

# BRC-X1000

4K Pan Tilt Zoom camera with 1.0-type Exmor R CMOS sensor (colour availability may vary by country)



## 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 an 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) 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 *1.5x at 4K resolution
Digital Zoom	No
Tele Convert Mode	Off, 2x *1920x1080 only
Focusing System	Auto/Manual
Horizontal Viewing Angle	64.6° (Wide-end)
Focal Length	f=9.3 to 111.6mm F2.8(Wide) ,F4.5(Tele)

Minimum Object Distance	1000 mm(Tele) 80 mm(Wide)
Pan/Tilt Angle	Pan: $\pm 170^\circ$ Tilt: $+90^\circ/-30^\circ$
Pan/Tilt Speed	Pan: 0.3° to 60°/s *1 0.05° to 60°/s *2 0.02° to 60°/s *3  Tilt: 0.3° to 60°/s *1 0.05° to 60°/s *2 0.02° to 60°/s *3  *1 When P/T SPEED TYPE setting is NORMAL *2 When P/T SPEED TYPE setting is Extd. RANGE (Requires firmware V2.10) *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* * Sony measurement conditions
Preset Position	100
PTZ Trace Memory	16
PTZ Motion Sync	Yes
Camera Tracking Data Output	Yes (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/CINE3/CINE4/ITU709//Patter
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 RGB, 4:4:4
Camera Control Interface	VISCA RS-422 RJ45(In/Out) VISCA over IP RJ45
External Sync. Input	BNC, 75Ω, HD 3-level sync, SD Black Burst
Power Connector Type	IEC60130-10 (JEITA standard RC-5320A) TYPE4

### General

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

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) Ceiling bracket (2) Wire rope (1) Screws(M3 x 8) (7) Screws(M4 x 8) (1) HDMI cable fixing plate (1)

Related products



**AWS-750**  
Anycast Touch portable live content producer



**REA-C1000 Edge Analytics Appliance**  
Edge Analytics Appliance



**SRG-XP1**  
Compact 4K 60p POV remote camera with wide angle lens



**HXC-FB80**  
Three 2/3-inch Exmor™ CMOS sensor HD colour studio camera



**RCP-3501**  
Remote-control panel for HDC/HSC/HXC series cameras



**RCP-3500**  
Remote-control panel for HDC/HSC/HXC series cameras



**RM-IP10**  
IP remote control panel for BRC cameras



**RM-IP500**  
PTZ Camera Remote Controller



**SRG-XB25**  
Compact 4K 60p BOX-style remote camera with 25x optical zoom



**MCX-500**  
Multi-Camera Live Producer



**HXC-P70**  
Affordable, three 2/3-inch Exmor CMOS sensor, full HD/SD compact system camera with direct optical fibre cable connection



## Gallery



