

Camera comparison

CAMERA TYPES

- UHD-4K camera
- HD-Ultra camera
- HD-Lite camera
- HD-Mini camera
- HD-Autofocus camera
- HD-Pro HDMI camera



MODELS	UHD-4K	HD-Ultra	HD-Lite	HD-Mini	HD-Autofocus	HD-Pro HDMI
Sensor	Sony 4K	Sony	Aptina	Aptina	Sony	Sony
Format	1/1.8", HDTV 2160p	1/2.8", HDTV 1080p	1/2.5", HDTV 1080p	1/3", HDTV 720p	1/1.9", HDTV 1080p	1/2.8", HDTV 1080p
Pixels	3840 x 2160 ⁽¹⁾ HDMI 60 fps USB 30 fps	3264 x 1836 ⁽¹⁾ 1920 x 1080 ⁽²⁾ HDMI 60 fps USB 30 fps	2592 x 1944 ⁽¹⁾ 1920 x 1080 ⁽²⁾ HDMI 15 fps, USB 15fps	1280 x 720 ⁽¹⁾ 1280 x 720 ⁽²⁾ HDMI 30 fps	1920 x 1080 ⁽¹⁾ HDMI 60 fps	1920 x 1080 ⁽¹⁾ 1920 x 1080 ⁽²⁾ HDMI 60 fps, USB 26 fps
Pixel size	2.0 x 2.0 (µm)	2.8 x 2.8 (µm)	2.2 x 2.2 (µm)	3.75 x 3.75 (µm)	3.75 x 3.75 (µm)	2.9 x 2.9 (µm)
Video recording	2160p	1080p	1080p	--	1080p	1080p
Video output	HDMI, USB-3.0 ⁽³⁾ , GbE ethernet, WiFi ⁽⁵⁾	HDMI, USB-2.0	HDMI, USB-2.0	HDMI	HDMI, USB-C ⁽³⁾	HDMI, USB-2.0
Scan mode	Progressive	Progressive	Progressive	Progressive	Progressive	Progressive
Exposure	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual
White balance	Automatic/ manual/ROI	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual/ROI
Sensitivity Lux/sec	505 mV	510 mV	1 V	6.5 V	1.12 V (1/30s)	1.3 V (1/30s)
Noise	Standard noise reduction	Standard noise reduction	Standard noise reduction	Standard noise reduction	Standard noise reduction	Standard noise reduction
Color rendering (bits)	36	36	24	24	24	24
Signal/Noise (db)	44	55	40.5	44	50	38
Dynamic (db)	--	69	60	85	65	66
Interfaces	Digital HDMI, USB-3, GbE ethernet, WiFi ⁽⁵⁾	Digital HDMI, USB-2	Digital HDMI, USB-2	Digital HDMI	Digital HDMI, USB-C	Digital HDMI, USB-2
Storage in HDMI mode	16 GB SD card (max. 32 GB)	16 GB SD card (max. 32 GB)	8 GB SD card (max. 32 GB)	16 GB SD card (max. 32 GB)	16 GB SD card (max. 32 GB)	16 GB SD card (max. 32 GB)
Camera buttons	on/off	on/off	on/off	--	on/off	on/off
Mounting	C-mount	C-mount	C-mount	C-mount	C-mount	C-mount
External power supply	100-240 Vac to 12Vdc/1A	100-240 Vac to 12Vdc/2A	100-240 Vac to 12Vdc/2A	100-240 Vac to 12Vdc/1A	100-240 Vac to 12Vdc/2A	100-240 Vac to 12Vdc/2A
Relative humidity	10-60 %	45-85 %	45-85 %	30-80 %	45-85%	30~80%
Temperature Operation Storage	-10 – 50° C -20 to 60° C	0 – 60° C -20 to 70° C	0 – 60° C -20 to 70° C	-10 – 40° C -20 to 60° C	-10-40° C -20°C to 60° C	-10~ 50° C -20°C to 60° C
Product number	VC.3040 VC.3040-HDS ⁽⁴⁾	VC.3036 VC.3036-HDS ⁽⁴⁾	VC.3031 VC.3031-HDS ⁽⁴⁾	VC.3020 VC.3020-HDS ⁽⁴⁾	VC.3034 VC.3034-HDS ⁽⁴⁾	VC.3038 VC.3038-HDS ⁽⁴⁾

⁽¹⁾ capture mode ⁽²⁾ live view ⁽³⁾ USB-2.0 compatible ⁽⁴⁾ model with attached high definition screen ⁽⁵⁾ available from November 2019

PACKAGE CONTENT

MODELS	UHD-4K	HD-Ultra	HD-Lite	HD-Mini	HD-Autofocus	HD-Pro
Software	ImageFocus Alpha	ImageFocus Plus	ImageFocus Plus	--	--	ImageFocus Alpha
Software languages	15 ⁽²⁾	6 ⁽¹⁾	6 ⁽¹⁾	English	15 ⁽²⁾	15 ⁽²⁾
Compatible	Win 7, 8 and 10 Mac OS	Win 7, 8 and 10 Mac OS	Win 7, 8 and 10 Mac OS	--	--	Win 7, 8 and 10
C-mount with objective	0.5x	0.37x	0.45x	0.37x	0.5x	0.37x
HDMI & USB cable	•	•	•	Only HDMI	•	•
30 and 30.5 mm conversion adapters (stereomicroscopes)	•	•	•	•	•	•
SD card	16 GB	16 GB	8 GB	16 GB	16 GB	16 GB
Calibration slide 10mm/100	•	•	•	•	•	•
External power netadapter	12V 1A	12V 2A	12V 2A	12V 1A	12V 1A	12V 1A
Dimensions (w x d x h)	78 x 65 x 98	80 x 70 x 90	80 x 70 x 90	50 x 50 x 60	81 x 65 x 78	81 x 65 x 78
Weight (grams)	555	440	280	150	500	500
Product number	VC.3040	VC.3036	VC.3031	VC.3020	VC.3034	VC.3038
With 11.6" HD screen	VC.3040-HDS	VC.3036-HDS	VC.3031-HDS	VC.3020-HDS	VC.3034-HDS	VC.3038-HDS

⁽¹⁾ One language can be selected during initial installation of the ImageFocus Plus software: English, German, French, Dutch, Spanish and Russian

⁽²⁾ English, Catalan, French, German, Indonesian, Italian, Japanese, Korean, Polish, Russian, Simplified Chinese, Spanish, Thai, Traditional Chinese, Turkish

BUILT-IN SOFTWARE FEATURES (HDMI MODE)

MODELS	UHD-4K	HD-Ultra	HD-Lite	HD-Mini	HD-Autofocus	HD-Pro HDMI
Image capturing	3840 x 2160	3261 x 1840	2592 x 1944	1280x720	1920 x 1080	1920 x 1080
Video recording	3840 x 2160 MP4	1920 x 1080 AVI	1920 x 1080 AVI	--	1920 x 1080 ASF	1920 x 1080 ASF
Browse saved images	•	•	•	--	•	•
Browse saved video's	•	•	•	--	no	•
SD card storage	16 GB	16 GB	8 GB	16 GB	16 GB	16 GB
Mouse driven	•	•	•	•	•	•
Auto Exposure	•	•	•	•	•	•
Exposure time	0.04 ~ 1000 ms	0.001s ~ 10 s	0.001s ~ 10 s	0.2 ~ 2000 ms	0.06 ~ 918 ms	0.036 ~ 8000 ms
Gain	•	•	•	•	•	•
RGB & white balance	•	•	•	•	•	•
Gamma	•	•	•	•	•	•
Sharpness	•	•	•	•	•	•
Noise reduction	3D algorithm	3D algorithm	3D algorithm	Standard	Standard	Standard
Saturation & contrast	•	•	•	•	•	•
Horiz. & vert. flip	•	•	•	•	•	•
Grids	cross/multi	cross/multi	multi	multi	multi	User defined
Autofocus	--	--	--	--	•	--
Compare function	•	•	•	--	•	•
Measurement functions	captured & live images	captured & live images	--	--	live image only	captured & live images
Calibration table	•	•	--	--	•	•
Line & free curve	•	•	--	--	•	•
Polygon & rectangle	•	•	--	--	•	•
Angle	•	•	--	--	•	•
Circle 3 points	•	•	--	--	•	•
Circle radius	•	•	--	--	•	•
Export function	CSV	CSV, Txt	--	--	CSV	CSV
Languages	5 ⁽²⁾	8 ⁽¹⁾	8 ⁽¹⁾	--	5 ⁽²⁾	5 ⁽²⁾

⁽³⁾ English, simplified Chinese, traditional Chinese, German, Italian, French, Japanese, Korean

⁽⁴⁾ English, Simplified Chinese, Traditional Chinese, Korean and Thai