

# 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.

### Class Recording System

## Class Recording System

**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.



## Class Recording System

## Class Recording System

### 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:

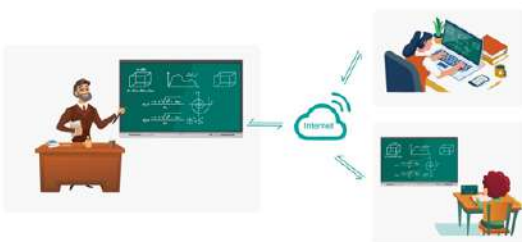
Two different ways of control make it very convenient to control the screen in the classroom



Control PC



Pad



### Achieve Remote Mode:

More interaction between teachers and students when online Conference

## Class Recording System

## SPECIFICATIONS

|                         |  |
|-------------------------|--|
| <b>Product Name</b>     | <b>4k Tracking Camera</b>  |
| 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-HD07)

|                                   |   |
|-----------------------------------|---|
| Video Input                       | Multiple video sources supported, up to 6 video sources<br>Included lecturer close-up, podium panorama, listener close-up, listener panorama, presentation from PC and electronic white board |
| Supported Video Input Resolution  | SDI IN: 720p@50@60, 1080p@25@30<br>( Reserved if work with 4K-HD IP Cameras)<br>HDMI IN: 1024*768, 1280*720, 1366*768, 1440*900, 1920*1080  |
| Video Output                      | 2*HDMI out  |
| Supported Video Output Resolution | HDMI OUT resolution: 1080p@50@60<br>Recording video resolution: 320*180, 480*270, 640*360, 960*540, 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, 2500MB/h, 3000 MB/h, 3600 MB/h  |
| Audio Encoding                    | AAC-LC  |
| Audio Bit Rate                    | 128Kbps   |
| Audio Sample Rate                 | 48KHz   |
| Tracking way                      | Work with auxiliary positioning camera  |
| File Format                       | Movie mode & Resource mode  |
| Network Port                      | 6* RJ45 (include 4 POE port)  |
| Storage                           | 1TB/2TB/4TB/8TB (optional), default 2TB   |
| Power                             | DC 48V  |
| Dimensions                        | 430mm*335mm*44.5mm (L*W*H)  |



## Product Name Touch Control Panel (CRS-TCP07)

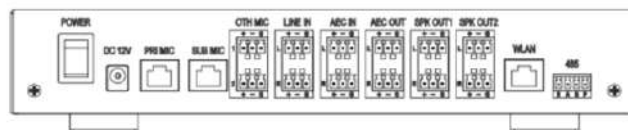
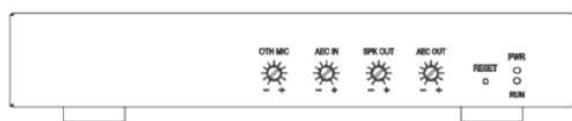
|                    |               |
|--------------------|---------------|
| Operation System   | Android       |
| CPU                | 4 core 1.8Ghz |
| Storage Capacity   | 32GB          |
| Memory Capacity    | 2GB           |
| Storage Type       | SSD           |
| Screen Size        | 7 inches      |
| 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   |

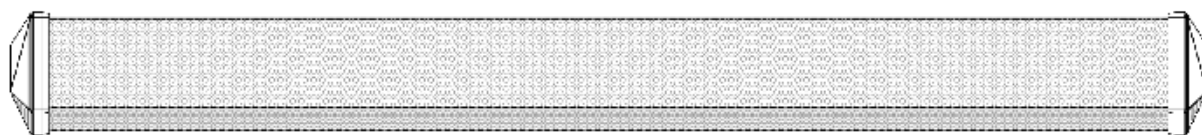


| Product Name                | Audio Processor                 |
|-----------------------------|---------------------------------|
| Model                       | CRS-AP10                        |
| Support algorithm           | AFC、ANS、AEC、AGC、ARR             |
| Acoustic feedback gain      | $\leq 18\text{dB}$              |
| 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 C ~50 C                     |
| Storage temperature         | -20 C ~70 C                     |
| 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 C ~50 C   |
| Storage temperature                       | -20 C ~70 C   |
| 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  $\leq 0.1\%$ 

Operating temperature -10℃~50℃

Storage temperature -20℃~70℃

3-core mini XLR socket Connect with audio host

Voltage 48V

Spherical hanging wheat size (diameter)  $\phi 70.5\text{mm}$ 

Net weight 69g

Color Silver

