Capture One 8

THE PROFESSIONAL CHOICE IN IMAGING SOFTWARE

RELEASE NOTES
English

PHASE**ONE**

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Capture One 8.3.5 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 400 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 timesaving 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 five versions:

- Pro, DB, Cultural Heritage (CH), Pro (for Sony) and Express (for Sony).

Highlights, Capture One 8.3.5

This is a service release providing a bug fix for Win 10 users only

Bug fixes

- (Win) Fixed an issue with the .net implementation following the Windows 10 Anniversary Edition update.

Highlights, Capture One 8.3.4

This is a service release providing bug fixes, and camera support

OS support

- Mac OS X 10.11

Camera support

- File support: Sony ILCE-7RM2 (a7R II) uncompressed support
- File and tethering support: Sony ILCE-7SM2 (a7S II) including uncompressed
- File support: Sony DSC-RX1RM2 (prelim) including uncompressed support
- Panasonic GX8 (revised)
- EOS M3 (revised)
- Leica Q (revised)
- Pentax K3 II (revised)*

Pixel shift mode not supported

Bug fixes

- (Win) Fixed: Sync issue with Capture Pilot Geo tags and XMP
- (Win) Fixed: Issue moving images with local adjustments

- (Mac) OpenCL crash with Nvidia cards on OSX 10.11

Highlights, Capture One 8.3.3

This is a service release providing bug fixes, and camera support

OS support

- Windows 10 64-bit

Camera support

- Additional file support: Canon 5DS/5DS R (sRAW, mRAW)
- File and tethering support: Canon EOS M3*
- File support: Canon G3X
- File support: Nikon D810A
- File support: Pentax K-3 II**
- File support: Panasonic GX8
- File support: Fuji XT10

*SDK does not allow exposure control tethered
**Pixel shift mode not supported

Bug fixes

- (Win) Fixed: Precision issue with Wacom and curves
- (Win) Fixed: Hang issue with camera settings tool

- (Mac) Fixed: An issue with live view for Leaf Aptus backs
- (Mac) Fixed: Stitch with Photoshop script for Photoshop CC 2015
- (Mac) Improved: Auto Crop for Cultural Heritage

- (Win/Mac) Miscellaneous minor fixes

Lens support

- Sony E 30mm F3.5 Macro (SEL30M35)
- Sony E 16mm F2.8 (SEL16F28)
- Nikon AF DC-Nikkor 135mm f/2D
- Canon EF 40mm f/2.8 STM
- Canon EF 100mm f/2.8 Macro USM
- Zeiss Batis 1.8/85
- Zeiss Batis 2/25

Highlights, Capture One 8.3.2

This is a service release providing bug fixes, and camera support

Camera support

- Preliminary File and tethering support: Canon 5DS/5DS R
- Tethering support: Canon EOS 750D/REBEL T6i/EOS Kiss X8i
- Tethering support: Canon EOS 760D/REBEL T6s/EOS 8000D

Bug fixes

- (Win) Fixed: Clean up of cache after removing files
- (Win) Fixed: Scaling issue with Color Editor
- (Win) Fixed: An issue that affects drag and drop functionality with Windows 8 and Windows 10 after installing security update KB3072633

- (Mac) Fixed: An issue where some documents failed to load

- (Win/Mac) Miscellaneous minor fixes

Highlights, Capture One 8.3.1

This is a service release providing bug fixes, lens and camera support

Camera support

- File and tethering support: Sony ILCE-7RM2 (a7R II)
- File and tethering support: Sony DSC-RX100M4
- File and tethering support: Sony DSC-RX10M2
- File and tethering support: Nikon D7200
- File support: Nikon V3
- File support: Nikon J4
- File support: Samsung NX mini
- File support: Samsung NX3000
- File support: Samsung NX2000
- File support: Canon EOS 750D
- File support: Canon EOS 760D
- Preliminary file support: Leica Q (Typ 116)

Lens support

- Schneider Kreuznach 35mm f/3.5

Bug fixes

- (Win) Fixed: Crashes when using Fibonacci spiral
- (Win) Fixed: Crash when using Win 7 without SP1
- (Win) Cosmetic improvements
- (Win) Miscellaneous stability issues

- (Mac) Fixed: Tethering issue with Pro (for Sony) Edition
- (Mac) Fixed: Sync to XMP
- (Mac) Fixed: Issues with EIP applying LCC
- (Mac) Fixed: Background process visible on 10.9
- (Mac) Fixed: Auto-fill behavior for tokens
- (Mac) Fixed: Miscellaneous stability issues
- (Mac) Fixed: Cosmetic improvements

- (Win/Mac) Fixed: Naming issue with Olympus TG4 firmware update

Highlights, Capture One 8.3

This is a feature release providing new features, bug fixes, performance enhancements, stability improvements, camera and lens support.

New features and improvements

- New high performance tethering engine (Mac)
- Modernized Capture tool
- Camera settings tool*
- IQ style grid modes

Functionality is defined by back firmware, or the DSLR camera attached

Camera support

- Tethering and file support: Phase One IQ3 50MP
- Tethering and file support: Phase One IQ3 60MP
- Tethering and file support: Phase One IQ3 80MP
- Preliminary file support for Canon 5DS
- Preliminary file support for Canon 5DS R
- File support for Olympus TG-4
- DNG 1.4 support

Lens support

- Schneider Kreuznach Macro LS 120mm f/4.0
- Nikon AF-S NIKKOR 28mm f/1.8G
- Nikon AF-S Micro-Nikkor 60mm f/2.8G ED

Bug fixes

- (Mac) Fixed: Crash when changing workspace
- (Mac) Fixed: Output naming token for image date returned error
- (Mac) Fixed: Auto crop issue drawing proxies on restart in CH edition
- (Mac) Fixed: Pink highlights in Canon 70D files
- (Mac) Fixed: Focus mask not shown in some zoom levels
- (Mac) Fixed: Issue with outputting pure white with OpenCL enabled
- (Mac) Stability fixes and improvements

- (Win) Fixed: Selection issues with Ctrl+Arrow, Ctrl+A shortcuts
- (Win) Fixed: An issue with the clipboard and purple fringing
- (Win) Fixed: Persist the "original crop" mode after re-launch
- (Win) Fixed: Localization issues with Chinese and Japanese characters
- (Win) Fixed: A location issue when outputting using digit counter
- (Win) Over 30 other small bug fixes and improvements
- (Win) Stability fixes and improvements

System Requirements

Capture One may run on other and older equipment than what is 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, Windows 10® 64-bit (version 1607)
- 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 10.9.5 or 10.10.5 or 10.11.x
- 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. It is not possible to upgrade sessions from Capture One 4 or 5. 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/downloads.aspx
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/downloads.aspx
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 not optimized for some cameras.

- Operation under virtualization software (e.g Parallels, Hackintosh etc) may cause instability. We do not recommend you use these OS configurations.

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.

- The following functionality is not supported for Fujifilm RAW files: processing/exporting to DNG, auto mask, healing with Repair Layers, focus mask and LCC.

- The following 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 of 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

- 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.

- Editing images in external applications other than Adobe Photoshop might result in unexpected behavior.

Mac users

- It is only possible to show the Capture One toolbar in "Icon Only" mode.

- Live View over USB can stall without the use of a repeater.

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.

- Operation under RAMDisk by Dataram is known to cause issues with disk labeling. Capture One is not supported with this configuration.

Supported Cameras

File Support: Capture One DB

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

Phase One			
IQ3 80MP	IQ160 Achromatic	P25+	P20
IQ3 60MP	IQ150	P21+	H 25
IQ3 50MP	IQ140	P20+	H 20
IQ280	iXU150	Achromatic+	H 101
IQ260	P65+	P45	H 10
IQ260 Achromatic	P40+	P30	H 5
IQ250	P45+	P25	LightPhase
IQ180	P30+	P21	
IQ160			

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 II		a200	NEX-7
a7R	a900	a100	NEX-6
a7S II	a850	a6000	NEX-5T
a7S	a700	a5100	NEX-5R
a7 II	a580	a5000	NEX-5N
a7	a560	a3000	NEX-5
a99	a550	RX1R II	NEX-3N
a77 II	a500	RX1R	NEX-F3
a77	a450	RX1	NEX-C3
a65	a390	R1	NEX-3
a58	a380	RX10	NEX-VG20
a57	a350	RX10M2	NEX-VG30
a55	a330	RX100M4	NEX-VG900
a37	a300	RX100 III	NEX-VG900E
a35	a290	RX100 II	QX-1
a33	a230	RX100	

Canon			
1D C	7D	350D/Rebel XT	G15 (preliminary)
1D X	70D	300D/Rebel	G12
1D Mark IV	60D	100D/Rebel SL1	G11
1Ds Mark III	50D	1200D/Rebel T5	G10
1D Mark III	40D	1100D/Rebel T3	G9
1D Mark II N	30D	1000D/Rebel XS	G6
1Ds Mark II	20D	100D/Rebel SL1	G5
1D Mark II	10D	D60	G3
1Ds	760D	D30	G2
1D	750D	M	S120
5DS	700D/Rebel T5i	M3	S110
5DS R	650D/Rebel T4i	Pro 1	S100
5D Mark III	600D/Rebel T3i	G7X	S95
5D Mark II	550D/Rebel T2i	G1 X mk II	S90
5D	500D/Rebel T1i	G1 X	
6D	450D/Rebel XSi	G16	
7D Mark II	400D/Rebel XTi		

Nikon			
D4s		D40X	P330
D4	D750	D40	P7800
DF	D700	D7200	P7700
D3s	D610	D7100	P7100
D3X	D600	D7000	P7000
D3	D300s	D5500	P6000
D2Xs	D300	D5300	1 AW1
D2X	D200	D5200	J4
D2Hs	D100	D5100	J3
D2H	D90	D5000	J2
D1X	D80	D3300	J1
D1H	D70s	D3200	V2
D810	D70	D3100	V1
D810A	D60	D3000	S1
D800	D50	P340	Coolpix A
D800E			

Leica			
M (Typ 240)	X1	C (Typ 112)	D-Lux 5
M (Typ 220)	X Vario	V-Lux 4	D-Lux 4
M-Monochrom	M9	D-Lux (Typ 109)	Digilux 3
X (Typ 113)	M8	D-Lux 6	Digital Module R
X2	T (Typ 701)	Q (Typ 116) (prelim)	

Fujifilm			
X-T1	X-Pro1	X100T	X10
XQ1	X-S1	X100S	XT10
X-A1	X-E2	X100	S5 Pro
X-A2	X-E1	X30	S3 Pro
X-M1	XF1	X20	S2 Pro

Olympus			
E-M1			E-1
E-M5 II	E-PL2	E-520	E-10
E-M5	E-PL1	E-510	E-20
E-M10	E-PM2	E-450	E-30
Stylus 1	E-PM1	E-P3	E-330
E-5	XZ-2 iHS	E-P2	E-300
E-P5	XZ-1	E-P1	E-400
E-PL7	XZ-10	E-420	C-7070
E-PL5	E-620	E-410	C-8080
E-PL3	E-3	E-500	TG-4

Panasonic	GX8 GX7 GX1 GF7 GF6 GF5 GF3 GF2 GF1	GM5 GM1 GH4 GH3 GH2 GH1 G6 G5	G3 G2 G1 G10 LX100 LX7 LX5 LX3	FZ1000 FZ72 FZ45 FZ200 FZ150 FZ100 LF1
Pentax	K-01 MX-1 K-3 (PEF only) K-3 II 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 (FW 1.0.0 Only) Q (PEF Only)
Ricoh	GR GR DIGITAL IV GR DIGITAL III	GR DIGITAL II GR DIGITAL GX100	GX200 GRX S10 GXR P10	GXR A16 GXR A12
Samsung	NX1 NX30 NX20	NX11 NX10 NX5 NXMini	NX3000 NX300 NX210 NX200	NX2000 NX100 NX1000 EX2F

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 1.4

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:

Phase One	IQ3 80MP IQ3 60MP IQ3 50MP IQ280 IQ260 IQ260 Achromatic IQ250 IQ180 IQ160	IQ160 Achromatic IQ150 IQ140 iXU150 P65+ P40+ P45+ P30+	P25+ P21+ P20+ Achromatic+ P45 P30 P25 P21	P20 H 25 H 20 H 101 H 10 H 5 LightPhase

Mamiya	DM56 DM40 DM33 DM28	DM22 M31 M22 M18		
Leaf	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:

Leaf	Aptus 75S Aptus 65S Aptus 54S	AFi 7 AFi 6 AFi 5	Aptus 75 Aptus 65	Aptus 22 Aptus 17
Sony	a7R II a7R a7S a7S II	a7 II a7 A99	a77 II RX100M4 RX10M2	a6000 a5100 a5000
Canon	1D C 1D X 1D Mark IV 1D Mark III 1Ds Mark III 5DS 5DSR 5D Mark III 5D Mark II	6D 7D Mark II 7D 70D 60D 50D 40D	760D/Rebel T6s 750D/Rebel T6i 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 EOS M3
Nikon	D4s D4 D3s D3X D3 D810 D800	D800E D750 D700 D610 D600 D300s D300	D90 D80[ii] D60 D40X D40 D7200 D7100	D7000 D5500 D5300 D5200 D5100 D5000 DF

Tether Support: Capture One Pro (for Sony)

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

Sony	a7R II a7R a7S a7S II	a7 II a7 a99	a77 II RX100M4 RX10M2	a6000 a5100 a5000

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 150mm (2x Tele) f/5.6
Digital AF 35mm f/3.5	Digital AF 120mm f/4 Macro
Digital AF 45mm f/2.8	Digital Zoom AF 75-150mm f/4.5
Digital AF 80mm f/2.8	MF 120mm f/4 Macro
Digital AF 150mm f/2.8 IF	45mm TS f/3.5

Schneider-Kreuznach

LS 28mm f/4.5 Aspherical
LS 35mm f/3.5
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 Macro 120mm f/4.0
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 LS 240mm f/4.5
Sekor AF 150mm IF D (2x Tele) f/5.6	Sekor LS 55mm f/2.8 D
Sekor AF 150mm f/2.8 IF D	Sekor LS 80mm f/2.8 D
Sekor AF 28mm f/4.5 Aspherical D	A 200mm f/2.8 APO
Sekor AF 80mm f/2.8 D	A 300mm f/2.8 APO
Sekor LS 110mm f/2.8 D	A 500mm f/4.5 APO
Sekor LS 150mm (2x Tele) f/7.0	AF 35mm f/3.5
Sekor LS 150mm f/3.5	AF 45mm f/2.8
Sekor LS 40mm IF (2x Tele) f/9.0	

Alpa

Alpagon 5.6/23 mm
Alpar 4.0/35 mm
Alpagon 5.6/70mm

Rodenstock	
HR Digaron-S 5.6/23 mm	HR Digaron-W 5.6/70 mm
HR Digaron-S 4.0/35 mm	HR Digaron – W 4.0/40mm/Aerial
HR Digaron-W 4.0/40 mm	HR Digaron – W 4.0/50mm/Aerial
HR Digaron-W 4.0/50 mm	HR Digaron – W 5.6/70mm/Aerial

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	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 40mm f/2.8 STM 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	EF 70-200mm f/4 L IS USM EF 85mm f/1.2L II USM EF 85mm f/1.8 USM EF 100mm f/2.8 Macro 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
Nikon	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 NIKKOR 20mm f/1.8G ED AF-S DX NIKKOR 16-85mm f/3.5-5.6G ED VR AF-S DX NIKKOR 18-70mm f/3.5-4.5G IF-ED 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 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 NIKKOR 28mm f2.8ED AF-S VR Micro-Nikkor 105mm f/2.8G IF-ED AF-S Micro-Nikkor 60mm f/2.8GED AF-S VR Zoom 70-300mm f/4.5-5.6G IF- ED AF DC-Nikkor 135mm f/2D 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
Pentax	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	SMC-DA 70mm F2.4 Limited SMC-FA 31mm F1.8 Limited SMC-FA 43mm F1.9 Limited

Panasonic	LEICA DG SUMMILUX 25mm / F1.4 ASPH LUMIX G 14mm F2.5 ASPH. LUMIX G 20mm F1.7 ASPH.	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
Olympus	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 40-150mm f/2.8 Pro 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	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
Sigma (Canon EF)	8-16mm F4.5-5.6 DC HSM 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) E 30mm F3.5 Macro (SEL30M35) E 16mm F2.8 (SEL16F28) 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
Zeiss	Zeiss Batis 1.8/85 Zeiss Batis 2/25 Otus 55mm f1.4 Otus 85mm f1.4 Distagon T* 2/35mm ZF.2 Distagon T* 1.4/35mm ZF.2 Zeiss Distagon T* 3.5/18mm ZF.2 Zeiss Distagon T* 2.8/21mm ZF.2 Zeiss Distagon T* 2.8/15mm ZF.2 Zeiss Distagon T* 2/28mm ZF.2 Zeiss Distagon T* 3.5/18mm ZF.2 Zeiss Distagon T* 3.5/18mm ZF.2 Zeiss Distagon T* 2.8/25mm ZF.2 Zeiss Distagon T* 2/25mm ZF.2 Zeiss Distagon T* 2.8/25mm ZF.2 Planar T* 1,4/50mm ZF.2 Makro Planar T* 2/50mm ZF.2 Planar T* 1.4/85mm ZF.2 Makro Planar 2/100mm ZF.2 Apo Sonnar T* 2/135mm ZF.2
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 Leica D-Lux (Typ 109) Leica X (Typ 113) Nikon COOLPIX A Nikon COOLPIX P340 Nikon COOLPIX P7700 Nikon COOLPIX P7800 Olympus XZ 6-24mm Olympus XZ-10 Panasonic LX100 Ricoh GR Sony Cyber-shot DSC- RX100 II Sony Cyber-shot DSC-RX10 Sony Cyber-shot DSC-RX100 Sony RX1/RX1R