hours
- Multiple charging method:
  - Support charging via Type-C USB port
  - Support charging via charging contracts in TES-5609CHG charging station
  - Support wireless charging by TES-5609CHG charging station

Controls and Indicators

- Microphone on/off button
- Microphone volume up/down button
- 4 indicators to display battery level and charging status
- **VOL** control indicator
- **PPT** mode indicator
- **PTT** mode indicator
- Function button: enable PPT control function
- Laser pointer button and transmitter

Interconnections

- Ø 3.5 mm jack for auxiliary audio input (external microphone)
- Two charging contacts
- Type-C USB port for charging

Technical Specifications

Electrical

IR transmission wavelength	870 nm
Modulation method	DQPSK
Power	DC 5 V, 2 A
Carrier frequency	Audio channel 3: 2.33 MHz
	Audio channel 5: 3.67 MHz
Capacity of battery	2300 mAh
When mic. is continuously on	Approx. 7 hours

Interface data

Connector	Ø 3.5 mm jack for auxiliary audio input
	Type-C USB port for charging

Microphone

Type	Uni-directional electret condenser microphone
Sensitivity	-46 dB at 680 Ohm (0 dB = 1 V/Pa at 1 kHz)
Frequency response	75 Hz ~ 20 kHz
Directivity 0°/180°	> 20 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	115 dB (THD < 3%)

Mechanical

Dimensions (h x w x d)	145 x 41 x 22 mm
Color	Silver grey (PANTONE 430 C)
Weight	83 g

Ordering Information

TES-5609	Digital Infrared Wireless Microphone (silver grey, with laser pointer, built-in rechargeable lithium battery, support wireless charging, with neck lanyard, excl. adapter)

TES-5600MIC
Wired Desktop Microphone

Features

- Standard stem microphone
- 1 audio cable with USB port for connecting to main unit/ control box to transmit audio
- 1 microphone on/off button
- Dimensions (h x w x d, without stem): 43×135×132 mm
- Color: black (PANTONE 419 C)
- Weight: 0.5 kg

Ordering Information

TES-5600MIC	Wired Desktop Microphone (standard stem microphone: 60cm, optional: 50/70cm)

TES-5600CSMN
Wired Desktop Microphone

Features

- Standard stem microphone
- 1 audio cable with USB port for connecting to main unit/ control box to transmit audio
- 1 microphone on/off button
- 1 lockable charging station for one TES-5604 microphone
- Support connecting to central control system via RS232 for unlocking microphone
- Support network management for unlock microphone, microphone status display, setting classroom information
- 1 USB port for connecting to TES-ADP5V adapter
- Dimensions (h x w x d, without stem): 53×135×132 mm
- Color: black (PANTONE 419 C)
- Weight: 0.6 kg

Ordering Information

TES-5600CSMN	Wired Desktop Microphone (standard stem microphone: 60cm, optional: 50/70cm; with a lockable charging station for one TES-5604/5608 series microphone, can be unlocked via central control system or via network management system; support network management when used with TES-5604NSW Classroom Audio System Management Platform with TES-ADP5V power adapter)

TES-5600CSML
Wired Desktop Microphone

Features

- Standard stem microphone
- 1 audio cable with USB port for connecting to main unit/ control box to transmit audio
- 1 microphone on/off button
- 1 lockable charging station for one TES-5604 microphone
- Support connecting to central control system via RS232 for unlocking microphone
- Support unlocking via scanning QR code
- 1 USB port for connecting to TES-ADP5V adapter
- Dimensions (h x w x d, without stem): 53×135×132 mm
- Color: black (PANTONE 419 C)
- Weight: 0.6 kg

Ordering Information

TES-5600CSML	Wired Desktop Microphone (standard stem microphone: 60cm, optional: 50/70cm; with a lockable charging station for one TES-5604/5608 series microphone, can be unlocked by scanning QR code or via central control system; with TES-ADP5V power adapter)

TES-5600CSM
Wired Desktop Microphone

Features

- Standard stem microphone
- 1 audio cable with USB port for connecting to main unit/ control box to transmit audio
- 1 microphone on/off button
- 2 charging stations for TES-5604 microphones
- 1 USB port for connecting to TES-ADP5V adapter
- Dimensions (h x w x d, without stem): 53×135×132 mm
- Color: black (PANTONE 419 C)
- Weight: 0.6 kg

Ordering Information

TES-5600CSM	Wired Desktop Microphone (standard stem microphone: 60cm, optional: 50/70cm; with a charging station for two TES-5604/ TES-5608 series microphones, with TES-ADP5V power adapter)

MS50/60/70EGD2B
Stem Microphone

Features

- Built-in windshield
- With 2 flexible parts
- Used for TES-5600 series Wired Desktop Microphone
- Stem length: 50/60/70 cm
- Microphone
  - Type: Uni-directional electret condenser microphone
  - Sensitivity: -46 dB at 680 Ohm (0 dB = 1 V/Pa at 1 kHz)
  - Frequency response: 75 Hz ~ 20 kHz
  - Directivity 0°/180°: ≥ 20 dB (1 kHz)
  - Equivalent noise: 20 dBA (SPL)
  - Maximum sound pressure level: 115 dB (THD < 3%)
- Color: black (PANTONE 419 C)
- Weight: MS50EGD2B (102 g)
  MS60EGD2B (105 g)
  MS70EGD2B (107 g)

Ordering Information

MS50EGD2B	Stem Microphone (50 cm, built-in windshield, flexible gooseneck tube, for TES-5600 series Wired Desktop Microphone, black)
MS60EGD2B	Stem Microphone (60 cm, built-in windshield, flexible gooseneck tube, for TES-5600 series Wired Desktop Microphone, black)
MS70EGD2B	Stem Microphone (70 cm, built-in windshield, flexible gooseneck tube, for TES-5600 series Wired Desktop Microphone, black)

TES-5675T
Hanging Microphone

Features

- Built-in directional electret microphone to pick up the audio of the teachers' lecture
- Pickup distance: 5 m
- Installed on MA-120P Retractable hanging bar (the bar needs to be ordered separately), height and direction adjustable.
- 1 3PIN Phoenix interface for analog audio output and power supply,
- Low-impedance balanced audio output (+: positive phase level, -: negative phase level and Ground wire (shield) connection)
- AI algorithm, clear quality audio: work with TES-5600MRN /MHN or TES-8100MA /MB main unit which has built-in high-performance digital signal processor (DSP), and can realize functions such as Acoustic Feedback Cancellation (AFC), Acoustic Echo Cancellation (AEC), Active Noise Control (ANC), Automatic Equalization (AEQ) and Automatic Level Control (ALC), etc..

Technical Specifications

Electrical

Microphone:	14mm Cardioid unidirectional microphone
Sensitivity:	-30 dB (0 dB = 1 V/Pa at 1 kHz)
Frequency response:	50 ~ 20000 Hz
Directivity 0°/180° :	> 20 dB (1 kHz)
Equivalent noise :	20 dBA (SPL)
Maximum sound pressure :	125 dB (THD<3%)
Phantom power requirements	DC 11 V - 52 V, 2 mA
Output impedance	230 Ω

Mechanical

Dimensions (mm) :	Ø 124 × 53 (height)
Color :	Gray
Weight: :	140 g

Ordering Information

TES-5675T	Hanging Microphone (Gray, round, 14mm Cardioid unidirectional microphone, pick up the audio of the teachers' lecture)

TES-5675S
Hanging Microphone

Features

- Built-in omnidirectional electret microphone to pick up students' interactive sounds
- Pickup range: 5 m radius with medium ambient noise
  8 m radius in a quiet environment
- Installed on MA-120P Retractable hanging bar (the bar needs to be ordered separately), height and direction adjustable.
- 1 3PIN Phoenix interface for analog audio output and power supply,
- Low-impedance balanced audio output (+: positive phase level, -: negative phase level and Ground wire (shield) connection)
- AI algorithm, clear quality audio: work with TES-5600MRN /MHN or TES-8100MA /MB main unit which has built-in high-performance digital signal processor (DSP), and can realize functions such as Acoustic Feedback Cancellation (AFC), Acoustic Echo Cancellation (AEC), Active Noise Control (ANC), Automatic Equalization (AEQ) and Automatic Level Control (ALC), etc..

Technical Specifications

Electrical

Microphone:	Omnidirectional microphone
Sensitivity:	-32 dB (0 dB = 1 V/Pa at 1 kHz)
Frequency response :	50 ~ 20000 Hz
Directivity 0°/180° :	> 20 dB (1 kHz)
Equivalent noise:	20 dBA (SPL)
Maximum sound pressure:	125 dB (THD<3%)
Phantom power supply:	DC 11 ~ 52 V, 2mA
Output impedance :	230 Ω

Mechanical

Dimensions (mm) :	Ø 124 × 53 (height)
Color :	Gray
Weight: :	140 g

Ordering Information

TES-5675S	Hanging Microphone (Gray, round, omnidirectional microphone, pick up students' interactive audio)

TES-5675H
Hanging Microphone

Features

- Built-in cardioid uni-directional electret condenser microphone to pick up the audio of the teachers' lecture
- Microphone: 14 mm cardioid unidirectional electret condenser
- Pickup distance: 5 m
- Installed on MA-120P Retractable hanging bar (the bar needs to be ordered separately), height and direction adjustable.
- The microphone terminal is a standard 3-pin XLR male XLRM, used for analog audio output and power supply
- Low-impedance balanced audio output, the audio signal is output through the XLR male output terminal's No.2 and No.3 pins (No.2 pin is for positive phase level, No.3 pin is for negative phase level), while No.1 is Ground wire (shield) connection
- AI algorithm, clear quality audio: work with TES-5600MRN /MHN or TES-8100MA /MB main unit which has built-in high-performance digital signal processor (DSP), and can realize functions such as Acoustic Feedback Cancellation (AFC), Acoustic Echo Cancellation (AEC), Active Noise Control (ANC), Automatic Equalization (AEQ) and Automatic Level Control (ALC), etc..

Technical Specifications

Electrical

Microphone:	14mm Cardioid unidirectional microphone
Sensitivity:	-32 dB (0 dB = 1 V/Pa at 1 kHz)
Frequency response:	50 ~ 20000 Hz
Directivity 0°/180° :	> 20 dB (1 kHz)
Equivalent noise :	20 dBA (SPL)
Maximum sound pressure :	139 dB (THD<3%)
Phantom power requirements	DC 11 V - 52 V, 2 mA
Output impedance :	280 Ω

Mechanical

Dimensions (mm) :	Ø 20 × 150
Color :	Black
Weight: :	140 g

Ordering Information

TES-5675H	Hanging Microphone (Black, 14mm Cardioid unidirectional microphone , pick up the audio of the teachers' lecture)

TES-5600RN/30
Digital Infrared Receiver

Functions

- TAIDEN originated digital infrared classroom audio system
- Based on TAIDEN originated dirATC-digital infrared Audio Transmitting and Control technologies
- Excellent immunity to RF interferences from HF-driven lighting and it works perfectly in sunlight
- Support 2 wireless microphones
- Reception angle: vertical: 150° (±75°), horizontal: 360°
- Emission range: linear transmitting distance: over 25 m
  covered range: 80 to 100 m^2

Indicators

- Power indicator

Interconnections

- 1 RJ45 interface for connection with main unit via CBLRJ45 Ethernet Extension Cable

Technical Specifications

Electrical

Wavelength	870 nm
Modulation method	DQPSK
Voltage	12 V DC (supplied from main unit or control box)

Mechanical

Mounting	Ceiling, wall or tripod mounting
Dimensions	60 × Ø 116 mm
Weight	220 g
Color	Red (PANTONE 476)

Ordering Information

TES-5600RN/30	Digital Infrared Receiver (RJ45 interface, ceiling, wall or tripod-mounted, supports 2 wireless microphones)

TES-5600RN1/30
Digital Infrared Receiver

Functions

- TAIDEN originated digital infrared classroom audio system
- Based on TAIDEN originated dirATC-digital infrared Audio Transmitting and Control technologies
- Excellent immunity to RF interferences from HF-driven lighting and it works perfectly in sunlight
- Support one wireless microphone
- Reception angle: vertical: 150° (±75°), horizontal: 360°
- Emission range: linear transmitting distance: over 25 m
  covered range: 80 to 100 m^2

Indicators

- Power indicator

Interconnections

- 1 RJ45 interface for connection with main unit via CBLRJ45 Ethernet Extension Cable

Technical Specifications

Electrical

Wavelength	870 nm
Modulation method	DQPSK
Voltage	12 V DC (supplied from main unit or control box)

Mechanical

Mounting	Ceiling, wall or tripod mounting
Dimensions	60 × Ø 116 mm
Weight	220 g
Color	Red (PANTONE 476)

Ordering Information

TES-5600RN1/30	Digital Infrared Receiver (RJ45 interface, ceiling, wall or tripod-mounted, supports 1 wireless microphone)

TES-5600BX2/30
Digital Infrared Classroom Audio System Main Unit

Functions

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Supports 2 wireless microphones
- 2 RJ45 for digital infrared wireless receiver
- 2 PC IN (adjustable volume), 1 LINE OUT
- Built-in amplifier, support 4 loudspeakers
- 1 Micro USB interface for remote control of PPT slides
- 1 A type USB interface for connecting to TES-5600MIC or TES-5600CSM series wired microphone for audio transmission

Controls and Indicators

- 1 volume knob for speakers
- 3 knobs for MIC volume, bass and treble
- Power switch with indicator

Interconnections

- 2 x 3.5 mm interface for PC IN with volume knob
- 1 x 3.5 mm interface for LINE OUT
- 1 A type USB interface for TES-5600MIC or TES-5600CSM series wired microphone
- 1 Micro USB interface for connecting to PC
- 2 RJ45 interface for connection to TES-5600RN/30 series Digital Infrared Receiver
- DC power supply

Technical Specifications

Electrical

Power supply	24 V DC
Modulation method	DQPSK
Carrier frequency	Audio channel 1: 2.33 MHz
	Audio channel 2: 3.67 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz
	Mic. to main unit: 100 Hz to 20 kHz
SNR	Mic. to main unit: ≥90 dBA
THD	Mic. to main unit: ≤0.05%
Dynamic range	Mic. to main unit: ≥85 dB

Audio Power Amplifier

Max. output power	60 W×2 (8 Ohm)
	30 W×4 (8 Ohm)

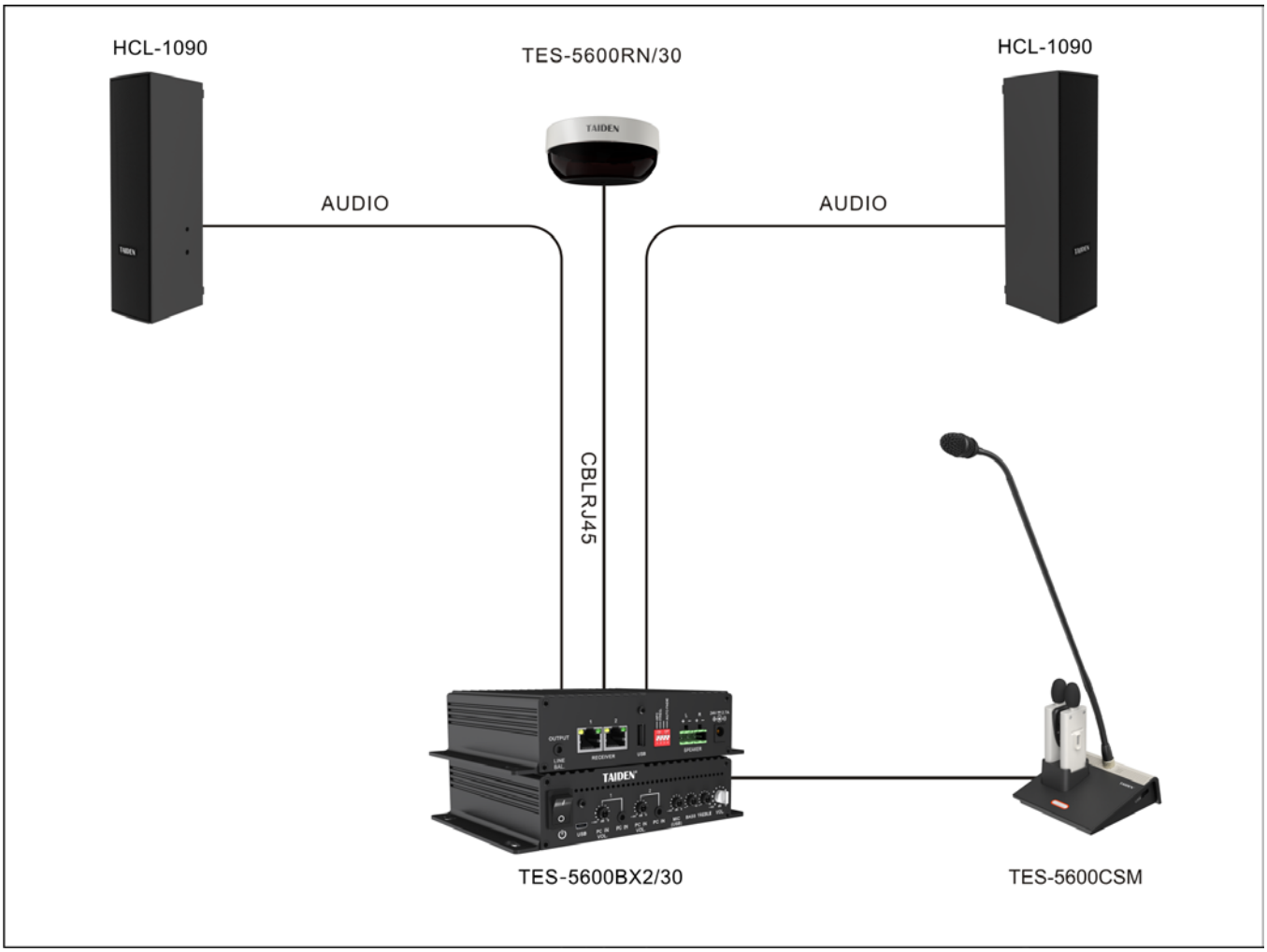
Mechanical

Dimensions (h x w x d)	41 × 168 × 123 mm
Weight	0.4 kg
Color	Black (PANTONE 419 C)

Ordering Information

TES-5600BX2/30	Digital Infrared Classroom Audio System Main Unit (with RJ45 interface, supports 2 wireless microphones, built-in audio power amplifier, can be connected to 4 loudspeakers, can connect to TES-5600 series Wired Desktop Microphone for audio transmission, 2 line in, 1 line out, adapter to be ordered separately)

System Connection for TES-5600BX Series



TES-5600MAU/50 Digital Infrared Classroom Audio System Main Unit

Functions

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- With web page control function, main unit's parameters can be set through web browser
- Can be managed by TSW-5600MN Parameter Setting Tool and TES-5600SW Digital Infrared Classroom Audio System Management Platform
- With 2 RJ45 (RECEIVER), for connecting to TES-5600RN series receivers
- Supports 2 wireless microphones
- Built-in amplifier, with 4 speaker ports, can connect to speakers directly
- Support digital audio input/output, remote PPT click function digital laser pointer function
- 1 Type-A USB for connecting to TES-5600MIC or TES-5600CSM series wired microphone for audio transmission
- Multiple audio input/output interfaces
- Connection to central control system through RS232 interface for centralized control
- Multiple Emergency Alarms
  - Alarm can be triggered by either emergency switch on the main unit, central system or by pendant microphone to meet different needs of the customers
  - After the alarm is activated, emergency signal can be transmitted to central system. The signal can also control the electrical level to connect relay or alarm devices of the third party, which is highly flexible
  - The speaker can trigger the alarm by pendant microphone unnoticed and send the emergency signal to campus security center
- 1U high & half rack width

Controls and Indicators

- OLED displays status and menu of the system configuration, supporting multi language menu
- 1 knob for configuration
- Power switch with indicator

Interconnections

- Multiple audio in/out interfaces:
  - Two 3-pin 3.81 mm Phoenix LINE IN interfaces for audio LINE IN: LINE IN1 is balanced, with phantom power can be used as microphone input and LINE IN2 is unbalanced
  - Two stereo 3-pin 3.81 mm Phoenix connectors for audio LINE OUT
  - One unbalanced Ø 3.5 mm REC OUT interface for audio output to recording system
  - Four 2-pin 5.08 mm Phoenix connectors for connecting to speakers
  - One Type-A USB interface for connecting to TES-5600MIC or TES-5600CSM series wired microphone for audio transmission
  - One Type-C USB interface for digital audio input/output
- DC power supply
- One RJ45 standard socket for connection to Ethernet interface (LAN)
- Two RJ45 (RECEIVER) for connection to TES-5600RN/30 series Digital Infrared Receivers
- One RS232 interface and two I/O ports for connecting to central control system
- One RS232 for connecting to TES-5600 series charging stations or Wired Desktop Microphone with charging stations
- One Emergency signal interface (ALARM) for connection to public emergency system.

Technical Specifications

Electrical

Power supply	24 V DC
Modulation method	DQPSK
Carrier frequency	Audio channel 1: 2.33 MHz
	Audio channel 2: 3.67 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz
SNR	Mic. to main unit: ≥90 dBA
THD	Mic. to main unit: ≤0.05%
Dynamic range	Mic. to main unit: ≥85 dB

Max. audio inputs

LINE IN 1	+8 dBu, BAL.
LINE IN 2	+4 dBu, UNBAL.

Max. audio outputs

LINE OUT 1	+14 dBu, BAL.
LINE OUT 2	+14 dBu, BAL.
REC OUT	-20 dBu~+14 dBu, UNBAL.

Audio Power Amplifier

Max. output power	60 W×2 (8 Ohm)
	30 W×4 (8 Ohm)

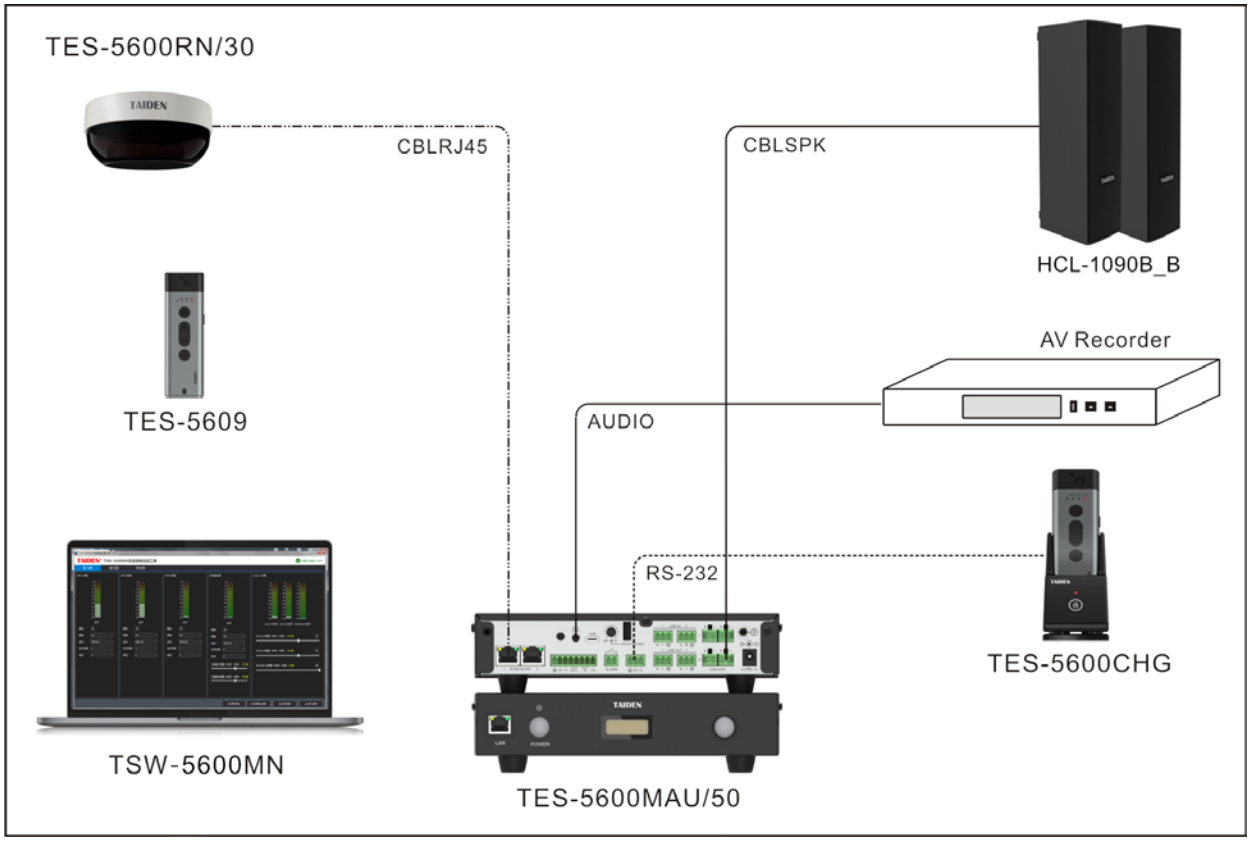
Mechanical

Mounting	Tabletop or mounted in a 19" rack
Dimensions (h x w x d)	55 × 211 × 236 mm
	(1U high & half rack width)
Weight	1.3 kg
Color	Black (PANTONE 419 C)

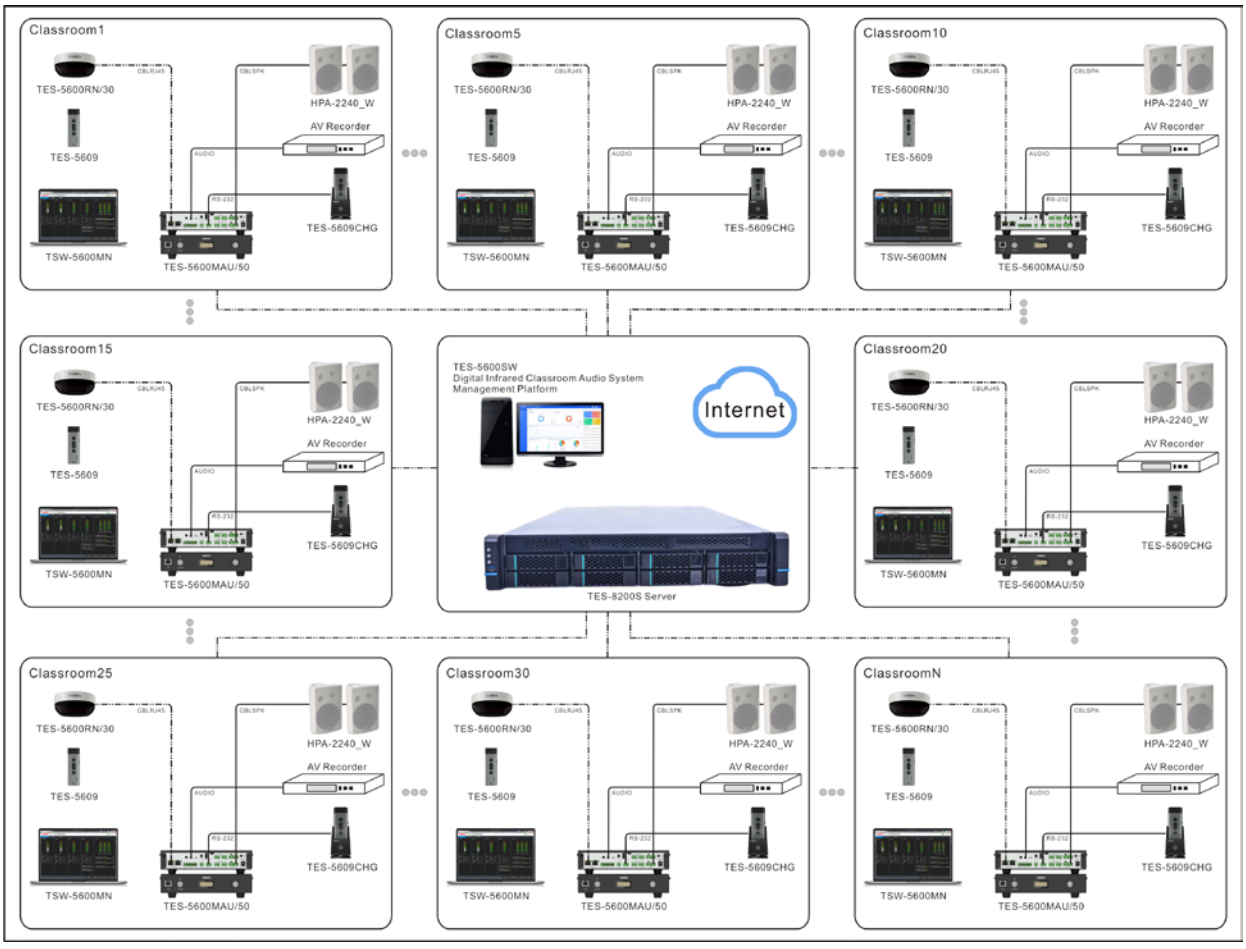
Ordering Information

TES-5600MAU/50	Digital Infrared Classroom Audio System Main Unit (with RJ45 interface, built-in Web interface, can be setup and managed by Digital Infrared Classroom System Management Platform, supports 2 wireless microphones, built-in amplifier, supports 4 speakers, can connect to TES-5600 series Wired Desktop Microphone for audio transmission, USB Type-C interface for digital audio input/output, phantom power, adapter to be ordered separately)

System Connection for TES-5600MAU/50 Classroom Audio system



System Connection for TES-5600MAU/50 campus system



TES-5630MA
Economical Digital Infrared Wireless System Main Unit

Functions

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Integrates the digital infrared wireless system main unit and the digital infrared receiver
- Supports 1 wireless microphones
- Built-in amplifier, 2 speaker ports

Controls and Indicators

- 1 adjustment for master volume
- 1 adjustment for bass
- 1 adjustment for treble
- 1 FB suppress switch
- 1 Line In auto fade switch

Interconnections

- Audio in/out interfaces:
  - 1 audio LINE IN (Ø 3.5 mm)
  - 1 audio LINE OUT (Ø 3.5 mm)
- DC power supply
- 1 BNC sockets for connection to extended TES-5600R series Digital Infrared Receiver
- 2 speaker output interfaces

Technical Specifications

Electrical

Power supply	24 V DC
Modulation method	DQPSK
Carrier frequency	Audio channel 1：1.67 MHz
	Audio channel 2：2.33 MHz
	Audio channel 3：3.0 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz
	Mic. to main unit: 100 Hz to 20 kHz
SNR	Mic. to main unit: ≥90 dBA
THD	Mic. to main unit: ≤0.05%
Dynamic range	Mic. to main unit: ≥85 dB
Max. output power	40 W×2 (8 Ohm)

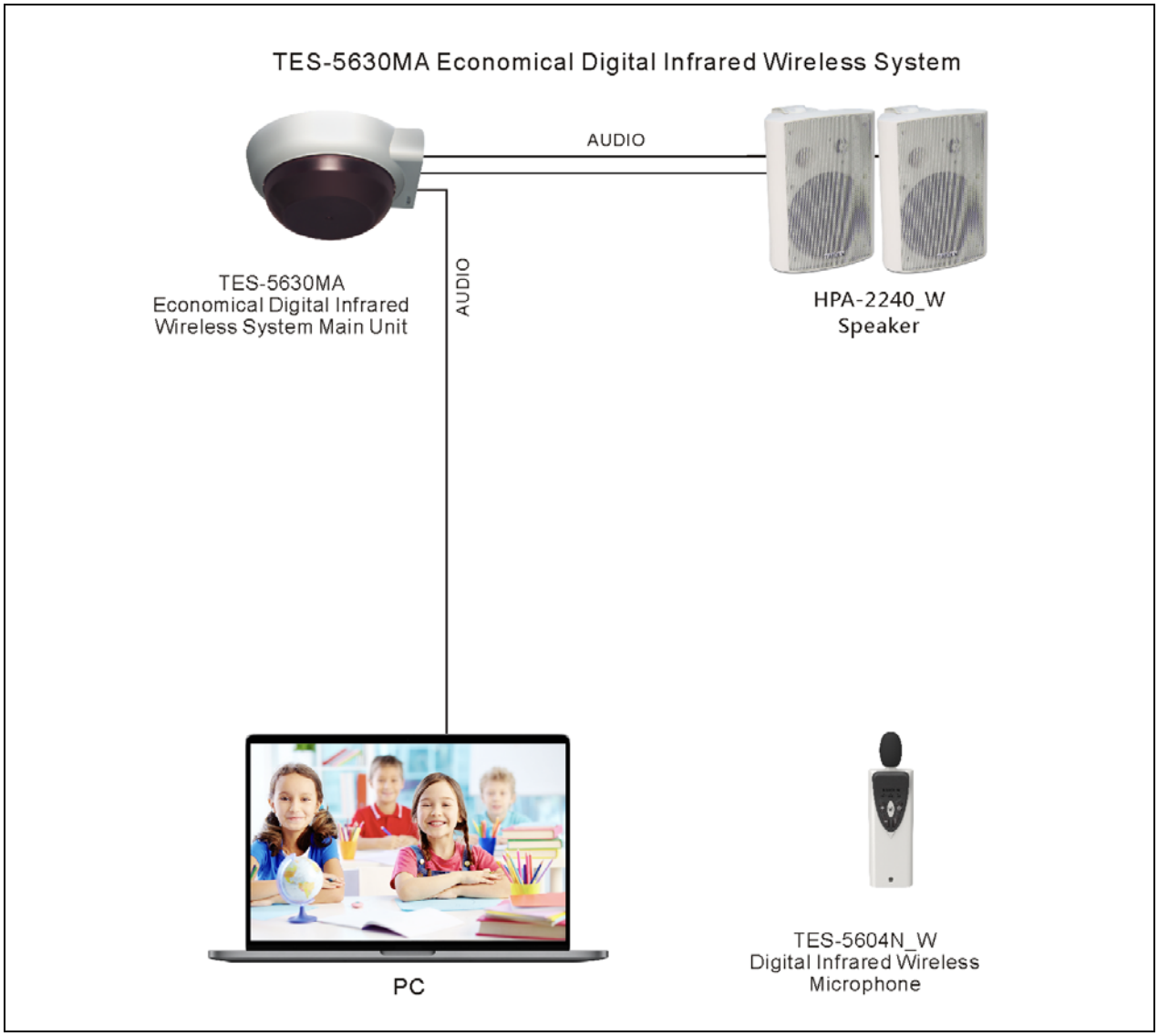
Mechanical

Mounting	Ceiling, wall or tripod mounting
Dimensions (h x w x d)	150 × 146 × 66 mm
Weight	0.6 kg
Color	Silver (PANTONE 428C)

Ordering Information

TES-5630MA	Economical Digital Infrared Wireless System Main Unit (with digital infrared receiver, supports 1 wireless microphone, built-in amplifier, supports 2 speakers, with adapter)

System Connection for TES-5630MA



TES-5685MB-F/30
Digital Infrared Classroom Audio System

System features

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Selectable infrared carrier frequency for simultaneous use of two wireless microphones
- Built-in digital audio power amplifier and speakers for easy sound reinforcement
- 1 RJ45 interface for analog audio signals input/output
- 1 RJ45 interface for connection to TES-5600RN/30 series Digital Infrared Receiver
- Volume of speakers is adjustable
- Bass and Treble are adjustable
- Supports remote PPT slides
- Highly integrated, and easy to install

Controls and Indicators

- Switch:
  - F1.: select IR frequency
  - F2: set broadcast mode
  - AFC: set AFC function
  - AUTO FADE on: reduce line in volume automatically when the IR microphone is on
- Bass and Treble adjustment knob
- Volume control knob

Interconnections

- RJ45 socket (AUDIO I/O) for connection to TES-5685BX series Function Extension Box
- Micro USB interface for connecting to computer
- RJ45 interface (RECEIVER) for connecting TES-5600RN/30 series receiver

Technical Specifications

Electrical

Power supply	AC 100-240 V, 1.5 A
Modulation method	DQPSK
Carrier frequency	Audio channel 1: 2.33 MHz
	Audio channel 2: 3.67 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz
	Mic. to main unit: 100 Hz to 20 kHz
SNR	Mic. to main unit: ≥90 dBA
THD	Mic. to main unit: ≤0.05%
Dynamic range	Mic. to main unit: ≥85 dB
Emission angle	vertical: 150° (±75°), horizontal: 360°
IR radiation range:	
Line-of-sight distance	25 m

Mechanical

Speaker interface	Max. 4×30 W (12 Ohm)
Dimension (h x w x d ,mm)	206 × 332 × 319
Color	White (PANTONE 420 C)
Weight	3.5 kg

Ordering Information

TES-5685MB-F/30	Digital Infrared Classroom Speaker (with digital infrared receiver, supports 2 wireless microphones, analog audio input/output, built-in audio power amplifier and integrated loudspeakers, RJ45 interface for extending receiver, Type F plug)

TES-5685MB-B/30
Digital Infrared Classroom Audio System

System features

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Selectable infrared carrier frequency for simultaneous use of two wireless microphones
- Built-in digital audio power amplifier and speakers for easy sound reinforcement
- 1 RJ45 interface for analog audio signals input/output
- 1 RJ45 interface for connection to TES-5600RN/30 series Digital Infrared Receiver
- Volume of speakers is adjustable
- Bass and Treble are adjustable
- Supports remote PPT slides
- Highly integrated, and easy to install

Controls and Indicators

- Switch:
  - F1.: select IR frequency
  - F2: set broadcast mode
  - AFC: set AFC function
  - AUTO FADE on: reduce line in volume automatically when the IR microphone is on
- Bass and Treble adjustment knob
- Volume control knob

Interconnections

- RJ45 socket (AUDIO I/O) for connection to TES-5685BX series Function Extension Box
- Micro USB interface for connecting to computer
- RJ45 interface (RECEIVER) for connecting TES-5600RN/30 series receiver

Technical Specifications

Electrical

Power supply	AC 100-240 V, 1.5 A
Modulation method	DQPSK
Carrier frequency	Audio channel 1: 2.33 MHz
	Audio channel 2: 3.67 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz
	Mic. to main unit: 100 Hz to 20 kHz
SNR	Mic. to main unit: ≥90 dBA
THD	Mic. to main unit: ≤0.05%
Dynamic range	Mic. to main unit: ≥85 dB
Emission angle	vertical: 150° (±75°), horizontal: 360°
IR radiation range:	
Line-of-sight distance	25 m

Mechanical

Speaker interface	Max. 4×30 W (12 Ohm)
Dimension (h x w x d ,mm)	206 × 332 × 319
Color	White (PANTONE 420 C)
Weight	3.5 kg

Ordering Information

TES-5685MB-B/30	Digital Infrared Classroom Speaker (with digital infrared receiver, supports 2 wireless microphones, analog audio input/output, built-in audio power amplifier and integrated loudspeakers, RJ45 interface for extending receiver, Type B plug)

TES-5685MC-F/30
Digital Infrared Classroom Audio System

System features

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Selectable infrared carrier frequency for simultaneous use of one wireless microphone
- Built-in digital audio power amplifier and speakers for easy sound reinforcement:
- 1 RJ45 socket for analog audio signals input/output
- 1 RJ45 interface for connection to TES-5600RN/30 series Digital Infrared Receiver
- Volume of speakers is adjustable
- Bass and Treble are adjustable
- Supports remote PPT slides
- Highly integrated, and easy to install

Controls and Indicators

- Switch:
  - F1.: select IR frequency
  - F2: set broadcast mode
  - AFC: set AFC function
  - AUTO FADE on: reduce line in volume automatically when the IR microphone is on
- Bass and Treble adjustment knob
- Volume control knob

Interconnections

- RJ45 socket (AUDIO I/O) for connection to TES-5685BX series Function Extension Box
- Micro USB interface for connecting to computer
- RJ45 interface (RECEIVER) for connecting TES-5600RN/30 series receiver

Technical Specifications

Electrical

Power supply	AC 100-240 V, 1.5 A
Modulation method	DQPSK
Carrier frequency	Audio channel 1: 1.67 MHz
	Audio channel 2: 2.33 MHz
	Audio channel 3: 3.0 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz
	Mic. to main unit: 100 Hz to 20 kHz
SNR	Mic. to main unit: ≥90 dBA
THD	Mic. to main unit: ≤0.05%
Dynamic range	Mic. to main unit: ≥85 dB
Emission angle	vertical: 150° (±75°), horizontal: 360°
IR radiation range:	
Line-of-sight distance	25 m

Mechanical

Speaker interface	Max. 4×30 W (12 Ohm)
Dimension (h x w x d, mm)	206 × 332 × 319
Color	White (PANTONE 420 C)
Weight	3.5 kg

Ordering Information

TES-5685MC-F/30	Digital Infrared Classroom Speaker (with digital infrared receiver, supports 1 wireless microphone, analog audio input/output, built-in audio power amplifier and integrated loudspeakers, RJ45 interface for extending receiver, Type F plug)

TES-5685MC-B/30
Digital Infrared Classroom Audio System

System features

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Selectable infrared carrier frequency for simultaneous use of one wireless microphone
- Built-in digital audio power amplifier and speakers for easy sound reinforcement:
- 1 RJ45 socket for analog audio signals input/output
- 1 RJ45 interface for connection to TES-5600RN/30 series Digital Infrared Receiver
- Volume of speakers is adjustable
- Bass and Treble are adjustable
- Supports remote PPT slides
- Highly integrated, and easy to install

Controls and Indicators

- Switch:
  - F1.: select IR frequency
  - F2: set broadcast mode
  - AFC: set AFC function
  - AUTO FADE on: reduce line in volume automatically when the IR microphone is on
- Bass and Treble adjustment knob
- Volume control knob

Interconnections

- RJ45 socket (AUDIO I/O) for connection to TES-5685BX series Function Extension Box
- Micro USB interface for connecting to computer
- RJ45 interface (RECEIVER) for connecting TES-5600RN/30 series receiver

Technical Specifications

Electrical

Power supply	AC 100-240 V, 1.5 A
Modulation method	DQPSK
Carrier frequency	Audio channel 1: 1.67 MHz
	Audio channel 2: 2.33 MHz
	Audio channel 3: 3.0 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz
	Mic. to main unit: 100 Hz to 20 kHz
SNR	Mic. to main unit: ≥90 dBA
THD	Mic. to main unit: ≤0.05%
Dynamic range	Mic. to main unit: ≥85 dB
Emission angle	vertical: 150° (±75°), horizontal: 360°
IR radiation range:	
Line-of-sight distance	25 m

Mechanical

Speaker interface	Max. 4×30 W (12 Ohm)
Dimension (h x w x d, mm)	206 × 332 × 319
Color	White (PANTONE 420 C)
Weight	3.5 kg

Ordering Information

TES-5685MC-B/30	Digital Infrared Classroom Speaker (with digital infrared receiver, supports 1 wireless microphone, analog audio input/output, built-in audio power amplifier and integrated loudspeakers, RJ45 interface for extending receiver, Type B plug)

TES-5685BX/30
Function Extension Box

Functions

- Function extension box for TES-5685M
- 1 PC IN and 1 LINE OUT
- Volume of MIC. IN and LINE IN adjustable
- 1 RJ45 interface for connecting to 5685M to transmit audio
- 1 A type USB interface for connecting to TES-5600MIC or TES-5600CSM series wired microphone for audio transmission
- Dimensions (h x w x d): 30 x 105 x 82 mm
- Weight: 0.2 kg

Ordering Information

TES-5685BX/30	Function Extension Box (for TES-5685M series, analog audio input/output, can connect to TES-5600 series Wired Desktop Microphone for audio transmission, 1 line out+1 line in)

TES-5685BXP/30
Function Extension Box

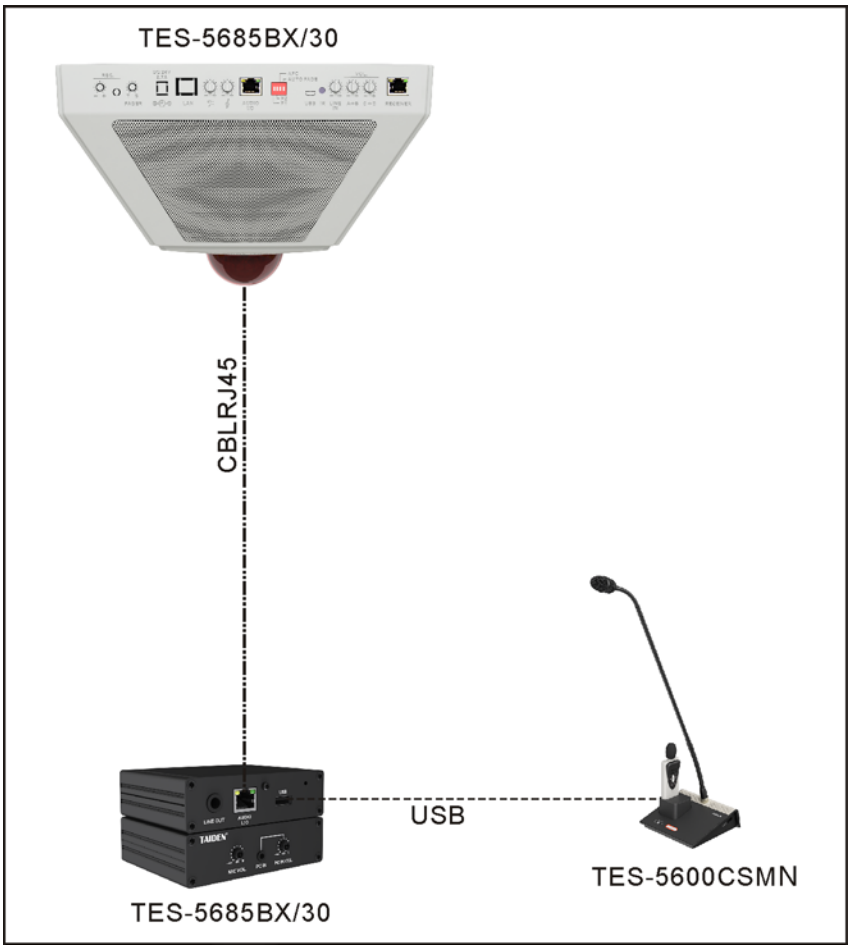
Functions

- Function extension box for TES-5685M
- 1 PC in and 1 line out
- 1 input for public address system, when the PA trigger enabled, the audio of PA IN puts out to all outputs and all other inputs are muted
- Volume of MIC. IN and LINE IN adjustable
- 1 RJ45 interface for connecting to 5685M to transmit audio
- 1 A type USB interface for connecting to TES-5600MIC or TES-5600CSM series wired microphone for audio transmission
- Dimensions (h x w x d): 30 x 105 x 82 mm
- Weight: 0.2 kg

Ordering Information

TES-5685BXP/30	Function Extension Box (for TES-5685M series, analog audio input/output, can connect to TES-5600 series Wired Desktop Microphone for audio transmission, 1 line out+1 line in, 1 PA in + 1 PA trigger)

System Connection



Function List

Type No.	TES-5685MB/30	TES-5685MC/30
IR microphone	2	1
Audio amplifier	●	●
Built-in speaker	●	●
LIEN IN/ LINE OUT	● (withTES-5685BX series)	● (withTES-5685BX series)
AUDIO I/O	●	●
Wired microphone	● (withTES-5685BX series)	● (withTES-5685BX series)
PA IN	● (withTES-5685BXP/30)	● (withTES-5685BXP/30)
PPT	●	●
Interface	RJ45	RJ45

TES-5690MA
Digital Infrared classroom Audio System Main Unit

System features

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Built-in professional digital audio power amplifier, 4 speaker ports
- 2 RJ45 interface for connection to TES-5600RN/30 series Digital Infrared Receiver
- Selectable infrared carrier frequency for simultaneous use of 2 wireless microphones
- A type USB for connecting to TES-5600MIC or TES-5600CSM series wired microphone for audio transmission
- B type USB interface for digital audio input/output and remote control of PPT slides via connecting to PC
- 1 Analog line input (Ø 3.5mm, stereo), 1 Analog audio input (3-pin Phoenix, balanced, with phantom power), 1 Analog priority input (3-pin Phoenix, stereo), the volume of each channel is individually adjustable
- 1 Analog line output (3-pin Phoenix, stereo)
- 1 RS232 interface for connection to central control system
- The balance of the power amplifier output channel is adjustable, output power: 200 W×2 + 60 W×2
- Built-in DSP audio processor, support webpage control and management. The user can access the IP address of main unit from web browser to set parameters and view device status, e.g. compressor, equalizer, DRC, etc.
- Complete protection functions: short-circuit, DC, over-temperature protection, overload power control, over-temperature power control, etc.

Interconnections

- ETHERNET (RJ45) interface for connecting to LAN/PC for web control and management
- RJ45 interface (IR RECEIVER) for connecting TES-5600RN/30 series Digital Infrared Receiver
- 1 type-B USB interface for digital audio input/output and remote control of PPT slides
- 1 type-A USB interface for connecting to TES-5600MIC or TES-5600CSM series wired microphone for audio transmission
- Multiple audio in/out interfaces:
  - 3 audio LINE IN
    - 1 Analog line input (Ø 3.5mm, stereo)
    - 1 Analog audio input (3-pin Phoenix, balanced, with phantom power) for microphone input
    - 1 Analog priority input (3-pin Phoenix, stereo)
  - 1 Analog line output (3-pin Phoenix, stereo)
  - 4 speaker ports available (2 FRONT + 2 REAR)
- 1 RS232 interface for connection to central control system

Technical Specifications

Electrical

Power supply	AC 100 ~ 240 V,3.0 ~ 1.5 A
Modulation method	DQPSK
Carrier frequency	Audio channel 1: 2.33 MHz
	Audio channel 2: 3.67 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz
	Mic. to main unit: 100 Hz to 20 kHz
SNR	Mic. to main unit: ⩾90 dBA
THD	Mic. to main unit: ⩽0.05%
Dynamic range	Mic. to main unit: ⩾85 dB

Mechanical

Speaker interface	200 W×2 (FRONT)
	60 W×2 /6 Ω (REAR)
Dimension (h x w x d, mm)	480×288×45
Color	Black (PANTONE 419 C)
Weight	4.3 kg

Ordering Information

TES-5690MA	Digital Infrared Classroom Audio System Main Unit (built-in webserver, can be setup and managed by TES-5600SW Digital Infrared Classroom Audio System Management Platform, supports 2 wireless microphones, with DSP, built-in audio power amplifier 2×200 W+2×60 W, central control interface)

TES-5690MC
Digital Infrared classroom Audio System Main Unit

System features

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Built-in professional digital audio power amplifier, the balance of the power amplifier output channel is adjustable, output power: 60 W×4
- Built-in DSP audio processor, support webpage control and management. The user can access the IP address of main unit from web browser to set parameters and view device status, e.g. compressor, equalizer, DRC, etc.
- Complete protection functions: short-circuit, DC, over-temperature protection, overload power control, over-temperature power control, etc.
- 1 RS232 interface can be connected to central control system

Interconnections

- RJ45 socket for connecting to LAN/PC for web control and management
- RJ45 interface (IR RECEIVER) for connecting TES-5600RN/30 series Digital Infrared Receiver
- 1 type-B USB interface for digital audio input/output and remote control of PPT slides
- 1 type-A USB interface for connecting to TES-5600MIC or TES-5600CSM series wired microphone for audio transmission
-
- Multiple audio in/out interfaces:
  - ♦ 3 audio LINE IN
    - 1 Analog line input (Ø 3.5mm, stereo)
    - 1 Analog audio input (3-pin Phoenix, balanced, with phantom power) for microphone input
    - 1 Analog priority input (3-pin Phoenix, stereo)
  - ♦ 1 Analog line output (3-pin Phoenix, stereo)
  - ♦ 2 SPEAKER (FRONT) ports available
- 1 RS232 interface for connection to central control system

Technical Specifications

Electrical

Power supply	AC 100 ~ 240 V 2.3 ~ 1.2 A
Modulation method	DQPSK
Carrier frequency	Audio channel 1: 2.33 MHz
	Audio channel 2: 3.67 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz
	Mic. to main unit: 100 Hz to 20 kHz
SNR	Mic. to main unit: ⩾90 dBA
THD	Mic. to main unit: ⩽0.05%
Dynamic range	Mic. to main unit: ⩾85 dB

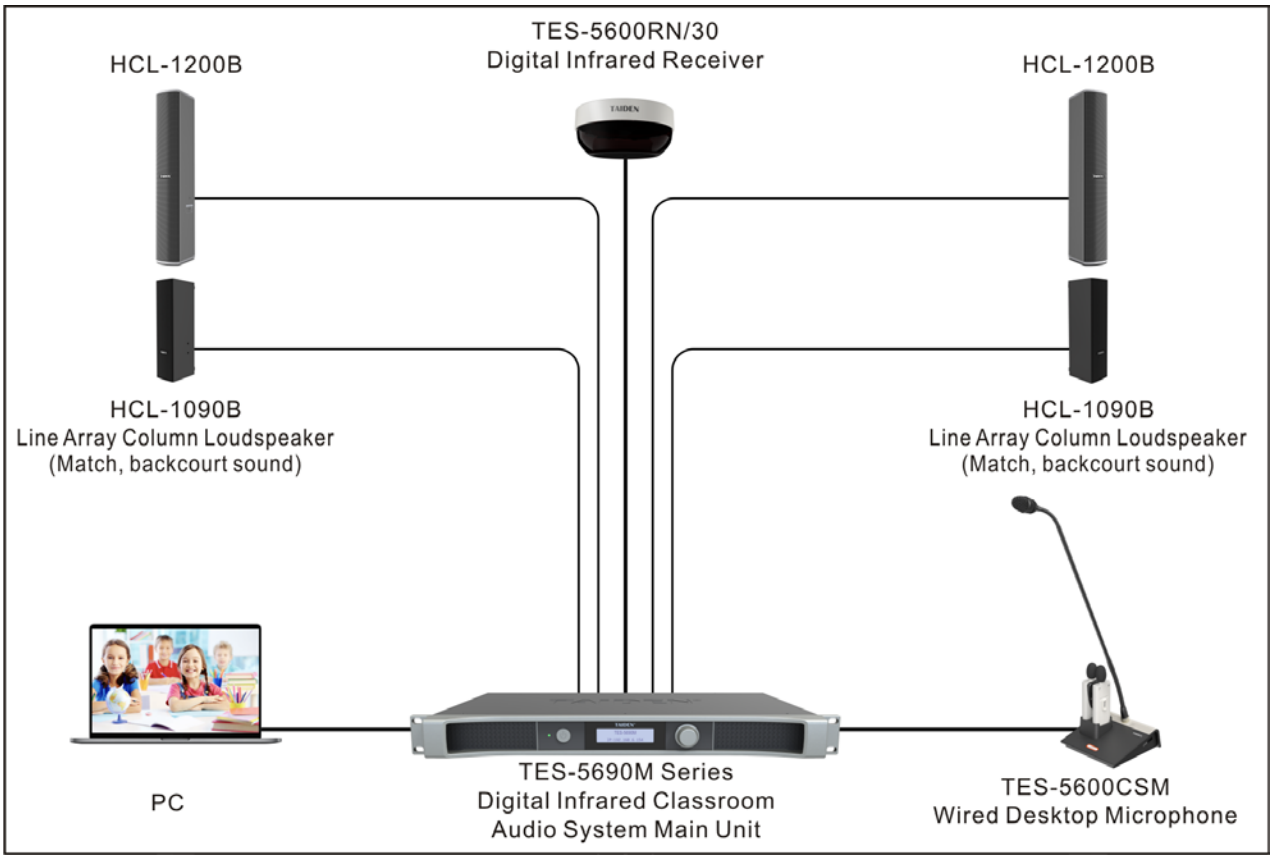
Mechanical

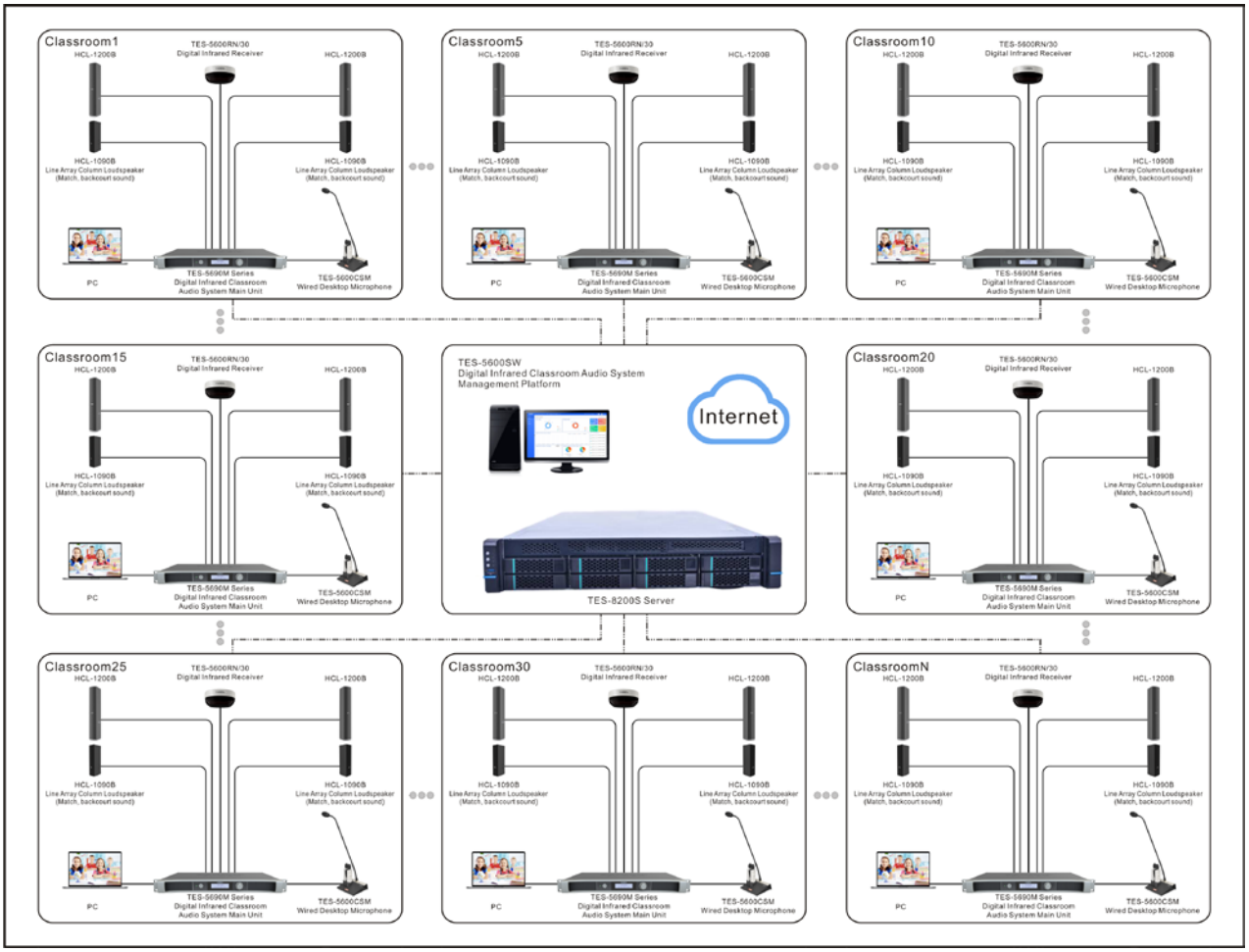
Speaker interface	60 W×4 /6 Ω
Dimension (h x w x d, mm)	480×288×45
Color	Black (PANTONE 419 C)
Weight	4.3 kg

Ordering Information

TES-5690MC	Digital Infrared Classroom Audio System Main Unit (built-in webserver, can be setup and managed by TES-5600SW Digital Infrared Classroom Audio System Management Platform, supports 2 wireless microphones, with DSP, built-in audio power amplifier 4×60 W, central control interface)

System Connection





TES-5600MRN
Digital Infrared Classroom Audio System Main Unit

Functions

- TAIDEN originated digital infrared classroom audio system
- Original dirATC-digital infrared Audio Transmitting and Control technologies for steady reproduction of crystal-clear sound
- Infrared transmitting carrier frequency conforms to IEC 61603-7, DQPSK digital modulation/demodulation technology
- Built-in high-performance digital signal processor (DSP), can realize multiple functions such as Acoustic Feedback Cancellation (AFC), Acoustic Echo Cancellation (AEC), Active Noise Control (ANC), Automatic Equalization (AEQ), Automatic Level Control (ALC), etc.
- Supports 2 wireless microphones
- Built-in amplifier, 4 speaker ports
- Cooperates with TES-560x microphones can Supports PPT Remote control of PPT slides (cooperate with), digital laser pointer (cooperate with TES-5608N)
- Support digital audio input and output via C type USB interface
- Remote Interactive function :1 remote interactive audio signal input (3PIN Phoenix REMOTE IN) and 1 remote interactive audio signal output (3PIN Phoenix, REMOTE OUT), with AEC function
- Can be used for normal recording and broadcasting through audio recording output (REC, Ø 3.5 mm)
- Support multiple use scenarios: 5 teaching sound reinforcement scenarios
- Connection with central control system via RS232 interface for centralized control

Controls and Indicators

- OLED displays status and menu of the system configuration, supporting multi language menu
- 1 knob for configuration
- Power switch with indicator
- Dependent potentiometer for MIC.1/2/3

Interconnections

- Multiple audio in/out interfaces:
  - 1 A type USB for connecting to TES-5600MIC or TES-5600CSM series wired microphone for audio transmission
  - 2 3PIN Phoenix interface with volume adjustment knob, used to extend connection to TES-5675 series Hanging microphones
  - 2 audio LINE IN (Ø6.4 mm, Balanced/differential)
  - 2 audio LINE OUT (Ø6.4 mm, Balanced/differential) LINE OUT 2 can be connected to back-to-listening speakers, providing a better experience for teachers
  - 1 remote interactive audio signal input for (3PIN Phoenix, REMOTE IN) and 1 remote interactive audio signal output (3PIN Phoenix, REMOTE OUT), with AEC function
  - 4 speaker ports
- 2 RJ45 for connection to TES-5600RN/30 series Digital Infrared Receivers
- 1 RJ45 network interface, can be controlled and managed through the built-in Web and smart classroom system management platform
- 1 RS232 interface for connection to central control system
- 1 C type USB can be connected to PC

Technical Specifications

Electrical

Power supply	24 V DC
Modulation method	DQPSK
Carrier frequency	Audio channel 1: 2.33 MHz Audio channel 2: 3.67 MHz
Frequency response	main unit to main unit: 50 Hz to 20 kHz Mic. to main unit: 100 Hz to 20 kHz
SNR	Mic. to main unit: ≥90 dBA
THD	Mic. to main unit: ≤0.05%
Dynamic range	Mic. to main unit: ≥100 dB
Audio Power Amplifier	
Max. output power	60 W×2 (8 Ohm) 30 W×4 (8 Ohm)

Interface data

Receiver terminal	RJ45 × 2
External control terminal	3.81 mm Phoenix connectors

Mechanical

Mounting	Tabletop or mounted in a 19" rack
Dimensions (h x w x d)	55 x 211 x 236 mm (1U high & half rack width)
Weight	1.3 kg
Color	Black (PANTONE 419 C)

Ordering Information

TES-5600MRN	Digital Infrared Classroom Audio System Main Unit (with RJ45 interface, built-in webserver, can be setup and managed by TES-5600SW Digital Infrared Classroom Audio System Management Platform, supports 2 wireless microphones , built-in audio power amplifier, supports 4 speakers, supports 2 TES-5675 series Hanging microphones and 1 TES-5600 series Wired Desktop Microphone (due to audio scenes) , Type C USB interface for digital audio input/output, remote interaction, adapter to be ordered separately)

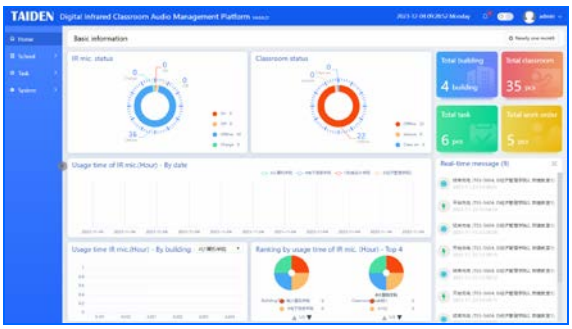
TES-5600 series application software

TES-5600 series application software is comprehensive, reliable and user-friendly. The management platform is deployed in TES-8200S smart classroom system management server. The school administrator can easily access the platform by any PC and manage the digital infrared classroom audio system and other peripheral devices centrally and efficiently from the very beginning of devices installation. The operation turns out to be easy and efficient.

TES-5600 series application software can be divided into the following software:

- TES-5600SW Digital Infrared Classroom Audio System Management Platform (support School Management, Device Management, Task Management, Logs, Setting and User management, can view status of wireless microphone/ hanging microphone and setup audio parameter)

TES-5600SW Digital Infrared Classroom Audio System Management Platform



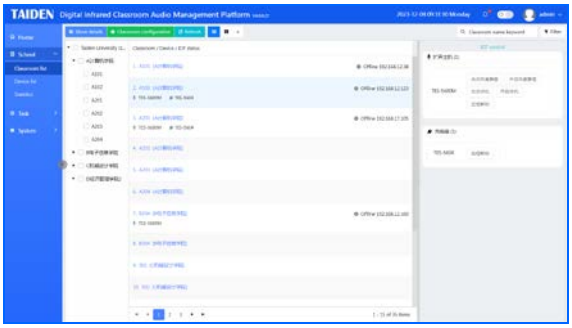
Functions

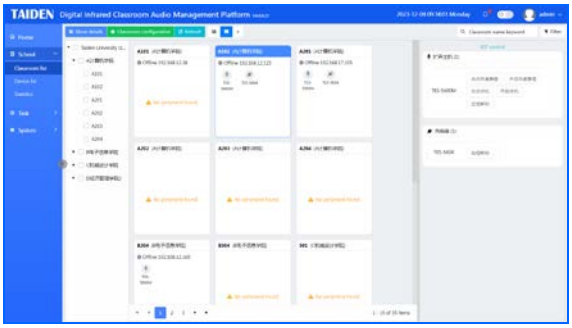
Supports various functions including School Management, Device Management, Task Management, Logs, Setting and User management. Through the platform, manager can view wireless microphone status, view and set the hanging microphone parameters, audio parameters setting and other functions.

■ **School Management**

Supports 2 style: card view and list view, including Classroom list, Device list, and Statistics

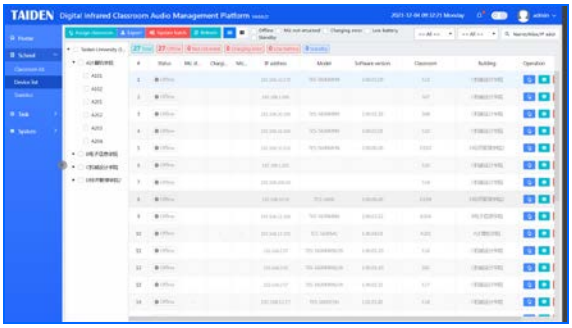
✧ **Classroom list**





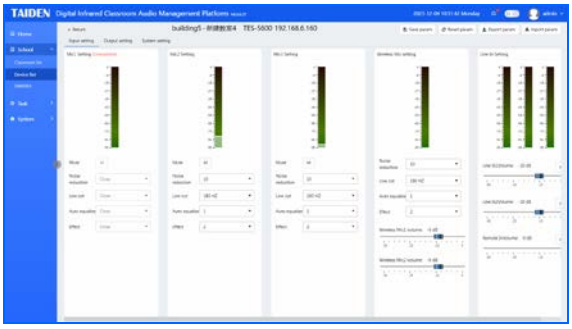
- Classroom list can view derails of all classrooms, including physical location (classroom, building and device status and IP address) ,IOT status and control
- Switch between classrooms arbitrarily in the classroom list can view/control IOT and tasks
- Show details: IOT control can be realized including set / cancel microphone mute, set / cancel standby mode, unlock microphone remotely, etc.
- View custom designed tasks flow of the current day
- Config classroom: Platform provide a set of classroom configuration by default
- Configuration list contains device information, i.e. Name/ Group/ Device/ Brand/ Model etc.
- Configuration list support Add/Clear All/ Refresh/Delete/ modify and copy to other classroom operations

✧ **Device List**



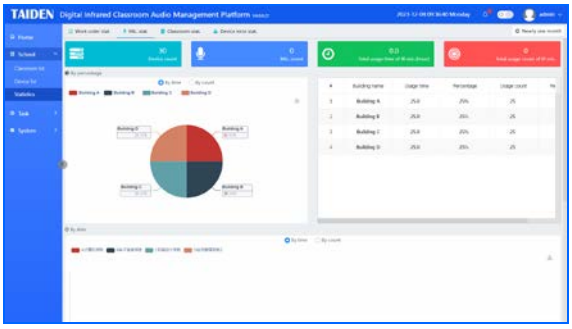
- After setting IP and port of platform in built-in Webserver of TES-5600MRN / TES-5600MHN/TES-5690M main units, the platform will automatically synchronize the main units
- Assign the devices to different classrooms
- Export device list for initial installation and maintenance. The list contains multiple information of the devices, i.e. IP address/ Device type/ Name/ Alias/ Classroom/ Building/ Status/ Mic status/ Battery, etc.
- Display status of all the devices that added to the platform, i.e. working status (working/standby/offline), microphone on/off status, battery, microphone return and charging status.
- Display status data statistics including total quantity of devices, quantity of device offline /not returned/ low battery)/ charging error/ Standby, etc.
- Support filtering function by selecting location or abnormal status

✧ **Settings**

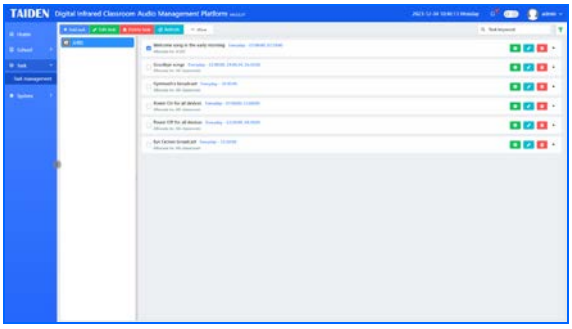


- Set input settings/ output settings/ system settings (Intelligent calibration for TES-5675 series hanging microphones) for TES-5600MRN/ TES-5600MHN
- Setup or review audio parameters or system parameters through built-in webserver of main unit by by clicking IP address in the devices list

✧ **Statistics**



■ Task Management



♦ Set tasks operated by platform automatically at specified time, (before/after class), i.e. set/cancel mute hanging microphone, set/cancel standby

■ System Management

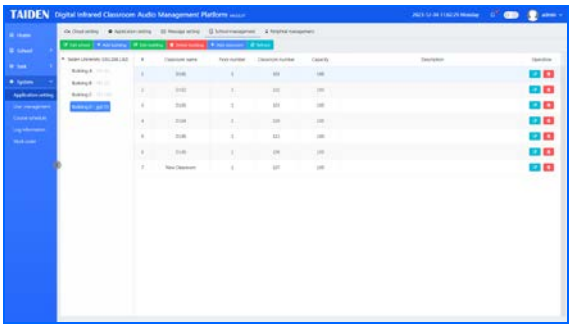
✧ Application Setting

♦ Cloud Setting：Setting IP address and WS port of TAIDEN Education Cloud Sever for Wechat online application

♦ Configure platform name and school Logo

♦ Settings for message push to TAIDEN Education Management Wechat official account

♦ School Management: maintain (add / modify / delete) school/buildings/classrooms



♦ Periphral management: the platform provides a set of configuration, including the device name and function list (control mode: WEBSOCKET; function: mute/cancel mute hanging microphone ,set/ cancel standby, unlock wireless microphone)

■ User management

♦ Including user management, role management, personal information

♦ User management login interface can register user , define their roles, and assign them different permissions.

♦ Different role have different permissions according to the authority to manage the designated building or classrooms

♦ User information can be modified

■ Logs

✧ **Device event logs**

♦ Keep 3 kinds of events of all devices: online/offline, start/finish charging, mic. on/off.

♦ Support search function: by specifying time or event type

♦ Logs can help with maintenance and debugging

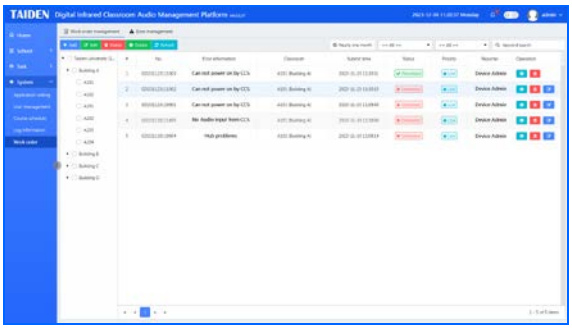
♦ Logs can also be used for statistical data, such as hanging microphone use time, online time and charging time, etc.

✧ **Message push logs**

♦ Abnormal messages and word orders push logs

■ Work Order management

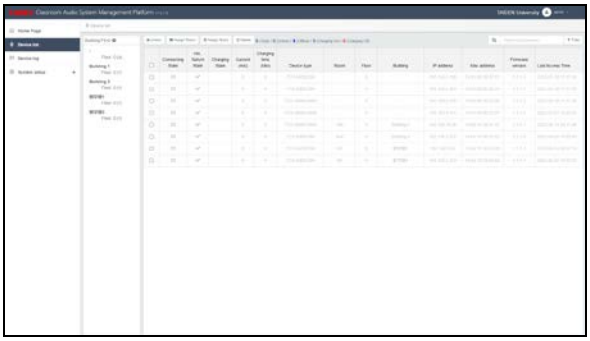
♦ Manage and deal with work orders for device maintains messages reported by Wechat official account or application



Ordering Information

TES-5600SW	Digital Infrared Classroom Audio System Management Platform (Supports classroom management, device management, can view wireless microphones' status, view/setup hanging microphones' parameter and MU parameter)

TES-5600NSW Classroom Audio System Management Platform



Features

- **Use with TES-5600CSMN Wired Desktop Microphone**
- **Access the management platform through browser by entering the server IP address and port number**
- **You can query the charging, returning, and locking status of the digital infrared wireless microphones**
- **You can execute the operations like microphone unlock, equipment allocation, and personnel allocation, etc.**

Ordering Information

TES-5604NSW	Classroom Audio System Management Platform (view the charging /locking /borrowing status of microphones)