REMOTE CAMERA CR-N700

TECHNICAL SPECIFICATIONS

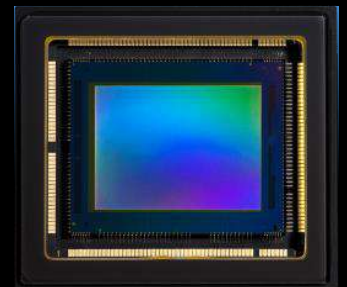# REMOTE CAMERA CR-N700

ENHANCED IMAGING CAPABILITIES

- 1.0-inch CMOS Sensor
- 4K 60P / 4:2:2 10bit (SDI / HDMI)
- Dual Pixel CMOS AF Support
- Eye AF / Head Detection AF
- IR Mode (Monochrome)
- Custom Picture Support
- HDR Support (PQ / HLG)

IMPROVED EFFICIENCY WHEN SHOOTING

- Supports NDI | HX Standard / Canon XC Protocol
- SRT & FreeD Protocols
- OSD Support for camera setting parameters
- Multi-view streaming using crop function
- Genlock support & tally lamp
- Operation with trace function and preset movements

CONNECTIVITY / COMPATIBILITY

- 2 X SDI Output Interfaces (12G-SDI / 3G-SDI)
- 12V DC (XLR Connector) Power Support
- PoE++ Power Supply Support (power / control / video feed with 1 cable)
- 2 x XLR Terminals
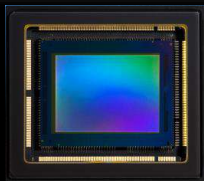- Wireless remote Control Support over WiFi

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4K 4:2:2 10bit

4K 4:2:2 10-bit output from 12G-SDI / HDMI

4K HDR PQ / HLG

Supports 4K HDR output in PQ and HLG

HIGH PRECISION AF | DUAL PIXEL CMOS AF

Canon's Dual Pixel CMOS AF is the technology that uses every pixel on the imaging sensor to detect focus, and also to capture actual image information achieving both high precision focusing and high image quality.
Touch focus can control high-speed continuous AF within approximately 80% of the vertical and horizontal area of the screen.
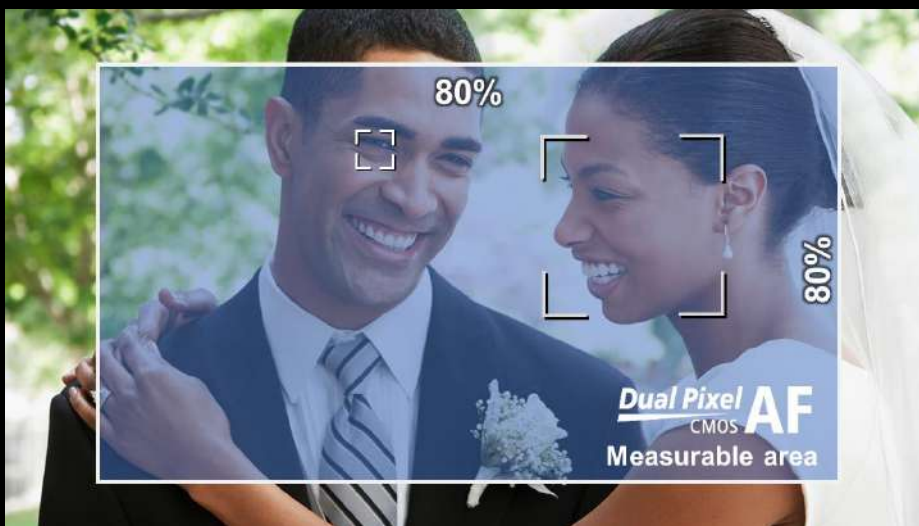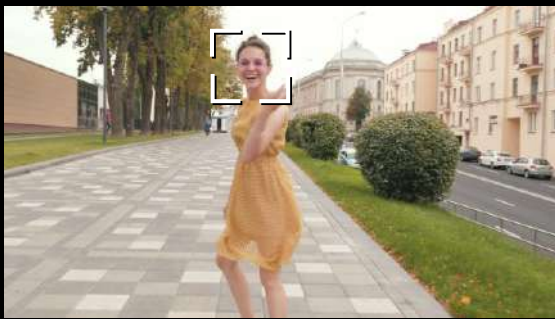
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FIRST CANON PTZ REMOTE CAMERA TO SUPPORT EYE AF & HEAD DETECTION AF

The human recognition functions have been enhanced, making this the first remote video camera to enable AF shooting with highly accurate eye and head detection features. Head detection can also be used to focus on the back of a person's head, closely tracking the subject even when shooting sports or other fast-moving situations.

EYE DETECTION AF

Eye AF technology has been applied to Canon's remote & PTZ camera. Even when another subject appears in the foreground, it detects the human eye and closely tracks it to continue shooting while maintaining accurate focus.

EYE / HEAD DETECTION AF

This is the first Canon's remote & PTZ cameras to support EOS iTR AF X, which uses deep learning. This lets the camera keep tracking the subject even if they turn around.

SUPPORTS SHOOTING LOW LIGHT – INFRARED (IR) MODE

The CR-N700 features IR for capturing infrared wavelengths. This lets users capture images even in dark places where ordinary shooting is difficult, such as reality shows and animal observations in the zoo, etc.
IR can be turned on an off from the Setting Page, RCCA, and the RC-IP100.
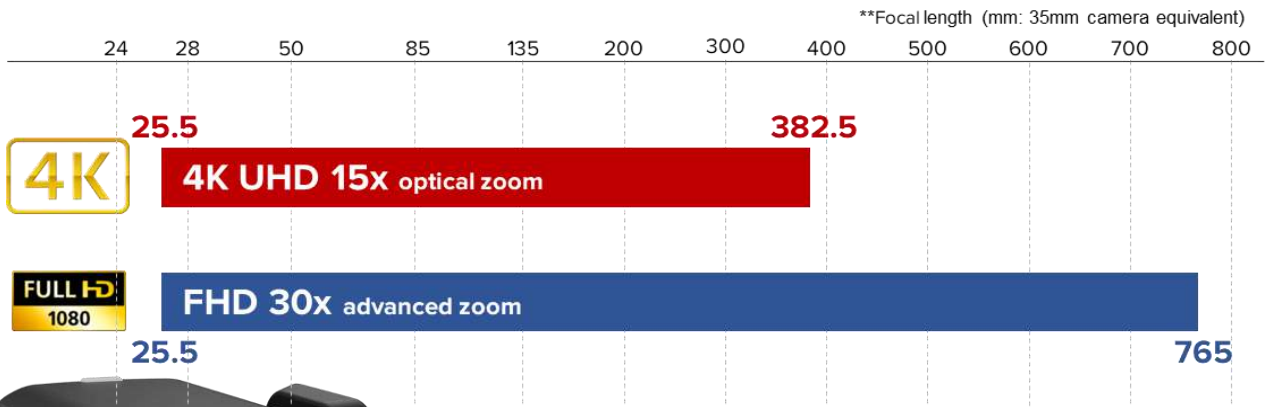

IR
ON

IR
OFF

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ENABLES MULTI OUTPUT OF 4K 60P VIDEO

Video output for 4K 60P has been added to meet more of the needs in high-end video production. A new 12G-SDI terminal has been added to enable multiple outputs to various video devices.

	Format	Max. resolution	Frame rate	Color sampling	Bit depth
IP streaming	H.264/ H.265	4K 3840 x 2160	59.94P	4:2:0	8 bit
12G-SDI	Uncompressed	4K 3840 x 2160	59.94P	4:2:2	10 bit
HDMI	Uncompressed	4K 3840 x 2160	59.94P	4:2:2	10 bit
3G-SDI	Uncompressed	FULL HD 1080 1920 x 1080	59.94P	4:2:2	10 bit

HIGH-MAGNIFICATION ZOOM

The CR-700 is equipped with 15x optical zoom starting from 25.5mm.
Using the 4K sensor during FHD, it can shoot at a maximum of approximately 30x advanced zoom while maintaining image quality.

**Focal length (mm: 35mm camera equivalent)

| 24 | 28 | 50 | 85 | 135 | 200 | 300 | 400 | 500 | 600 | 700 | 800 |

4K 25.5 — 382.5
4K UHD **15x** optical zoom

FULL HD 1080
FHD **30x** advanced zoom
25.5 — 765

4K
15x
OPTICAL ZOOM

FHD
30x
ADVANCED ZOOM

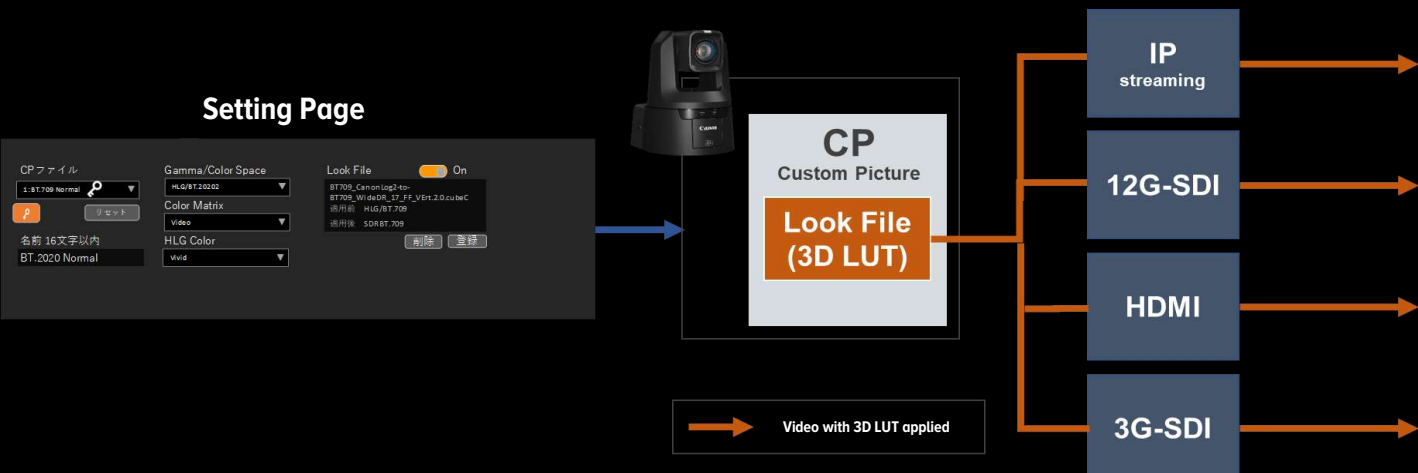**Canon**

FULL FEATURED CUSTOM PICTURE SETTINGS

The Custom Picture file has been expanded to support BT.709 / EOS Standard / EOS Neutral. These can be used in a wide range of production environments. It also uses a colour matrix with multiple colour reproduction properties that is consistent with the Cinema EOS system.

Custom Picture File	Gamma / Gamut	Colour Matrix
C1 : BT.709 Normal	BT.709 Normal / BT.709	Video
C2 : BT.709 Wide DR	BT.709 Wide DR / BT.709	Video
C3 : BT.709 Standard	BT.709 Standard / BT.709	Video
C4: Canon Log 3	Canon Log 3 / Cinema Gamut	Neutral
C5 : PQ	PQ / BT.2020	Neutral
C6 : HLG	HLG / BT.2020	Neutral
C7 : EOS Standard	Look File : EOS Standard Base：Wide DR / BT.709	Neutral
C8 : EOS Neutral	Look File : EOS Neutral Base：Wide DR / BT.709	Neutral
C9 - C20：User**	BT.709 Normal / BT.709	Video

C3 : BT.709 Standard

C8 : EOS Neutral

IMPORT 3D LUTs FROM EXTERNAL SOURCES

A 3D LUT created with colour grading or other software in .cube format can be imported into the camera via IP and applied to recordings. This enables grading with a desired look even in workflows that do not include colour grading, making workflows more efficient.

Setting Page

CP ファイル
1 : BT.709 Normal
リセット
名前 16文字以内
BT.2020 Normal

Gamma/Color Space
HLG/BT.2020
Color Matrix
Video
HLG Color
vivid

Look File — On
BT709_CanonLog2-to-
BT709_WideDR_17_FF_VErt.2.0.cubeC
適用前　HLG/BT.709
適用後　SDR BT.709
削除　登録

CP
Custom Picture
Look File
(3D LUT)

IP streaming

12G-SDI

HDMI

3G-SDI

→ Video with 3D LUT applied

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LUT / View Assist Support

Video with Canon Log 3 applied has a wider dynamic range and is taken with the intent of editing after shooting. This means the images displayed during shooting in their current state have low contrast and may appear slightly dark. By using the LUT/View Assist function, users can reproduce the same contrast as the standard video. 3D LUTs (User LUT) created by users are imported into the camera via IP.

Setting Page

CP
Custom Picture

Canon Log 3

LUT/View Assist

12G-SDI LUT

HDMI / 3G-SDI View Assist

IP streaming

12G-SDI

HDMI

3G-SDI

These LUT are supported when outputting Canon Log 3				
12G-SDI	Wide DR BT.709	Wide DR BT.2020	HLG BT.2020	PQ BT.2020
	DCI DCI-P3	User LUT		

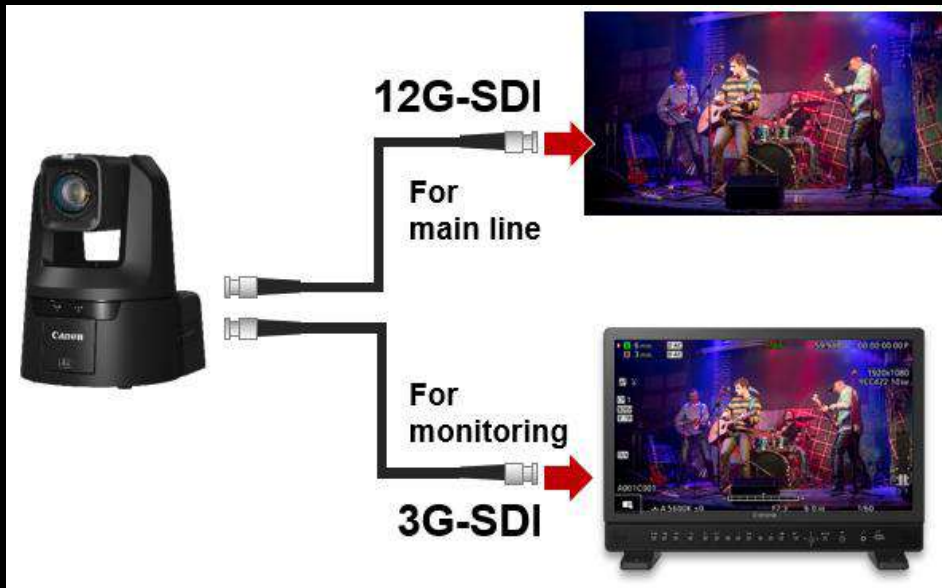| This video can be output after converting the file format with View Assist when outputting with Canon Log 3	
HDMI 3G-SDI	Wide DR BT.709

SUPPORTS PERMANENT CEILING MOUNT

The CR-N700 can be mounted either upright or inverted (ceiling mount) with the image flip function to record images in the correct orientation without post-processing.
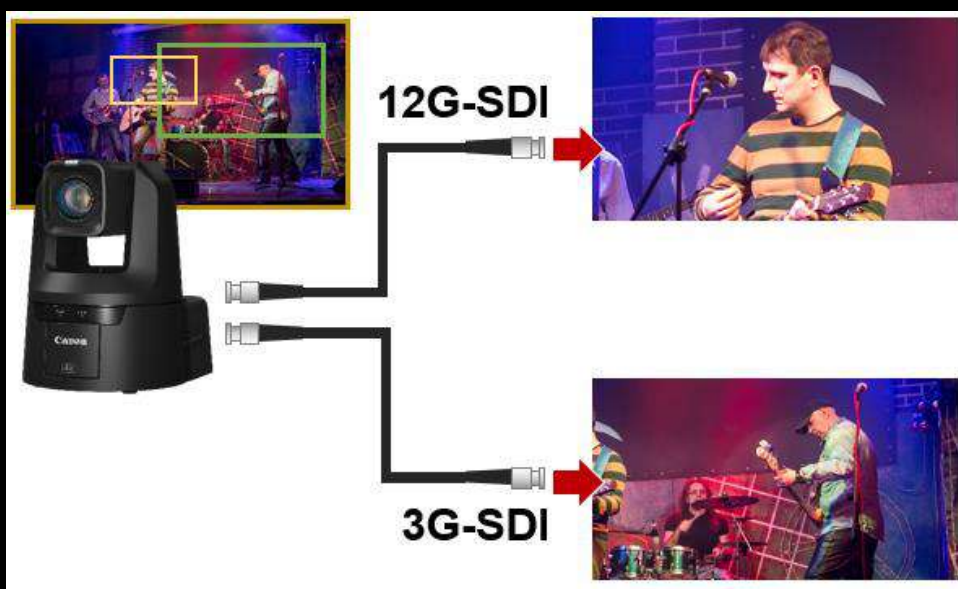

Not flipped

Flipped

2 x CHANNELS OF SDI OUTPUT (12G-SDI / 3G-SDI)

The CR-N700 features a 12G-SDI output terminal that can stream 4K 60P video with a single cable. When used together with the 3G-SDI terminal, users can now output two video channels simultaneously. This means a single camera can output video for different purposes at the same time, answering video production needs by combining various assist functions.
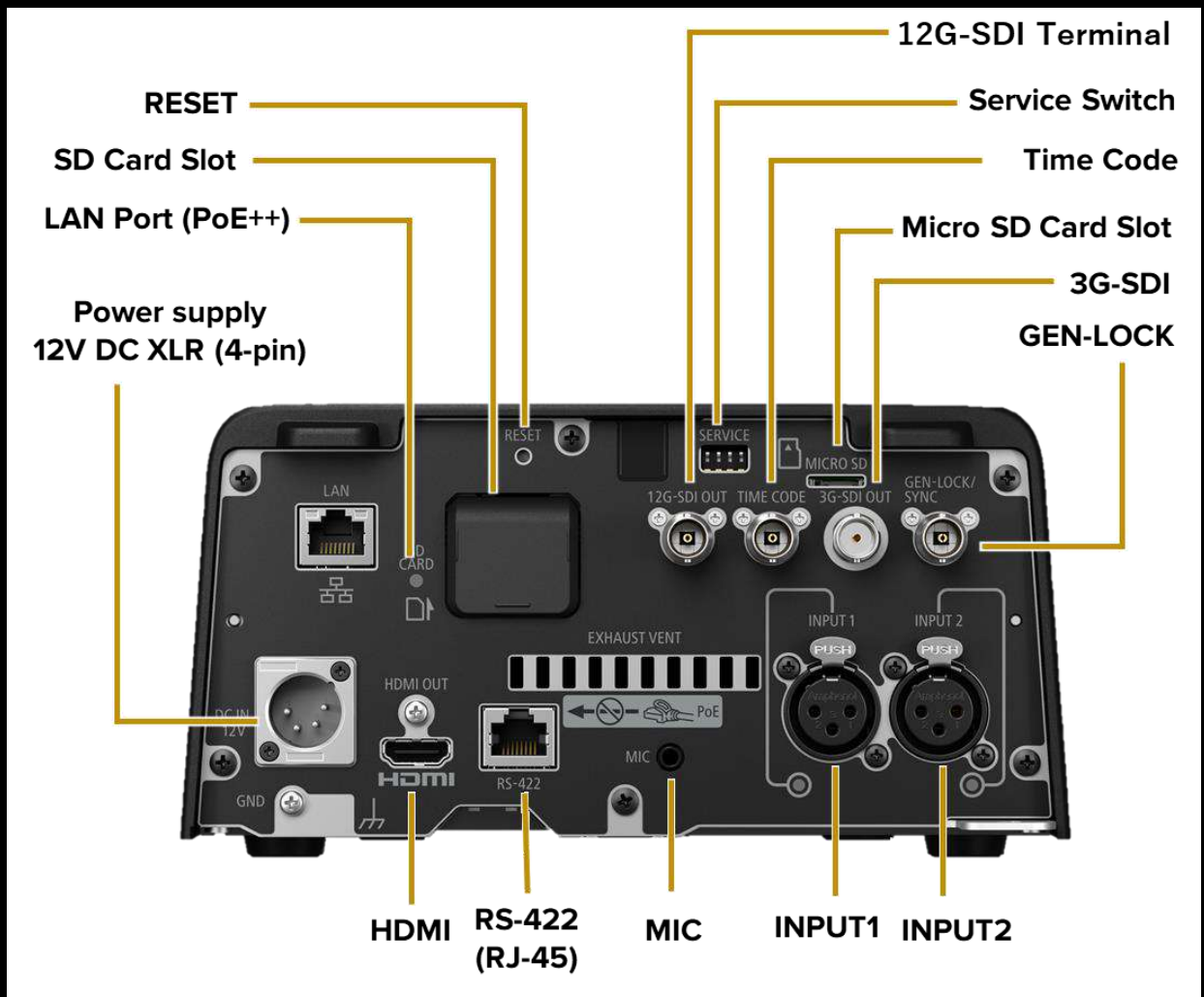
Main Line & Monitoring

Crop Streaming

REAR INTERFACE CONFIGURATION

RESET

SD Card Slot

LAN Port (PoE++)

**Power supply
12V DC XLR (4-pin)**

12G-SDI Terminal

Service Switch

Time Code

Micro SD Card Slot

3G-SDI

GEN-LOCK

RESET

SERVICE

MICRO SD

LAN

12G-SDI OUT   TIME CODE   3G-SDI OUT   GEN-LOCK/SYNC

SD CARD

INPUT 1   INPUT 2

EXHAUST VENT

PoE

HDMI OUT

MIC

DC IN 12V

GND

HDMI

RS-422

PUSH   PUSH

HDMI   **RS-422
(RJ-45)**   **MIC**   **INPUT1**   **INPUT2**
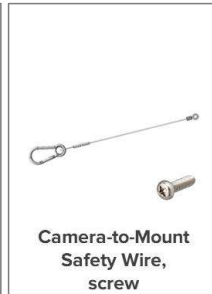

What's in the Box

**Camera
(Black/White)**

Mounting bracket, screw
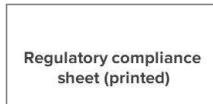
Safety Wire, screw

Camera-to-Mount Safety Wire, screw

IR remote controller, battery

User's manual (online)

Regulatory compliance sheet (printed)
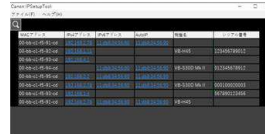
Warranty (Printed)

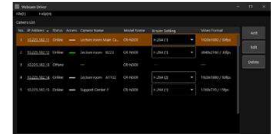**(AC adapter is not included)**

Compatible Accessories / Software

**RC-IP100
Remote Camera Controller**

**RCCA
(Control Application)**

Camera Search Tool

Webcam Driver

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VIDEO OUTPUT SPECIFICATIONS

Destination		Format	Colour Sampling	Resolution	Frame Rate
IP STREAMING	Main Stream	H.264 / H.265	4:2:0 8-bit	3840 x 2160	59.94P(H.265 only in 4K)/50.00P/29.97P/25.00P/23.98P/14.99P/12.50P/11.99/5.99P/5.00P
				1920 x 1080	59.94P(H.265 only in 4K)/50.00P/29.97P/25.00P/23.98P/14.99P/12.50P/11.99/5.99P/5.00P
				1280 x 720	59.94P(H.265 only in 4K)/50.00P/29.97P/25.00P/23.98P/14.99P/12.50P/11.99/5.99P/5.00P
	Sub Stream 1 (NDI‖HX Settings)	H.264	4:2:0 8-bit	640 x 360	29.97P/25.00P/23.98P/14.99P/12.50P/11.99P/5.99P/5.00P
	Sub Stream 2 (RCCA Settings)	JPEG	4:2:0 8-bit	1280 x 720	14.99P/12.50P/11.99P
12G-SDI		UNCOMPRESSED	4:2:2 10-bit	3840 x 2160	59.94P/50.00P/29.97P/25.00P/23.98P
				1920 x 1080	59.94P/59.94i/50.00P/50.00i/29.97P/25.00P/23.98P
				1280 x 720	59.94p/50.00P
				720 x 576	50.00i
				720 x 480	59.94i
HDMI		UNCOMPRESSED	4:2:2 10-bit	3840 x 2160	59.94P/50.00P/29.97P/25.00P/23.98P
				1920 x 1080	59.94P/59.94i/50.00P/50.00i/29.97P/25.00P/23.98P
				1280 x 720	59.94p/50.00P
				720 x 576	50.00P
				720 x 480	59.94P
3G-SDI		UNCOMPRESSED	4:2:2 10-bit	1920 x 1080	59.94P/59.94i/50.00P/50.00i/29.97P/25.00P/23.98P
				1280 x 720	59.94p/50.00P
				720 x 576	50.00i
				720 x 480	59.94i

REMOTE CAMERA MODEL COMPARISON

FEATURES		CR-N700	CR-N500	CR-N300
Sensor / Lens		1" 4K Dual Pixel CMOS AF 15 x		1/2.3" 4K 20x
Advanced Zoom		YES	-	-
IR Mode (Monochrome)		YES	-	-
Video Output I/F		12G-SDI / 3G-SDI / HDMI / IP	3G-SDI / HDMI / IP	3G-SDI / HDMI / IP
Video Output Format (Max)	SDI	12G-SDI: 4K 59.94p (4:2:2 10-bit) 3G-SDI: FHD 59.94p (4:2:2 10-bit)	FHD 59.94p (4:2:2 10-bit)	FHD 59.94p (4:2:2 10-bit)
	HDMI	4K 59.94p (4:2:2 10-bit)	4K 29.97p (4:2:2 10-bit)	4K 29.97p (4:2:2 10-bit)
	IP	4K 59.94p (4:2:0 8-bit)	4K 29.97p (4:2:0 8-bit)	4K 29.97p (4:2:0 8-bit)
HDR		HLG / PQ	-	
LOG Shooting		YES		-
Face Tracking AF		Eye / Face / Head	Face	Face
Image Stabilisation		YES		
Video Transfer Protocol (IP)		XC Protocol / RTP (RTSP) / RTMP (S) / NDI‖HX / SRT		
Control Protocol (IP / Serial)		XC Protocol / Standard Communication (Serial / IP) / NDI‖HX / free-d		
Power Supply		POE++ / DC12V (XLR Connector)	POE+ / DC24V	POE+ / DC24V
Time Code Terminal		YES	-	-
Pan Operation Range / Speed		±170˚, 0.1˚/s - 100˚/s		±170˚, 0.2˚/s - 300˚/s
Tilt Operation Range / Speed		30˚ - 90˚, 0.1˚/s - 100˚/s		30˚ - 90˚, 0.2˚/s - 180˚/s
Crop Function		YES	-	-

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