

# Capture One 8

THE PROFESSIONAL CHOICE IN IMAGING SOFTWARE



RELEASE NOTES

English

PHASEONE

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# Capture One 8.0 Release Notes

Capture One Pro 8 is a professional RAW converter offering you ultimate image quality with accurate colors and incredible detail from more than 300 high-end cameras – straight out of the box. It offers state-of-the-art tethered capture, powerful digital asset management, extensive adjustment tools and a flexible workflow.

With an updated processing engine, market-leading performance and powerful new features, Capture One Pro 8 is the professional choice in imaging software. The highly responsive tools give you the power to create stunning images from your camera's RAW files, in a time-saving workflow that can be customized to fit your needs.

Capture One 8 is made by Phase One (the World's leading manufacturer of high-end digital camera systems) in collaboration with the World's leading professional photographers.

Capture One 8 is available in four versions:  
Pro, DB, Pro (for Sony) and Express (for Sony).

# Highlights, Capture One 8.0

This is a major release of Capture One adding a number of features and improvements, focused on improving the workflow of professional photographers.

Application performance has been greatly improved. The user interface has been modernized and improved for greater usability. The new image-processing engine adds several new under-the-hood improvements to your images, while giving you even better control of your adjustments. The world's best image quality just got better.

This release adds new features, image quality improvements, new tethered functionality, more creative tools, better digital asset management, an updated user interface, performance optimization and support for additional cameras.

## Image Quality Improvements

- New Capture One 8 processing engine
- Improved image quality of HDR (High Dynamic Range) tool
- Improved image quality of local moiré suppression
- Improved image quality of luminance noise reduction
- Improved Black and White noise suppression and conversion quality
- Natural Clarity method

## Tethered Functionality

- Live View Focus Meter for Phase One IQ and MamiyaLeaf Digital Backs<sup>1</sup>
- Live View Direct Capture
- Live View Depth of Field preview
- Live View Force Orientation
- Customizable Live View window
- Hot Folder for Catalogs
- Tethered support for select Sony cameras

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<sup>1</sup> Not available for Phase One IQ260 Achromatic, P, P+ or Leaf Aptus.

## Creative Tools

- Repair Layers for Cloning and Healing
- Film Grain
- Local White Balance
- Local HDR
- Local Noise Reduction
- Local Purple Fringing
- Target colors and other Curve tool improvements
- Improved Skin Tone Editor

## Digital Asset Management

- Hierarchical Keywords
- Synchronization of Catalog folders
- Differentiated Import between Catalogs and Sessions
- Export Collection as Catalog
- Import Catalogs
- Session and Catalog Templates
- Refined Metadata editing
- Metadata editing in the Filters tool
- Import from Apple Aperture (Mac only)

## Performance

- Faster loading of catalogs
- Faster thumbnail browsing and smoother scrolling
- Faster importing
- Faster processing
- Faster preview generation for Canon and Nikon files
- Faster tethered shooting
- Scalable OpenCL support (utilization of all available GPUs)

### ... And more

- Improved and modernized user interface
- Batch Chromatic Aberration analysis
- Extended AppleScript (Mac) support for capturing, processing, document creation and collection management
- Layer Selection Points
- Original Crop aspect ratio
- Freehand rotation in the Crop tool
- Click-to-view in Browser
- Tips Overlay

### Camera File Support

- Phase One IQ150
- Leaf Credo 50 (Improved colors)
- Nikon D810
- Sony A7S
- Sony RX100 III
- Sony A77 II
- Sony A5100
- Sony NEX-VG20
- Sony NEX-VG30
- Sony NEX-VG900
- Sony QX-1
- Sony A560
- Sony A290
- Sony A37
- Fujifilm X30 (preliminary)

### Camera Tethered Support

- Phase One IQ150
- Leaf Credo 50
- Sony A7, A7R and A7S
- Sony A99 and A77 II
- Sony a5000 and a6000
- Nikon D810

# System Requirements

Capture One may run on other and older equipment than what's listed below but to ensure the best possible results we recommend that your computer conforms to the following specifications:

## Microsoft® Windows® minimum requirements

- Intel® Core™ 2 Duo or better
- 4 GB of RAM
- 10 GB of free hard disk space
- Color calibrated monitor with 1280x800, 24-bit resolution at 96dpi screen ruling
- Windows 7® SP1 64-bit, Windows 8® 64-bit
- Microsoft® .NET Framework version 4.5.2 (will be installed if not present)
- A PDF reader is needed to read the Release Notes
- An Internet connection is needed when activating Capture One.

## Apple® Macintosh® minimum requirements

- Intel® Core™ 2 Duo or better
- 4 GB of RAM
- 10 GB of free hard disk space
- Calibrated color monitor with 1280x800, 24-bit resolution at 96dpi
- Mac OS X 10.9 or later
- An Internet connection is needed when activating Capture One.

## Recommended system requirements

Working with high-resolution images and doing calculation heavy adjustments may put too much pressure on the minimum requirements system to work properly. In such cases and to optimize performance, please follow the recommendations below:

- Use processors with multiple cores, e.g. Intel Core i7™ or better
- Have 16 GB of RAM or more
- Leave plenty of hard disk space free for your images
- A fast hard disk e.g. a Solid State Disk (SSD)
- A fast Graphics card from NVIDIA or AMD, e.g. AMD Radeon 7950 (Mac) / AMD R9 290 (Win) or newer, with minimum 2GB RAM. We recommend using the Mac Pro (late 2013) containing the dual AMD D700 GPU.

# Installation

Capture One is compatible with previous 7.x, 6.x, 5.x and 4.x versions.

If you upgrade from Capture One 7, 6, 5 or 4 the settings will be migrated. If you upgrade from Capture One 3 the original settings cannot be reused. If you want to keep your existing versions of Capture One you can install this newer version of Capture One 8 in a different location. However, it is generally recommended that you only install one version of Capture One.

## Install on Windows

Capture One includes an easy-to-use installer that will install all the software you need to run the application on a Windows based computer.

To install the software, please follow the procedure below:

1. Load the Capture One USB, CD or download the application from the Phase One website: <http://www.phaseone.com>
2. Run the executable software install file.
3. Read and accept the license agreement when presented.
4. Follow the on-screen instructions to complete the installation.

## Install on OS X

Capture One includes an easy-to-use installer that will install all the software necessary to run the application on OS X.

To install the software, please follow the procedure below:

1. Load the Capture One USB, CD or download the application from the Phase One website: <http://www.phaseone.com>
2. Open the Capture One disk image.
3. Drag the Capture One icon to the Applications folder.
4. Start the Capture One application from your Applications folder.
5. Read and accept the license agreement when presented.

In addition Leaf and Mamiya DM Back users should install specific Leaf drivers before connecting their back by selecting Install Leaf Drivers from the Capture One menu in the application. We recommend that you Quit Capture One and restart the computer after the installation.

# Recommendations and limitations

## All users

- When you have disconnected a camera do not reconnect a camera until the Camera tool status changes to "No Camera Attached".
- DNG support is for raw DNG only is not optimized for specific cameras.

## Other camera users

- Connecting some Canon cameras to the computer after launching Capture One might result in tethered capture being unavailable. If you experience this, connect the camera to the computer prior to launching Capture One.
- This functionality is not supported for Fujifilm RAW files: processing/exporting to DNG, auto mask, healing with Repair Layers and LCC.
- This functionality is not supported for sRAW/mRAW files: LCC analysis and healing with Repair Layers.
- Canon Live View: The image is not rotated according to camera orientation, as Canon does not report the orientation during Live View.

## Digital Back users

- Battery charging on IQ systems can cause issues with stability over Thunderbolt adapters or in low power devices such as Laptops. Switch charging off if you suffer repeated disconnections.
- For tethered shooting with Phase One digital backs make sure that your system can either supply at least 10W power via Firewire (more than most laptops can supply) or make sure to activate the "Force Battery" setting on the back. Use the 4.5m Phase One Firewire cable.
- For tethered shooting with Leaf and Mamiya DM digital backs make sure that your system can supply at least 12W power via Firewire (more than most laptops can supply). Use a Leaf or Mamiya Firewire cable.
- Unless otherwise specified for your Phase One camera system, do not open the shutter on the camera prior to opening the Live View window. Doing so



will generate errors on the digital back after closing the Live View window. The recommended procedure for using Live View is to first open the Live View window, then open the shutter on the camera, use Live View as desired, when done, close the shutter on the camera, and close the Live View window.

- For Leaf Backs and Mamiya DM systems, the camera body must be selected in preferences before connecting the back.
- For Leaf Backs and Mamiya DM systems, in the case of a communication error during firmware upload, please wait 10 minutes before disconnecting the FireWire cable.
- Leaf Aptus II 8 only works with black and white Live View.
- Focus controls for iXR and iXA cameras are only supported by IQ and Credo backs.

# Known issues

Below you will find a list of known issues for Capture One 8 at the time of shipping.

## All users

- A Heal Repair Layer and Spot tool can cause image quality issues when used together
- Browsing folders containing unsupported image files may affect application performance.
- Previews from earlier versions of Capture One may be updated. In some cases, this can affect the application performance the first time images are viewed in this version of Capture One.
- Using e.g. a US laptop keyboard it might be preferable to change some of the standard keyboard shortcuts.

## Mac users

- It is not recommended using Capture One with Mac OS X 10.10 Yosemite.
- Capture One is not compatible with Mac OS X 10.8 Mountain Lion.
- It is only possible to show the Capture One toolbar in “Icon Only” mode.
- Current time name token is 2 hours behind actual time

## Windows users

- Windows drivers are required for some older models of Canon DSLR cameras to be able to shoot tethered. These drivers are available from Canon’s web site.
- If you have Bonjour 2.0.3 installed you may experience problems with Capture Pilot. Bonjour 2.0.2 (shipping with Capture One 8) and 2.0.4 (shipped with iTunes) have been tested to work with Capture Pilot. To check the version number of Bonjour, go to 'Control Panel' and select 'Programs and Features'-
- Importing a catalog can result in the last picture not getting imported.

- Panning during zoom to 100% in Nikon Live View can cause feed to stop

# Supported Cameras

## File Support: Capture One DB

Capture One DB offers file support for the following cameras or digital backs:

Phase One	IQ280	IQ140	P25+	P20
	IQ260	iXU150	P20+	H 25
	IQ260 Achromatic	P65+	Achromatic+	H 20
	IQ250	P40+	P45	H 101
	IQ180	P45+	P30	H 10
	IQ160	P30+	P25	H 5
	IQ160 Achromatic	P21+	P21	LightPhase
	IQ150			
Mamiya	DM56	DM22		
	DM40	M31		
	DM33	M22		
	DM28	M18		
Leaf	Credo 80	Aptus-II 12R	Aptus-II 8	AFi-II 12
	Credo 60	Aptus-II 12	Aptus-II 7	AFi-II 10
	Credo 50	Aptus-II 10R	Aptus-II 6	AFi-II 7
	Credo 40	Aptus-II 10	Aptus-II 5	AFi-II 6

## File Support: Capture One Pro

In addition to the above cameras, Capture One Pro offers file support for the following cameras or digital backs:

Leaf	Aptus 75S	AFi 7	Aptus 75	Aptus 22
	Aptus 65S	AFi 6	Aptus 65	Aptus 17
	Aptus 54S	AFi 5		
Sony	A7R	A850	A200	NEX-6
	A7S	A700	A100	NEX-5T
	A7	A580	a6000	NEX-5R
	A99	A560	a5100	NEX-5N
	A77 II	A550	a5000	NEX-5
	A77	A500	a3000	NEX-3N
	A65	A450	RX1R	NEX-F3
	A58	A390	RX1	NEX-C3
	A57	A380	R1	NEX-3
	A55	A350	RX10	NEX-VG20
	A37	A330	RX100 III	NEX-VG30
	A35	A300	RX100 II	NEX-VG900
	A33	A290	RX100	QX-1
	A900	A230	NEX-7	

Canon	1D C	70D	350D/Rebel XT	G15 (preliminary)	
	1D X	60D	300D/Rebel	G12	
	1D Mark IV	50D	100D/Rebel SL1	G11	
	1Ds Mark III	40D	1200D/Rebel T5	G10	
	1D Mark III	30D	1100D/Rebel T3	G9	
	1D Mark II N	20D	1000D/Rebel XS	G6	
	1Ds Mark II	10D	100D/Rebel SL1	G5	
	1D Mark II	700D/Rebel T5i	D60	G3	
	1Ds	650D/Rebel T4i	D30	G2	
	1D	600D/Rebel T3i	M	S120	
	5D Mark III	550D/Rebel T2i	Pro 1	S110	
	5D Mark II	500D/Rebel T1i	G1 X mk II	S100	
	5D	450D/Rebel XSi	G1 X	S95	
	6D	400D/Rebel XTi	G16	S90	
	7D				
	Nikon	D4s	D800E	D50	P7800
D4		D700	D40X	P7700	
DF		D610	D40	P7100	
D3s		D600	D7100	P7000	
D3X		D300s	D7000	P6000	
D3		D300	D5300	1 AW1	
D2Xs		D200	D5200	J3	
D2X		D100	D5100	J2	
D2Hs		D90	D5000	J1	
D2H		D80	D3200	V2	
D1X		D70s	D3100	V1	
D1H		D70	D3000	S1	
D810		D60	P330	Coolpix A	
D800					
Leica		M Typ 240	X1	V-Lux 4	D-Lux 4
		M Typ 220	X Vario	D-Lux 6	Digilux 3
	M-Monochrom	M9	D-Lux 5	Digital Module R	
	X2	M8			
Fujifilm	X-T1	X-S1	S5 Pro	X100	
	XQ1	X-E2	S3 Pro	X30	
	X-A1	X-E1	S2 Pro	X20	
	X-M1	XF1	X100S	X10	
	X-Pro1				
Olympus	E-M1	E-PL1	E-510	E-10	
	E-M5	E-PM2	E-450	E-20	
	E-M10	E-PM1	E-P3	E-30	
	Stylus 1	XZ-2 iHS	E-P2	E-330	
	E-5	XZ-1	E-P1	E-300	
	E-P5	XZ-10	E-420	E-400	
	E-PL5	E-620	E-410	C-7070	
	E-PL3	E-3	E-500	C-8080	
	E-PL2	E-520	E-1		
Panasonic	GX7 (preliminary)	GH4	G2	FZ72	
	GX1	GH3	G1	FZ45	
	GF6 (preliminary)	GH2	G10	FZ200	
	GF5	GH1	LX7	FZ150	
	GF3	G6	LX5	FZ100	
	GF2	G5	LX3	LF1	
	GF1	G3			

<b>Pentax</b>	K-01 MX-1 K-3 K-5 IIs K-5 II K-5 K50	K-30 K-r K20D K10D K7 KX K200D	K110D K100D Super K100D K2000/K-m *istDL2 *istDL	*istD *istDS2 *istDS Q10 Q7 Q (PEF Only)
<b>Ricoh</b>	GR GR DIGITAL IV GR DIGITAL III	GR DIGITAL II GR DIGITAL GX100	GX200 GRX S10 GXR P10	GXR A16 GXR A12
<b>Samsung</b>	EX2F NX20 NX11	NX10 NX5 NX300	NX210 NX200	NX100 NX1000

Mamiya: MZD, ZD Back.

Epson: R-D1s, R-D1.

Konica Minolta: Alpha 5 D, Alpha 7 D, A1, A2.

Other files: CinemaDNG, Linear DNG, DNG 1.2

## File Support: Capture One Pro and Express (for Sony)

Capture One Pro (for Sony) and Capture One Express (for Sony) have file support for the Sony cameras above.

## Tethered Support: Capture One DB

Capture One DB has tethered support for these cameras or digital backs:

<b>Phase One</b>	IQ280 IQ260 IQ260 Achromatic IQ250 IQ180 IQ160 IQ160 Achromatic IQ150	IQ140 iXU150 P65+ P40+ P45+ P30+ P21+	P25+ P20+ Achromatic+ P45 P30 P25 P21	P20 H 25 H 20 H 101 H 10 H 5 LightPhase
<b>Mamiya</b>	DM56 DM40 DM33 DM28	DM22 M31 M22 M18		
<b>Leaf</b>	Credo 80 Credo 60 Credo 50 Credo 40	Aptus-II 12R Aptus-II 12 Aptus-II 10R Aptus-II 10	Aptus-II 8 Aptus-II 7 Aptus-II 6 Aptus-II 5	AFi-II 12 AFi-II 10 AFi-II 7 AFi-II 6

## Tether Support: Capture One Pro

In addition to the above cameras, Capture One Pro offers tethered support for the following cameras:

<b>Leaf</b>	Aptus 75S Aptus 65S Aptus 54S	AFi 7 AFi 6 AFi 5	Aptus 75 Aptus 65	Aptus 22 Aptus 17
<b>Sony</b>	A7R A7S	A7 A99	A77 II a6000	a5000
<b>Canon</b>	1D C 1D X 1D Mark IV 1D Mark III 1Ds Mark III 5D Mark III	5D Mark II 6D 7D 70D 60D 50D	40D 700D/Rebel T5i 650D/Rebel T4i 600D/Rebel T3i 550D/Rebel T2i 500D/Rebel T1i	450D/Rebel XSi 1200D/Rebel T5 1100D/Rebel T3 1000D/Rebel XS 100D/Rebel SL1 M
<b>Nikon</b>	D4s D4 D3s D3X D3 D810 D800	D800E D700 D610 D600 D300s D300 D200	D90 D80 D60 D40X D40 D7100	D7000 D5300 D5200 D5100 D5000 DF

## Tether Support: Capture One Pro (for Sony)

Capture One Pro (for Sony) offers tethered support for these cameras:

<b>Sony</b>	A7R A7S	A7 A99	A77 II a6000	a5000
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# Supported Lenses

These are the lenses with automatic lens corrections in Capture One 8:

Phase One	Digital AF 28mm f/4.5 Aspherical Digital AF 35mm f/3.5 Digital AF 45mm f/2.8 Digital AF 80mm f/2.8 Digital AF 150mm f/2.8 IF	Digital AF 150mm (2x Tele) f/5.6 Digital AF 120mm f/4 Macro Digital Zoom AF 75-150mm f/4.5 MF 120mm f/4 Macro 45mm TS f/3.5
Schneider-Kreuznach	LS 28mm f/4.5 Aspherical LS 40-80mm f/4.0-5.6 LS 55mm f/2.8 LS 75-150mm f/4-5.6 LS 80mm f/2.8 LS 110mm f/2.8 LS 150mm f/3.5 LS 150mm (2x Tele) f/7.0 LS 240mm f/4.5 LS 240mm (2x Tele) f/9.0	
Mamiya	Sekor AF 120mm f/4.0 Macro Sekor MF 120mm f/4.0 Macro Sekor AF 150mm IF D (2x Tele) f/5.6 Sekor AF 150mm f/2.8 IF D Sekor AF 28mm f/4.5 Aspherical D Sekor AF 80mm f/2.8 D Sekor LS 110mm f/2.8 D Sekor LS 150mm (2x Tele) f/7.0 Sekor LS 150mm f/3.5 Sekor LS 40mm IF (2x Tele) f/9.0	Sekor LS 240mm f/4.5 Sekor LS 55mm f/2.8 D Sekor LS 80mm f/2.8 D A 200mm f/2.8 APO A 300mm f/2.8 APO A 500mm f/4.5 APO AF 35mm f/3.5 AF 45mm f/2.8
Carl Zeiss (Hasselblad V)	Distagon T* 2.8/80 CF Distagon T* 3.5/60 CF Distagon T* 4/40 IF CFE Makro-Planar T* 4/120 CFE	
Carl Zeiss (Contax 645)	Apo-Makro-Planar T* 4/120 Distagon T* 2.8/45 Distagon T* 3.5/35 Distagon T* 3.5/55	Planar T* 2/80 Sonnar T* 2.8/140 Sonnar T* 4/210
Hasselblad	HC 2.2/100 HC 2.8/80 HC 3.2/150 HC 3.5-4.5/50-110	HC 3.5/35 HC 4/120 HCD 4/28



Canon	<p>EF 16-35mm f/2.8L II USM  EF 17-40mm f/4L USM  EF 20mm f/2.8 USM  EF 24-70mm f/2.8L USM  EF 24-70mm f/2.8L II USM  EF 24-70mm f/4L IS USM  EF 24-105mm f/4L IS USM  EF 24mm /1.4L II USM  EF 35mm f/1.4L USM  EF 50mm f/1.2L USM  EF 50mm f/1.4 USM  EF 50mm f/1.8 II  EF 70-200mm f/2.8L IS II USM  EF 70-200mm f/2.8L IS USM</p>	<p>EF 70-200mm f/4 L IS USM  EF 85mm f/1.2L II USM  EF 85mm f/1.8 USM  EF 100mm f/2.8L Macro IS USM  EF 100-400mm f/4.5-5.6L IS USM  EF 135mm f/2L USM  EF 300mm f/4L IS USM  EF-S 10-22mm f/3.5-4.5 USM  EF-S 17-55mm f/2.8 IS USM  EF-S 17-85mm f/4-5.6 IS USM  EF-S 18-135mm f/3.5-5.6 IS STM  EF-S 18-55mm f/3.5-5.6 IS STM  EF-S 18-55mm f/3.5-5.6 IS</p>
Nikon	<p>AF NIKKOR 20mm f/2.8D  AF NIKKOR 28-105mm f/3.5-4.5 D IF  AF NIKKOR 35-70mm f/2.8D  AF NIKKOR 35mm f/2D  AF NIKKOR 50mm f/1.8D  AF-S DX NIKKOR 16-85mm f/3.5-5.6G ED VR  AF-S DX NIKKOR 18-105mm f/3.5-5.6G ED VR  AF-S DX NIKKOR 18-200mm f/3.5-5.6G ED VR  AF-S DX NIKKOR 18- 300mm f/3.5-5.6G ED VR  AF-S DX NIKKOR 18-55mm f/3.5-5.6G VR  AF-S DX NIKKOR 35mm f/1.8G  AF-S DX Zoom-Nikkor 17-55mm f/2.8G IF-ED  AF-S NIKKOR 14-24mm f/2.8G ED  AF-S NIKKOR 16-35mm f/4G ED VR  AF-S NIKKOR 17-35mm f/2.8 ED  AF-S NIKKOR 24-120mm f/4G ED VR  AF-S NIKKOR 24-70mm f/2.8G ED  AF-S NIKKOR 24-85mm f/3.5-4.5G ED VR  AF-S NIKKOR 24-85mm f/3.5-4.5G ED</p>	<p>AF-S NIKKOR 24mm f/1.4G ED  AF-S NIKKOR 28-300mm f/3.5-5.6G ED VR  AF-S NIKKOR 28-70mm f/2.8D IF-ED  AF-S NIKKOR 35mm f/1.4G  AF-S NIKKOR 50mm f/1.4G  AF-S NIKKOR 50mm f/1.8G  AF-S NIKKOR 70-200mm f/2.8G ED VR II  AF-S NIKKOR 70-200mm f/2.8G ED VR  AF-S NIKKOR 70-200mm f/4G ED VR  AF-S NIKKOR 85mm f/1.4G  AF-S NIKKOR 85mm f/1.8G  AF-S NIKKOR 58 mm 1.4G  AF-S VR Micro-Nikkor 105mm f/2.8G IF-ED  AF-S VR Zoom-Nikkor 70-300mm f/4.5-5.6G IF- ED  1 NIKKOR 11-27.5mm f/3.5-5.6  1 NIKKOR VR 10-30mm f/3.5-5.6  1 NIKKOR AW 11-27.5mm f/3.5-5.6  1 NIKKOR AW 10mm f/2.8</p>
Pentax	<p>SMC-D FA 100mm F2.8 WR  SMC-DA 15mm F4 Al Limited  SMC-DA 18-55mm F3.5-5.6 AL WR  SMC-DA 21mm F3.2 Al Limited</p>	<p>SMC-DA 70mm F2.4 Limited  SMC-FA 31mm F1.8 Limited  SMC-FA 43mm F1.9 Limited</p>
Panasonic	<p>LEICA DG SUMMILUX 25mm / F1.4 ASPH  LUMIX G 14mm F2.5 ASPH.  LUMIX G 20mm F1.7 ASPH.</p>	<p>LUMIX G VARIO 14-42 f3.5-5.6 II ASPH. O.I.S.  LUMIX G X VARIO 12-35mm F2.8 ASPH.  POWER O.I.S</p>
Olympus	<p>M.ZUIKO DIGITAL 14-42mm 1:3.5-5.6 II R  M.ZUIKO DIGITAL 17mm 1:2.8 Pancake  M.ZUIKO DIGITAL 25mm 1:1.8  M.ZUIKO DIGITAL 45mm 1:1.8  M.ZUIKO DIGITAL ED 12-40mm 1:2.8  M.ZUIKO DIGITAL ED 12-50mm 1:3.5- 6.3 EZ  M.ZUIKO DIGITAL ED 12mm 1:2.0  M.ZUIKO DIGITAL ED 17mm 1:1.8  M.ZUIKO DIGITAL ED 60mm 1:2.8 Macro  M.ZUIKO DIGITAL ED 75-300mm 1:4.8-6.7  M.ZUIKO DIGITAL ED 75mm 1:1.8  M.ZUIKO DIGITAL ED 9-18mm 1:4.0-5.6</p>	<p>ZUIKO DIGITAL ED 7-14mm 1:4.0  ZUIKO DIGITAL ED 9-18mm 1:4.0-5.6  ZUIKO DIGITAL 11-22mm 1:2.8-3.5  ZUIKO DIGITAL ED 12-60mm 1:2.8-4.0 SWD  ZUIKO DIGITAL ED 14-35mm 1:2.0 SWD  ZUIKO DIGITAL 14-54mm 1:2.8-3.5 II  ZUIKO DIGITAL ED 50mm 1:2.0 Macro  ZUIKO DIGITAL ED 150mm 1:2.0  ZUIKO DIGITAL ED 300mm 1:2.8.  ZUIKO DIGITAL ED 50-200mm 1:2.8-3.5 SWD  ZUIKO DIGITAL ED 90-250mm 1:2.8  ZUIKO DIGITAL ED 35-100mm 1:2.0</p>

Sigma (Canon EF)	10-20mm F3.5 EX DC HSM 105mm F2.8 EX DG OS HSM Macro 120-400mm F4.5-5.6 DG APO OS HSM 150-500mm F5-6.3 APO DG OS HSM 150mm F2.8 EX DG OS HSM APO Macro 17-50mm F2.8 EX DC OS HSM 17-70mm F2.8-4 DC Macro OS HSM   C 18-200mm F3.5-6.3 II DC OS HSM 18-250mm F3.5-6.3 DC MACRO OS HSM 18-35mm F1.8 DC HSM   A 24-105mm F4 DG OS HSM   Art 24-70mm F2.8 IF EX DG HSM	24mm F1.8 EX DG ASP Macro 28mm F1.8 EX DG ASP Macro 30mm F1.4 EX DC HSM 50mm F1.4 EX DG HSM 50mm F2.8 EX DG Macro 85mm F1.4 EX DG HSM APO 50-150mm F2.8 EX DC OS HSM APO 70-200mm F2.8 EX DG OS HSM 10-20mm F4-5.6 EX DC HSM 50- 500mm F4.5-6.3 APO DG OS HSM 70-300mm F4-5.6 APO DG Macro APO Macro 180mm F2.8 EX DG OS HSM
Sigma (Nikon F)	120-300mm F2.8 EX DG OS APO HSM 20mm F1.8 EX DG ASP RF 35mm F1.4 DG HSM   Art	70-300mm F4-5.6 DG OS 70mm F2.8 EX DG Macro 12-24mm F4.5-5.6 DG HSM II
Sigma (Sony E)	19mm f2.8 EX DN 30mm F2.8 EX DN 60mm F2.8 DN A	
Sony	A 50mm F1.4 (SAL50F14) E 18-55mm f/3.5-5.6 OSS (SEL1855) E PZ 16-50 mm F3.5-5.6 OSS (SELP1650) FE 28-70mm F3.5-5.6 OSS (SEL2870) A 50 mm F2.8 Macro (SAL50M28) A Carl Zeiss Distagon T* 24mm F2 ZA SSM (SAL24F20Z) A Carl Zeiss Vario-Sonnar T* 24-70 mm F2.8 ZA SSM (SAL 2470Z) A Carl Zeiss Planar T* 85 mm F1.4 ZA (SAL85F14Z) A 70-300mm F4.5-5.6 G SSM (SAL 70300G) E 50mm F1.8 OSS (SEL50F18) A 100mm F2.8 Macro (SAL100M28) A 85 mm F2.8 SAM (SAL85F28) A 35 mm F1.4G (SAL 35F14G) A Carl Zeiss Vario-Sonnar T* 16-35mm F2.8 ZA SSM (SAL1635Z) A Carl Zeiss Sonnar T* 135 mm F1.8 ZA (SAL 135F18Z) A DT 11-18 mm F4.5-5.6 (SAL1118) A DT 16-50mm F2.8 SSM (SAL1650)	
Leica	50mm f/2 Summicron-M	
Fixed Lens cameras	Canon PowerShot G1 X Canon PowerShot G12 Canon PowerShot G15 Canon PowerShot G16 Canon PowerShot S100/S110 Canon PowerShot S120 Fujifilm FinePix X100 Nikon COOLPIX A Nikon COOLPIX P7700	Nikon COOLPIX P7800 Olympus XZ 6-24mm Olympus XZ-10 Ricoh GR Sony Cyber-shot DSC- RX100 II Sony Cyber-shot DSC-RX100 Sony Cyber-shot DSC-RX10 Sony RX1/RX1R