

# Class Recording System

## New Education System

### INTRODUCTION

The class recording system is a system that can record classroom content and perform real-time synchronous live broadcast, subsequent playback and viewing. It typically includes camera equipment, audio equipment, and recording software that captures instructor narration, student interactions, and courseware computer content. The recording and broadcasting system is flexible and convenient, and students can watch the course content online in real time or repeatedly after downloading according to their needs, thereby improving the learning effect and review efficiency.



### FEATURES

- Class recording system enable real-time interaction and participation between teachers and students through the use of cameras and display screens, facilitating effective teaching and learning.
- The camera in the class recording system enables the recording of teaching content, allowing students to playback and review the material at their own pace for enhanced comprehension and retention.
- In the class recording system, the camera can be used to broadcast the students' learning situation in real-time. Teachers can observe students' participation, understanding, etc. through the camera.
- The cameras and displays in the class recording system can support remote teaching and learning. Teachers can teach remotely through the camera, and students can watch the teaching content through the display screen at different locations, realizing the sharing of educational resources and learning without geographical restrictions.

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**Teacher stand on the podium:**

The scene changes to the close-up view of the teacher.

**Teacher walking near the board:**

The scene changes to follow the teacher.

**Teacher writing notes:**

The camera focus to the blackboard to see the details.

**Teacher stepped off the podium:**

The scene changes to the full view of the teacher.

**1 student stand up to answer questions:**

The scene changes to the close-up view of the student.

**2 student stand up to answer questions:**

The scene changes to panoramic view.



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### Recording System:

The content of each class will be automatically merged through multiple cameras, and all the pictures will be automatically synthesized into one video. After class, students can watch the replay of the class through their computers, mobile phones.



### 4K Camera & Omnidirectional Mic:

Clear camera and all-round microphone can clearly record classroom images and sounds.

### Flexible Control:

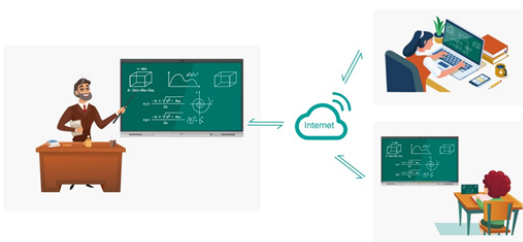
Two different ways of control make it very convenient to control the screen in the classroom



Control PC



Pad



### Achieve Remote Mode:

More interaction between teachers and students when online Conference

## Class Recording System

## SPECIFICATIONS

Product Name	4k Tracking Camera
Model	CRS-4KIPC-T/S
Image Sensor	1/2.8 inch CMOS, 8.46 million pixels
Scanning Method	Progressive
Lens Mount Type	M12
Lens 1 Focal Length	f=8.2mm, horizontal field of view: 40°
Minimum Illumination	0.5 Lux @ (F1.8, AGC ON)
Electronic Shutter	1/30s ~ 1/10000s
White Balance	Auto, Indoor, Outdoor, One Push, Manual, Specified Color Temperature
Digital Noise Reduction	2D, 3D digital noise reduction
Backlight Compensation	Support
EPTZ	Support
Auto Focus	Support
Digital Zoom	8x
PoE Power Supply	Support
Lens	Tracking Mode



Product Name	Intelligent Recording Server (CRS-IRS-HD06)
Video Input	Multiple video sources supported, up to 6 video sources
Supported Video Input Resolution	HD signal: 720p@50@60, 1080p@25@30 HDMI signal: 1024*768, 1280*720, 1366*768, 1400*1050, 1440*900, 1920*1080 VGA signal (analog): 1024*768, 1280*720, 1366*768, 1440*900
Video Output	2*HDMI out
Supported Video Output Resolution	HDMI out: 720p@50@60, 1080p@50@60 VGA out: support 1080p at maximum Movie mode resolution: 720*480, 704*576, 800*600, 1024*576, 1024*768, 1280*720, 1920*1080
Video Encoding	H.264 High Profile
Frame Rate	25fps, 30fps
Recording File Size	300MB/h, 500MB/h, 600MB/h, 800MB/h, 1000MB/h, 1500MB/h, 2000MB/h
Audio Encoding	AAC-LC
Audio Bit Rate	128Kbps
Audio Sample Rate	48KHz
Tracking way	Build-in auxiliary position camera in 4K-HD e-PTZ camera
File Format	Mp4, Movie mode & Resource mode
Network Port	6* RJ45 (include 4 POE port)
Storage	1TB/2TB/4TB/8TB(optional), support dual hard disk
Power	DC 48V
Dimensions	430mm*335mm*44.5mm (L*W*H)



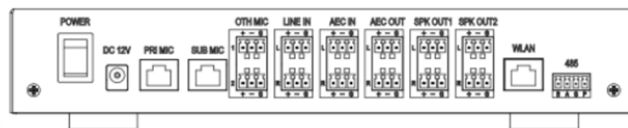
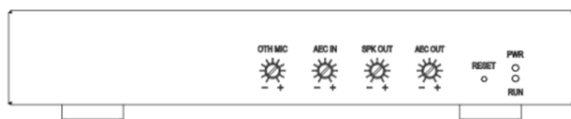
Product Name		Touch Control Panel (CRS-TCP07)
Operation System	Android	
CPU	4 core 1.8Ghz	
Storage Capacity	32GB	
Memory Capacity	2GB	
Storage Type	SSD	
Screen Size	7 inches	
Display Resolution	1280×800	



Product Name	Intelligent Ceiling Mic (CRS-ICM8M)
Microphone Type	Digital Array Microphone
Array Microphone	Built-in 7 mics to form ring array microphone, 360° omnidirectional pickup
Pickup Range	MAX 8m
Sensitivity	-26 dB
Signal Noise to Ratio	64 dB(A)
Frequency Response	20Hz - 16kHz
USB Protocol	Support UAC
Automatic Echo Cancellation (AEC)	Support
Automatic Noise Suppression (ANS)	Support
Automatic Gain Control (AGC)	Support
Audio Input	1 x AEC-REF: 3.5mm line in interface
Audio Output	1 x SPK-OUT: 3.5mm line out interface; 1 x AEC-OUT: 3.5mm line out interface
USB Interface	1 x USB: USB audio interface
Power Input	USB DC5V
Power	DC 48V
Dimensions	Φ 130mm x H 33mm

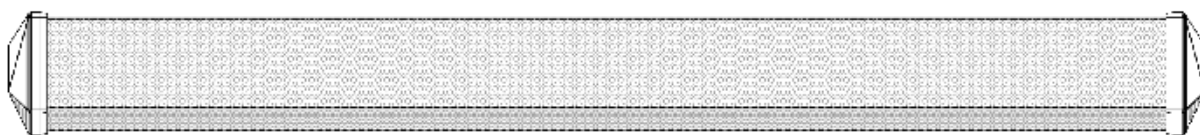


Product Name	Audio Processor
Model	CRS-AP10
Support algorithm	AFC、ANS、AEC、AGC、ARR
Acoustic feedback gain	$\leq 18\text{dB}$
Noise reduction	$\leq 30\text{dB}$
Echo Cancellation Amplitude	$\leq 90\text{dB}$
Echo cancellation length	$\leq 1\text{s}$
Reverb suppression	$\leq 18\text{dB}$
Maximum gain	$\leq 30\text{dB}$
Sampling Rate	48k
Frequency response	100Hz~20kHz, $\pm 0.5\text{dB}$
SNR	75dB
Distortion	$\leq 0.1\%$
Voltage	AC 100-240V, 0.75A 50/60Hz
Operating Voltage	DC12V/300mA
Dimensions (LxWxH)	270x163x52(mm)
Operating temperature	-10℃~50℃
Storage temperature	-20℃~70℃
Color	black
Weight	2.2kg





Product Name	Array Mic
Model	CRS-AM6M
Pickup distance	6 meters clear pickup
Microphone array directivity	180° fan-shaped pickup
Number of Microphone Arrays	6
Sensitivity	-37dB±3dB
Frequency response	100-20KHz
SNR	70dB
Distortion	≤0.1%
Operating temperature	-10℃~50℃
Storage temperature	-20℃~70℃
Pointing to the microphone RJ45 interface	Interface with a dedicated audio host
Bracket installation interface	1/4x6x6 through hole
Cable requirements	Twisted-pair shielded network cable of Category 5e or above
Power supply	RJ45 network port power supply
Voltage	DC12V
Dimensions (LxWxH)	446x49.3x45.7 (mm)
Net weight	207g
Color	silver



Product Name		Ceiling Mic (CRS-CM6M)
Pickup distance		6 meters clear pickup
Microphone directivity		omnidirectional
Sensitivity		-25dB±3dB
Frequency response		100-20KHz
SNR		78dB
Distortio		≦0.1%
Operating temperature		-10℃~50℃
Storage temperature		-20℃~70℃
3-core mini XLR socket		Connect with audio host
Voltage		48V
Spherical hanging wheat size (diameter)		φ70.5mm
Net weight		69g
Color		Silver

