

# **TAIDEN®**

## **Classroom Audio System**



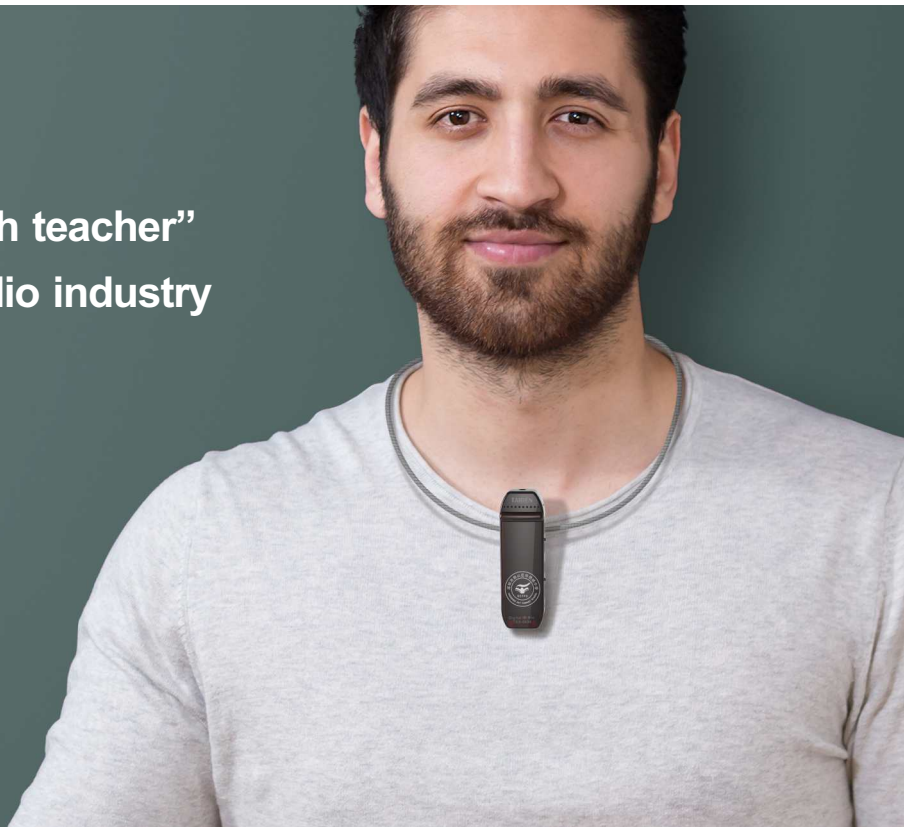
# About TAIDEN

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 successively a series of classroom audio systems which can be categorized as digital IR wireless classroom audio reinforcement system, interactive audio recording 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, creating a genuine maintenance-free solution.

Apart from providing industry-leading solutions, TAIDEN also endeavors to shape the industry standard and promote the development of education informatization, co-developing a series of Chinese national standards and industry standards concerning teaching environment including GB/T 36447-2018 *Multimedia instructing environment design requirements*.

**“Personal mic. for each teacher”  
To lead classroom audio industry**





**World leading technology**  
**Audio transmission and control based on**  
**Proprietary digital infrared processing chip**



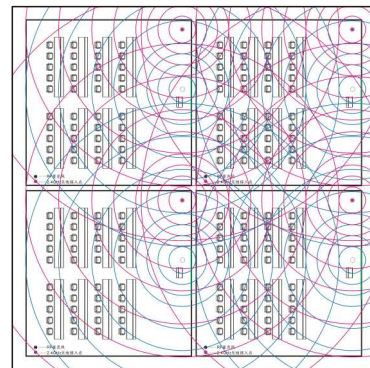
TAIDEN TDIR04  
 Digital Infrared Processing Chip

**Excellent audio clarity**  
 CD quality audio within a range of 20 meters  
 Signal to noise ratio higher than 85 dBA

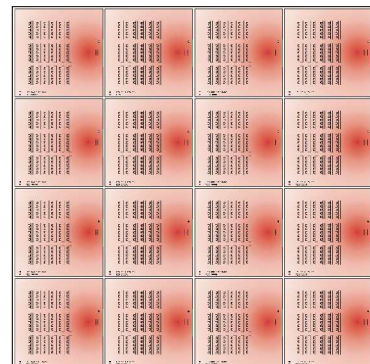
**Zero RF radiation**  
 No health hazards resulted from RF radiation  
 Worry-free use for long-time wearing

**Convenient operation & management**  
 Power on to talk, no frequency tuning needed  
 Personal mic for each teacher, adding hygienic bonus

**Immunity to interference**  
 Allows for simultaneous use in adjacent rooms  
 Insusceptible to radio and HF-driven lighting interference  
 Works perfectly in direct sunlight



Interferences generated  
 between classrooms using RF systems



Zero interferences  
 between classrooms using IR systems

# Wireless Audio Reinforcement

TAIDEN's wireless audio reinforcement solution, based on its proprietary dirATC—digital infrared audio transmission and control technology, features highly integrated design and greatly improves speech intelligibility. All the possible defects resulted from traditional audio reinforcement solutions, such as confinement of presenters on the podium by fixed gooseneck microphones; frequency tuning and coordination required by radio frequency microphones, let alone its susceptibility to interference and health hazards from RF radiation; and uneven sound field distribution brought by clumsy body-pack microphones. The design philosophy of the solution is to create a green and safe sound environment of crystal clear audio quality where teachers can instruct with less voice stress and students can have improved engagement and learning outcomes.

## TES-5685MB/MC Series

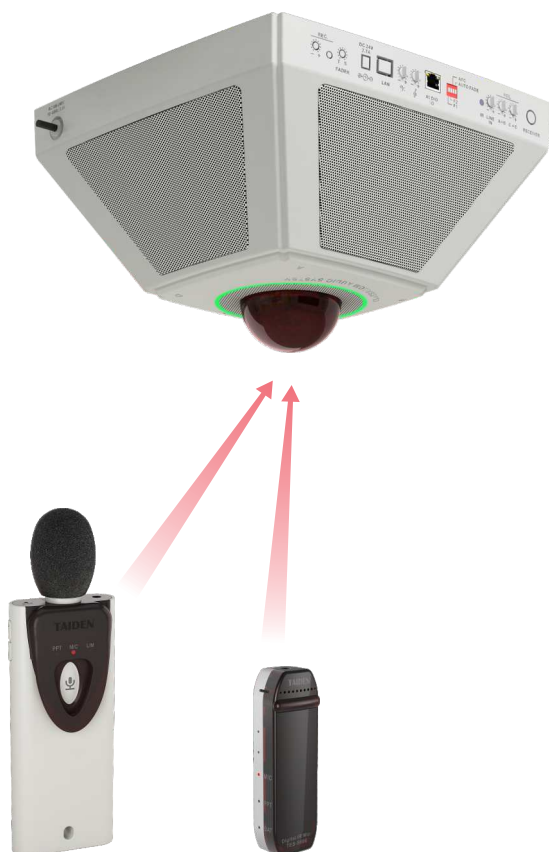


**Highly  
integrated**

**Wiring free**

**Even  
sound field**

TES-5685 MB/MC series provides a highly integrated and easy wiring classroom audio reinforcement solution by combining top-firing speaker with control unit, digital IR receiver and power amplifier. Crystal clear sound reinforcement can easily be realized with only one combo unit (TES-5685MB/MC) and one wireless microphone. The four-sided top-firing speaker ensures even sound field distribution across the classroom.



## Technical Specifications

- Digital infrared microphone for the teacher:  
Full channel frequency response: 50 Hz ~ 20 kHz  
SNR: >85 dBA  
THD: <0.06%
- Selectable infrared carrier frequency for simultaneous use of two wireless microphones
- Analog audio input/output and line in/line out with TES-5685BX series
- Built-in digital audio power amplifier for easy sound reinforcement:
- Ethernet interface for centralized control and management
- Dimensions (h×w×d,mm): 206×331×319

## Function List

Model No.	Power amp	Speaker	Wireless mic.	Analog input/output (with TES-5685BX)	Line In/Out (with TES-5685BX)	MIC In (for TES-5604 series, with TES-5685BX)
TES-5685MB	●	●	2	●	●	●
TES-5685MC	●	●	1	●	●	●

# Wireless Audio Reinforcement

## TES-5600 Series

Built-in  
power amp

Presentation  
remote

Compact  
size

TES-5600 series featuring built-in power amplifier can be used with existing speakers in the classroom to realize audio reinforcement. Either the receiver going up in the ceiling or the control box going inside the cabinet is of compact size, ensuring an easy and neat installation. What's more, the wireless microphone for teacher can be used as a presentation remote to control slideshow.



### Technical Specifications

- Digital infrared microphone for the teacher:  
Full channel frequency response: 50 Hz ~ 20 kHz  
SNR: >85 dBA  
THD: <0.06%
- Selectable infrared carrier frequency for simultaneous use of two wireless microphones
- Remote control of PPT slides via TES-5604/5605/5606 series microphone
- Built-in digital audio power amplifier for easy sound reinforcement:
- Ethernet interface for centralized control and management
- Dimensions (h×w×d,mm): 168×103×41 (TES-5600BX Series)  
146×66×105 (TES-5630 Series)  
Φ84×57 (TES-5600R)

### Function List

Model No.	Power amp	Speaker	Wireless mic.	Presentation remote
TES-5600BX1	●	4	1	●
TES-5600BX2	●	4	2	●
TES-5630M	●	2	2	
TES-5630MA	●	2	1	

# Wireless Audio Reinforcement

## TES-5630 Series

Embedded  
control unit

Built-in  
power amp

Neat setup

TES-5630 series integrates control unit, power amplifier with IR receiver to realize audio reinforcement when used with existing speakers in the classroom. The installation is very easy and convenient with one combo unit going up in the ceiling.

### Technical Specifications

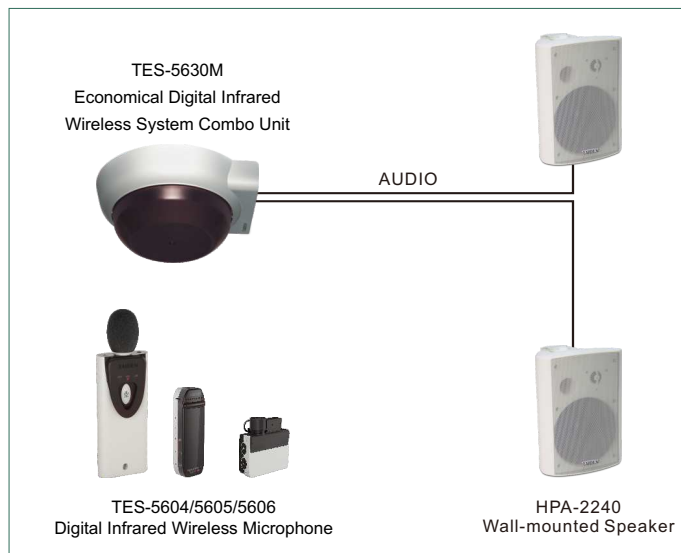
- World pioneering digital infrared wireless classroom audio system
- Based on TAIDEN original dirATC-digital infrared Audio Transmitting and Control technologies
- Blend of digital infrared wireless system main unit and digital infrared wireless receiver
- Digital infrared audio processing and transmitting technologies enable excellent audio quality
  - Frequency response: 50 Hz ~ 20 kHz
  - SNR: >85 dBA
  - THD: <0.06%
- Built-in amplifier, supports 2 speakers
  - Max. output power: 30 W ×2 (8 Ω)
- Supports 2 wireless microphones
- Dimensions (h×w×d,mm): 150 ×146 ×66
- Weight: 0.6 kg



TES-5630M

Economical Digital Infrared Wireless System Combo Unit

### Connection Diagram



# Wireless Audio Reinforcement

## TES-5640 Series

Fixed mic  
+  
wireless mic

Auto  
charging

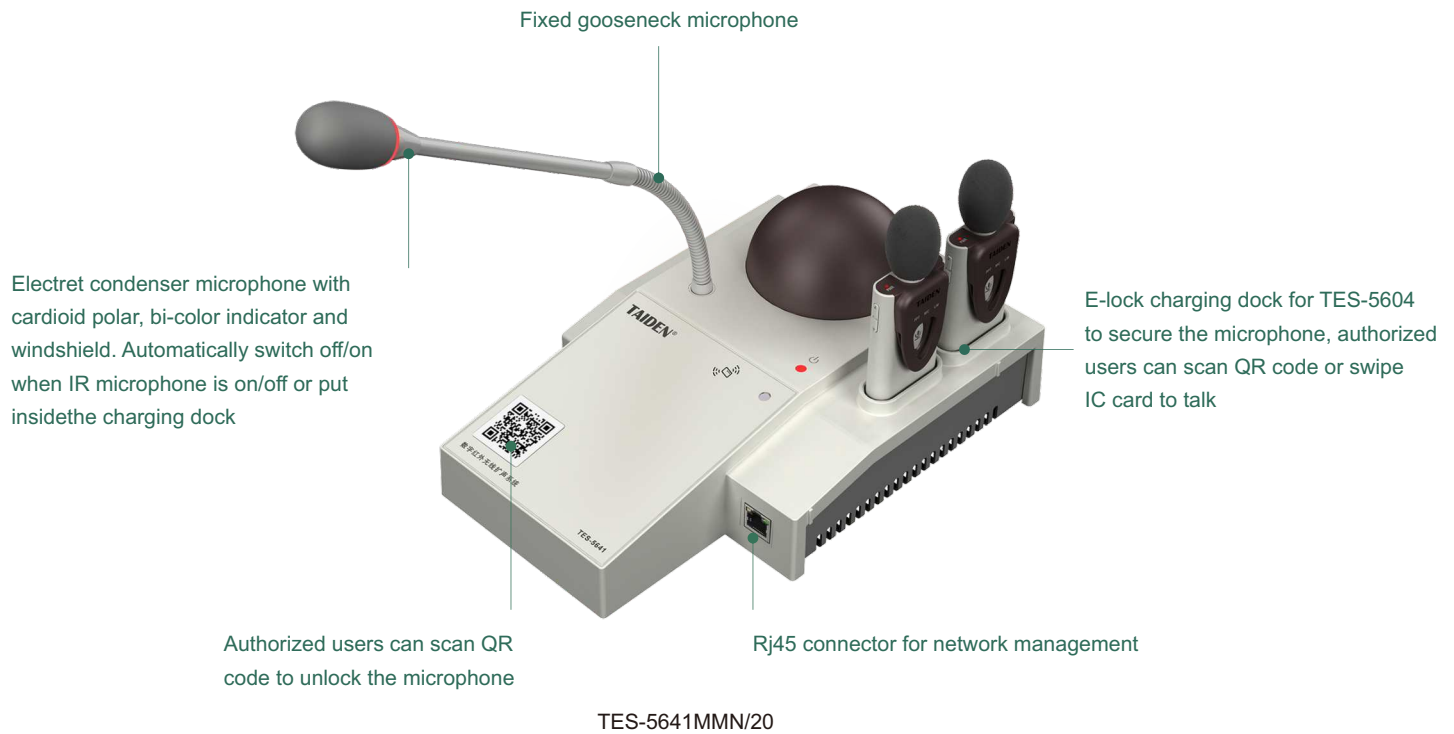
Secure  
storage

TES-5640 series, a combination of fixed gooseneck microphone, IR receiver and power amplifier, fits on the lectern or at the side of the blackboard. Audio amplification can be realized via the fixed gooseneck microphone or the wireless IR microphone once the system is connected to existing speakers in the classroom. The wireless microphone can be put back in the e-lock charging station after use to be charged up for following classes. And the e-lock ensures secure storage of the microphone.



TES-5641ML/W  
(Wall-mounting)





## Function List

Function Model No.	Gooseneck mic.	Wireless mic.	Central control	Charging dock	Network	Mounting
TES-5640MMN/20	●	2	●	●	●	Flush-mount
TES-5640MN/20		2	●	●	●	Flush-mount
TES-5641MMN/20	●	2		●	●	Desktop
TES-5641MN/20		2		●	●	Desktop
TES-5641ML/20	●	2		●		Desktop
TES-5641MML/20		2		●		Desktop
TES-5641ML/W		2		●		Wall-mount
TES-5642M/W	●	2				Desktop
TES-5643M		2				Desktop
TES-5643M/W		2				Wall-mounting
TES-5642MM		1				Desktop
TES-5642M		1				Wall-mounting
TES-5644MM	●					Desktop

# Wireless Audio Reinforcement

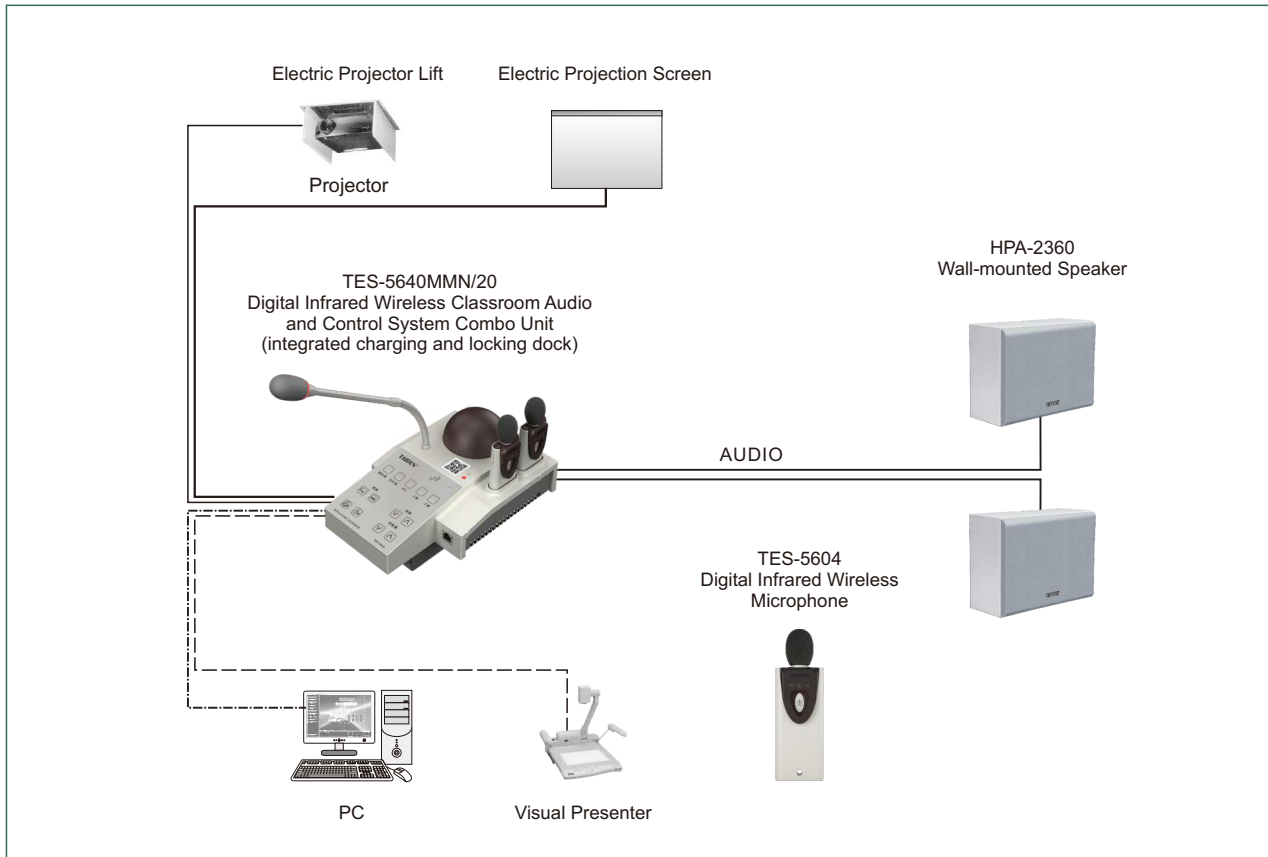
## TES-5640 Series



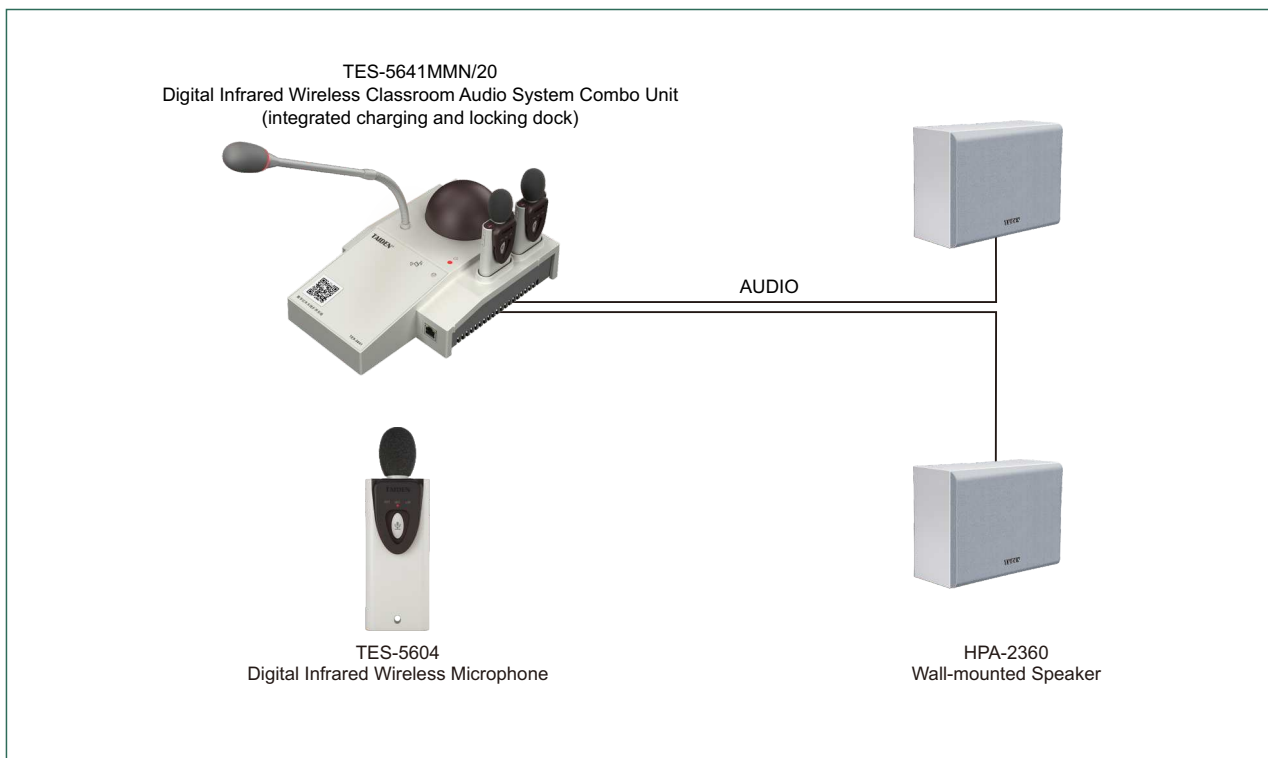
### Technical Specifications

Power supply		24 V DC, 2.7 A (TES-5640/5641/5642/5643) 24 V DC, 1.5 A (TES-5641/5642/5643/5644)
Max. output power to speakers		2×30 W (8 Ω), 4×15 W (8 Ω)
SNR		>85 dB (A)
Dynamic range		>90 dB
Frequency response		50 Hz-20 kHz
THD		<0.06%
IR receiver	Wavelength	870 nm
	Modulation	DQPSK
	Carrier frequency	1-8 MHz
	Communication range	Horizontal: 360°, Vertical: 150°
IR radiation range		Line-of-sight distance: 25 m, effective distance: about 12 m ( affected by reflection conditions)

## TES-5640 Digital Infrared Wireless Classroom Audio and Control System



## TES-5641 Digital Infrared Wireless Classroom Audio System



# Wireless Audio Reinforcement

## TES-560X Series Digital Infrared Wireless Microphone

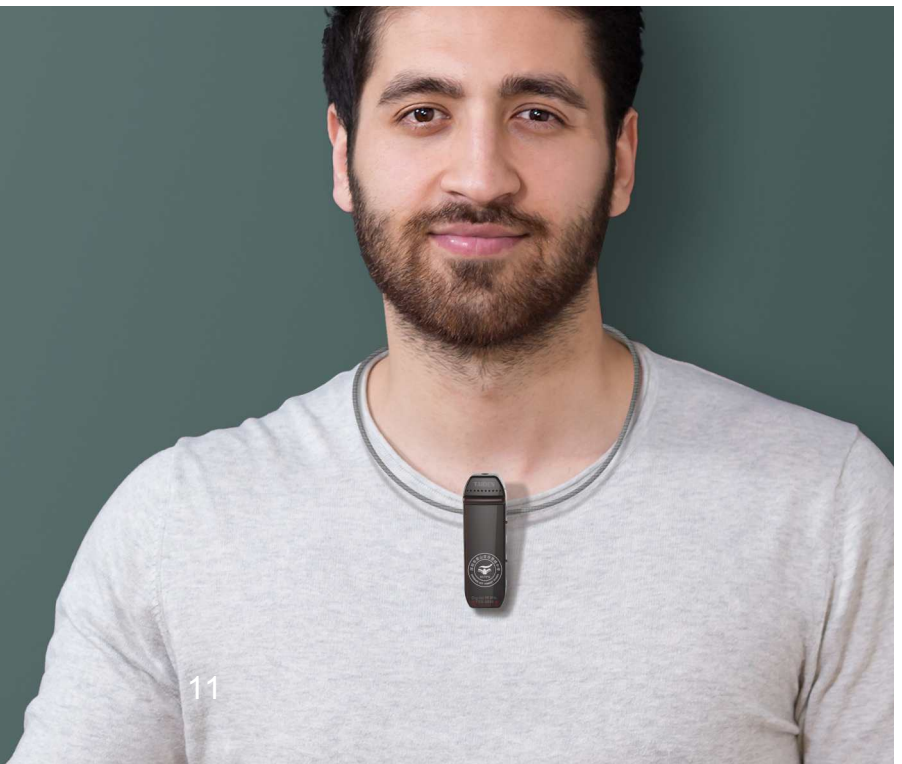
**Excellent audio quality   RF radiation free   Ease of use   Hygienic bonus**

TES-560X series microphone, based on the digital infrared audio transmission and control technology, features excellent audio quality with a s/n ratio higher than 85 dBA, ease of use with power on to talk and no frequency tuning needed, and insusceptibility to interference allowing simultaneous use in adjacent rooms. Thanks to its RF radiation free merit, teachers do not have to worry about possible health hazards even for long time wearing. The light-weight microphone can be handheld, attached to collars, ties or pockets or worn around the neck. The best and most ideal application is “personal mic. for each teacher” to ensure personal hygiene and convenient management.



TES-5606

Excellent Audio Quality  
Convenient Operation  
Smart & Sleek Design



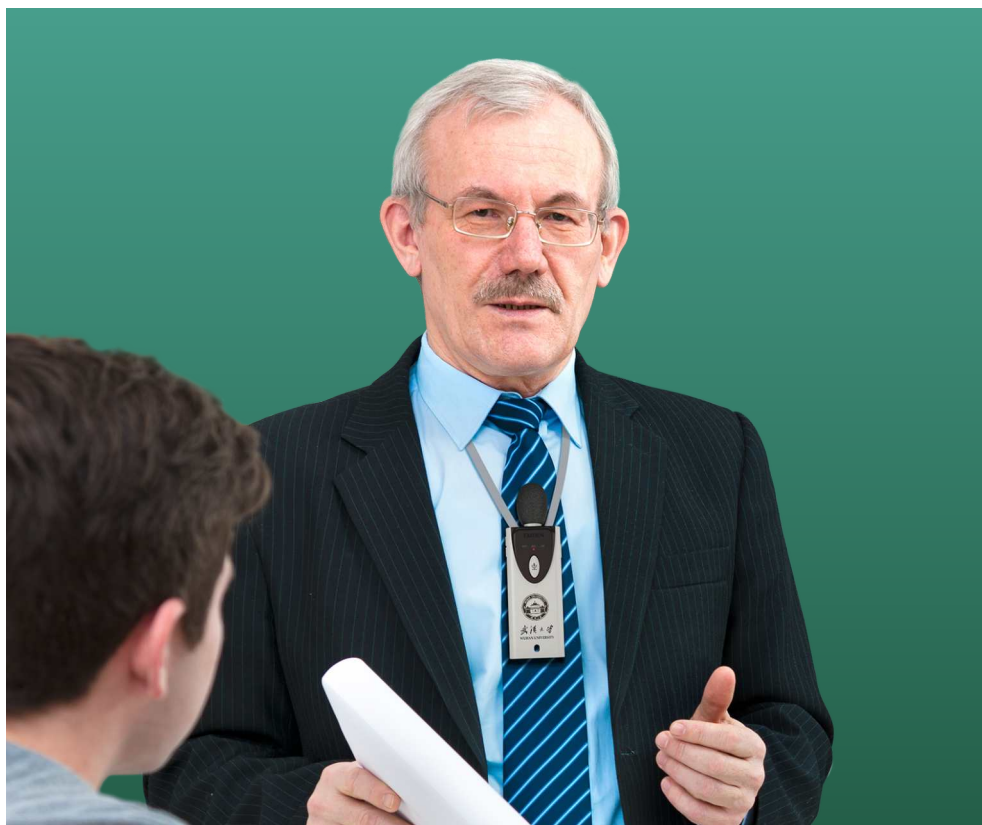


## Hands-free Operation



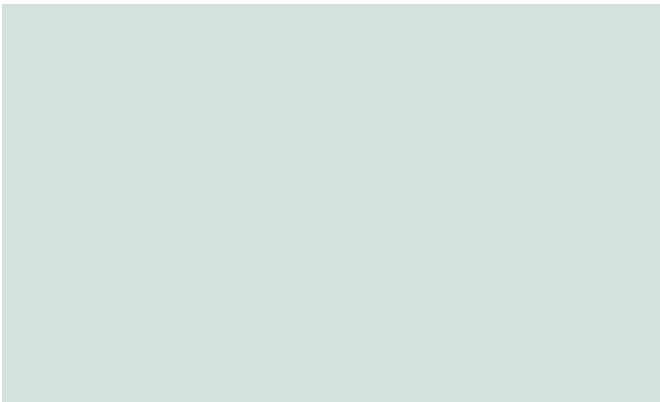
# Wireless Audio Reinforcement

## TES-560X Series Digital Infrared Wireless Microphone



### TES-56004NS Neck Lanyard

Magnetic breakaway clasp  
Easier to wear



TES-5605



## Technical Specifications

- Superior extendability, supporting audio input (Ø 3.5 mm AUDIO IN) from devices such as MP3 and mobile phone
- Independent volume adjustment of the microphone and external audio source
- Remote control of PPT slides
- Transmitter powers off automatically when no voice is detected for a preset period of time
- Supports Lithium battery, battery life:
  - 6 hours (TES-5604A)
  - 5 hours (TES-5606)
  - 4 hours (TES-5605)
- Dimensions ( h×w×d, mm): 133×42×19 mm (TES-5604A)  
 45×45×17 mm (TES-5605)  
 76×24×22 mm (TES-5606)

# Interactive Audio Recording and Webcasting



TAIDEN's interactive audio recording solution, working entirely behind the scenes, is a completely non-disruptive tool to capture lectures. Teachers' sound picked up by the IR wireless microphone and students' sound by an exclusive omnidirectional microphone are captured and recorded in sync. The audio captured can be archived for after-class review by teachers and students.

The system is compatible with any third-party streaming and recording products for simultaneous HD capture of both the lecturer and their presentation for live streaming, webcasting, video on demand, after class review by students or teachers' performance assessment.

Aside from audio capturing, the system also amplifies the teacher's sound so that each student can hear clearly anywhere in the classroom.

## Innovative sound pickup technology New era of lecture recording

Sound  
reinforcement

Integrated  
design

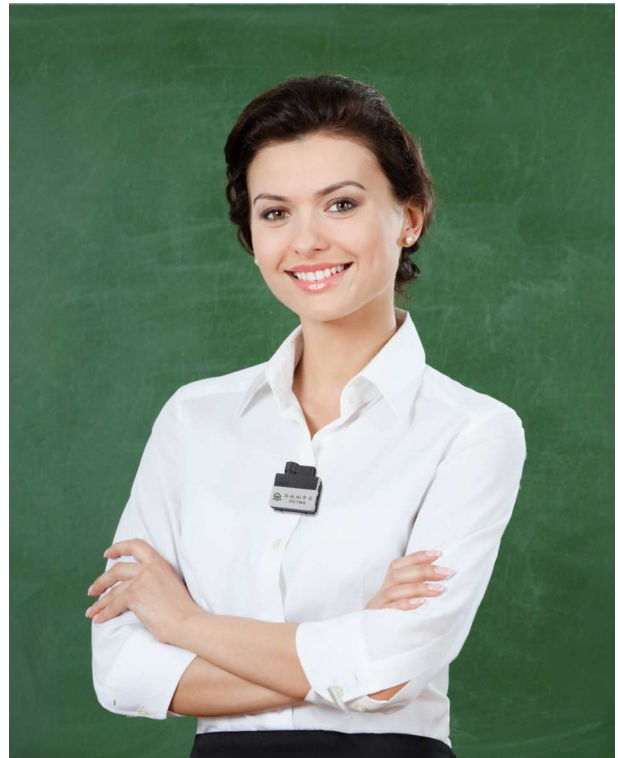
Audio  
recording

## IR mic. + array mic

- Digital infrared wireless microphone for the teacher, SNR >85 dBA
- Built-in omnidirectional array microphone for capturing students' sound within a radius of 5 to 8 m
- Optimal recovery of student voice by high-performance DSP
- Audio ducking ensures the priority of IR microphone input over the array microphone input

## Zero RF radiation, green and healthy

- IR microphone free from RF radiation
- No worries about health hazards for long time wearing



## Visual indication of sound direction

- 12-segment light indicator
- Accurate sound direction indication



## Highly integrated, space saving

- All-in-one solution with microphone, power amplifier and speakers
- Compatible with any third party streaming and recording solutions
- Quick, easy and neat setup

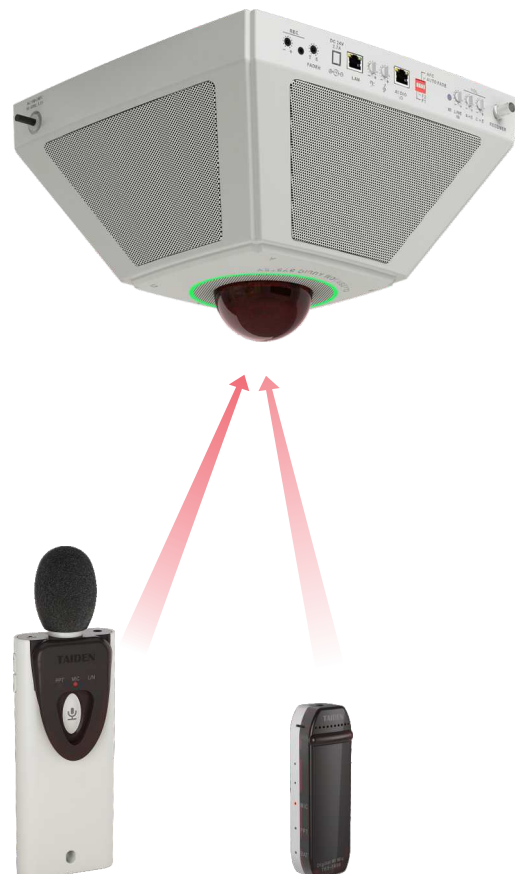


# Interactive Audio Recording and Webcasting

TES-5685MA



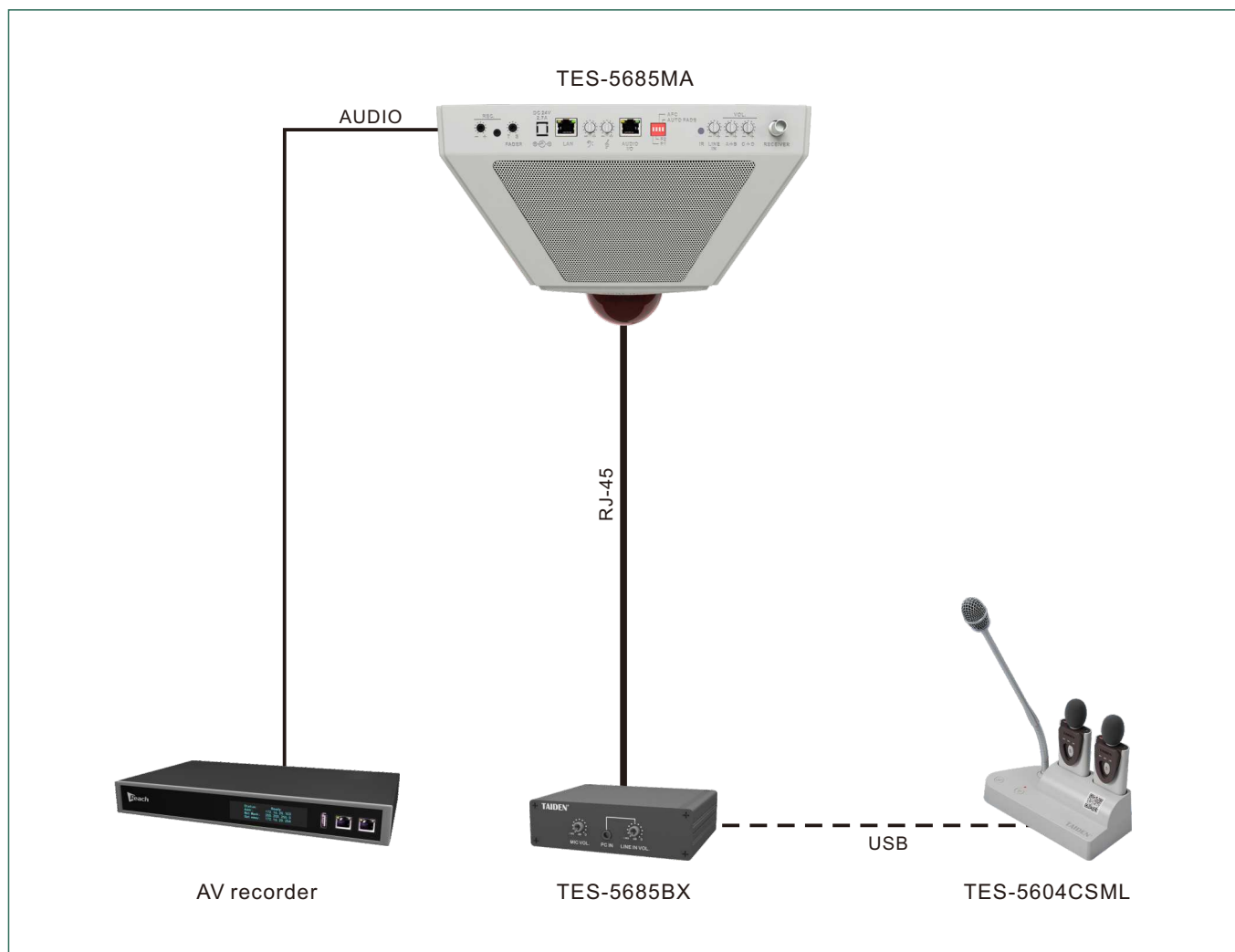
**All-in-one solution**  
**Quick and easy setup**



## Technical Specifications

- Digital infrared microphone for the teacher:
  - Full channel frequency response: 50 Hz ~ 20 kHz
  - SNR: >85 dBA
  - THD: <0.06%
- Selectable infrared carrier frequency for simultaneous use of two wireless microphones
- Built-in array microphone for students:
  - Pickup range: 5 m radius with medium ambient noise
  - 8 m radius in a quiet environment
- Analog audio input/output and line in/line out with TES-5685BX series
- Built-in digital audio power amplifier for easy sound reinforcement:
- Ethernet interface for centralized control and management
- Power supply: DC 24 V, 2.7 A

## Connection Diagram



# Interactive Audio Recording and Webcasting

TES-5680 Series

Highly integrated  
Compact sized



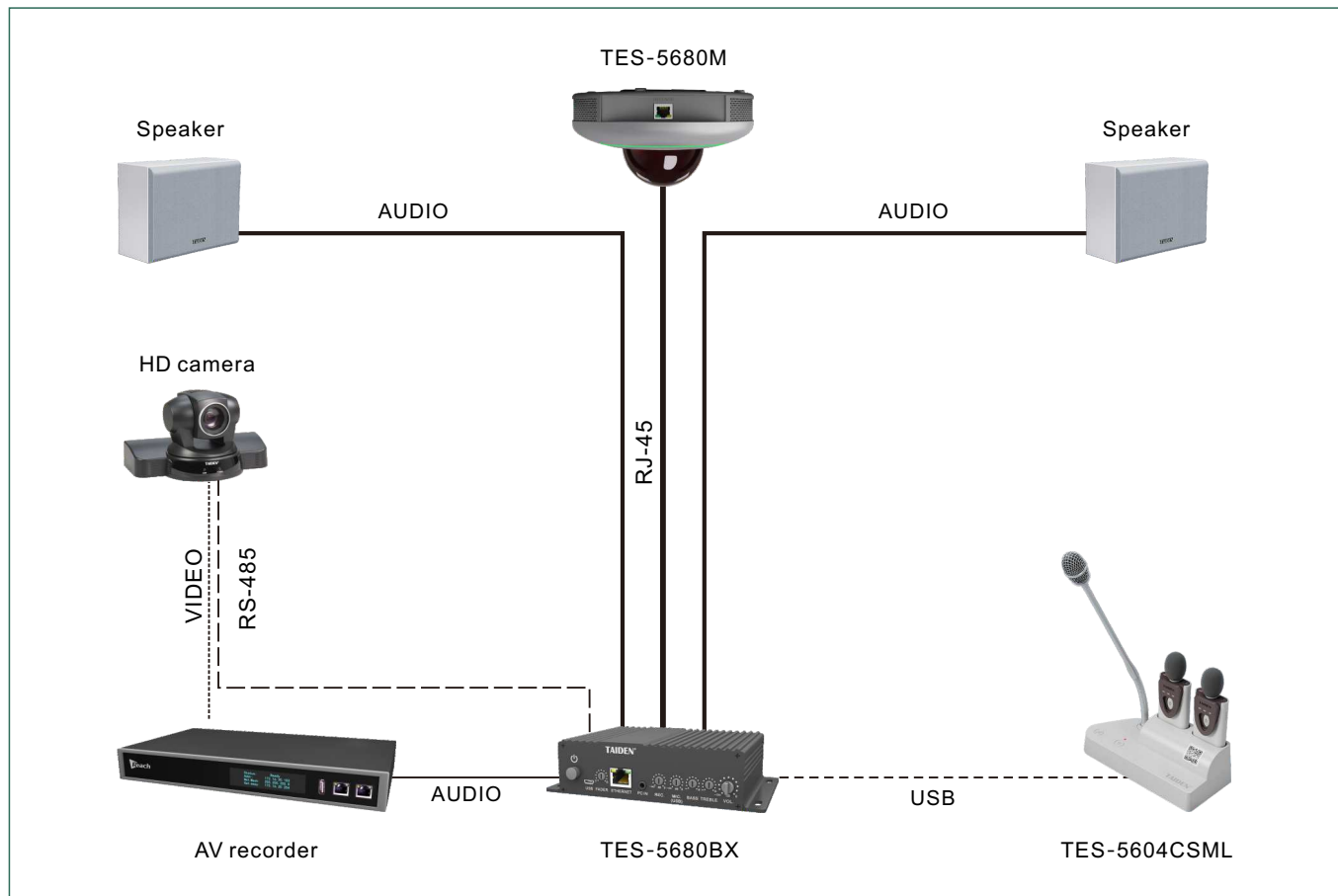
## Technical Specifications

- Digital infrared microphone for the teacher:  
Full channel frequency response: 50 Hz ~ 20 kHz  
SNR: >85 dBA  
THD: <0.06%
- Selectable infrared carrier frequency for simultaneous use of two wireless microphones
- Built-in array microphone for students:  
Pickup range: 5 m radius with medium ambient noise  
8 m radius in a quiet environment
- Built-in digital audio power amplifier for easy sound reinforcement:  
Maximum output power:  $30\text{ W} \times 2$  ( $8\ \Omega$ )  
 $15\text{ W} \times 4$  ( $8\ \Omega$ )
- 1 Line in (PC IN), 1 microphone input (MIC IN) with phantom power and adjustable sensitivity, 1 Line out (LINE), 1 audio recording output (REC.)
- Ethernet interface for centralized control and management
- Power supply: DC 24 V, 2.7 A



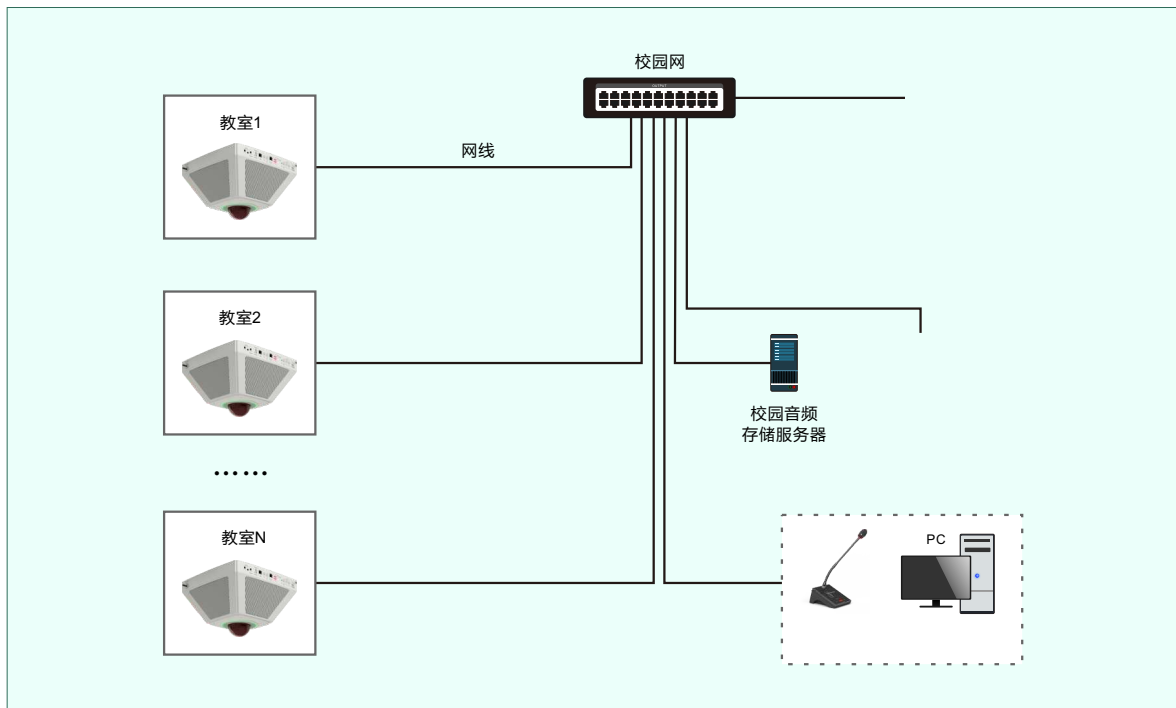
Visual indication  
of sound direction

## Connection Diagram



# Lecture Recording Management Platform

- Inspired by the multi-room management platform customized for the UN
- Designed for quality lecture recording and management
- Local and cloud storage of recordings
- Convenient search for specific lectures to playback, download or live stream
- Real-time monitoring and tracking of classrooms
- Compatible with speech recognition solutions for captioning and lecture transcription
- Centralized microphone management for schools
- Campus public address facility



#	时间	用户名	教师姓名	事件	设备名称	Mac地址	教室
1	2017-08-23 14:47:20	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
2	2017-08-23 14:42:16	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
3	2017-08-23 14:38:26	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
4	2017-08-23 14:36:10	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
5	2017-08-23 11:53:21	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
6	2017-08-23 11:52:19	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
7	2017-08-21 16:45:56	Dewei_03	曾朝晖	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
8	2017-08-21 15:54:47	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
9	2017-08-21 14:16:18	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
10	2017-08-21 13:57:45	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
11	2017-08-21 13:54:16	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
12	2017-08-21 13:53:11	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
13	2017-08-21 11:59:59	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
14	2017-08-21 10:32:16	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
15	2017-08-21 10:32:16	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310

#	用户名	教师姓名	联系电话	电子邮箱	最后登录时间	状态
1	Teacher_14	陈超伟	1234567890	chenwg@163.com		否
2	Teacher_14	陈超伟	1234567890	chenwg@163.com		否
3	Teacher_13	王杰	1234567890	wangj@163.com	2017-07-27 10:41:20	否
4	Teacher_12	孔凡	1234567890	hongf@163.com	2017-07-26 18:11:10	否
5	Teacher_11	张博	1234567890	zhangb@163.com		否
6	Teacher_10	李强	1234567890	liq@163.com		否
7	Teacher_09	冯强	1234567890	fengq@163.com	2017-07-27 18:13:31	否
8	Teacher_08	曾朝晖	1234567890	zengc@163.com		否
9	Teacher_07	曾朝晖	1234567890	zengc@163.com		否
10	Teacher_06	曾朝晖	1234567890	zengc@163.com	2017-07-26 18:27:04	否
11	Teacher_05	王杰	1234567890	wangj@163.com	2017-07-27 10:14:43	否
12	Teacher_04	孔凡	1234567890	hongf@163.com		否
13	Teacher_03	张博	1234567890	zhangb@163.com		否
14	Teacher_02	李强	1234567890	liq@163.com	2017-07-26 15:50:59	否
15	Teacher_01	冯强	1234567890	fengq@163.com	2017-07-26 15:50:52	否

#	时间	用户名	教师姓名	事件	设备名称	Mac地址	教室
1	2017-08-23 14:47:20	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
2	2017-08-23 14:42:16	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
3	2017-08-23 14:38:26	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
4	2017-08-23 14:36:10	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
5	2017-08-23 11:53:21	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
6	2017-08-23 11:52:19	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
7	2017-08-21 16:45:56	Dewei_03	曾朝晖	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
8	2017-08-21 15:54:47	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
9	2017-08-21 14:16:18	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310
10	2017-08-21 13:57:45	School_02	王杰	开始录制	TD_170206043N	C7-02-00-03-C4-9C	310

# References

## Wuhan University, China

Wuhan University invested in TAIDEN digital infrared classroom audio system and 5,000 wireless microphones for nearly 500 classrooms. Each and every teacher at the university is provided with a personal wireless microphone for convenient management and personal hygiene. Meanwhile, the classrooms are equipped with TAIDEN e-lock charging stations so that the microphones can be securely stored and charged between class sessions and good to go for classes after. The newly equipped classrooms boast of quality audio reinforcement that is RF radiation free and greatly saves operation costs.



### Solution one:

Digital IR Classroom Audio System Main Unit + Digital IR Receiver + Wall Speakers  
+ Digital IR Wireless Microphone



TES-5600MA/02P  
Digital IR Wireless System  
Main Unit

+



TES-5600R  
Digital IR Receiver

+



HPA-2360  
Wall Mounted Speaker

+



TES-5603B2  
Digital IR Wireless Microphone

### Solution two:

Digital IR Classroom Audio System Control Box + Digital IR Receiver + Wall Speakers  
+ Digital IR Wireless Microphone and Charging Station



TES-5600BX  
Control Box

+



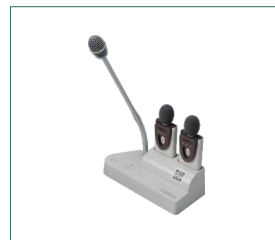
TES-5600R  
Digital IR Receiver

+



HPA-2360  
Wall Mounted Speaker

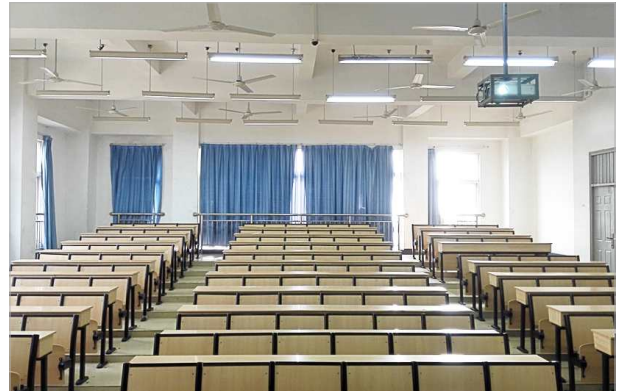
+



TES-5604 and  
TES-5604CSML

## Wuhan University of Science and Technology, China

Wuhan University of Science and Technology invested in TAIDEN digital infrared classroom audio system and over 2,200 wireless microphones for 375 classrooms. Teachers have their own personal wireless microphones which offer hands-free operation and ensure personal hygiene. Besides, the school AV team does not have to bother with the management of microphones.



### Solution:

Digital IR Classroom Audio System Main Unit + Digital IR Receiver + Wall Speakers  
+ Digital IR Wireless Microphone



TES-5600MA/02P  
Digital IR Wireless System  
Main Unit



TES-5600R  
Digital IR Receiver



HPA-2360  
Wall Mounted Speaker



TES-5603B2  
Digital IR Wireless Microphone

# References

Harbin Institute of Technology  
Northeastern University  
Tianjin Medical University  
Tianjin Chengjian University  
Tianjin Normal University  
Shanxi University of Finance & Economics  
Shanxi Agricultural University  
Shanxi Medical University  
Shanxi University of Science & Technology  
Xianyang Normal University  
Inner Mongolia Traffic Career Technical College

China University of Petroleum  
Civil Aviation University Of China  
Wuhan University  
Wuhan University of Science and Technology  
Zhengzhou University  
Military Transportation University  
Jiangxi Agricultural University  
Wuhan University of Science and Technology  
Yunnan Minzu University  
Guangdong University of Technology  
Henan Technical College of Construction  
Nantong Vocational College of Science & Technology  
Jingchu University of Technology

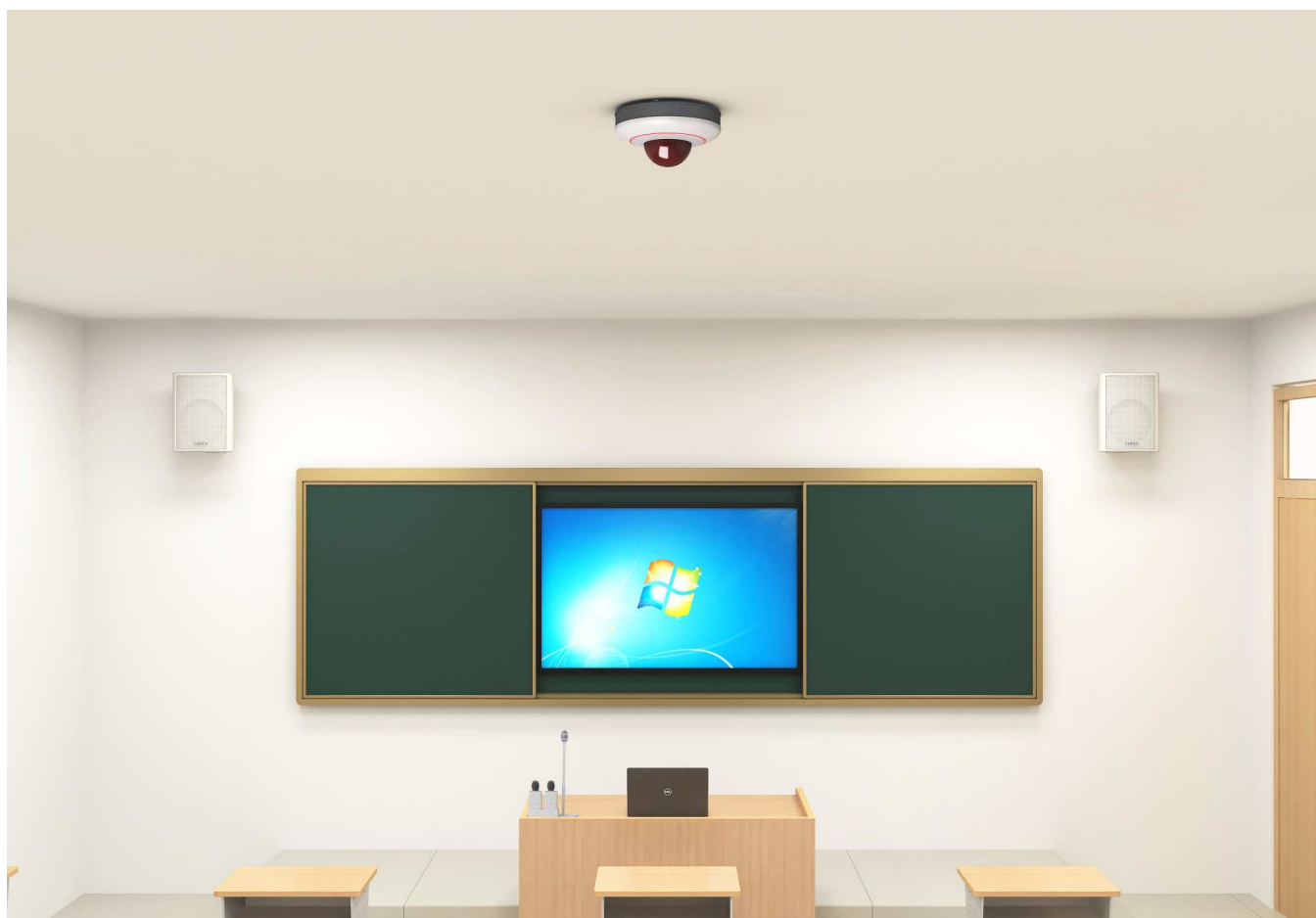
Sichuan University  
Sichuan International Studies University  
Chongqing Jiaotong University  
Xiamen University  
Graduate School at Shenzhen, Tsinghua University  
Chengdu University of Technology  
Southwest Medical University  
Sichuan University of Science & Engineering  
Chongqing University of Technology  
Chongqing Jiaotong University  
Chongqing University of Arts and Sciences  
Guangdong Police College  
North Sichuan Medical College  
Xiamen Medical College  
  
Fang Cao Di International School China  
Ji'n'an No.3 High School of Shandong  
The Primary School Attached to Central China Normal University  
The High School Attached to Huaiyin Normal University  
Yangzhou High School of Jiangsu Province  
Huaiyin Middle School in Jiangsu Province  
Tongchuan No.1 Middle School  
Shenzhen Overseas Chinese Town High School  
Shenzhen Nanshan Liuxian Primary School  
Wuluolu Middle School



## Accessories

		
<p><b>TES-5600CE Encoder</b></p> <ul style="list-style-type: none"> <li>■ Used for encoding IC cards (TES-5600K) of TAIDEN classroom audio system</li> <li>■ Dimensions (h×w×d, mm): 66×84×121</li> <li>■ Weight: 0.2 kg</li> </ul>	<p><b>TES-ADP24VL Power Adapter</b></p> <ul style="list-style-type: none"> <li>■ Power Supply: 100 V - 240 V, 50 Hz / 60 Hz</li> <li>■ Output: 24 V DC, 2.7 A</li> <li>■ Approvals: UL, CE, VDE</li> <li>■ Cable: 3 m</li> <li>■ Dimensions (h×w×d, mm): 32×115×50</li> <li>■ Color: black</li> <li>■ Weight: 0.4 kg</li> </ul>	<p><b>TES-ADP24VN Power Adapter</b></p> <ul style="list-style-type: none"> <li>■ Power Supply: 100 V - 240 V, 50 Hz / 60 Hz</li> <li>■ Output: 24 V DC, 2.7 A</li> <li>■ Connector: UL, CE or VDE type, according to the sales area</li> <li>■ Cable: 3 m</li> <li>■ Dimensions (h×w×d, mm): 32×115×50</li> <li>■ Color: black</li> <li>■ Weight: 0.4 kg</li> </ul>
		
<p><b>TES-5604NS Neck Lanyard</b></p> <ul style="list-style-type: none"> <li>■ Stylish and ergonomic design</li> <li>■ Used for TES-5604A series microphones</li> <li>■ Adjustable neck lanyard</li> </ul>	<p><b>TES-5600NS Neck Lanyard</b></p> <ul style="list-style-type: none"> <li>■ Stylish and ergonomic design</li> <li>■ Used for TES-5604C/5605/5606 series microphones</li> <li>■ Weight: 10 g</li> <li>■ Color: white (PANTONE 420 C) black (PANTONE 419 C)</li> </ul>	<p><b>TES-5606NS Neck Lanyard</b></p> <ul style="list-style-type: none"> <li>■ Stylish and ergonomic design</li> <li>■ Used for TES-5604C/5605/5606 series microphones</li> <li>■ Length: 480/520/560 mm</li> <li>■ Color: gray (PANTONE 431 C) black (PANTONE 419 C)</li> </ul>
		
<p><b>TES-ADP5V Power Adapter</b></p> <ul style="list-style-type: none"> <li>■ Power supply: AC 100 V - 240 V, 50 Hz/60 Hz</li> <li>■ Output: 5 V DC, 2.0 A</li> <li>■ Connector: UL, CE or VDE type, according to the sales area</li> <li>■ Cable length: 1 m</li> <li>■ Dimensions (h×w×d, mm): 43×39×27</li> <li>■ Color: White</li> <li>■ Weight: 50 g</li> </ul>	<p><b>TES-5604CHG/01 Charging Unit</b></p> <ul style="list-style-type: none"> <li>■ Used for charging TES-5604 Series microphone</li> <li>■ Charges 1 TES-5604 wireless microphone</li> <li>■ Power supply: 5 V DC, 2.0 A</li> <li>■ Dimensions (h×w×d, mm): 52×76×57</li> <li>■ Color: White</li> <li>■ Weight: 0.1 kg</li> </ul>	<p><b>TES-5604CHG/09 Charging Station</b></p> <ul style="list-style-type: none"> <li>■ Charges 9 TES-5604 series wireless microphones per charging</li> <li>■ Power supply: 5 V DC, 6.0 A</li> <li>■ Dimensions (h×w×d, mm): 55×231×173</li> <li>■ Color: White</li> <li>■ Weight: 0.8 kg</li> </ul>

		
<p><b>HPA-2240 Wall Mounted Speaker</b></p> <ul style="list-style-type: none"> <li>■ Frequency Response: 65 Hz - 20 kHz</li> <li>■ Constant Input Impedance: 8 Ω</li> <li>■ Constant Input Voltage: 70-100 V (HPA-2240A)</li> <li>■ Nominal Output: 40 W</li> <li>■ Sensitivity: 90 dB</li> <li>■ Installation: vertically or horizontally wall-mounted</li> <li>■ Dimensions (h×w×d, mm): 290×215×190</li> <li>■ Weight: 3.4 kg</li> </ul>	<p><b>HPA-2360 Wall Mounted Speaker</b></p> <ul style="list-style-type: none"> <li>■ Frequency Response: 80 Hz ~ 20 kHz</li> <li>■ Constant Input Impedance: 8 Ω</li> <li>■ Nominal Output: 60 W</li> <li>■ Sensitivity: 89 dB</li> <li>■ Installation: vertically or horizontally wall-mounted</li> <li>■ Dimensions (h×w×d, mm): 215×290×123</li> <li>■ Weight: 2.8 kg</li> </ul>	<p><b>HPA-2220 Wall Mounted Speaker</b></p> <ul style="list-style-type: none"> <li>■ Frequency Response: 85 Hz - 20 kHz</li> <li>■ Constant Input Impedance: 8 Ω</li> <li>■ Nominal Output: 20 W</li> <li>■ Sensitivity: 89 dB</li> <li>■ Installation: vertically or horizontally wall-mounted</li> <li>■ Dimensions (h×w×d, mm): 215×170×150</li> <li>■ Weight: 2.1 kg</li> </ul>
		
<p><b>HPA-2230 Wall Mounted Speaker</b></p> <ul style="list-style-type: none"> <li>■ Frequency Response: 75 Hz - 20 kHz</li> <li>■ Constant Input Impedance: 8 Ω</li> <li>■ Nominal Output: 30 W</li> <li>■ Sensitivity: 89 dB</li> <li>■ Installation: vertically or horizontally wall-mounted</li> <li>■ Dimensions (h×w×d, mm): 242×182×162</li> <li>■ Weight: 2.4 kg</li> </ul>	<p><b>HPA-22100 Wall Mounted Speaker</b></p> <ul style="list-style-type: none"> <li>■ Frequency Response: 40 Hz - 20 kHz</li> <li>■ Constant Input Impedance: 8 Ω</li> <li>■ Nominal Output: 100 W</li> <li>■ Sensitivity: 90 dB</li> <li>■ Installation: vertically or horizontally wall-mounted</li> <li>■ Dimensions (h×w×d, mm): 455×280×270</li> <li>■ Weight: 7.7 kg</li> </ul>	<p><b>HPA-2140 Ceiling Speaker</b></p> <ul style="list-style-type: none"> <li>■ Frequency Response: 75 Hz - 20 kHz</li> <li>■ Constant Input Impedance: 8 Ω</li> <li>■ Nominal Output: 40 W</li> <li>■ Sensitivity: 90 dB</li> <li>■ Installation: ceiling-mounted</li> <li>■ Hole size: Ø198 ~ 208 (mm)</li> <li>■ Dimensions: Ø230 ~ 128 (mm)</li> <li>■ Weight: 1.7 kg</li> </ul>
		
<p><b>HPA-2160 Ceiling Speaker</b></p> <ul style="list-style-type: none"> <li>■ Frequency Response: 60 Hz - 20 kHz</li> <li>■ Constant Input Impedance: 8 Ω</li> <li>■ Nominal Output: 60 W</li> <li>■ Sensitivity: 89 dB</li> <li>■ Installation: ceiling-mounted</li> <li>■ Hole size: Ø222 (mm)</li> <li>■ Dimensions: Ø252 ~ 215 (mm)</li> <li>■ Weight: 5 kg</li> </ul>	<p><b>TES-1021 Clip Microphone</b></p> <ul style="list-style-type: none"> <li>■ Stylish and ergonomic design</li> <li>■ Used for TES-5604 series microphones</li> <li>■ Excellent immunity to RF interferences from mobile phones</li> <li>■ Ø 3.5 mm stereo plug with a 0.3- meter cable</li> <li>■ Color: black PANTONE 419 C)</li> <li>■ Weight: 10 g</li> </ul>	<p><b>CBL-SPK2 Speaker Cable</b></p> <ul style="list-style-type: none"> <li>■ 18AWG×2C</li> <li>■ Connecting between the main unit and the speakers</li> <li>■ Length of per roll: 305 meter</li> </ul>



ISO9001: 2008  
Certified by ANAB  
Certificate No.: FM 85884



CE certified  
(including EMC and Safety)



FCC certified

**RoHS**

Compliance with Directive  
2011/65/EU of the  
European Parliament

Distributed by:



Member of International Congress  
& Convention Association (ICCA)