SONY

Transform presentations with the Edge AI Video Analytics Solution.

REA-C1000
Edge Analytics Appliance

Enrich your visual communications

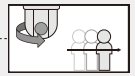
Increase audience engagement with our Edge Analytics Appliance

The Edge Analytics Appliance incorporates artificial intelligence (AI) into the video processing technology that Sony has cultivated over many years in the development of cameras and broadcasting equipment. This makes it easy to create video that maximizes the power of visual communication.
The REA-C1000 Edge Analytics Appliance brings an exciting new dimension of audience engagement to various applications.

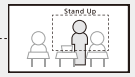
Product Composition

Edge Analytics Appliance (main unit)
REA-C1000

Handwriting Extraction
REA-L0100

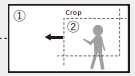


PTZ Auto Tracking
REA-L0200



Close-Up by Gesture
REA-L0300

Chroma Key-Less CG Overlay
REA-L0400



Focus Area Cropping
REA-L0500

Various Applications

As the powerful brain of any connected camera and AV setup, the Edge Analytics Appliance works like a virtual camera operator at your fingertips and allows you to cost effectively create professional, engaging content for teaching, training, seminars, events, and conferences in a broad range of applications.

Seminar / Conference

Corporate Media (Marketing / AD)

Event Production

Faith-based organizations

E-learning / MOOCs

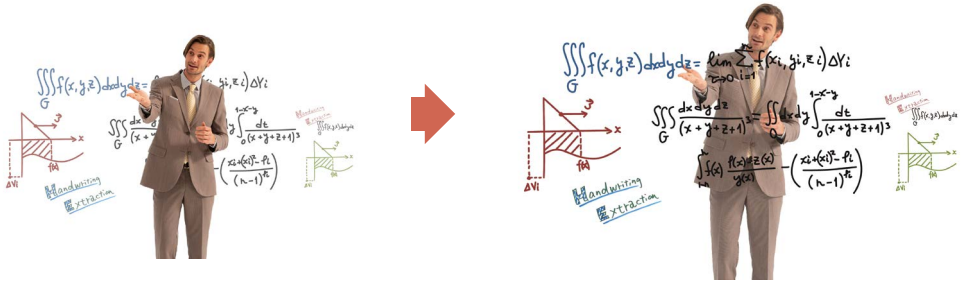
Healthcare

Handwriting Extraction

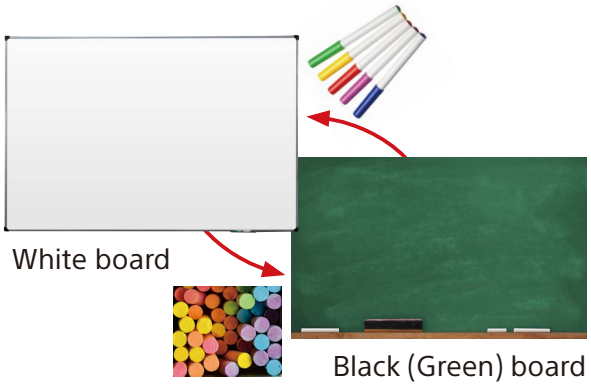
REA-L0100

Ultimate audience engagement via real-time editing and viewing of presented content

The REA-C1000 system uses handwriting extraction technology (REA-LO100) to extract characters and diagrams written on a whiteboard or blackboard, and to display them in real time - giving an unobstructed view of both the teacher and the content. As the contents of the board are now always visible, the system empowers the teacher to vividly portray his/her lesson material, thinking processes, and passion to their students. Even students sitting in an awkward place in the room, or in a remote location, can now benefit from an uninterrupted view. This system can be programmed to be operator-free.

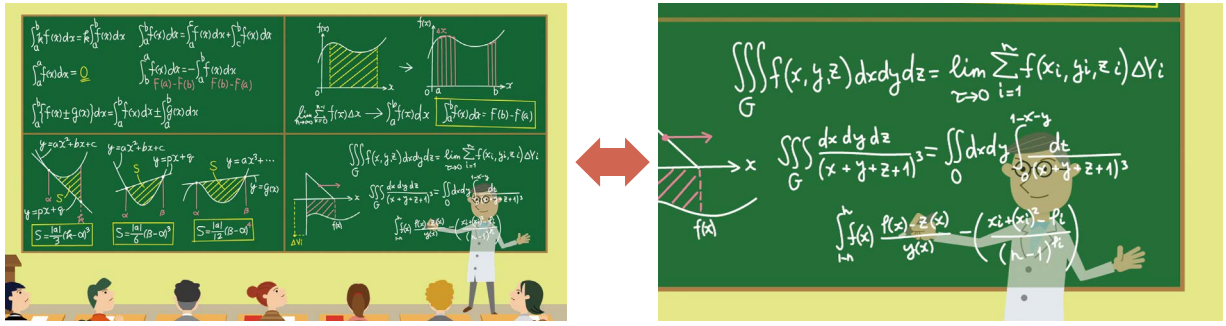


Board Color



Text and images can be extracted from a whiteboard or from a dark-surface board (blackboard) so that they are clearly visible in front of the lecturer.

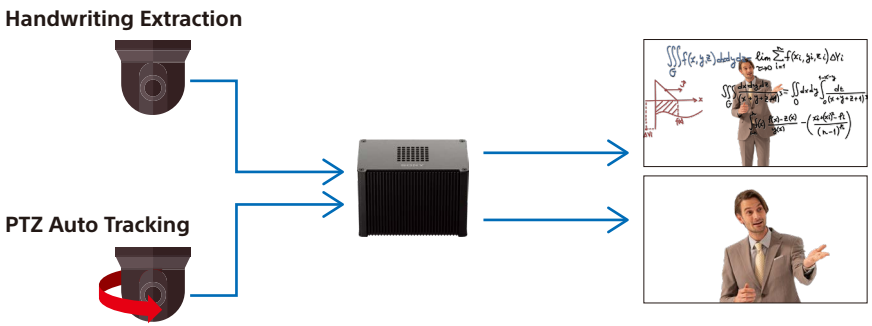
Multiple Raised Boards / Wide Horizontal Boards



The system supports extraction from a raised board or a wide horizontal board and, by using face detection, it can zoom a display of the image around the teacher.

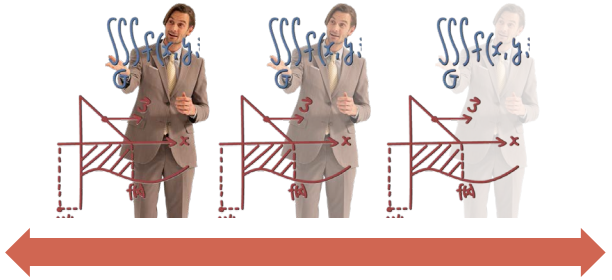
*When the auto-switch angle is enabled, operation may be compromised if the presenter's face is partially obscured (for example, by a mask).

Simultaneous Multiple Functions



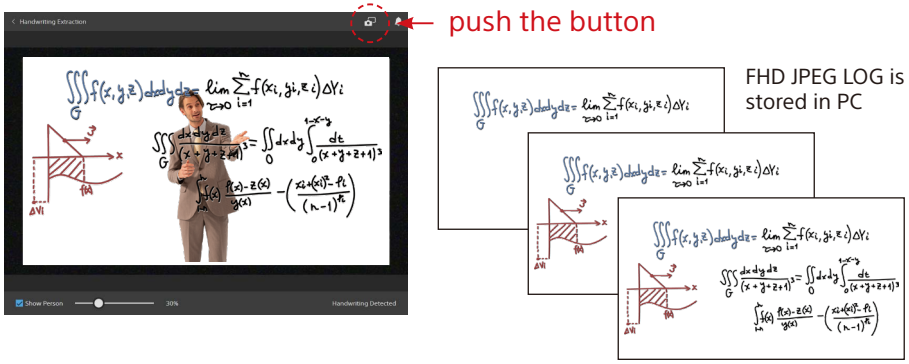
The Edge Analytics Appliance can be used together with the PTZ Auto Tracking (REA-L0200) function by connecting two cameras.

Transparency Ratio



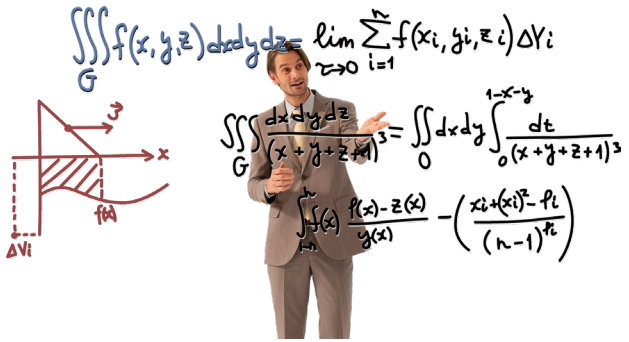
The transparency of the person can be adjusted in real time. It is also possible to create video that shows only the presenter's handwriting.

Snapshot Log Function



The content written on the board can be saved in JPEG format using the one-shot log function. This snapshot contains an image of the written content but excludes the presenter overlay.

Modify the Actual Image

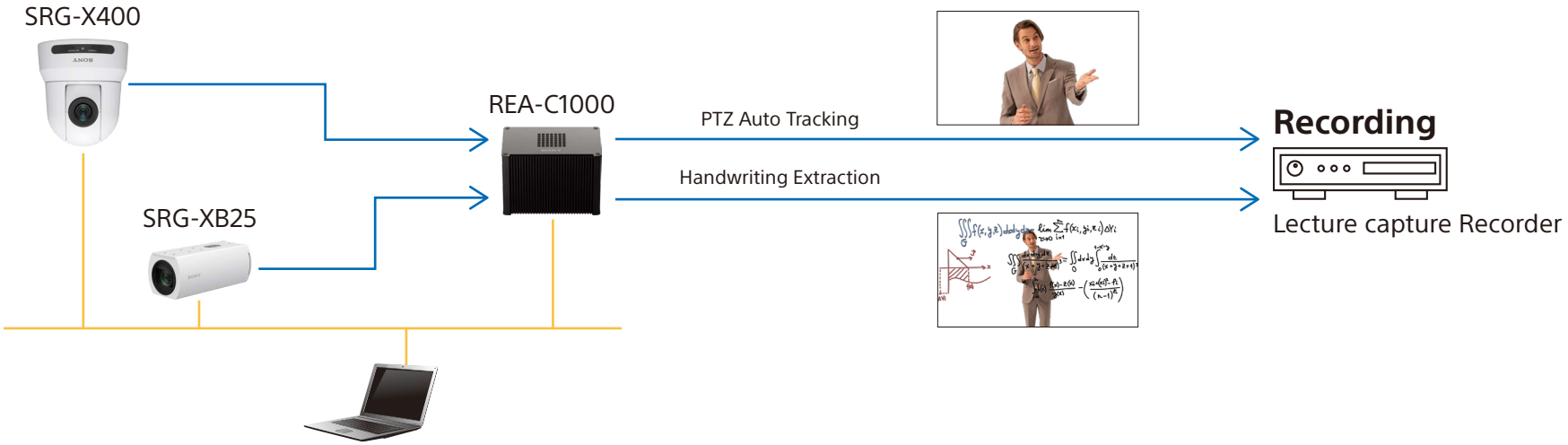


You can enhance the color of extracted characters. This can make it easier to read the writing, with a more clearly visible colors or contrasts than in the original board writing.

HDMI
Network

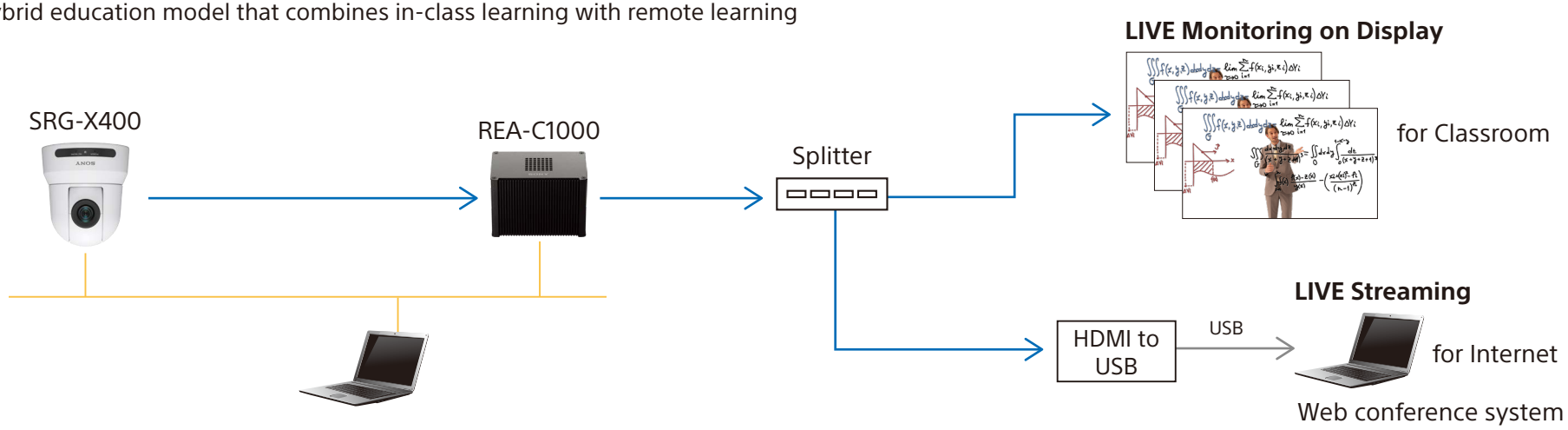
System Example for Handwriting Extraction

Scenario 01 : Lecture Capture (On-demand)



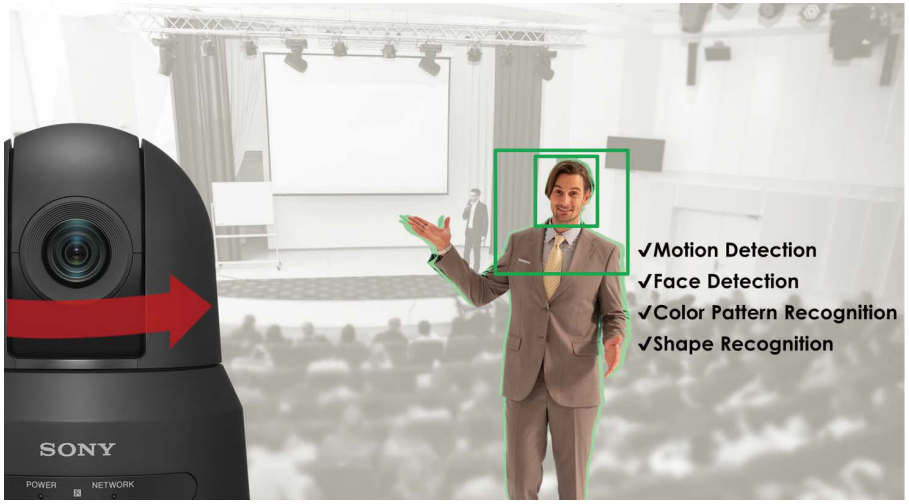
Scenario 02 : Hybrid LIVE lecture (Offline/Online)

hybrid education model that combines in-class learning with remote learning



PTZ Auto Tracking

REA-LO200



Keep your presenter in focus with real-time intelligent framing

The PTZ Auto Tracking feature (REA-LO200) uses intelligent motion detection technology to track the presenter on the stage while controlling the connected PTZ so that he/she is always in the frame and in sharp focus. This tracking is done very accurately and smoothly – without the need for any manual control - resulting in a seamless viewer experience.

Supports Sony PTZ Cameras

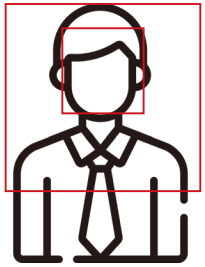
With fully detailed knowledge of Sony cameras' internal parameters and strict mechanical control, the REA-C1000 provides smooth following control for a natural angle that tracks the speaker.

- BRC-X1000, BRC-X400, BRC-H800
- SRG-X400, SRG-X120, SRG-360SHE, SRG-300SE*, SRG-300H, SRG-120DH

As of 2021 Jan *300SE needs SDI to HDMI converter

Highly Accurate Critical Thinking

The system uses AI to recognize and track the target in real time, based on complex elements such as the person's face, movement, shape, and color.



- ✔ Motion Detection
- ✔ Face Detection
- ✔ Color Pattern Recognition
- ✔ Shape Recognition

*If the presenter's face is partially obscured (for example, by a mask), the tracking function may be compromised.

Easy Switching Composition

Full Body mode

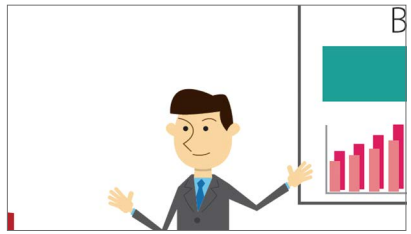
Upper Body mode

The base angle can be set to upper body or full body. Without difficult setting procedures, this enables the required angle to be maintained as the system tracks the presenter within the image area.

Adjusting Camera Angle

Before adjustment

After adjustment



You can also adjust the height and size of the tracking target within the screen.

Tracking Tally Lamp

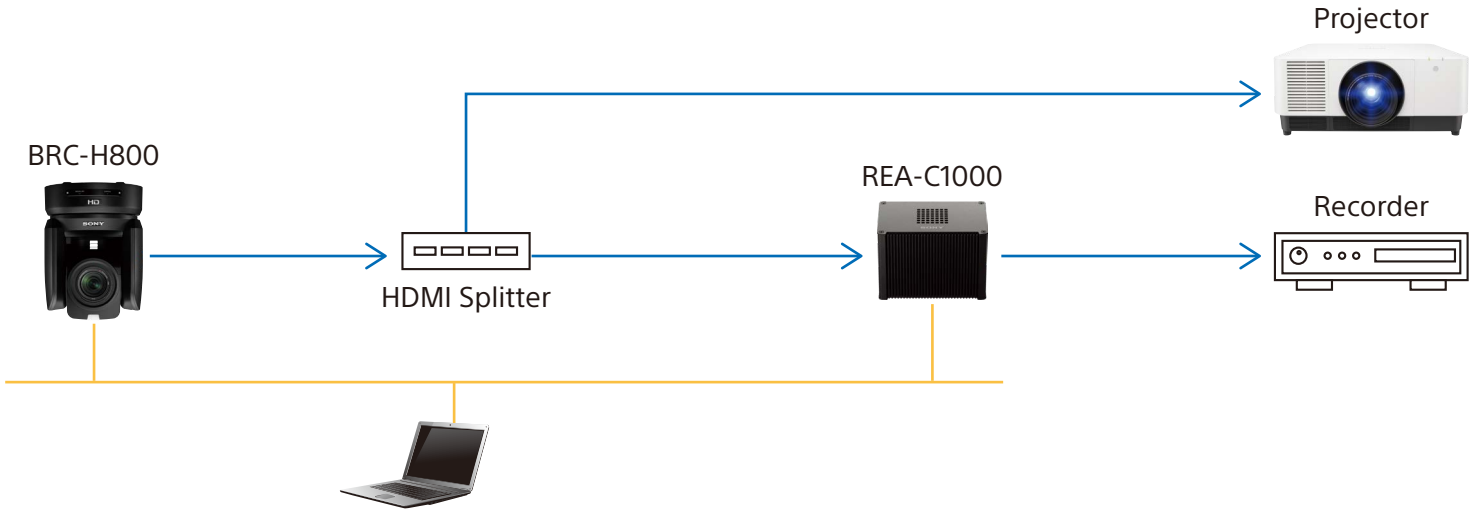
Turn Off=Lost

The system can be used with the tally lamp of Sony's remote cameras. Turning on the tally lamp during tracking and turning off the tally lamp when tracking is lost allows you to see whether the person is being automatically tracked.

HDMI
Network

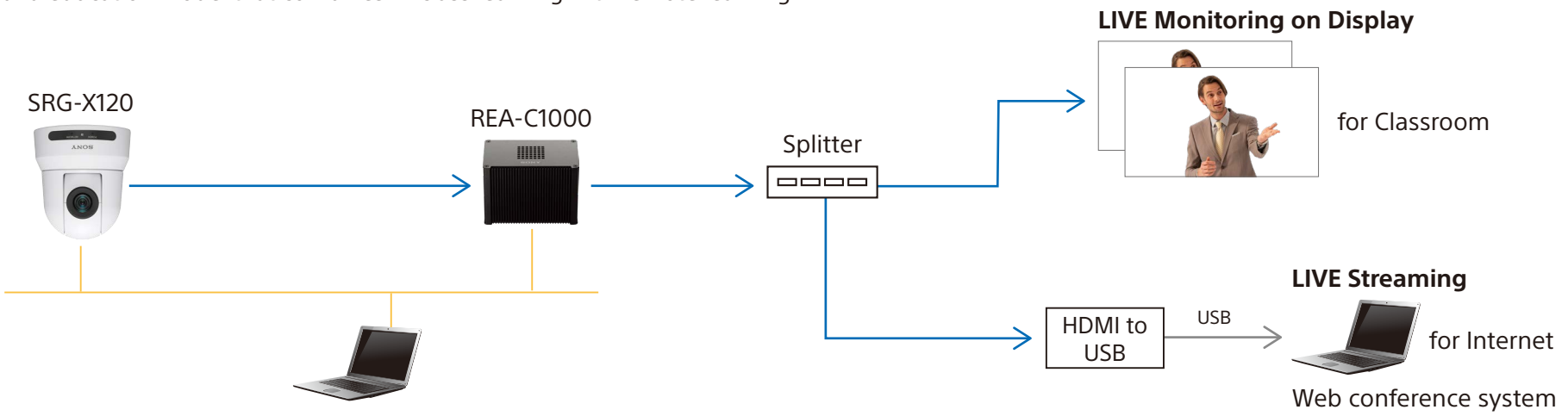
System Example for PTZ Auto Tracking

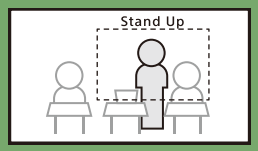
Scenario 01 : Business Seminar at an auditorium



Scenario 02 : Hybrid LIVE lecture (Offline/Online)

Hybrid education model that combines in-class learning with remote learning





Close-Up by Gesture

REA-L0300

Involve your audience by getting close to them

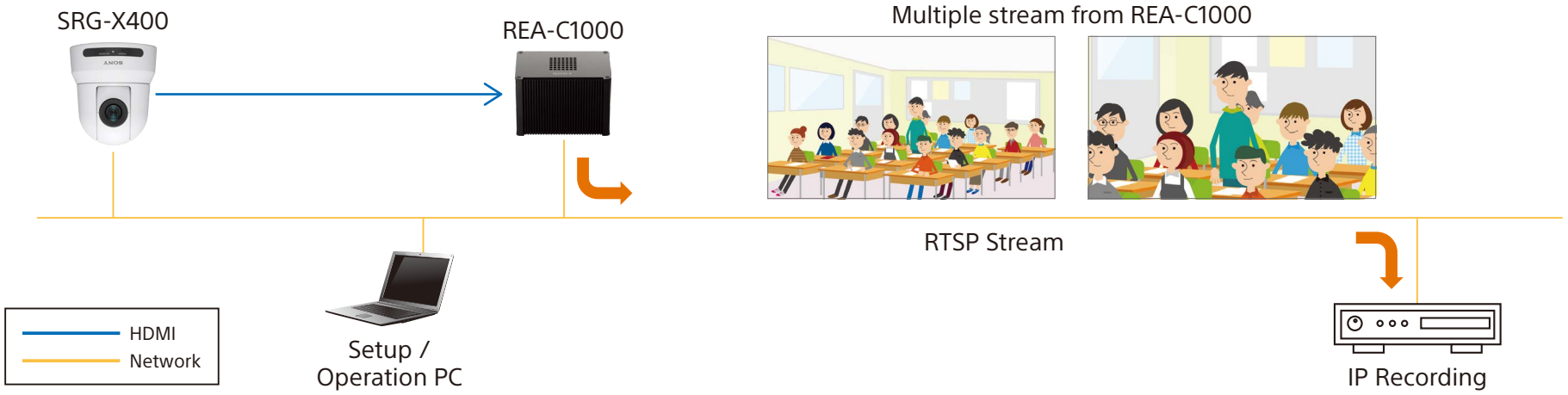
When using the Close-Up by Gesture application (REA-L0300) to capture footage in the classroom, students who stand up to speak from a group of about 20 to 30 people are automatically recognized and the camera electronically zooms in on the person who is speaking.

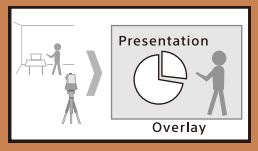
Whole image | **Stand up** | **Auto zoom** | **Whole image**

When that student sits down, the camera automatically switches from zoomed to a 4K bird's eye angle of view, as if a camera operator is controlling the camera. An alternative application is to capture footage in the front and rear of the classroom; this is useful for faculty development. The Edge Analytics Appliance also supports IP output for capturing footage from multiple classrooms to recorders on a network.

System Example

Scenario 01 : Lecture Capture (Network Recorder)





Chroma Key-Less CG Overlay

REA-L0400

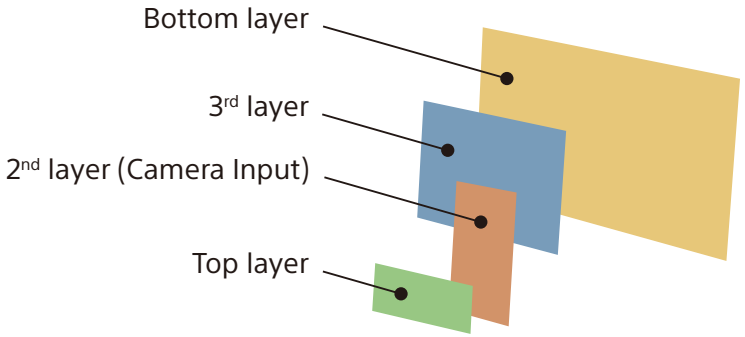
Professional quality content from your office

Using the Chroma Key-Less CG Overlay application (REA-L0400), you can easily create composite images without a green-screen studio or specialist staff. An office conference room or simple studio can be used to place the person being recorded into another image in real time, making it easy to produce appealing image content. This application is a powerful tool for producing business presentation videos, video content for streaming on the web, and e-learning content.

Before

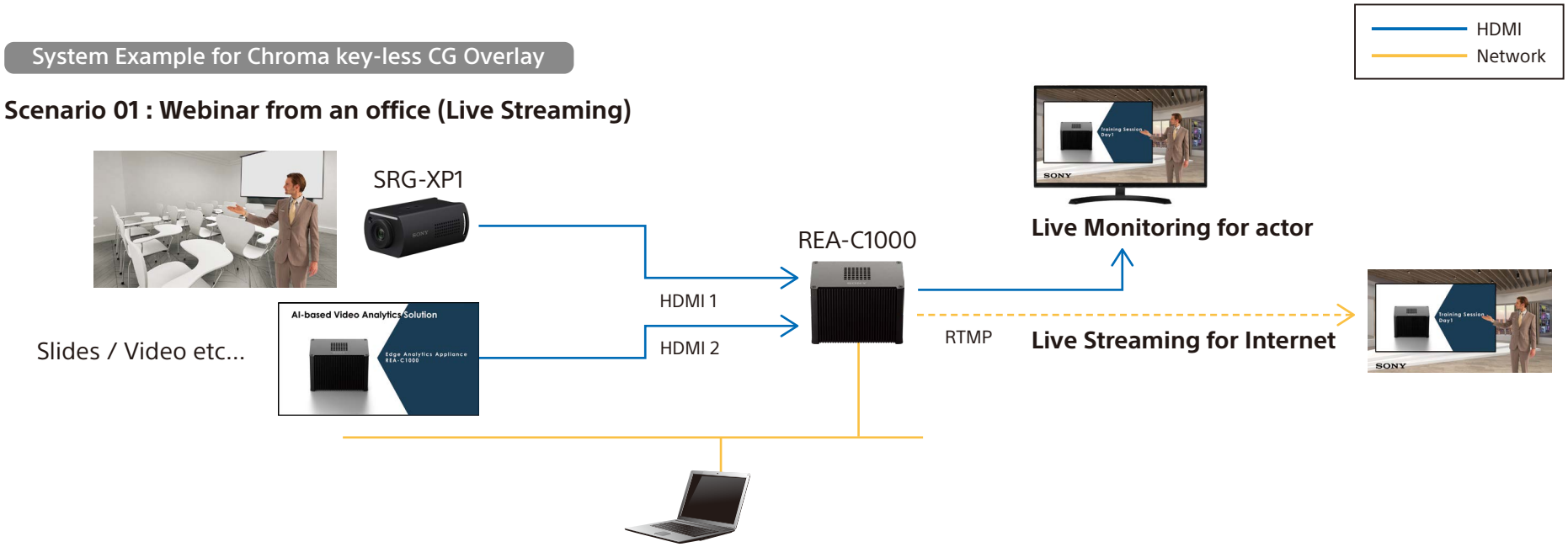
After

Layer Structure

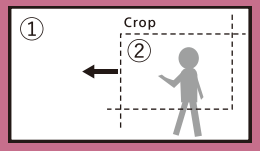


Up to four layers of content can be produced in real-time. The size of the image that is input from the camera can be changed at will. For example, you can enlarge or reduce the image of a person to the desired size and arrange it so that it fits the background image.

System Example for Chroma key-less CG Overlay



For better-looking composite shots, make sure to choose a shooting location without moving objects in the background. It is also a good idea to wear clothing that is a different color to the shooting environment.

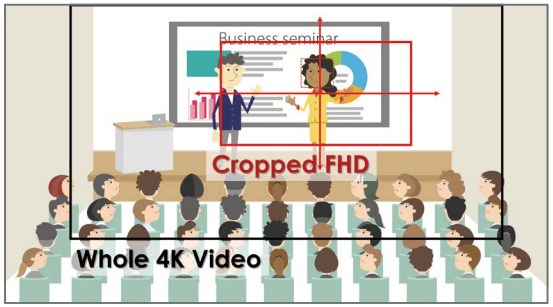


Focus Area Cropping

REA-L0500

Bringing your audience closer to the action

Using the Focus Area Cropping application (REA-L0500), you can output footage in real time from different angles with a single camera, almost as if you are using a multi-camera setup. This application enables shooting with fewer cameras than usually required at a single shooting location, making it possible to allocate equipment and staff to other shooting opportunities. It provides electronic panning, tilting, and zooming that track subject movement in the angle of view from a 4K bird's-eye view for continuous subject tracking that is almost as if a camera operator is controlling the camera.



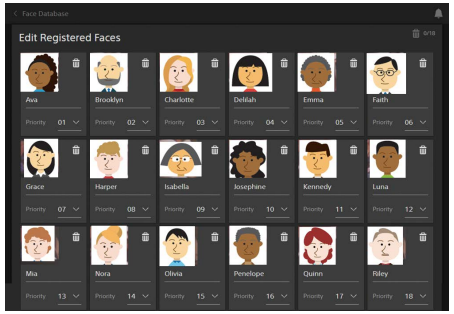
2 streams from a single cam

Whole 4k video

Cropped FHD

Support Face Identification

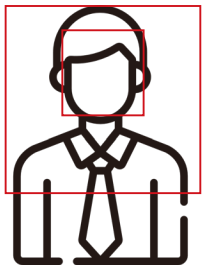
Once faces have been registered in advance, they can then be automatically tracked when in camera view. You can control priority.



*You can create a face database of up to 100 people.

Highly Accurate Critical Thinking

The system uses AI to recognize and track the target in real time, based on complex elements such as the person's face, movement, shape, and color.



- ✔ Motion Detection
- ✔ Face Identification
- ✔ Color Pattern Recognition
- ✔ Shape Recognition

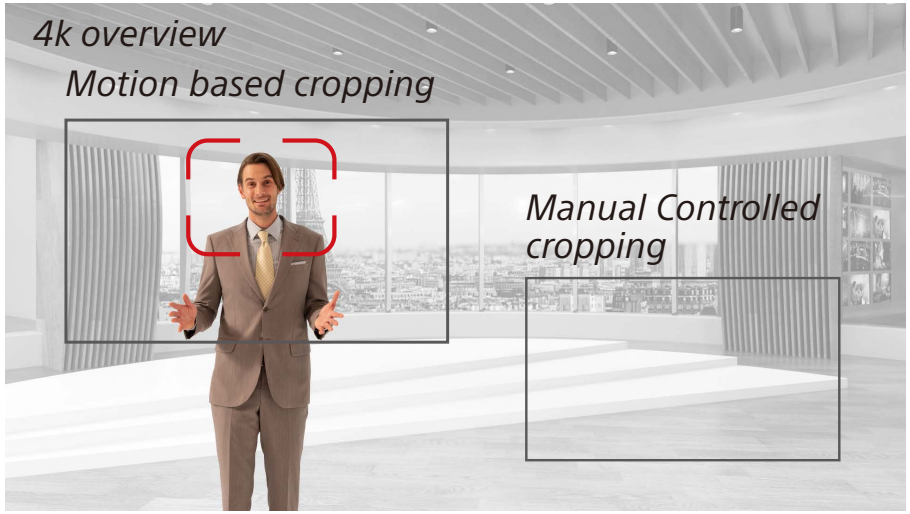
*If the presenter's face is partially obscured (for example, by a mask), the tracking function may be compromised.

Fixed Area Cropping / Focus Area Cropping

The cropping area is selectable as fixed or dynamic to follow the speaker's movements.

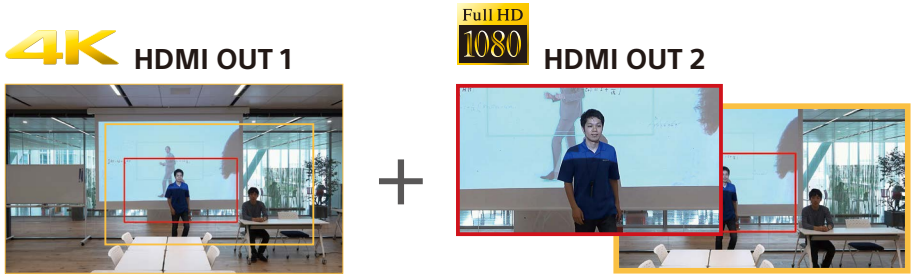
The Focus Area Cropping function is best for cropping subjects that move around, such as speakers and actors. It provides electronic panning, tilting, and zooming that track subject movement in the angle of view from a 4K bird's-eye view for continuous subject tracking that is almost as if a camera operator is controlling the camera.

This Fixed Area Cropping function is best for cropping subjects with minimal movement, such as screens, panelists, and on-stage presenters. It gives complete freedom of control over the shooting area by dragging the mouse to switch from a bird's-eye view to digital zoom.



Switcher-Like Selectable Output

Up to two specific areas can be cropped at the same time while shooting. For each specific area, you can select focus area cropping or fixed area cropping. Also you can select program output from HDMI2 during live operation.

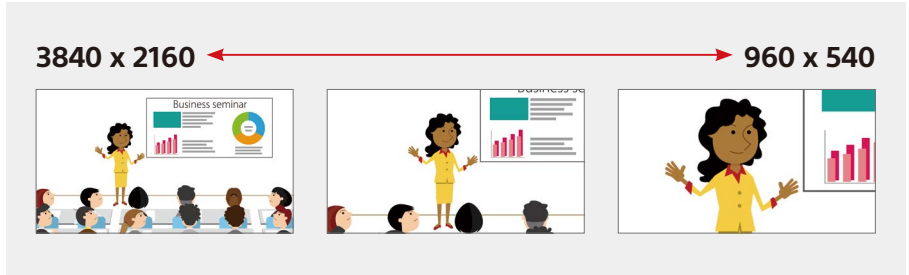


4k High Quality Whole View

Selectable output from 2 cropped videos

Full HD Adjustment

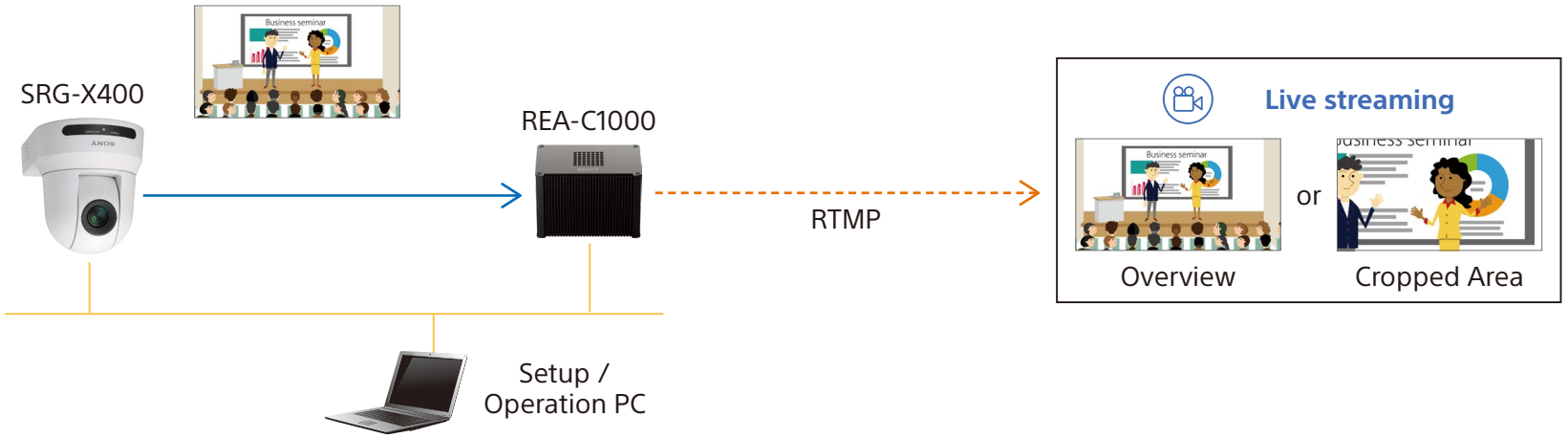
The cropped image will always be adjusted to Full HD (1920x1080). This means that the shooting resolution is variable and can easily be changed during output without any compatibility loss with later-stage systems



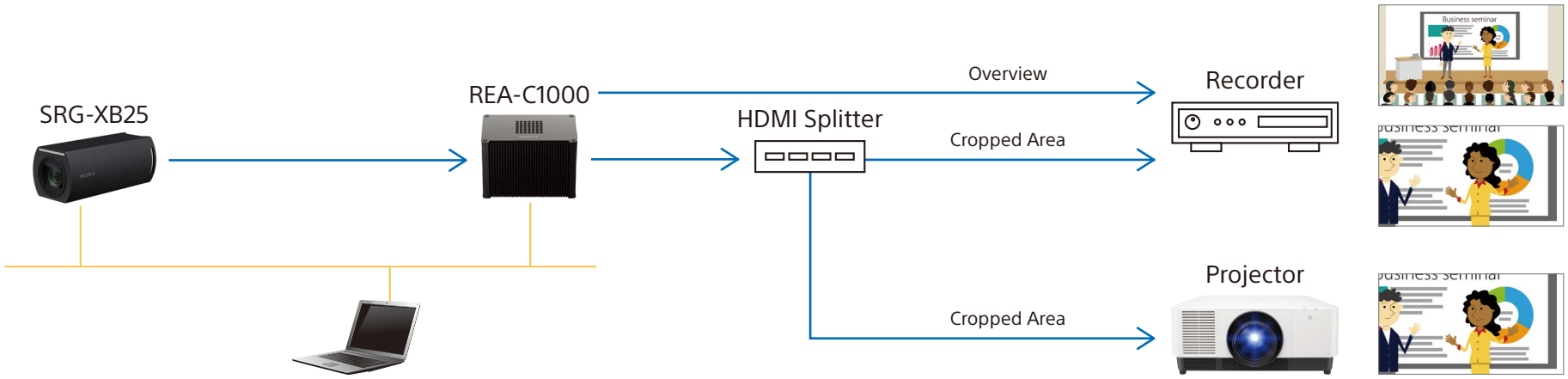
HDMI
Network

System Example for Focus Area Cropping

Scenario 01 : Event Production on virtual (Live Streaming)



Scenario 02 : Event Production at an event space

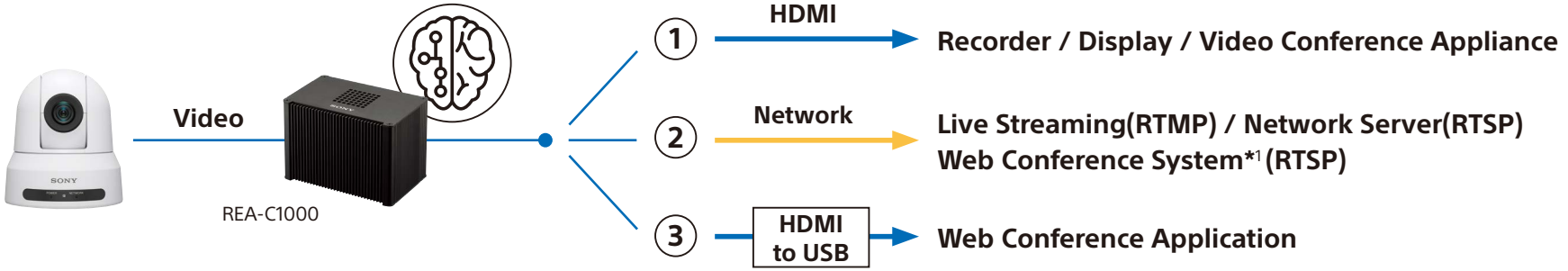


Edge Analytics Appliance

REA-C1000

The Edge Analytics Appliance creates impactful video content which previously would have required significant time, expense, and human resource to produce. With artificial intelligence-led technology, the REA-C1000 vastly improves the quality of communication by empowering the presenter to deliver content and to engage their audience like never before.

Flexible functions and interfaces for a variety of uses



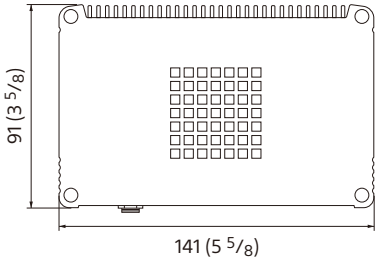
*1 This option is only valid for the user who installed Virtual Webcam Driver for Remote Camera.

Specifications

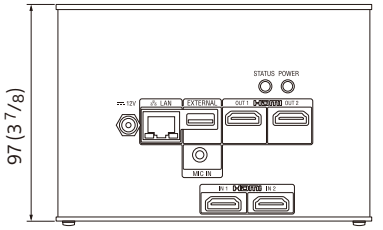
Intuitive Web based User Interface	Supports Google Chrome Ver. 7.0 or later
HDMI IN 1	Up to 4K 30p (3840×2160 / 29.97P, 25P)
HDMI IN 2	Up to FHD 60p (1920×1080 / 59.94P, 50P)
HDMI OUT 1	[EDID] : Automatically determine and output a video image that is compatible with the connected output device. Up to 4K 30p (3840×2160 / 29.97P, 25
HDMI OUT 2	[EDID]: Up to FHD 60p (1920×1080 / 59.94P, 50P)
Network (LAN)	RJ-45 (1000BASE-T)
DC power input	12 V 5 A (required 3rd party AC Adapter)
MIC IN	Stereo, ø3.5 mm mini jack
HDMI Embedded Audio	Supported
RTSP, RTMP live streaming	H.264
IPv4, IPv6	Internet Protocol version
Role-based Authorization	Access permissions of one administrator and nine general users
Access Restrict	Configure the security function to restrict the computers that can access the unit
Dimension / Mass	Height: 97mm, Width: 141mm, Depth: 91mm / Approx. 0.86kg (1 lb 14 oz)
Operating temperature	5 °C to 40 °C (41 °F to 104 °F)

External dimensions

Top

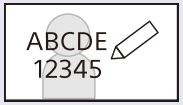
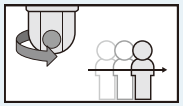
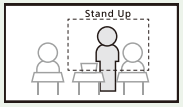
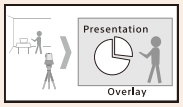
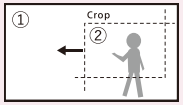


Rear



Unit: mm (inches)

Support Camera Matrix (as of Feb 2021)

Features		Recommend Camera
	**Handwriting Extraction** **REA-L0100**	BRC-X1000, BRC-H800, BRC-X400, SRG-X400, SRG-X120, SRG-XB25, SRG-XP1, XDCAM Series
	**PTZ Auto Tracking** **REA-L0200**	**Supported Camera :** BRC-X1000, BRC-H800, SRG-300H, SRG-300SE, SRG-120DH, BRC-X400, SRG-X400, SRG-X120, SRG-360SHE
	**Close-Up by Gesture** **REA-L0300**	BRC-X1000, BRC-X400, SRG-X400, SRG-XB25, SRG-XP1, XDCAM Series
	**Chroma Key-Less CG Overlay** **REA-L0400**	BRC-X1000, BRC-X400, BRC-H800, SRG-X400, SRG-X120, SRG-XP1, XDCAM Series, A7 Series
	**Focus Area Cropping** **REA-L0500**	BRC-X1000, BRC-X400, SRG-X400, SRG-XB25, SRG-XP1, PXW-FS7, PXW-Z150, PXW-Z190, PXW-Z280

Distributed by

MK20439V1YIT21FEB