

## BRC-X1000

Premium 4K30P PTZ Camera with 12x optical zoom and uncompromising broadcast picture quality



### Overview

**Remotely capture broadcast quality 4K images with smooth, silent PTZ and excellent low-light sensitivity**

The BRC-X1000 is Sony's first 4K remote camera, combining uncompromising broadcast picture quality and smooth, silent PTZ operation with the flexibility of 3G-SDI and HDMI connections.

Designed for remote operation, this compact but powerful robotic camera is an ideal complement to other broadcast cameras for capturing images in hard-to-reach or unobtrusive positions. It's equally at home in TV newsrooms, remote studios and on-air suites, auditoriums, houses of worship, courtrooms or sports stadiums. It's also particularly suited to efficient multi-camera set-ups, under the control of a single operator.

The 1.0-type Exmor R CMOS image sensor captures detail-packed 4K footage at 30p with four times the pixel count of Full HD, and excellent low-light sensitivity. The large image sensor also allows the creation of beautiful 'bokeh' effects with a shallow depth of field to suit any artistic intention.

Speedy, near-silent PTZ operation with 12x optical zoom

accommodates wide-angle scenes and tightly framed close-ups, with Clear Image Zoom 18x (4K), 24x(HD) extending this range even further without visible loss of resolution. In HD resolution, 24x zoom can be doubled to 48x with Tele Convert Mode. Broadcast-friendly features include dual tally lamps for on-air operation, while operational flexibility is enhanced with options for ceiling, table top or tripod mounting.

There's also a broad range of video interfacing and remote control possibilities - plus support for PoE+ and genlock - for smooth integration into any broadcast, professional or corporate AV environment.

The BRC-X1000/1 and the BRC-X1000/WPW are the US/Canada models which are bundled with the AC-UES1230MT AC power supply and cord. In all other regions the AC power supply and cord are sold separately.

Available in black as BRC-X1000 and in white as BRC-X1000/W (colour availability may vary by country).

## Features

### **Enhanced Pan/Tilt/Zoom (PTZ) operation**

Accurately re-frame shots or track moving subjects with smooth, speedy, near-silent remote control of pan, tilt and zoom functions. There's also low-speed zoom and a slow pan/tilt mode for precise, judder-free camera movements. PTZ Trace Memory allows a sequence of camera movements to be memorised and followed whenever required. PTZ Motion Sync smoothly blends separate pan, tilt and zoom movements for seamless, professional-looking transitions. Up to 100 pre set positions for pan/tilt/zoom operations

## **Uncompromising 4K images**

The camera's large, back-illuminated 1.0-type Exmor R CMOS sensor delivers uncompromised broadcast quality colour pictures in detail-packed 4K 30p, with four times the resolution of Full HD. Footage can also be captured in Full HD 60p - ideal for fast-moving sports action.

## **Cinematic 24p pictures**

The camera can also operate in 24p mode, for video footage with a rich, filmic look.

## **High quality 12x optical zoom and 18x(4K) or 24x(HD) with Clear Image Zoom**

The high quality Zeiss Vario-Sonnar T\* lens with 12x optical zoom range covers wide angle shots as well as tight close-ups. Clear Image Zoom\* expands this range to 18x (4K) or 24x (HD) without sacrificing detail. In addition, the Tele Convert Mode can double this range again, up to 48x zoom while maintaining a 1920x1080 resolution.

\*Clear Image Zoom is a Sony original intelligent interpolation, which analyzes the input image and increases the resolution of the image.

## **Excellent low light sensitivity**

The BRC-X1000 can capture crisp, low noise colour video images in light levels as low as 1.7lx, making it an ideal choice for dimly lit live hall and theater.

## **Flexible installation**

Integration is simplified in a wide range of environments, with PoE+ (Power over Ethernet) to reduce cabling requirements and VISCA control over IP.

## **Remote operation**

Pan/tilt/zoom and other camera settings can be

controlled using the supplied IR remote commander, or with the optional RM-IP500 Remote Control Unit that can control multiple cameras.

### **RCP/MSU Connectivity**

In a studio environment, BRC-X1000 can be controlled via Sony's Remote Control Panel RCP-1500/1501/1530 and MSU-1000/1500. Connection can be made over IP networks.

\*The compatibility is described in Remote Camera System Guide.

### **Genlock**

Genlock simplifies integration with other systems in multi-camera broadcast environments.

### **Versatile video outputs**

Enjoy greater installation flexibility in professional broadcast and AV environments with dual link 3G-SDI (x4) and HDMI video outputs.

### **Front and rear tally lamps**

Ideal for on-air broadcast use, the BRC-X1000 features dual tally lamps on the front and rear of the camera body. Brightness of the front tally lamp can be adjusted in two steps.

### **Always up to date**

New camera functionality and performance improvements can be added via firmware updates over IP.

### **Simplified construction of VR/AR systems\***

Real-time camera tracking data (pan/tilt/zoom/focus/iris) can be output from the camera over IP network in free-d\* protocol. It can construct VR/AR system without

additional tracking system, easy and cost effective solution.

\* VR: Virtual Reality, AR: Augmented Reality

\* free-d is an industry-standard protocol for transmitting camera tracking data.

## Specifications

### Specifications

|   |  |
|---|--|
| Image Sensor                              | 1.0-type back-illuminated Exmor R CMOS sensor  |
| Image Sensor (Number of Effective Pixels) | Approx. 14.2 Megapixels  |
| Image Sensor (Total Number of Pixels)     | Approx. 20.4 Megapixels  |
| Signal System                             | 2160/29.97p, 1080/59.94p, 1080/59.94i, 720/59.94p, 2160/25p, 1080/50p, 1080/50i, 720/50p, 2160/23.98p, 1080/23.98p |
| Minimum Illumination (50IRE)              | 1.7 lux (50IRE, F2.8, 1/30s, Max.Gain)   |
| Horizontal Resolution                     | 1800 TV line (in 3G-SDI output) (center)   |
| Gain                                      | Auto/Manual (-3dB to +33dB)  |
| Shutter Speed                             | 1/10000s to 1/8 (59.94/29.97)<br>1/10000s to 1/6 (50/25/23.98)   |

|                          |  |
|--------------------------|--|
| Exposure Control         | Auto, Manual, Priority mode (shutter priority, iris priority, gain priority), Back light, Spot light |
| White Balance            | Auto1/Auto2/One Push/Indoor/Outdoor/Manual   |
| Optical Zoom             | 12x  |
| Clear Image Zoom         | 2x<br>*1.5x at 4K resolution   |
| Digital Zoom             | No   |
| Tele Convert Mode        | Off, 2x<br>*1920x1080 only   |
| Focusing System          | Auto/Manual  |
| Horizontal Viewing Angle | 64.6° (Wide-end)   |
| Focal Length             | f=9.3 to 111.6mm<br>F2.8(Wide) ,F4.5(Tele)   |
| Minimum Object Distance  | 1000 mm(Tele)<br>80 mm(Wide)   |
| Pan/Tilt Angle           | Pan: $\pm 170^\circ$<br>Tilt: $+90^\circ/-30^\circ$  |
|                          | Pan:<br>0.3° to 60°/s *1<br>0.05° to 60°/s *2<br>0.02° to 60°/s *3                                   |
|                          | Tilt:<br>0.3° to 60°/s *1  |

|                             |   |
|-----------------------------|---|
| Pan/Tilt Speed              | 0.05° to 60°/s *2<br>0.02° to 60°/s *3  |
|                             | *1 When P/T SPEED TYPE setting is NORMAL<br>*2 When P/T SPEED TYPE setting is Extd. RANGE (Requires firmware V2.10)<br>*3 When P/T SPEED TYPE setting is Extd. STEP (Requires firmware V2.10) |
| Pan/Tilt Slow Mode          | Yes   |
| Pan/Tilt Operation Noise    | NC30 or less*<br>* Sony measurement conditions  |
| Preset Position             | 100   |
| PTZ Trace Memory            | 16  |
| PTZ Motion Sync             | Yes   |
| Camera Tracking Data Output | Yes<br>(Requires firmware V2.10)  |

## Camera Features

|                     |        |
|---------------------|--------|
| Day/Night           | Yes    |
| Visibility Enhancer | Yes    |
| Image Flip          | On/Off |
| Picture             |        |

|                |  |
|----------------|--|
| Profile Preset | Yes  |
| ND Filter      | Off, 1/4, 1/16, 1/64 switchable in menu                                |
| Color Gain     | Yes (15 step)  |
| Color Hue      | Yes (15 step)  |
| Color Matrix   | Off/Standard/High Saturation/FL light/MOVIE/STILL/CINEMA/PRO/ITU709/BW |
| Gamma          | Standard/Straight/MOVIE/STILL/CINE1/CINE2/CIN                          |
| Gamma Level    | Yes (15 step)  |
| Black Level    | Yes (97 step)  |
| Black Gamma    | Yes (15 step)  |
| Knee Point     | Yes (13 step)  |
| Knee Slope     | Yes (15 step)  |
| Flicker Cancel | On/Off   |

## Interface

|                 |  |
|-----------------|--|
| 4K Video Output | Dual Link 3G-SDI(2SI only) x2 and HDMI |
| HD Video Output | 3G-SDI x4 and HDMI                     |



|                          |   |
|--------------------------|---|
| HDMI Color Space         | YCbCr, 4:2:2<br>RGB, 4:4:4                            |
| Camera Control Interface | VISCA RS-422<br>RJ45(In/Out)<br>VISCA over IP<br>RJ45 |
| External Sync. Input     | BNC, 75Ω, HD 3-level sync,<br>SD Black Burst          |
| Power Connector Type     | IEC60130-10<br>(JEITA standard RC-5320A)<br>TYPE4     |

## General

|                          |   |
|--------------------------|---|
| Power Requirements       | DC 10.8V to 13.2V,<br>PoE+ (IEEE802.3at compliant)  |
| Power Consumption        | DC12 V:21.5 W (Max)<br>PoE+:25.5 W (Max)  |
| Operating Temperature    | 0 °C to 40 °C<br>32 °F to 104 °F  |
| Storage Temperature      | -20 °C to +60 °C<br>-4 °F to +140 °F  |
| Dimensions (W x H x D)*1 | Approx. 198 x 260 x 238mm<br>(without projecting object)<br>Approx. 7 7/8 x 10 1/4 x 9 3/8<br>inch (without projecting<br>object) |
| Mass                     | Approx. 4.3kg<br>Approx. 9 lb 7.7oz   |

|                               |   |
|-------------------------------|---|
| Optional Card Slots           | Not needed  |
| Body Color                    | Black and White   |
| Size of Screw Hole for Tripod | 1/4-20UNC x2  |
| Mountable Angle               | <math>\pm 15^\circ</math>   |
| Ceiling Mount                 | Yes   |
| Supplied Accessories          | IR Remote Commander Unit (1)<br>Ceiling bracket (2)<br>Wire rope (1)<br>Screws(M3 x 8) (7)<br>Screws(M4 x 8) (1)<br>HDMI cable fixing plate (1) |

## Related products



### MCX-500

Multi-Camera Live Producer



### RM-IP500

PTZ Camera Remote Controller



### RM-IP10

IP remote control panel for BRC cameras



### AWS-750

Anycast Touch portable live content producer



### REA-C1000

#### Edge Analytics Appliance

Edge Analytics Appliance



### HXC-FB80

Three 2/3-inch Exmor™ CMOS sensor HD colour studio camera



### HXC-P70

Affordable, three 2/3-inch Exmor CMOS sensor, full HD/SD compact system camera with direct optical fibre cable connection



### RCP-3500

Remote-control panel for HDC/HSC/HXC series cameras



## SRG-XP1

Compact 4K60P IP  
POV Remote  
Camera with and  
101° wide viewing  
angle lens



## SRG-XB25

Compact 4K60P IP  
BOX-style Remote  
Camera with 25x  
optical zoom



## RCP-3501

Remote-control  
panel for  
HDC/HSC/HXC  
series cameras



## MSU-3000

Master setup unit,  
multi camera  
remote control  
panel for system  
cameras (horizontal  
type)



## MSU-3500

Master setup unit,  
multi camera  
remote control  
panel for system  
cameras (vertical  
type)

## Gallery



