

Camera comparison

CAMERA TYPES

- UHD-4K camera
- UHD-4K Touch camera
- HD-Ultra camera
- HD-Lite camera
- HD-Mini camera without HDS
- HD-Mini camera with HDS
- HD-Autofocus camera
- HD-Pro HDMI camera



MODELS	UHD-4K	UHD-4K Touch	HD-Ultra	HD-Lite	HD-Mini	HD-Mini + HDS	HD-Autofocus	HD-Pro HDMI
Sensor	Sony 4K	Sony 4K	Sony	Aptina	Sony	Sony	Sony	Sony
Format	1/1.8", HDTV 4K	1/1.8", HDTV 4K	1/2.8", HDTV 1080p	1/2.5", HDTV 1080p	1/2.8", HDTV 1080p	1/2.8", HDTV 1080p	1/1.9", HDTV 1080p	1/2.8", HDTV 1080p
Resolution*	3840 x 2160 ^(1,2) HDMI 60 fps USB 30 fps	3840 x 2160 ^(1,2) HDMI 30 fps USB 20 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	1920 x 1080 ^(1,2) HDMI 60 fps	1920 x 1080 ^(1,2) HDMI 60 fps	1920 x 1080 ^(1,2) HDMI 60 fps WiFi mode 25 fps	3840 x 2160 ⁽¹⁾ 1920 x 1080 ⁽²⁾ HDMI 60 fps, USB 26 fps
Pixel size	2.0 x 2.0 (µm)	2.0 x 2.0 (µm)	2.8 x 2.8 (µm)	2.2 x 2.2 (µm)	2.9 x 2.9 (µm)	2.9 x 2.9 (µm)	3.75 x 3.75 (µm)	1.45 x 1.45 (µm)
Video output	HDMI, USB-2.0, Ethernet, WiFi	HDMI, USB-2.0	HDMI, USB-2.0	HDMI, USB-2.0	HDMI	HDMI	HDMI, WiFi	HDMI, USB-C
Scan mode	Progressive	Progressive	Progressive	Progressive	Progressive	Progressive	Progressive	Progressive
Exposure	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual
White balance	Automatic/ manual/ROI	Automatic/ manual/ROI	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual/ROI
Sensitivity Lux/sec	3541 mV (1/30 s)	505 mV	510 mV	1000 mV	1300 mV	1300 mV	1120 mV (1/30s)	300 mV (1/30s)
Noise	3D algorithm	Standard noise reduction	3D algorithm	3D algorithm	3D algorithm	3D algorithm	3D algorithm	3D algorithm
Color rendering (bits)	36	32	36	24	12	12	24	24
Signal/Noise (db)	40.5	40.5	55	40.5	42	42	50	38
Dynamic (db)	48	48	69	60	69	69	65	66
Interfaces	Digital HDMI, USB-3 Ethernet, WiFi	Digital HDMI, USB-2	Digital HDMI, USB-2	Digital HDMI, USB-2	Digital HDMI	Digital HDMI	Digital HDMI, WiFi	Digital HDMI, USB-C
Storage	32 GB SD card (≤ 128GB) or USB drive ⁽⁷⁾	32 GB SD card (≤ 128GB) or USB drive ⁽⁷⁾	16 GB SD card (max. 32 GB)	8 GB SD card (max. 32 GB)	32 GB SD card (max. 128 GB)	32 GB SD card (max. 128 GB)	32 GB SD card (max. 128 GB)	32 GB SD card (max. 128 GB)
Software	ImageFocus Alpha	ImageFocus Alpha	ImageFocus Plus	ImageFocus Plus	--	--	--	ImageFocus Alpha
Software languages	15 ⁽⁶⁾	15 ⁽⁶⁾	13 ⁽⁵⁾	13 ⁽⁵⁾	--	--	15 ⁽⁶⁾	15 ⁽⁶⁾
Camera buttons	on/off	on/off	on/off	on/off	--	--	on/off	on/off
Mounting	C-mount	C-mount	C-mount	C-mount	C-mount	C-mount	C-mount	C-mount
External power supply	100-240 Vac - 12Vdc/1A	100-240 Vac - 12Vdc/2A	100-240 Vac - 12Vdc/2A	100-240 Vac - 12Vdc/2A	100-240 Vac - 12Vdc/1A	100-240 Vac - 12Vdc/1A	100-240 Vac - 12Vdc/2A	100-240 Vac - 12Vdc/2A
Relative humidity	30 - 80 %	30 - 80 %	45 - 85 %	45 - 85 %	30 - 80 %	30 - 80 %	45 - 85 %	30 - 80 %
Temperature / Operation / Storage	-10 - 50° C -20 - 60° C	10 - 50° C -20 - 60° C	0 - 60° C -20 - 70° C	0 - 60° C -20 - 70° C	-10 - 50° C -20 - 60° C	-10 - 50° C -20 - 60° C	-10 - 40° C -20° C - 60° C	-10 - 50° C -20° C - 60° C
Product number	VC.3045 VC.3045-HDS ⁽⁴⁾	VC.3043-HDS Touch ⁽⁴⁾	VC.3036 VC.3036-HDS ⁽⁴⁾	VC.3031 VC.3031-HDS ⁽⁴⁾	VC.3023	VC.3024-HDS ⁽⁴⁾	VC.3034 VC.3034-HDS ⁽⁴⁾	VC.3039 VC.3039-HDS ⁽⁴⁾

* Frame rates depend on resolution and output mode and have been determined at optimal conditions

⁽¹⁾ capture mode ⁽²⁾ live view ⁽³⁾ USB-2.0 compatible ⁽⁴⁾ model with attached HD screen, 1080p

⁽⁵⁾ One language can be selected during initial installation of the ImageFocus Plus software: English, Chinese Simplified, Traditional Chinese, Thai, German, Italian, French, Korean, Japanese, Russian, Polish and Portuguese

⁽⁶⁾ English, Catalan, Indonesian, Polish, Chinese Simplified, Traditional Chinese, Thai, German, Italian, French, Korean, Japanese, Russian, Turkish, Spanish

⁽⁷⁾ Not included

PACKAGE CONTENT

MODELS	UHD-4K	UHD-4K Touch	HD-Ultra	HD-Lite	HD-Mini	HD-Mini+HDS	HD-Autofocus	HD-Pro
Compatible	Win 10 and higher Mac OS, Linux	Win 10 and higher Mac OS, Linux	Win 10 and higher Mac OS	Win 10 and higher Mac OS	--	--	--	Win 10 and higher Mac OS, Linux
C-mount with objective	0.5x	0.5x	0.37x	0.45x	0.37x	0.37x	0.5x	0.37x
HDMI & USB cable	•	•	•	•	Only HDMI	Only HDMI	Only HDMI	•
30 and 30.5 mm conversion adapters (stereomicroscopes)	•	•	•	•	•	•	•	•
SD card	32 GB	32 GB	16 GB	8 GB	32 GB	32 GB	32 GB	32 GB
Calibration slide 10mm/100	•	•	•	•	--	--	•	•
External power netadapter	12V 1A	12V 1A	12V 2A	12V 2A	12V 1A	12V 1A	12V 1A	12V 1A
Dimensions (w x d x h)	88 x 78 x 65	88 x 78 x 65	80 x 70 x 90	80 x 70 x 90	51ø x 60	50 x 50 x 60	81 x 65 x 78	81 x 65 x 78
Weight (grams)	480	480	440	280	50	130	500	500
Product number	VC.3045		VC.3036	VC.3031	VC.3023	--	VC.3034	VC.3039
With 11.6" HD screen			VC.3036-HDS	VC.3031-HDS	--			
With 13" HD screen	VC.3045-HDS	VC.3043-HDS			--	VC.3024-HDS	VC.3034-HDS	VC.3039-HDS

BUILT-IN SOFTWARE FEATURES (HDMI MODE)

MODELS	UHD-4K	UHD-4K Touch	HD-Ultra	HD-Lite	HD-Mini	HD-Mini+HDS	HD-Autofocus	HD-Pro HDMI
Image capturing	3840 x 2160	3840 x 2160	3261 x 1840	2592 x 1944	1920 x 1080	1920 x 1080	1920 x 1080	3840 x 2160
Video recording	3840 x 2160 MP4	3840 x 2160 MP4	1920 x 1080 AVI	1920 x 1080 AVI	1920 x 1080 MP4	1920 x 1080 MP4	1920 x 1080 ASF	1920 x 1080 MP4
Browse saved images	•	•	•	•	•	•	•	•
Browse saved video's	•	•	•	•	•	•	--	•
Mouse driven	•	•	•	•	•	•	•	•
Auto Exposure	•	•	•	•	•	•	•	•
Exposure time	0.04 ~ 1000 ms	0.04 ~ 1000 ms	0.001s ~ 10 s	0.001s ~ 10 s	0.01 ~ 1000 ms	0.01 ~ 1000 ms	0.06 ~ 918 ms	0.04 ~ 1000 ms
Gain	•	•	•	•	•	•	•	•
RGB & white balance	•	•	•	•	•	•	•	•
Gamma	•	•	•	•	•	•	•	•
Sharpness	•	•	•	•	•	•	•	•
Noise reduction	3D algorithm	Standard noise reduction	3D algorithm	3D algorithm	3D algorithm	3D algorithm	3D algorithm	3D algorithm
Saturation & contrast	•	•	•	•	•	•	•	•
Horiz. & vert. flip	•	•	•	•	•	•	•	•
Grids	cross/multi	cross/multi	cross/multi	multi	multi	multi	multi	User defined
Autofocus	--	--	--	--	--	--	•	--
Compare function	•	•	•	•	--	--	•	•
Measurement functions	captured & live images	captured & live images	captured & live images	--	captured & live images	captured & live images	captured & live images	captured & live images
Calibration table	•	•	•	--	•	•	•	•
Line & free curve	•	•	•	--	•	•	•	•
Polygon & rectangle	•	•	•	--	•	•	•	•
Angle	•	•	•	--	•	•	•	•
Circle 3 points	•	•	•	--	•	•	•	•
Circle radius	•	•	•	--	•	•	•	•
Export function	CSV	CSV	CSV, Txt	--	CSV	CSV	CSV	CSV
Languages	10 ⁽⁴⁾	10 ⁽⁴⁾	9 ⁽³⁾	9 ⁽³⁾	10 ⁽⁴⁾	10 ⁽⁴⁾	10 ⁽⁴⁾	10 ⁽⁴⁾

HDMI mode

⁽³⁾ English, Chinese Simplified, Traditional Chinese, German, Italian, French, Korean, Japanese, Spanish

⁽⁴⁾ English, Chinese Simplified, Traditional Chinese, Thai, German, Italian, French, Korean, Japanese, Russian