Razr i-RECORD

iClassroom-recording Processor

(Model: R11)

R11 is the latest product of Razr, it supports MAX 8 signal inputs, including 7-way SDI signals and 1-way VGA: teacher close-up, student close-up, podium panorama, student panorama, two blackboard, remote video conferencing, and presentation signal from PC. It integrated auto-tracking, auto-switch & recording features, can auto tracking teacher and student's movement, detect the signal source change and auto-switch the image between teacher close-up, student close-up, podium panorama, student panorama, blackboard, remote video conferencing and presentation.

R11 works with video conference system, to achieve distance Learning, It specialized for classroom's recording solution in education market.

Features:

☐ Multiple video sources supported, up to 8 video sources

Include teacher close-up, student close-up, podium panorama, student panorama, two blackboard, remote video conferencing, and presentation signal from PC, totally 8 video sources.

☐ Advanced auto tracking technology

With image recognition and multiple frames comparison technology, system can work out the position and detect teacher and student's motion, then can easily auto tracking teacher and student's movement without wear any infrared device.

☐ Exclusive 8-signal auto-switching technology

Switching between different signals, recording teaching activities naturally.

☐ Two Blackboard capture and switch function

R11 can Max capture two Blackboard images and switch the output image.

☐ Embedded with audio processing function

R11 integrated audio processing module, support for echo suppression, 48V phantom power supply, audio mixing output and other functions.

☐ Local interaction

R11 comes with an interactive function module that supports up to 1 lecture room + 4 lecture rooms.

☐ USB copy file

R11 with USB 3.0 port, can support copy the recorded movie mode high quality file to mobile storage device via USB interface.

☐ Support Movie mode and Resource mode

R11 recorded file is a standard MP4 format and supports simultaneous recording of high and low bit rate movie mode and resource mode file.

High bit rate files are used for high-quality file saving, and low bit rate files are used for live streaming and video on-demand in mobile devices or low-bandwidth environments.

Specifications:

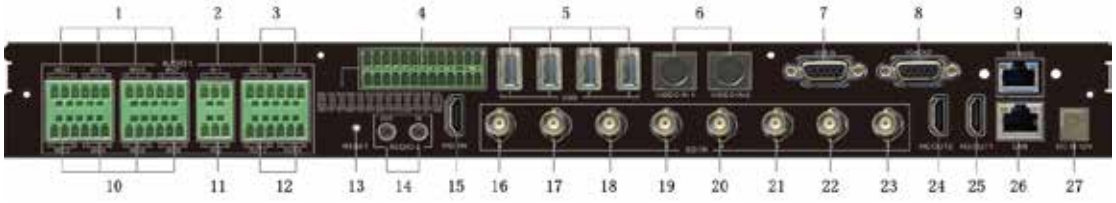
Model	R11
Operation System	Linux OS
Supported Video Input Resolution	HD signal: 720p@50@60, 1080p@25@30 VGA signal (digital DVI): 1024*768, 1280*720, 1366*768, 1400*1050, 1440*900, 1920*1080 VGA signal (analog): 1024*768, 1280*720, 1366*768, 1440*900, SD signal: support D1 video input (NTSC&PAL)
Supported 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
Director Mode	4 scenes, 5 scenes and 6 scenes (2 Blackboard area)
Teacher tracking way	With auxiliary positioning camera
Student tracking way	With analysis camera installed on ceiling
File Format	Movie mode & Resource mode
Language	English, Simplified Chinese, Traditional Chinese
Storage	1TB/2TB/4TB/8TB(optional), support dual hard disk
Power	AC 100~240V/60W/2A
Dimensions	430mm*335mm*44.5mm (L*W*H)
Weight	10.0Kg
Relative Humidity	5% to 95%
Working Temperature	-20°C to 60°C
Storage Temperature	-40°C to 80°C

Front Panel:

No.	Component	Statement
1	USB Port	USB3.0, for download the latest file
2	LCD	Display system info, IP address, status, etc.
3	Up button	Reserved
4	Down button	Reserved
5	Left button	Reserved
6	Right button	Reserved
7	Main interface button	Reserved
8	Power button	Power Switch, Light touch to display IP address

Rear Panel:



No.	Connector	Statement
1	MIC IN	Microphone audio input
2	LINE IN	LINE IN audio from PC or DVD player
3	Audio Out	OUT 1 for Amplifier, OUT 3 for Monitor
4	Control	Control port
5	USB port	USB3.0, can download file or connected with Keyboard
6	Video IN	Reserved
7	VGA IN	VGA signal input from PC
8	VGA Out	Output director image
9	Debug port	Audio system Debug port
10	MIC IN	Microphone audio input
11	LINE IN	Audio input from far site of Video Conference
12	Audio Out	OUT 2 for far site audio, OUT 4 for Monitor
13	RESET	Reset to factory setting
14	AUDIO IN/OUT	Reserved
15	HDMI IN	HD signal input, only can use when VGA in is disconnected
16	3G-SDI	Remote Video Conferencing signal input
17	3G-SDI	Reserved
18	3G-SDI	Blackboard 2 input
19	3G-SDI	Blackboard 1 input
20	3G-SDI	Student panorama signal input
21	3G-SDI	Podium panorama signal input
22	3G-SDI	Student close-up signal input
23	3G-SDI	Teach close-up signal input
24	HDMI OUT2	Connected to VC system, auxiliary stream
25	HDMI OUT1	Connected to VC system, main stream
26	LAN	Connected with network
27	Power input	DC12V input

REACH R11 System Camera Datasheet

Close-up Camera

(Model: HD-930L)

Image sensor	1/2.8-type HD CMOS
Effective pixels	2.14 million
Video format	1080p60/p50, 1080i60/i50, 1080p30/p25, 720p60/p50
Lens	20x optical zoom, 12x digital zoom f=4.7-94mm, F1.6 to F3.5
Electronic shutter	1/1 to 1/10,000 sec.
Minimum illumination	0.5Lux (Multicolor), 0.1Lux (Black & White)
Encoding	H.265/H.264, 1080p 60fps
Control	1 RS232 in, 1 RS232 out, 1 RS485 in
TF card	Yes, maximum support 64GB
Pan/Tilt speed	Pan: 0.1° ~ 120°/sec., Tilt: 0.1° ~ 80°/sec.
Pan/Tilt range	Pan: ±170°, Tilt: -30 ~ 90°
Preset	Up to 256, Preset accuracy ≤ 0.1°
Video output	3G-SDI, DVI-D (compatible with HDMI)
Control protocol	PELCO-D/ PELCO-P / VISCA
Noise-signal ratio	≥50dB
Digital noise reduction	2D/3D
Backlight compensation	Support
Audio	AAC, 1*3.5mm port (including 1* Line in, 1* Line out)
LAN	10M/100M Adaptive Ethernet interface, PoE optional
Networking protocol	HTTP, TCP, UDP, RTSP, RTMP, ONVIF

USB	1*USB port
Dual-stream	Support
Power	DC 12V, <20W
Working temperature	0° C ~ +40° C
Storage temperature	-20° C ~ +60° C
Dimension	243mm x 163mm x 145mm (L x W x H)
Weight / Color	1.2KG / Silver gray

Panoramic camera

(Model: HD-630L)

Image sensor	1/3-type HD CMOS
Effective pixels	2.14 million
Lens	5x optical zoom, 2.8-14mm
Video format	1080p30/p25, 720p60/p50
Resolution	Maximum support 1920*1080@30fps
Video coding	H.264
Audio coding	AAC
Video output	SDI
LAN	100MB, Adaptive Ethernet port
Horizontal field	32° - 84°
Minimum illumination	0.5Lux
Support protocol	RTMP, RTSP, ONVIF, HTTP
TF card	Yes, maximum support 64GB
S/N ratio	≥55dB
Control	RS232/RS485, VISCA
Power	DC 9V-12V, <5W
Working temperature	-40℃~+60℃
Dimension	149mm*76mm*58mm (L*W*H)

Weight / Color	0.42KG / Gray

Blackboard camera

(Model: HD-640L)

Image sensor	1/3-type HD CMOS
Effective pixels	2.14 million
Lens	3x optical zoom, 7-22mm
Video format	1080p30/p25, 720p60/p50
Resolution	Maximum support 1920*1080@30fps
Video coding	H.264
Audio coding	AAC
Video output	SDI
LAN	100MB, Adaptive Ethernet port
Horizontal field	16° - 33°
Minimum illumination	0.5Lux
Support protocol	RTMP, RTSP, ONVIF, HTTP
TF card	Yes, maximum support 64GB
S/N ratio	≥55dB
Control	RS232/RS485, VISCA
Power	DC 9V-12V, <5W
Working temperature	-40℃~+60℃
Dimension	149mm*76mm*58mm (L*W*H)
Weight / Color	0.42KG / Gray

Analysis camera

(Model: SD-400)

Positioning camera

Image sensor	1/3 OV4689 CMOS
Effective pixels	4.00 million
Minimal illumination	0.6Lux@F1.2 (multicolor), 0.08Lux@F1.2 (black and white)
Encoding	H.265/H.264
Video format	1080p30
Video output	RJ45
Video bit rate	32Kbps – 16Mbps adjustable, support CBR/VBR
S/N ratio	≥50dB
USB	1*USB, maximum support 128 GB (optional)
Protocol	TCP/IP, UDP, RTP, RTSP, RTCP, HTTP, DNS, DDNS, DHCP, FTP, NTP, PPPOE, SMTP, UPNP
Power	DC 12V/PoE (External POE module required), 3W maximum
Dimension	58mm*50mm*50mm (L*W*H)
Weight / Color	0.22KG / black