BRC Series
Color Video Cameras

SONY
make.believe

BRC-H900
BRC-H700
BRC-Z700
BRC-Z330
BRC-300
BRC-300P

APPLICATIONS

Corporate/Boardroom

BRC Series cameras are excellent for various business communication applications, such as videoconferencing, corporate training, and transmission of managers' regular speeches. Each of the cameras in this series offers particular features and advantages, providing a variety of cameras for any application. The cameras are easy to operate and can be quickly reset after each use simply by touching a button on the supplied controller – which recalls pre-specified positions for capturing speech and switching scenes.

Auditorium/Concert Hall

With its pan/tilt/zoom (P/T/Z) capability, a single camera can capture a wide shooting range during an entire live performance, including audience shots. Therefore, with the BRC Series, fewer cameras and camera operators are required, resulting in huge cost savings. These cameras make it easy to get close-ups of performers from locations that are typically difficult for a camera operator to reach. Additionally, each camera's compact size and quiet movement doesn't distract the audience from the performance.

City Council

Remotely controlled by the RM-BR300, BRC Series cameras quickly capture all of the actions at council meetings or trials. Each camera provides simple, streamlined operation by offering multiple presets which pre-define P/T/Z positions.

Sports Events

With high-speed and extremely smooth pan/tilt movement, BRC Series cameras can follow the quick, spontaneous flow of sports action. With cameras installed in high positions, operators can obtain extensive views of each event, and capture shots at unique angles, typically very difficult to achieve with conventional shooting. Also, optical fiber connection (max. 2,000 m) achieves long-distance data transfer and enables single-operator broadcasting.

Studio

The BRC Series is also ideal for use in the broadcast industry. The BRC-H900, BRC-H700, BRC-Z700, and BRC-Z330 can output HD-SDI signals*1 – a necessity for highly demanding broadcasters who seek uncompromising picture quality. With flexible installation, these cameras can be easily integrated into a working studio with tripods or ceiling brackets. For the wide angles required in studio shooting, wide conversion lenses are available*2. And there are numerous other benefits, including quiet and smooth P/T/Z movement, a tally indicator, cost-efficiency, and more.

Education

By deploying BRC Series cameras, teachers can offer students new educational opportunities anytime and anywhere. With the real-time distribution of lectures and other educational content, academic institutions can deliver e-learning classes, and professors can efficiently share their opinions and collaborate via networked communication.

Houses of Worship

By using large screens in combination with highly sensitive BRC Series cameras, clear video images can be delivered with accurate color reproduction. Attendees can become more involved in the service and follow ongoing events better than ever before. With a variety of peripheral components, a range of user-friendly systems can be designed to suit the size and budget of every organization.

Weddings

Pre-installed BRC Series cameras are ideal for capturing wedding ceremonies since their silent movement will not disturb the ceremony. With high picture performance and zooming capabilities, these cameras can capture natural facial expressions and, for example, the graceful movements of the bride. Also, due to their compact and sleek design, these cameras blend easily into the surrounding environment.

*1 The BRC-H700, BRC-Z700, and BRC-Z330 require optional video cards.
*2 Wide conversion lenses are available for the BRC-Z700 and BRC-300.

The BRC Series consists of five pan/tilt/zoom (P/T/Z) cameras – the BRC-H900, BRC-H700, BRC-Z700, BRC-Z330, and BRC-300/300P. They offer wide and smooth P/T/Z capabilities together with exceptional picture quality from SD to Full HD images. You can remotely control these cameras using the RM-BR300 Remote Control Unit or RM-IP10 IP Remote Controller.*3 As a flagship model, the BRC-H900 delivers greatest sensitivity (F10) and horizontal resolution (more than 1, 000 TV lines in HD-SDI output) to meet the needs of high image quality applications. The BRC Series is perfect for a variety of remote video shooting applications, and each camera integrates easily into a wide range of indoor and outdoor systems.
These features allow more users to enjoy the benefits of BRC Series cameras, particularly in education, broadcast, bridal, and corporate applications. In addition, with their advanced remote capabilities, these cameras also enable a reduction in manned operation.

PRODUCTS OVERVIEW

		BRC-H900	BRC-H700	BRC-Z700	BRC-Z330	BRC-300	BRC-300P
							
Image Sensor		1/2-type Exmor CMOS x 3	1/3-type IT CCD x 3	1/4-type CMOS x 3	1/3-type CMOS	1/4.7-type CCD x 3	1/4.7-type CCD x 3
Signal System		1080i/59.94, 720p/59.94, 1080i/50, 720p/50, NTSC, PAL	1080i/59.94, 1080i/50	1080i/59.94, 1080i/50, NTSC, PAL	1080i/59.94, 720p/59.94, 1080i/50, 720p/50, NTSC, PAL	NTSC	PAL
Sensitivity		F10	NA				
Minimum Illumination		4 lx (50IRE, F1.9, +24 dB)	6 lx (50IRE, F1.6, +24 dB)	6 lx (50IRE, F1.6, +24 dB)	6 lx (50IRE, F1.6, +24 dB)	7 lx (25IRE, F1.6, +18 dB)	
Advanced Color Adjustment		✔					
HD Video Output	HD/SD-SDI	✔	Option	Option	Option		
	Component, RGB	✔	✔	✔	✔		
SD Video Output	Composite, Y/C	✔		✔	✔	✔ (NTSC)	✔ (PAL)
Optical Zoom (Digital Zoom)		14x	12x (4x)	20x (4x)	18x (4x)	12x (4x)	
IP Control		Option		Option	Option		

KEY FEATURES

Superb Picture Quality

Thanks to Sony's amazing image sensor technology, BRC Series remote cameras deliver exceptionally high picture quality to meet demanding live production requirements. The BRC-H900 offers excellent performance at minimum illumination (as low as four lux) and therefore offers visibility even in dark environments*4.

Silent & Smooth Pan/Tilt/Zoom Mechanism

BRC Series remote cameras can be operated with slow to fast P/T/Z motion from remote locations*5. Also the silent mechanism enables the unit to be installed in noise-conscious environments.

Flexible Installation

In addition to typical desktop installation, BRC Series cameras can be mounted on the ceiling. With the use of a tripod and tripod screw, these cameras are also suitable for mobile applications, such as live events. Also thanks to their compact design, these cameras can be installed in locations typically too small for camera operators and larger cameras.

IP Control

The BRC-H900, BRC-Z700, and BRC-Z330 can be controlled though an IP network with the use of an RM-IP10 IP Remote Controller and BRBK-IP10 or BRBK-IP7Z IP Control Card. This functionality allows for flexible configurations, and enables the installation of up to 112 units of BRC cameras and up to five units of RM-IP10 controller depending on customer requirements.

Advanced Color Adjustment

The BRC-H900 is equipped with a variety of picture adjustment features, including color, gamma, black, and knee settings. These feature-rich color adjustment functions allow fine tuning to meet professional demands.

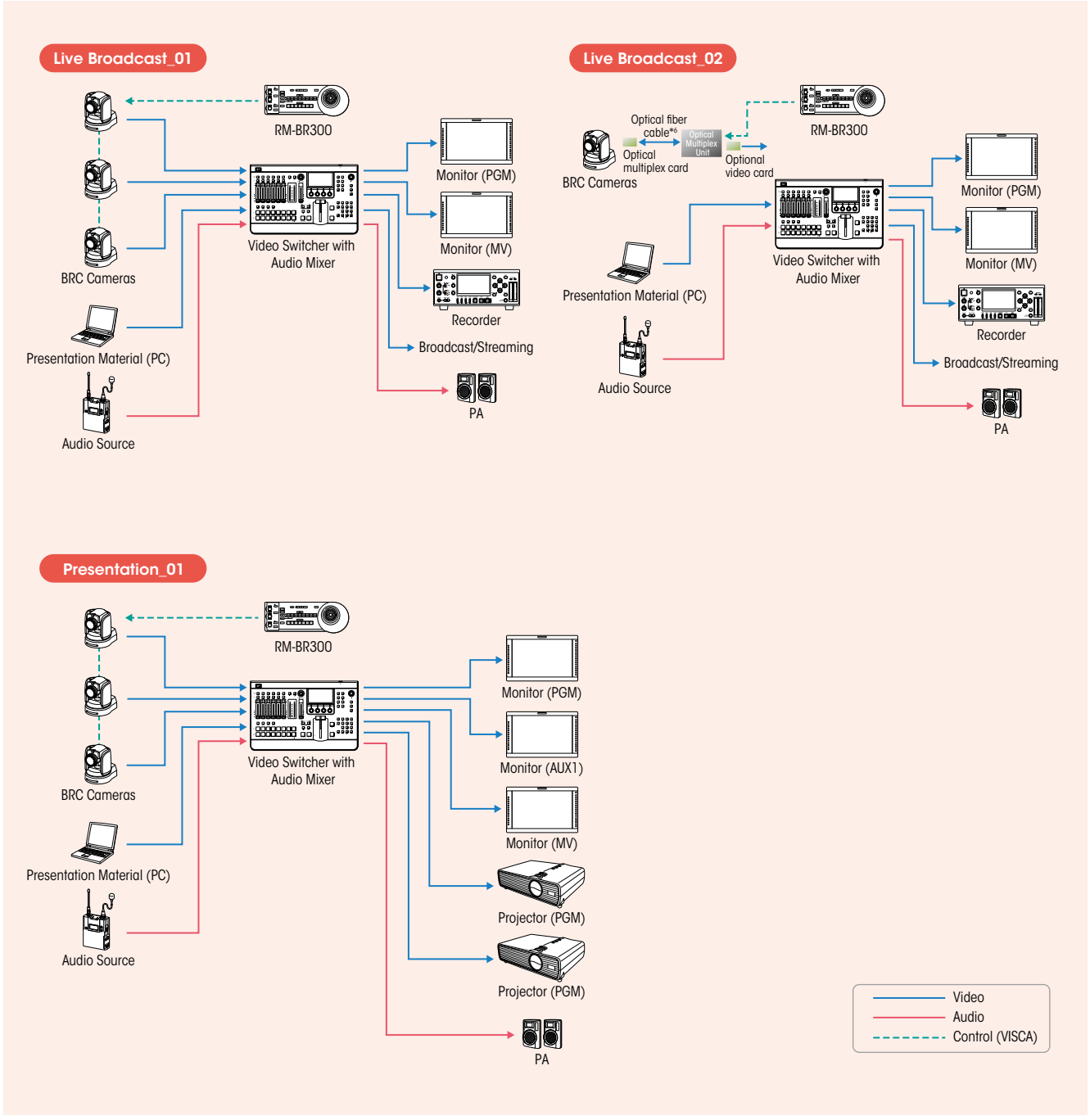
Tally Lamp

All BRC Series cameras are equipped with a tally lamp. Additionally, the BRC-H900 has a second tally lamp – one on the front and one on the rear, offering wider visibility.

*3 The RM-IP10 is compatible with the BRC-H900, BRC-Z700, and BRC-Z330 only.
*4 At 50IRE, F1.9, +24 dB.
*5 Ranging from 0.22° to 60° per second for the BRC-H900 and BRC-Z700.

SYSTEM CONFIGURATION

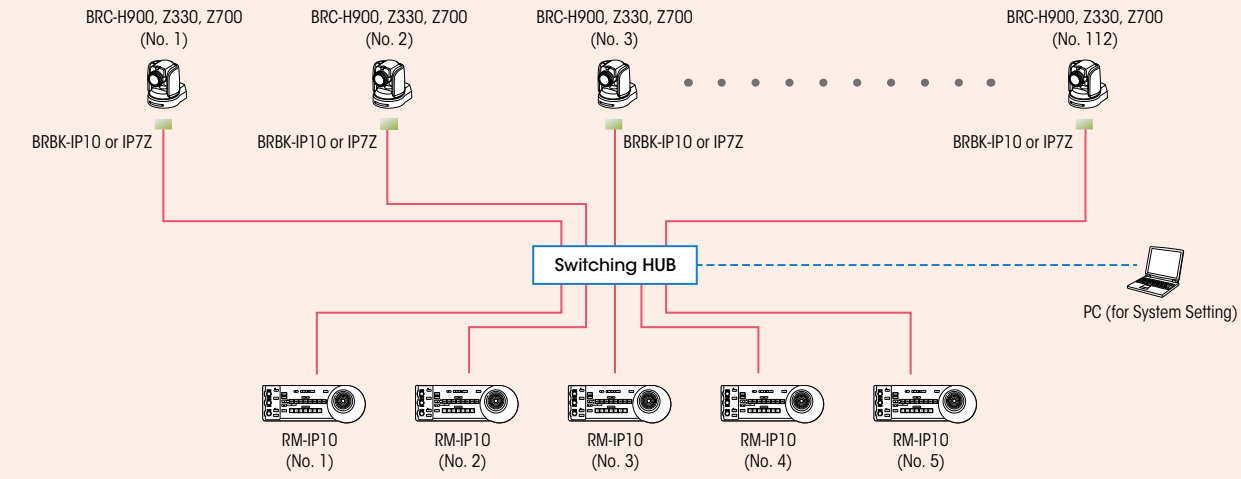
You can configure a variety of systems to meet your application needs by choosing HD and/or SD components.
Users can choose either HD or SD system components.



*6 There are two types of optical fiber cable (Single-mode/Multi-mode). Please refer to the specifications.

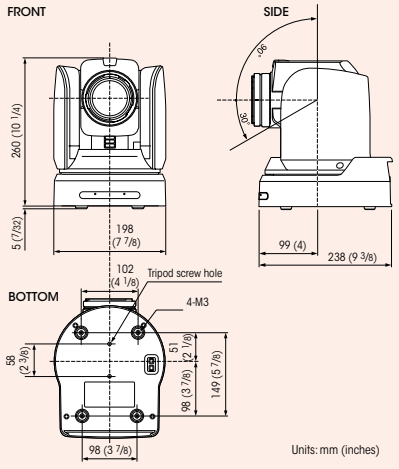
	BRC and BRU System				
	BRC-H900 	**BRC-H700** 	**BRC-Z700** 	**BRC-Z330** 	**BRC-300/300P** 
Wide Conversion Lens	—	—	—	—	VCL-0737W 
Optical Multiplex Card (inserted to the BRC Series)	BRBK-SF1	BRBK-H700	BRBK-MF1	BRBK-SF1	BRBK-303
Optical Fiber Cable	CCFC-S200 (Single-mode) 	CCFC-M100HG (Multi-mode) 		CCFC-S200 (Single-mode) 	CCFC–M100 (Multi-mode) 
Optical Multiplex Unit	BRU-SF10 (Supports Single-mode optical fiber) 	BRU-H700 (Supports Multi-mode optical fiber) 		BRU-SF10 (Supports Single-mode optical fiber) 	BRU-300/ 300P (Supports Multi-mode optical fiber) 
Optional Video Card (inserted to the BRC Series)	BRBK-HSD2 HD/SD-SDI	HFBK-HD1 HD-SDI, HD Component (Y/Pb/Pr), RGB HFBK-SD1 SD-SDI, Composite, Y/C, SD Component (Y/Cb/Cr), RGB	BRBK-HSD1 HD-SDI, SD-SDI	BRBK-HSD2 HD/SD-SDI	BRBK-301 Composite, Y/C, SD Component (Y/Cb/Cr), RGB BRBK-302 SD-SDI
	BRBK-SA1 Analog SD Output	HFBK-TS1 i.LINK (HDV) HFBK-XG1 WXGA, XGA, VGA		BRBK-SA1 Analog SD Output	BRBK-304 i.LINK (DV)
IP Control Card	BRBK-IP10 	—	BRBK-IP7Z 	BRBK-IP10 	—
Remote Control Unit (IP)	RM-IP10 	—	RM-IP10 	RM-IP10 	—
Remote Control Unit (VISCA)	RM-BR300 				

BRC Control by RM-IP10 IP Remote Controller

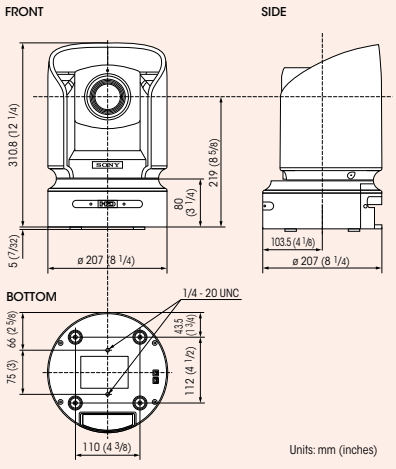


DIMENSIONS

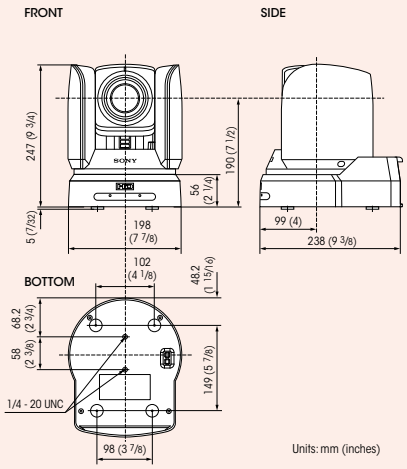
BRC-H900



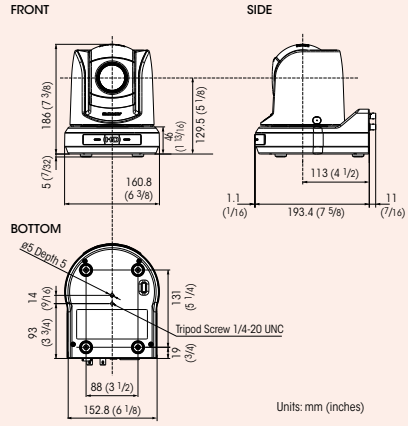
BRC-H700



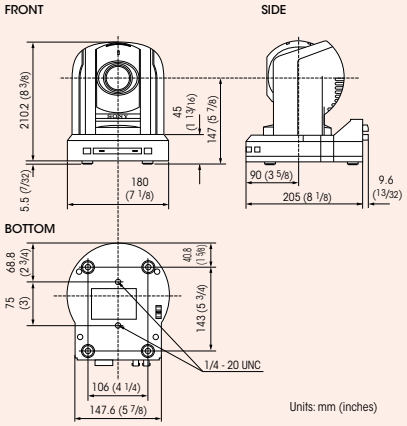
BRC-Z700



BRC-Z330

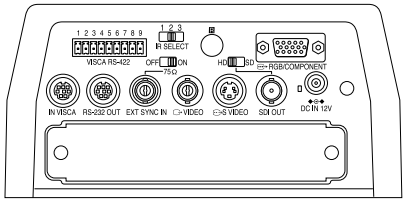


BRC-300/300P

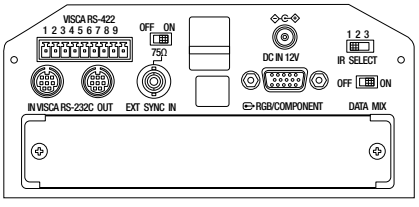


REAR PANELS

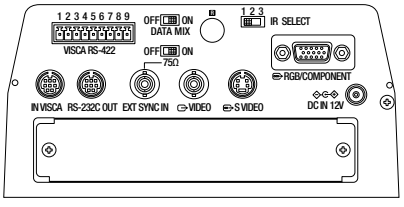
BRC-H900



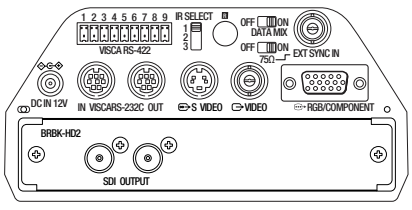
BRC-H700



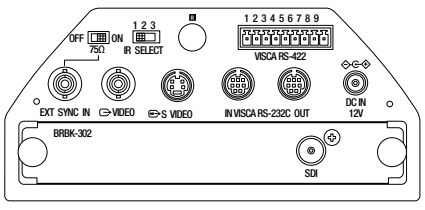
BRC-Z700



BRC-Z330



BRC-300/300P



OPTIONAL ACCESSORIES

BRC-H700

BRBK-H700
HD Optical Multiplex Card

BRC-H700 BRU-H700

HFBK-HD1
HD Interface Board

BRC-H700 BRU-H700

HFBK-SD1
SD Interface Board

BRC-H700 BRU-H700

HFBK-XG1
XGA Interface Board

BRC-H700 BRU-H700

HFBK-TS1
i.LINK (HDV) Interface Board

BRC-Z700

BRBK-MF1
HD Optical Multiplex Card

BRC-Z700

BRBK-HSD1
HD/SD-SDI Output Card

BRC-Z330

BRBK-HD2
HD-SDI Output Card

BRC-300

BRBK-303
SD Optical Multiplex Card

BRC-300 BRU-300

BRBK-301
Analog RGB Component Card

BRC-300 BRU-300

BRBK-302
SDI Card

BRC-300 BRU-300

BRBK-304
DV Card

BRC-H900
BRC-Z330 BRU-SF10

BRBK-HSD2
HD/SD-SDI Output Card

BRC-H900
BRC-Z330 BRU-SF10

BRBK-SA1
Analog SD Output Card

BRC-H900 BRC-Z330

BRBK-SF1
HD Optical Multiplex Card

BRC-H900 BRC-Z330

BRBK-IP10
IP Control Card

BRC-Z700

BRBK-IP7Z
IP Control Card

BRC-H700 BRC-Z700

BRU-H700
HD Optical Multiplex Unit
(Supports Multi-mode optical fiber)

BRC-H900 BRC-Z330

BRU-SF10
HD/SD Optical Multiplex Unit
(Supports Single-mode optical fiber)

BRC-300

BRU-300/BRU-300P
SD Optical Multiplex Unit
(Supports Multi-mode optical fiber)

BRC-H700 BRC-Z700

CCFC-M100HG
Optical Fiber Cable
2-core Multi-mode Optical Fiber Cable (100 m long), Extension Plug Included

BRC-H900 BRC-Z330

CCFC-S200
Optical Fiber Cable
2-core Single-mode Optical Fiber Cable (200 m long), Extension Plug Included

BRC-300

CCFC-M100
Optical Fiber Cable
2-core Multi-mode Optical Fiber Cable (100 m long), Extension Plug Included

CCMC-9DS[*7]
RGB/Component, Y/C Cable (9-pin D-sub)

CCXC-9DBS[*7]
RGB/Component, VBS Cable (9-pin D-sub)

BRC-300

VCL-0737W
Wide Conversion Lens

PERIPHERAL EQUIPMENTS

RM-IP10[*8]
IP Remote Controller

- Comfortable P/T/Z operation with the optical three-axis joystick
- Versatile camera adjustment by simple panel operation
- The use of IP technology allows flexible installation and easy operation
- Preset feature saves camera settings (up to 16 positions)

RM-BR300
Remote Control Unit

- Comfortable P/T/Z operation with the optical three-axis joystick
- Versatile camera adjustment by simple panel operation
- VISCA RS-232C/RS-422 communication interfaces allow high-speed, long-distance control
- A tally/contact connector allows connection with a switcher and provides a short-circuit corresponding to the camera address
- Preset feature saves camera settings (up to 16 positions)[*9]

*7 These cables are for use with the BRBK-301 or HFBK-SD1.
*8 The RM-IP10 is compatible with the BRC-H900, BRC-Z700, and BRC-Z330 only.
*9 For the BRC-300/300P, six positions can be saved.

SPECIFICATIONS

	BRC-H900	BRC-H700	BRC-Z700	BRC-Z330	BRC-300	BRC-300P
Camera						
Image Sensor	1/2-type Exmor CMOS x3	1/3-type IT CCD x3	1/4-type CMOS x3	1/3-type CMOS	1/4.7-type IT Advanced HAD CCD x3	
Image Sensor (Number of Effective Pixels)	Approx. 2.07 Megapixels	Approx. 1.07 Megapixels	Approx. 1.04 Megapixels	Approx. 2.16 Megapixels	Approx. 1.02 Megapixels	
Signal System	60 Hz: 1080/59.94i, 720/59.94P, NTSC 50 Hz: 1080/50i, 720/50P, PAL	60 Hz: 1080/59.94i 50 Hz: 1080/50i	60 Hz: 1080/59.94i, NTSC 50 Hz: 1080/50i, PAL	60 Hz: 1080/59.94i, 720/59.94P, NTSC 50 Hz: 1080/50i, 720/50P, PAL	NTSC	PAL
Sensitivity	F10	NA				
Minimum Illumination (50IRE)	4 lx (50IRE, F1.9, +24 dB)	6 lx (50IRE, F1.6, +18 dB)	6 lx (50 IRE, F1.6, +24 dB)		NA	
Minimum Illumination (25IRE)	NA				7 lx (25IRE, F1.6, +18dB)	7 lx (25iRE, F1.6, +18dB)
Horizontal Resolution	>1,000 TV line (in HD-SDI output) (center)	NA				
S/N Ratio	50 dB					
Gain	Auto/Manual (-3 dB to +24 dB)	Auto/Manual (0 dB to +18 dB and Hyper Gain)	Auto/Manual (0 to +24 dB and Hyper Gain)	Auto/Manual (-3 dB to +24 dB and Hyper Gain)	Auto/Manual (-3 dB to +18 dB, 3 dB steps) switchable	
Shutter Speed	1/8,000 s to 1/60 s or 1/8,000 s to 1/50 s	1/10,000 s to 1/60 s or 1/10,000 s to 1/50 s			NTSC: 1/10,000 s to 1/4 s	PAL: 1/10,000 s to 1/3 s
Exposure Control	Auto, Manual, Priority mode (shutter priority & iris priority), Back light, Spot light	Auto, Manual, Priority mode (shutter priority, Gain priority & iris priority), EV compensation		Auto, Manual, Priority mode (shutter priority, Gain priority & iris priority), EV compensation, Color AE	Auto, Manual, Priority mode (shutter priority & iris priority), Bright, spot AE	
Color AE Function	No			Off/Narrow/STD/Wide switchable in menu	No	
White Balance	Auto/Indoor/Outdoor/One-push/Manual		Auto1/Auto2/Indoor/Outdoor/One-push/Manual		Auto/Indoor/Outdoor/One-push/Manual	
Optical Zoom	14x	12x	20x	18x	12x	
Digital Zoom	–	4x	4x	4x	4x	
Focusing System	Auto/Manual					
Horizontal Viewing Angle	59.6°(Wide-end)	60.3°(Wide-end)	55.2°(Wide-end)	55.1°(Wide-end)	4:3 mode: 37.8°, 16:9 mode: 45.4°(Wide end)	
Focal Length	f=5.8 mm to 81.2 mm F1.9 (Wide), F2.8 (Tele)	f = 4.5 mm to 54 mm F1.6 (Wide), F2.8 (Tele)	f = 3.9 mm to 78 mm F1.6 (Wide), F2.8 (Tele)	f=4.6 mm to 82.8 mm F1.6 (Wide), F2.2 (Tele)	f = 3.6 mm to 43.2 mm F1.6 (Wide), F2.8 (Tele)	
Minimum Object Distance	800mm	500 mm (Wide) 800mm (Tele)	10 mm (Wide, Limiter Off) 500 mm (Wide, Limiter On) 800 mm (Tele)	100 mm (Wide, Limiter Off) 500 mm (Wide, Limiter On) 1,500 mm (Tele)	300 mm (Wide) 800 mm (Tele)	
Pan/Tilt Angle	Pan: ±170° Tilt: +90°/-30°			Pan: ±175° Tilt: +90°/-30°	Pan: ±170° Tilt: +90°/-30°	
Pan/Tilt Speed	Pan: 0.22° to 60°/s Tilt: 0.22° to 60°/s	Pan: 0.25° to 60°/s Tilt: 0.25° to 60°/s	Pan: 0.22° to 60°/s Tilt: 0.22° to 60°/s	Pan: 0.25° to 60°/s Tilt: 0.25° to 60°/s	Pan: 0.25° to 60°/s Tilt: 0.25° to 60°/s	
Preset Position	16				6	
Image Stabilization	On/Off (Optical)	On/Off (Optical)	On/Off (Optical)	No	No	
Image Flip	On/Off	On/Off	On/Off	On/Off	On/Off	
ND Filter	No	Off/ND1/ND2	No	Off/ 1/4 / 1/16 switchable in menu	No	
Gamma	STD1/STD2/STD3/STD4/CINE1/CINE2/CINE3/CINE4	Normal/Cinema	Normal/Cinema	Normal/Cinema	No	
Interface						
HD Video Output	HD/SD-SDI(switchable) Component (Y/Pb/Pr) or RGB, HD, VD or SYNC	Component (Y/Pb/Pr) or RGB, HD, VD or SYNC			–	
SD Video Output	Composite, Y/C	No	Composite, Y/C		VBS, Y/C	
Camera Control Interface	RS-232C/RS-422 (VISCA)					
External Sync. Input	Yes					
General						
Power Requirements	DC 10.8 V to 13.2 V				DC 12 V	
Power Consumption	Max 28.8 W (without optional cards)	Max 24 W (without optional cards)	Max 28.8 W (without optional cards)	Max 18 W (without optional cards)	21.6 W (without optional cards)	
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)	198 x 260 x 238mm (7 7/8 x 10 1/4 x 9 3/8 inch)	207 x 310.8 x 207 mm (8 1/4 x 12 1/4 x 8 1/4 inches)	198 x 247 x 238 mm (7 7/8 x 9 3/4 x 9 3/8 inches)	160.8 x 186 x 193.4mm (6 3/8 x 7 3/8 x 7 5/8 inches)	180 x 210.1 x 205 mm (7 1/8 x 8 3/8 x 8 1/8 inches)	
Mass	5.0 kg (11 lb 0.37 oz)	4.5 kg (9 lb 15 oz)	4.5 kg (9 lb 15 oz)	1.9 kg (4 lb 4 oz)	2.5 kg (5 lb 8 oz)	
Supplied Accessories	IR Remote Commander Unit (1), AC power adaptor (1), AC power cord (1), RS-422 connector plug (1), Ceiling bracket (2), Wire rope (1), Screws (M3 x 8) (7), Screws (M4 x 8) (1), Operating instructions (1)				IR Remote Commander Unit (1), AC power adaptor (1), AC power cord (1), RS-422 connector plug (1), Ceiling bracket (2), Wire rope (1), Screws (7), Operating instructions (1)	

	BRU-H700	BRU-SF10	BRU-300	BRU-300P
Interfaces				
Optical fiber connector	LC Duplex Fiber Connector			
Optical cable type	Multi-mode	Single-mode	Multi-mode	Multi-mode
HD video output	D-Sub 15 pin: Component (Y/Pb/Pr) or RGB, HD, VD or SYNC		—	
SD video output	—		BNC: Composite (NTSC), Mini DIN 4 pin: Y/C	BNC: Composite (PAL), Mini DIN 4 pin: Y/C
External sync input	BNC			
External sync output	BNC			
Audio line output	Phono jack x2 (L/R)		—	
Camera control	Mini DIN 8 pin: RS-232C (VISCA IN), Mini DIN 8 pin: RS-232C (VISCA OUT), Connector plug 9 pin: RS-422 (VISCA IN/OUT)			
Optional card slots	2 slots		2 slots (When both slots are used simultaneously, the interface cards must be of two different types.)	
General				
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)			
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)			
Power requirements	AC 100 V to 240 V (50/60 Hz)	DC 12 V	AC 100 V to 240 V (50/60 Hz)	
Power consumption	Max. 10 W (without optional cards)	Max. 15.6 W (without optional cards)	Max. 9 W (without optional cards)	
Dimensions (W x H x D)	210 x 86 x 240 mm (8 3/8 x 3 1/2 x 9 1/2 inches)		212 x 88 x 210 mm (8 3/8 x 3 1/2 x 8 3/8 inches)	
Mass	2.4 kg (5 lb 5 oz)	2.0 kg (4 lb 7 oz)	2.1 kg (4 lb 10 oz)	
Supplied accessories	AC power cord, RS-422 connector plug, RS-232C cable (3 m, Mini DIN 8 pin), Operating instructions	AC adapter, Power cord, DC-cord secure connection attachment, RS-232C connecting cable, RS-422 connector plug, Operatiog Instructions	AC power cord, RS-422 connector plug, RS-232C cable (3 m, Mini DIN 8 pin), Operating instructions	

	HFBK-HD1	HFBK-SD1	HFBK-XG1	HFBK-TS1	BRBK-MF1	BRBK-HSD1	BRBK-HD2	BRBK-303
Video output	D-Sub 15 pin: Component (Y/Pb/Pr) or RGB, HD, VD or SYNC BNC x2: HD-SDI	D-Sub 9 pin: Component (Y/Pb/Pr) or RGB, Composite or Y/C, SYNC BNC: Composite BNC: SD-SDI	D-Sub 15 pin: RGB, HD, VD (WXGA/XGA/VGA)	i.LINK 6 pin: HDV OUT (IEEE1394 S100)	LC Duplex Fiber Connector	BNC x2: HD-SDI or SD-SDI	HD-SDI	LC Duplex Fiber Connector
Audio line input	—	—	—	Phono jack x2 (L/R)	Phono jack x2 (L/R)	—	—	—

	BRBK-301	BRBK-302	BRBK-304	BRBK-HSD2	BRBK-SA1	BRBK-SF1	BRBK-IP10	BRBK-IP7Z
Video output	D-Sub 9 pin: Component (Y/Pb/Pr) or RGB, Composite or Y/C, SYNC	BNC: SD-SDI	i.LINK 6 pin: DV OUT (IEEE1394 S100)	BNC x3, HD-SDI or SD-SDI	BNC x1: VIDEO, Mini DIN 4pin x1: S VIDEO, D-sub 9pin x1: RGB/SYNC	LC Duplex Fiber Connector	BNC x2: HD-SDI or SD-SDI*	BNC x2: HD-SDI or SD-SDI
Audio line input	—	—	—	—	—	Phono jack x2 (L/R)	RJ-45 x1: 10Base-T/100Base-TXAuto	RJ-45 x1: 10Base-T/100Base-TXAuto

* DATA MIX ON/OFF selectable in HD-SDI

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