

# P 40+ Camera System

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Inset image © Phase One - Kajsa Björnberg

## Capture Revolution

The Phase One P 40+ Camera system is designed to be a seamless extension of your creativity. Extraordinary capture becomes natural through ease of use and direct control.

Shoot digital or film with no lens or back restrictions. Take advantage of the Phase One digital lenses or use your Mamiya 645 AF/ AFD or Hasselblad V lenses for an even broader choice.

The P 40+ is a capture revolution. With capture rates of up to 1,8 frames per second in Sensor+ mode and an ISO range from 50 to 3200, this digital back is truly revolutionary.

The Sensor+ technology allows you to switch between 40 and 10 megapixel captures, offering a unique tool for almost any job.

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# P 40+ Digital Back Specifications



Inset image © Phase One - Kajsa Björnberg

- Sensor+ technology solution
- Switch between 40 and 10 megapixel captures using Sensor+
- 40 megapixels for highest image quality and detail level
- 10 megapixels for higher sensitivity and faster workflow
- ISO range from 50 – 3200
- Fast capture rates - up to 1.8 fps.
- Extreme 12.5 f-stop dynamic range

Imaging technology	
CCD	Less than fullframe CCD
Lens Factor	1.3
Resolution	40 megapixels
Active pixels	7320 x 5484 pixels
CCD size effective	44 mm x 33 mm
Pixel size	6 x 6 micron
Image ratio	4:3
Dynamic range	12.5 f-stops

P 40+ full resolution capture mode	
Resolution	40 megapixels
Pixel size	6 x 6 micron
RAW file compression	IIQ large: 40 MB IIQ small: 26 MB
ISO	50, 100, 200, 400, 800

Sensor+ capture mode	
Resolution	10 megapixels
Pixel size	12 x 12 micron
RAW file compression	IIQ large: 10 MB IIQ small: 7 MB
ISO	200, 400, 800, 1600, 3200

Output files	
Color depth	16 bit per color
Image file formats	All output formats of Capture One are possible: TIFF-RGB, TIFF-CMYK, JPEG
Color management	RGB, Embedded ICC profile, CMYK

LCD screen	
Size	2.2"
Resolution	230,400 pixels
Viewing angle	160°

Lighting	
Supports all photographic lights: Flash, tungsten, daylight, fluorescent, HMI	

Operating conditions	
Temperature	0° to 40°C (32° to 122°F)
Humidity	15 to 80% RH (non-condensing)

Computer minimum requirements	
Mac	Fast Intel Core™ 2 Duo or later CPU, 4 GB RAM, Fast HDD: RAID 0 configured systems for max performance, Nvidia 8800 series graphics card or newer
PC	Intel® Pentium® 4, 2 GB RAM, 10 GB free hard disk space, IEEE 1394 interface, Windows XP®, Service Pack 3 or Windows Vista®, Service Pack 1

P+ back mounts	
Phase One/ Mamiya	Phase One 645 AF, Mamiya 645AFDII/ AFDIII, Mamiya RZ67 PRO IID via adaptor
Phase One H101	Hasselblad H1 and H2
Hasselblad V	Hasselblad 555ELD, 553ELX, 503CW and 501CM Via adaptor: Mamiya RZ67 Pro II Mamiya RB67
Contax	Contax 645

Wide angle & technical cameras	
4 x 5" via FlexAdaptor: Arca Swiss, Cambo, Linhof, Toyo, Sinar, Plaubel, Horseman.	

Storage files	
Phase Ones IIQ RAW file format speeds up the image capture and file transfer. It increases the storage capacity by turning the full 16 bit image data into a compact RAW file format. The default IIQ RAW-large format is completely lossless.	

Software	
Capture One 4.8 or later	

Certifications	
CE	

# 645 AF Camera Body Specifications



- Open platform for maximum choice and compatibility
- Durable, proven platform for secure operation
- Ergonomic handling and ease of use
- Use Phase One digital lenses, Mamiya AF/AFD lenses or Hasselblad V lenses
- Guaranteed up to 300.000 captures or 3 years (VA)
- Exposures from 1/4000s to 60 minutes
- Prepared for use with leaf shutter lenses

Shutter speed from 1/4000s to 60 minutes, B and X modes can match the extreme long exposure capability of the P+ digital backs or stop action with fast shutter speed or flash.


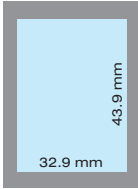
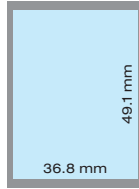
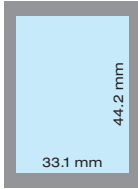
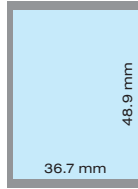
The mirror and viewfinder of the Phase One 645 camera are almost three times larger than those of 35mm cameras, providing much greater control of focus and composition.

While hosting a complete list of features and custom functions, the Phase One 645 camera is extremely easy to use. All settings important to the exposure are easily controlled by manual dials and soft buttons.

<b>Camera type</b>	Modular 645 AF SLR body
<b>Lenses</b>	Phase One Digital and Mamiya 645 AFD Compatible with Hasselblad V lenses Ready for leaf shutter lenses
<b>Backs</b>	Digital back and film ready Open platform back mount
<b>Auto focus</b>	TTL phase-difference AF with 3 focus points Focus confirmation in manual mode Infrared AF assists for unfailing focus Auto focus lock for swift AF/ M shift
<b>Shutter</b>	1/4000s to 60 minutes Up to 2 fps Shutter speed bracketing
<b>Flash</b>	Focal plane shutter: Up to 1/125s Leaf shutter lenses: Up to 1/800s' 1 <sup>st</sup> and 2 <sup>nd</sup> curtain flash synchronization X sync terminal and support for TTL flash
<b>Light Metering</b>	TTL metering (average, spot and auto) Programmable AEL button Exposure compensation: +/- 5EV
<b>Mirror-Up</b>	Electronically-activated by switch on grip

<b>Viewfinder</b>	Fixed prism viewfinder Exchangeable diopter from -5 to +3 LCD panel with full exposure information
<b>Focusing Screen</b>	Interchangeable focus screens Laser engraved mask for digital back Matte, Grid, Checker, Microprism
<b>Selftimer</b>	Self-timer from 2 to 60 sec
<b>Remote</b>	Screw-in cable release on shutter button Terminal for electronic triggering devices
<b>Stop Down Preview</b>	Stop down button on front of camera
<b>Tripod Socket</b>	1/4 inch and 3/8 inch included
<b>Power Requirements</b>	6 AA batteries (standard or rechargeable) External battery pack – 6 AA batteries External AC adapter
<b>User configuration</b>	3 user presets for capture settings 36 custom settings Customizable dials and buttons
<b>Size</b>	W, H, D // 6, 5, 7.2" // 153, 128, 184mm
<b>Weight</b>	61oz. / 1730g. w/o batteries

# P+ Digital Back Overview

	P 65+	P 40+	P 45+	P 30+	P 25+		
<b>Description</b>	World's first full frame medium format digital back, featuring <b>Sensor+</b> with a choice of 60.5 megapixels for finest resolution or scaled full frame captures for fast workflow and low light versatility.	Fastest digital back with up to 1.8 fps in Sensor+ mode. A choice of 40 or 10 megapixels and an ISO range from 50 to 3200 makes this digital back the most versatile tool in the range.	High resolution shooter with unlimited burst sequences and optimized for large format photography with live preview functionality for easy composition and focus checking.	The top quality fast fashion shooter with ISO 1600, with superior moiré control and well suited for harsh environments.	All-round shooter with unlimited burst sequences and optimized for large format photography with live preview functionality for easy composition and focus checking.		
<b>Sensors</b>							
<b>Lens Factor</b>	1.0	1.3	1.1	1.3	1.1		
<b>CCD size effective</b>	53.9 x 40.4 mm	43.9 x 32.9	49.1 x 36.8	44.2 x 33.1	48.9 x 36.7		
<b>Active pixels</b>	8984 x 6732	7320 x 5484	7216 x 5412	6496 x 4872	5436 x 4080		
<b>Pixel size (micron)</b>	<b>Full res.</b> 6 x 6	<b>Sensor+</b> 12 x 12	<b>Full res.</b> 6 x 6	<b>Sensor+</b> 12 x 12	9 x 9		
<b>Resolution (megapixels)</b>	60.5	15.0	40	10	39	31.6	22
<b>Light sensitivity (ISO)</b>	50-800	200-3200	50-800	200-3200	50-800	100-1600	50-800
<b>Exposure time</b>	1/10.000 – 1 minute	1/10.000 – 1 minute	1/10.000 sec. up to one hour with XPose+ technology				
<b>Image quality</b>	16bit-OptiColor+, 12 f-stops Dynamic+ and Lens+ technology						
<b>Capture time (frames per sec.**)</b>	1.0	1.4	1.2	1.8	0.67	0.8	0.67
<b>Battery Lifetime (up to captures/up to stand-by time*)</b>	2000 / 3		2500 / 4		2500 / 4	3000 / 4	4000 / 4
<b>Image buffer</b>	1.3 GB High Speed RAM		1.3 GB High Speed RAM		640 MB high speed RAM		
<b>Display</b>	2.2" QVGA TFT with 230,000 pixels, high brightness and contrast both indoor and outdoor, very fine details						

All testfigures are expected maximum made at Phase One test department "all things being equal". Battery used for test is new 2500mAh Li+.  
 \*) standby Time will vary a lot depending on temperature, usage of battery and state of the back e.g. Zero Latency will increase power consumption significantly  
 \*\*) Maximum expected performance. The actual performance will be dependent on the camera model and on the camera and digital back capture modes

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