Canon

4K PTZ CAMERAS
EXQUISITE 4K AT YOUR FINGERTIPS

4K UHD

FULL HD 1920×1080

BROADCAST-QUALITY VIDEO
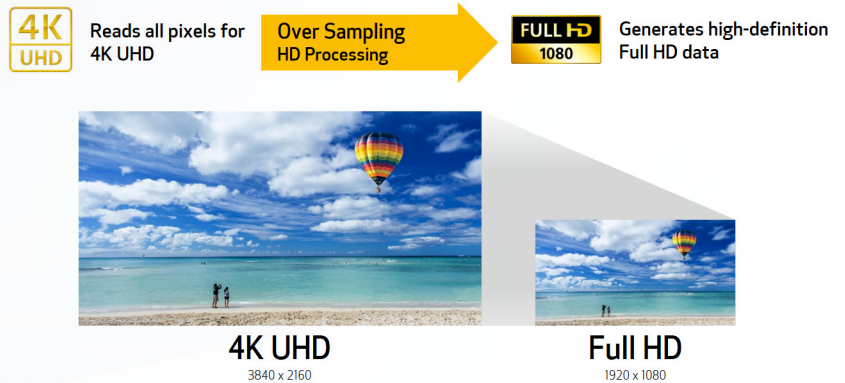FLEXIBLE CONNECTIVITY
INDOOR AND OUTDOOR APPLICATION

FEATURES AND BENEFITS

Canon's line of professional PTZ cameras are engineered to provide the highest level of image quality and compatibility for demanding professionals in a multitude of production applications.

>>> BROADCAST-QUALITY VIDEO

Drawing on over 80 years of imaging excellence, these cameras utilize genuine Canon lenses and a DIGIC DV6 imaging processor to provide 4K UHD video that can effortlessly match with Canon's Cinema EOS cameras to provide a uniform look to your broadcast or live stream. Common features of the 4K PTZ line of cameras include:

- Fast and precise autofocus
- Smooth on-air camera movements
- Oversampling HD processing for better looking HD video
- Built-in image stabilization
- Powerful low-light performance

4K UHD 3840 x 2160   **Full HD** 1920 x 1080

Canon 4K Video System

Optical Zoom Lens   **4K UHD CMOS Pro Image Sensor**   **DiG!C DV 6 Pro Image Processor**

>>> FLEXIBLE CONNECTIVITY

The Canon PTZ camera lineup* offers a variety of IP connectivity possibilities, including support for Canon's XC Protocol, VISCA (IP), VISCA (serial), RTSP/RTP, RTMP/RTMPS, NU, RTMP, and NDI®|HX. Utilizing today's most popular live production protocols and streaming platforms, the cameras deliver stunning, high quality 4K video in real time, eliminating the wait for completed video files to download.

Canon's XC Protocol provides control, communication, and high quality video streaming within your favorite application. This flexible IP makes it easy to control and adjust the orientation, zoom, and picture quality remotely for multiple cameras within the same system. It is also available in select models of Cinema EOS cameras, allowing productions to operate both sets of cameras using the same controller.

The cameras are also compatible with the Canon's RC-IP100 controller, the Remote Camera Control Application via IP* and selected third-party controllers, making integration with existing set-ups a breeze.

*CR-X500 does not support IP or any of the IP protocols listed. NU protocol supported via serial RS-422 only.

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INDOOR CAMERAS

CR-N300
REMOTE CAMERA 4K UHD FULL HD 1920×1080

- High Quality 4K 30P and FHD 60P Video Output
- 1/2.3" Type CMOS Sensor
- DIGIC DV 6 Image Processor
- Hybrid AF
- PoE+ Single Cable IP operation
- Variable Pan speed of .2° - 300°/second and variable Tilt speed of .2° - 170°/second
- Optical Image Stabilization
- Virtually Seamless Integration into Canon Imaging Workflow
- Easy Integration into IP Streaming
- Various Interfaces Supported for Multiple Environments

CR-N500
REMOTE CAMERA 4K UHD FULL HD 1920×1080

- High Quality 4K 30P and FHD 60P Video Output
- 1.0" Type CMOS Sensor
- DIGIC DV 6 Image Processor
- Canon Log 3, Wide DR Gamma Supported
- Dual Pixel CMOS AF
- Dual Pixel Focus Guide
- Face Detection & Tracking
- PoE+ Single Cable IP operation
- Variable Pan and Tilt speed of .1° - 100°/second
- Optical Image Stabilization
- Virtually Seamless Integration into Canon Imaging Workflow
- Easy Integration into IP Streaming
- Various Interfaces Supported for Multiple Environments

OUTDOOR CAMERAS

CR-X300
REMOTE CAMERA 4K UHD FULL HD 1920×1080

- High Quality 4K 30P and FHD 60P Video Output
- 1/2.3" Type CMOS Sensor
- DIGIC DV 6 Image Processor
- IR Mode
- Optical Image Stabilization
- PoE++ Single Cable IP operation
- IP65 Water and Dust Resistant
- Built-in Wiper
- Durable Aluminum Body
- Virtually Seamless Integration into Canon Imaging Workflow
- Various Interfaces Supported for Multiple Environments

CR-X500
REMOTE CAMERA 4K UHD FULL HD 1920×1080

- High Quality 4K 60P Video Output
- 1.0" Type CMOS Sensor
- Dual Pixel CMOS AF
- Dual DIGIC DV 6 Image Processors
- Wide ±170° Pan/ +30 ~ -50° Tilt Coverage
- Canon Log 3, Wide DR Gamma Supported
- IP65 Water and Dust Resistant
- Built-in Wiper
- Durable Aluminum Body
- Virtually Seamless Integration into Canon Imaging Workflow
- Various Interfaces Supported for Multiple Environments

RC-IP100 Remote Camera Controller

Canon's RC-IP100 Remote Camera Controller provides IP control for up to 99 supported Canon cameras. An additional Canon camera can be controlled through the serial port. The controller is equipped with a 7" interactive touch screen and a joystick in order to pan, tilt, zoom and change camera function settings remotely. The smooth precision of the joystick allows operators to capture on-air movements with confidence.

SPECIFICATIONS

Canon

SPECIFICATION	CR-N300	CR-N500	CR-X300	CR-X500
OPERATING CONDITION	Indoor		Outdoor	
IMAGE SENSOR	Type 1/2.3 (1/2.3 in.) single-plate CMOS sensor. Total pixels: approx. 21.14 megapixels. Effective pixels: approx. 8.29 megapixels (3840 x 2160)	Type 1.0 (1.0 in.) single-plate CMOS sensor. Total pixels: approx. 13.40 megapixels. Effective pixels: approx. 8.29 megapixels (3840 x 2160)	1/2.3" 4K UHD CMOS Pro Image Sensor. Total pixels: approx. 21.14 megapixels. Effective pixels: approx. 8.29 megapixels (3840 x 2160)	Type 1.0 (1.0 in.) single-plate CMOS sensor. Total pixels: approx. 13.40 megapixels. Effective pixels: approx. 8.29 megapixels (3840 x 2160)
LENS	f=3.67 – 73.4 mm, F/1.8 – 2.8, 8-bladed circular aperture	f=8.3 – 124.5 mm, F/2.8 – 4.5, 9-bladed iris diaphragm	f=3.67 – 73.4 mm, F/1.8 – 2.8, 8-bladed circular aperture	f=8.3 – 124.5 mm, F/2.8 – 4.5, 9-bladed iris diaphragm
ZOOM	Optical: 20x Digital: 20x	Optical: 15x Digital: 20x	Optical: 20x Digital: 20x	Optical: 15x Advanced Zoom FHD: 30x
ANGLE OF VIEW	4K UHD: Horizontal: 65.6 (W) – 3.6° (T) Vertical: 39.8° (W) – 2.0° (T) Full HD: Horizontal: 63.5 (W) – 3.4° (T) Vertical: 38.4° (W) – 1.9° (T)	Horizontal: 73.0 (W) – 5.7° (T) Vertical: 45.2° (W) – 3.2° (T)	4K UHD: Horizontal: 65.6 (W) – 3.6° (T) Vertical: 39.8° (W) – 2.0° (T) Full HD: Horizontal: 63.5 (W) – 3.4° (T) Vertical: 38.4° (W) – 1.9° (T)	Horizontal: 73.0 (W) – 5.7° (T) Vertical: 45.2° (W) – 3.2° (T)
SHUTTER SPEED	1/6 – 1/2000 sec. *(specific values depend on the frame frequency and frame rate)*	1/3 – 1/2000 sec. *(specific values depend on the frame frequency)*	1/6 – 1/2000 sec. *(specific values depend on the frame frequency)*	Auto, Manual 1/3 – 1/1000 sec.
IRIS	Manual/Automatic aperture			Auto, Manual
GAIN	0.0 dB – 36 dB	-6.0 db – 33.0 db	0.0 dB – 36 dB	Auto, Manual 0 db – 33.0 dB
ND FILTER	Built-in (1/8 at maximum, gradation ND), motor operated	Built-in (Off, 1/4, 1/16, 1/64), motor operated	ND filter: 1/8 at maximum Enhanced ND filter: 1/32	Built-in (Off, 1/4, 1/16, 1/64), motor operated
WHITE BALANCE	AUTO (AWB), Set A, Set B, preset settings (daylight: 5,600 K*, tungsten lamp: 3,200 K*), color temperature setting (2,000 K – 15,000 K), Manual *Color temperatures are given for reference purposes only.*			AUTO (AWB), Set
FOCUS	Focus mode: Manual, Continuous AF, Face AF, Tracking. AF type: Hybrid AF, Contrast AF	Focus mode: Manual, AF-boosted MF, Continuous AF, Face AF, Tracking. AF type: Dual Pixel CMOS AF, Contrast AF	Focus Mode: Manual, Continuous AF, Face Detection AF, Tracking. AF type: Hybrid AF, Contrast AF	Dual Pixel CMOS AF
GAMMA	Normal 1 (Standard), Normal 3 (BT.709)	Normal1 (Standard), Normal2 (x4.0), Normal3 (BT.709), Normal4 (x5.0), Wide DR, Canon Log 3	Normal 1 (Standard), Normal 3 (BT.709)	Normal1: BT.709, Normal1: BT.2020, Wide DR: BT.709, Wide DR: BT.2020, PQ: BT.2020, HLG: BT.2020, Canon Log 3: BT.709, Canon Log 3: BT.2020
IMAGE STABILIZER	Optical-shift		Optical-shift (Standard IS, Powered IS)	Optical-shift
MIN. SUBJECT ILLUMINATION	Approx. 1.5 lux (shutter speed 1/30 sec., frame frequency 59.94 Hz, (P (Programmed AE) Shooting Mode), (Auto Slow Shutter On)	3840x2160: Approx. 1.5 lux (shutter speed 1/30 sec., frame frequency 29.97P, Gain 33.0 dB) 1920x1080: Approx. 3 lux (shutter speed 1/60 sec., frame frequency 59.94P, Gain 33.0 dB)	Approx. 3.0 lux (shutter speed 1/60 sec, frame frequency 59.94Hz (P (Program AE) shooting mode), auto slow shutter "Off")	Approx. 3 lux (shutter speed 1/60 sec., Frame Rate 59.94P, Gain 33.0 dB)
PAN, TILT, ZOOM OPERATION	Pan Range: Horizontal ±170° Speed: 0.2° – 300°/sec. Tilt Range: Vertical -30° – +100° Speed: 0.2° – 180°/sec.	Pan Range: Horizontal ±170° Speed: 0.1° – 100°/sec. Tilt Range: Vertical -30° – +90° Speed: 0.1° – 100°/sec.	Pan Range: Horizontal ±180° Speed: 0.3° – 60°/sec. Tilt Range: Vertical -40° – +215° Speed: 0.3° – 60°/sec.	Pan Range: Horizontal ±170° Speed: 0.5° – ~25°/sec. Tilt Range: Vertical -50° – +30° Speed: 0.3° – ~20°/sec.

VIDEO OUTPUT FORMAT

SPECIFICATION	CR-N300	CR-N500	CR-X300	CR-X500
SDI	1920x1080: 59.94P/59.94i, 50.00P/50.00i/25.00P, 29.97P/23.98P (4:2:2 10 bit) 1280x720: 59.94P, 50.00P (4:2:2 10 bit)		3840x2160: 29.97P, 25.00P, 23.98P (4:2:2 10 bit) 1920x1080: 59.94P/59.94i, 50.00P/50.00i/25.00P, 29.97P/23.98P (4:2:2 10 bit) 1280x720: 59.94P, 50.00P (4:2:2 10 bit)	3840x2160: 59.94P (4:2:2 10 bit) 1920x1080: 59.94P/59.94i, 50.00P/50.00i/25.00P, 29.97P/23.98P (4:2:2 10 bit)
	*Same video format required for SDI and HDMI (cannot select different formats for SDI and HDMI) *When 3840 x 2160 is selected for HDMI, video will not be outputted to SDI*			
HDMI	3840x2160: 29.97P, 25.00P, 23.98P (4:2:2 10 bit) 1920x1080: 59.94P/59.94i, 50.00P/50.00i/25.00P, 29.97P/23.98P (4:2:2 10 bit) 1280x720: 59.94P, 50.00P (4:2:2 10 bit)			
	*Same video format required for SDI and HDMI (cannot select different formats for SDI and HDMI) *When 3840 x 2160 is selected for HDMI, video will not be outputted to SDI.*			
IP	Frame frequency 59.94 Hz: 1920 x 1080: 59.94fps, 29.97fps, 14.99fps, 5.00fps (4:2:0 8 bit) 1280 x 720: 59.94fps, 29.97fps, 14.99fps, 5.00fps (4:2:0 8 bit) 640 x 360: 59.94fps, 29.97fps, 14.99fps, 5.00fps (4:2:0 8 bit)	Frame frequency 29.97 Hz: 3840 x 2160: 29.97fps, 14.99fps, 5.00fps (4:2:0 8 bit) 1920 x 1080: 29.97fps, 14.99fps, 5.00fps (4:2:0 8 bit) 1280 x 720: 29.97fps, 14.99fps, 5.00fps (4:2:0 8 bit) 640 x 360: 29.97fps, 14.99fps, 5.00fps (4:2:0 8 bit) Frame frequency 50.00 Hz: 1920 x 1080: 50.00fps, 25.00fps, 12.50fps, 5.00fps (4:2:0 8 bit) 1280 x 720: 50.00fps, 25.00fps, 12.50fps, 5.00fps (4:2:0 8 bit) 640 x 360: 50.00fps, 25.00fps, 12.50fps, 5.00fps (4:2:0 8 bit)	Frame frequency 25.00 Hz: 3840 x 2160: 25.00fps, 12.50fps, 5.00fps (4:2:0 8 bit) 1920 x 1080: 25.00fps, 12.50fps, 5.00fps (4:2:0 8 bit) 1280 x 720: 25.00fps, 12.50fps, 5.00fps (4:2:0 8 bit) 640 x 360: 25.00fps, 12.50fps, 5.00fps (4:2:0 8 bit) Frame frequency 23.98 Hz: 3840 x 2160: 23.98fps, 11.99fps, 5.99fps (4:2:0 8 bit) 1920 x 1080: 23.98fps, 11.99fps, 5.99fps (4:2:0 8 bit) 1280 x 720: 23.98fps, 11.99fps, 5.99fps (4:2:0 8 bit) 640 x 360: 23.98fps, 11.99fps, 5.99fps (4:2:0 8 bit)	
	JPEG has one pattern fixed depending on the frame frequency format is fixed and cannot be selected) Resolution: 1280 x 720 when frame frequency is 59.94/29.97 Hz: 14.99 fps, when frame frequency is 50.00/25.00 Hz: 12.50 fps, when frame frequency is 23.98 Hz: 11.99 fps			
USB	Motion JPEG: 1920x1080, 1280 x 720, 640 x 360 59.94 Hz: 12.00 fps, 5.00 fps	50.00 Hz: 12.50 fps, 5.00 fps			
SUPPORTED PROTOCOLS	Protocol: XC Protocol, RTSP/RTP, NDI®|HX, RTMP/RTMPS, Standard (VISCA) Communication (Serial), Standard (VISCA) Communication (IP)			Control: Canon NU Protocol

INTERFACE

SPECIFICATION	CR-N300	CR-N500	CR-X300	CR-X500
COMMUNICATION CONTROL	LAN, Wi-Fi, Serial, IR, USB	LAN, Wi-Fi, Serial, IR	LAN, Serial	
NETWORK TERMINAL	LAN x 1, RJ45, 1000Base-T			
SDI OUT TERMINAL	3G-SDI, BNC jack (output only) x 1, 0.8 Vp-p/75 Ω, unbalanced SMPTE 424, SMPTE 425, SMPTE ST 299-2 compliant Embedded audio, Time code (VITC/LTC)		6G-SDI, BNC jack (output only) x 1, 0.8 Vp-p/75 Ω, unbalanced SMPTE 2081, 424, 425, ST 299-2 compliant Embedded audio, Time code (VITC/LTC)	12G-SDI, BNC jack (output only) x 1
GEN-LOCK TERMINAL		BNC jack x 1, 1.0 Vp-p/75 Ω, input only		BNC jack x 1
HDMI OUT TERMINAL	HDMI connector x 1, output only			
RS-422 TERMINAL	RJ45 connector x 1			RS-422 Serial
MIC TERMINAL	φ3.5 mm stereo mini jack (unbalanced, plug-in power supported) • Sensitivity (MIC): -72 dBV (Manual volume center, full scale -18 dB)/1 kΩ or more/Att.: 20 dB • Sensitivity (LINE): -10 dBV (Manual volume center, full scale -18 dB)/1 kΩ or more Supply Voltage: 2.4 V DC (Bias resistance: 2.2 kΩ)		Built-In Waterproof Microphone	
INPUT 1 / INPUT 2 XLR TERMINALS		INPUT (3-pin jack) (pin1: shield, pin2: hot, pin3: cold), 2 sets, balanced. Sensitivity (MIC): -60 dBu (Manual volume center, full scale -18 dB)/600 Ω/Att.: 20 dB. Sensitivity (LINE): +4 dBu (Manual volume center, full scale -18 dB)/1 kΩ or more. Supply Voltage: 48 V DC (Bias resistance: 6.8 kΩ)		

OTHER

SPECIFICATION	CR-N300	CR-N500	CR-X300	CR-X500
OPERATING ENVIRONMENT	Temperature: +32°F – +104°F (0°C – +40°C) Humidity: 10% – 90% (without condensation)		Temperature: +5°F – +104°F (-15°C – +40°C) Humidity: 90% or less (without condensation) Startup temperature: +14°F – +104°F (-10°C – +40°C)	
DUST/WATER RESISTANCE			IP65	IP55
POWER SUPPLY	PoE: PoE+ power supply via LAN connector (IEEE802.3at compliant) – PoE cannot be used External power source: 24V DC (using included AC adaptor)		PoE: PoE++ power supply via LAN connector (IEEE802.3bt compliant) – PoE and PoE+ cannot be used External power source: 12V DC *(use included power cable with DC plug)*	DC 10.5 - 15 V, 90W
POWER CONSUMPTION	PoE+ Input: Approx. 16.2W* max. (body only) DC Input: Approx. 15.0W max. (body only) *Class 4 (25.5 W required) for power supply devices*	PoE+ Input: Approx. 19.6W* max. (body only) DC Input: Approx. 18.6W max. (body only) *Class 4 (25.5 W required) for power supply devices*	PoE++ Input: Approx. 39.8W* max. (body only) DC Input: Approx. 37.7W max. (body only) *Class 5 (40.0 W required) for power supply devices*	DC 10.5 - 15 V, 90W
QUIETNESS	NC35 or lower	NC30 or lower	NC45 or lower (when operating at 60°/sec)	NC55 or less
DIMENSIONS (W X H X D)	Approx. 6.06 x 7.01 x 6.46 in. (154 x 178 x 164 mm) *(excluding protrusions)*	Approx. 7.87 x 10.59 x 8.19 in. (200 x 269 x 208 mm) *(excluding protrusions)*	Approx. 8.54 x 12.24 x 8.54 in. (217 x 311 x 217 mm) *(excluding protrusions and connector cover)*	Approx. 13.27 x 15.35 x 15.2 in. (337 x 390 x 386 mm) *(excluding protrusions)*
WEIGHT	Approx. 4.86 lb. (2.2 kg) (body only)	Approx. 9.04 lb. (4.1 kg) (body only)	Approx. 15.5 lb. (7 kg) (body only)	Approx. 37.48 lbs. (17.0 kg)
SUPPORTED CONTROLLERS	Hardware: RC-IP100 Software: Remote Camera Control Application Search Tool			Hardware: RC-IP100

For more info: pro.usa.canon.com

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