

Product Guide

Extraordinary equipment for
extraordinary photographers

PHASE**ONE**

what the world's best photography is made of

Phase One delivers extraordinary equipment that enables photographers to work simpler, better, faster!

Freedom of choice

- Open platform
- The right tool for the job

Ultimate image quality

- Constantly upgrading the industry's best image quality

Peace of mind

- Service, support and products that deliver under all conditions

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Phase One Camera System



The Phase One 645 Camera System is designed to be a seamless extension of your creativity. Extraordinary capture becomes natural. Photographer, subject, hardware and software blend into one. The intuitive control of workflow delivers unlimited creative freedom.



Complete kit:

- Lenses, body, digital back, software and camera system accessories
- Optimized integration like DSLR but completely modular
- Supports Phase One 645 and Mamiya 645 lens mount
- Multi-mount adapter supports extended lens range
- Supports any Phase One 645 and Mamiya 645 digital back mount or film
- Firmware based, upgrading enabled
- Extended support and warranty program

Phase One Camera System components

Value added

- Camera body
- Phase One 80mm lens
- 2x lens pouch, body and lens caps
- P+ digital back
- 2GB CF card
- Camera strap
- Camera battery cassette (spare)
- 2x digital back batteries
- DB battery charger with universal adapters
- Firewire card reader with cable
- Multi connector DB cable
- Phase One HB multimount adapter
- USB key with documentation
- QPcard
- Digiclean kit
- LCC calibration plate
- Capture One PRO software
- 4.5m Firewire cable
- Stroller case with room for 17" laptop

Classic

- Camera body
- Phase One 80mm lens
- Lens pouch, body and lens caps
- P+ digital back
- Camera strap
- Digital back battery
- DB battery charger with universal adapters
- Multi connector DB cable
- USB key with documentation
- Digiclean kit
- Capture One DB software
- 4.5m Firewire cable
- Waterproof hard case



Phase One Sensor Technology

Phase One offers two separate sensor platforms ensuring that sensor capabilities are not compromised. Key features like pixel scaling, higher ISO and new full frame 645 sensor formats are delivered through Sensor+ enabled digital backs. Industry leading XPose+ enabled digital backs provide up to 1 hour, noise free exposures. Both sensor platforms are enabled with Dynamic+, Opticolor+, Lens+ and Focus+ technologies.



Sensor+ technology [patent pending]

- Save time in post-production, save storage space through smaller images files and gain higher noise-free ISO sensitivity.
- Scalable pixels provide 100% sensor resolution at 6x6 micron pixels or 25% sensor resolution at 12x12 micron pixels. The live sensor area does not change between 100% and 25% sensor resolution resulting in no image crop.
- File sizes are reduced to 25% of full sensor resolution for 12x12 micron pixels
- ISO sensitivity doubles providing 100, 200, 400, 800 and 1600 ISO settings at existing image quality
- Firmware upgradable sensor providing updates previously only available through new sensors.
- Sensor+ technology available with P 65+

XPose+ technology [patent pending]

- Up to 1 hour exposures noise-free
- XPose+ technology solutions: P 45+, P 30+, P 25+

Technologies for image quality

Constant innovation by Phase One ensures that you will always deliver the ultimate in image quality to your clients. The following technologies are shared across all platforms.

Lens+

- Distortion correction
- Sharpness fall-off correction
- Light fall-off correction
- Vignetting control
- Provided through Capture One 4 PRO software
- Manual application of Lens+ is available for lenses that do not provide metadata. This includes older manual focus optics as well as View camera lenses.

Focus+

- Chromatic aberration correction
- Purple fringing correction

Dynamic+

- Less noise at all ISO settings
- Maximized dynamic range available from each sensor platform
- Provides high ISO capability at better quality
- Dynamic+ is built into the P+ digital backs
- Capture One 4 PRO software further enhances Dynamic+ information for optimal final results

Opticolor+

- Opticolor+ is an exclusive Phase One technology and provides shadow area color information unavailable from competing systems
- Maintains color accuracy and detail in even the darkest shadows
- Optimizes skin tones
- Optimizes files for best reproduction
- Opticolor+ is built into the P+ digital backs
- Capture One 4 PRO software further enhances Opticolor+ information for optimal final results

P 65+



Inset image © Peter Svensson

Capture redefined

- Sensor+ technology solution
- Full frame 645 sensor for true wide angle
- Extraordinary details with 60.5 mega pixel resolution
- Full 645 viewfinder coverage for clear view of image composition and focus
- Extreme dynamic range of 12.5 f-stops
- Sensor+ upgrade technology for future proof performance
- 20% larger sensor area than 39 mega pixel or 50 mega pixel digital backs

Specifications

Resolution	60.5 mega pixel
Pixel size	6 x 6 microns
Live area	53.9mm x 40.4mm
ISO range	50, 100, 200, 400, 800
Dynamic range	12.5 f-stops
Bit depth	16 bit per color
IIQ small	40 MB RAW files
IIQ large	60 MB RAW files
Sensor+ capture mode	
Resolution	15 mega pixel
Pixel size	12 x 12 microns
ISO range	100, 200, 400, 600, 800, 1600
IIQ small	10 MB RAW files
IIQ large	15 MB RAW files

P 45+



Inset image © Torben Eskerod

Creative genius

- XPose+ technology solution
- High resolution and finest detail
- Studio or location workhorse
- Unlimited burst capacity
- Unique XPose+ technology for long exposure up to 1 hour, noise-free
- OptiColor+ and Dynamic+ provide extreme color detail in even the darkest areas
- Live preview

Specifications

Resolution	39 mega pixel
Lens factor	1.1x
Live area	49.1mm x 36.8mm
Active pixels	7216 x 5412
Pixel size	6.8 x 6.8 microns
ISO range	50 - 800
Dynamic range	12 f-stops
Bit depth	16 bit per color
IIQ small	27 MB RAW files
IIQ large	44 MB RAW files

P 30+



Ultimate control

- XPose+ technology solution
- Fashion, people, location workhorse
- Up to ISO 1600
- Secure storage with S3 technology
- Up to 1 hour exposures, noise-free
- Superior moiré control
- Unlimited burst lengths, tethered or untethered

Specifications

Resolution	31.6 mega pixel
Lens factor	1.3x
Live area	44.2mm x 33.1mm
Active pixels	6496 x 4872
Pixel size	6.8 x 6.8 microns
ISO range	100 - 1600
Dynamic range	12 f-stops
Bit depth	16 bit per color
IIQ small	22 MB RAW files
IIQ large	35 MB RAW files

P 25+



Passionate vision

- XPose+ technology solution
- Powerful tool for commercial, portrait, advertising and fashion
- Budget solution for production
- Up to 1 hour noise-free exposures
- Live Preview provides a fast and simple solution for view camera capture

Specifications

Resolution	22 mega pixel
Lens factor	1.1x
Live area	48.9mm x 36.7mm
Active pixels	5436 x 4080
Pixel size	9 x 9 microns
ISO range	100 - 800
Dynamic range	12 f-stops
Bit depth	16 bit per color
IIQ small	17 MB RAW files
IIQ large	22 MB RAW files

Phase One warranty and support program

Phase One provides the most extensive and advanced warranty and support program in the photographic industry. An investment in Phase One technology is an investment in your peace of mind.

Value Added warranty

Value Added warranty program includes:

- 3 Year Value Added Warranty
 - 3 year warranty on digital back, body and lenses
 - Free digital back loan unit during repair
 - 3 years or 300,000 shutter releases — whichever comes first
- Capture One PRO software
- 24/7 Knowledge Base and online Support Forum
- Access to trusted worldwide service network
- Attractive upgrade path to new Phase One products

Capture One PRO software

Capture One is RAW workflow software created to optimize the image capture process. It combines the best image quality on the market with a highly efficient workflow. The Capture One PRO license includes two major upgrades.

Classic warranty

Classic warranty program includes:

Phase One offers a 1 year warranty on digital back, body and lenses covering manufacturing defects free of charge 1 year from date of purchase.

- The warranty on the camera is either 1 year or 100,000 shutter releases, whichever comes first

Capture One DB software

- 24/7 Knowledge Base and online Support Forum
- Access to trusted worldwide service network
- Attractive upgrade path to new Phase One products

Capture One DB software

Capture One is RAW workflow software created to optimize the image capture process. It combines the best image quality on the market with a highly efficient workflow.

Added service for all warranties

24/7 Knowledge Base and online Support Forum

Phase One's searchable Knowledge Base at <http://support.phaseone.com> provides you with detailed answers to most questions that you might have.

In addition, Phase One's official support forum lets you easily share your experiences and get assistance from other Phase One product owners.

Access to worldwide service network

The Value Added program includes priority access to the trusted Phase One dealer network with representation in more than 80 countries. The Phase One dealers serve as your direct contact in the market and their 24 hour access to the Phase One support team ensures full technical support no matter when and where you need it.

Added service for all warranties

Attractive upgrade path to new Phase One products

We continuously strive to be at the forefront of technological developments and thereby securing future Phase One innovation. By offering you an attractive upgrade path to new Phase One products, we want to enable you to always keep your equipment up-to-speed. Learn more about upgrade paths through your Phase One dealer.

Additional Phase One resources

Phase One website

- Articles, case studies available as PDF downloads
- Phase One Portfolio series offering images and techniques including lighting and workflow suggestions
- Global rental services listing
- Dealer locator
- Phase One photographer of the week images
- Phase One photographer image galleries
- User forum
- Knowledge Base - 24/7 online support

Phase One RAWNEWS+ newsletter

- Feature articles about photographers, techniques and the photographic industry
- Updates and announcements for software and hardware
- Software “How to” articles and video links
- Software and hardware user reviews
- Sign up for RAWNEWS+ via www.phaseone.com

Technical Camera Solutions



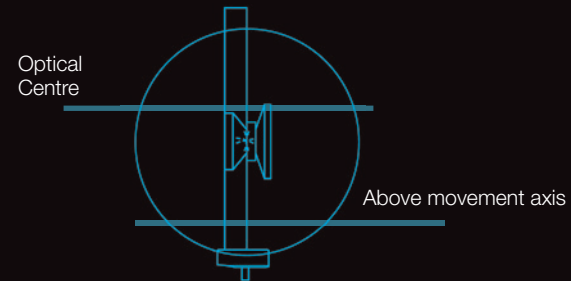
FlexAdapter

- Universal design using View camera lens boards
- Quick insert plates allow for fast platform switch
- Viewfinder includes pop-up magnifier
- Supported View Cameras: Arca-Swiss, Cambo, Horseman, Linhof, Sinar, Toyo
- Orientation support: Horizontal and vertical depending upon camera model and movements required
- Included items: FlexAdapter, specific View Camera mounted plate, focusing screen, removable viewfinder with pop-up magnifier, wake-up sync cable
- Simple to operate, requiring no external power supplies
- Easy to operate with electronic or mechanical shutter systems



Arca-Swiss bundle solution

- Complete integrated solution for Phase One P+ backs
- Mechanical and digital shutter bundles
- The most advanced view camera movements saving time and producing a better final image
- Arca-Swiss orbix solution



Technical Camera Solutions



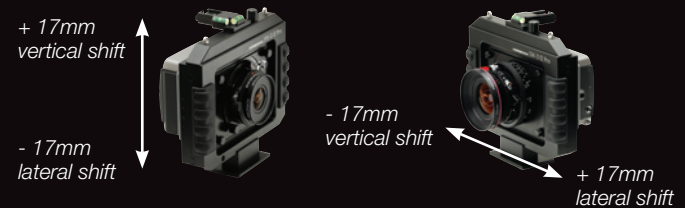
Cambo Wide DS

- Traditional technology for advanced digital capture
- Primarily for architecture and landscape use
- Optimized for extreme wide angle (i.e. 24mm, 28mm, 35mm lenses)
- Geared movement design
- Focussing mount included on lenses
- Cambo Wide DS movements



Horseman SW-D II Pro

- Ultra compact design
- Primarily for architecture and landscape use
- Optimized for extreme wide angle
- Friction movement design
- Focus mounts included on lenses
- Horseman SW-D II Pro movements



Phase One Camera Body



Our development of the Phase One camera is a pledge to providing photographers with choice and creative freedom in an open platform. We believe that medium format equipment is a long term investment and have designed the Phase One camera to deliver long term performance.



- Spectacular image quality through a seamless integration of back, body, lens and software
- Previously only possible with integrated systems (DSLRs)
- Supports Phase One 645 and Mamiya 645 lens mount
- Multi-mount adapter supports extended lens range
- Supports any Phase One 645 and Mamiya 645 digital back mount or film
- Peace of mind with unprecedented value-added warranty
- Extremely robust and reliable design keeps you focused on your subject, not your equipment
- Platform for world leading image quality

Phase One Camera Body Specifications



Features: AF lock, AE lock, Auto bracket, 35 custom functions, mirror lock-up, cable release on shutter button, self timer, depth of field preview, external power socket, TTL flash support, metal body

Focus	Auto-focus, manual focus, focus assist
AF method	TTL phase difference detection method
Lens mount	Mamiya 645
Back mount	Universal Mamiya 645 back mount for film or Digital Railroad
Diopter adjustment	- 2.5 to + 0.5 built-in, optional diopter correction lenses
Focusing screens	Matte (standard), Checkered, Microprism C for non-AF lenses
AF assist beam	Auto activation under low light or contrast
Shutter speeds	B, X, 60 minutes to 1/4000
Flash sync	Body 1/125, leaf shutter lenses — all shutter speeds
Power	6 AA batteries
Tripod socket	1/4, 3/8 support
Size/Weight	6"(w) x 5"(h) x 7.3"(d) / 153(w) x 128(h) x 184(d)mm: 3.8 lbs/1.73 kg (w/o battery)
Warranty	1 year or 100,000 actuations; Value added 3 year or 300,000 actuations

Phase One Leaf shutter readiness



- Phase One cameras are leaf shutter ready
- No cables or special adapters required
- Full integration with Phase One camera body
- Simple, fast solution

Phase One Digital Lenses



- Manufactured for digital capture
- Precision manufactured, all metal barrels
- “On the fly” auto focus/manual selector
- Advanced digital lens correction through Capture One

Phase One 45mm f3.5 TS Lens



- New advanced lens design
- Additional advanced optical correction in Capture One PRO software
- Advanced 12 blade aperture
- New anti-reflection coating
- New barrel design with streamlined mechanical operation

Specifications

Compatible cameras	Phase One 645/ Mamiya 645AFD
Optical construction	8 elements, 7 groups
Angle of view	83° (98° w/optical unit shifted)
Aperture range	f/3.5 - f/22 (manual)
Maximum aperture	f/3.5
Focusing	manual
Minimum focusing distance	1.15ft (0.35m)
Minimum focusing distance	1.15ft (0.35m)
Filter size	Ø82mm
Lens movement	individual rotation of both tilt and shift in any direction
Rotation movement range	360°, with click stops every 15°
Shift movement range	0 to 12mm in any direction
Tilt movement range	0 to 8° in any direction
Dimensions	96 x 110mm
Weight	880g

Phase One Digital 28mm f3.5 Lens



Optical construction	14 elements, 10 groups
Angle of view	102°
Minimum aperture	f/32
Diaphragm	automatic
Focusing	auto focus/manual
Minimum focusing distance	35cm
Maximum magnification ration	0.15
Equivalent 35mm focal length	17mm
Filter size	sheet filter on rear mount
Lens hood	built-in
Dimensions	62 x 84mm
Weight	886g

Phase One Digital 45mm f2.8 Lens



Optical construction	9 elements, 7 groups
Angle of view	74°
Minimum aperture	f/22
Diaphragm	automatic
Focusing	auto focus/manual
Minimum focusing distance	45cm
Maximum magnification ration	0.13
Equivalent 35mm focal length	29mm
Filter size	Ø67mm
Lens hood	bayonet
Dimensions	49,5 x 77mm
Weight	492g

Phase One Digital 80mm f3.5 Lens



Optical construction	6 elements, 5 groups
Angle of view	47°
Minimum aperture	f/22
Diaphragm	automatic
Focusing	auto focus/manual
Minimum focusing distance	70cm
Maximum magnification ration	0.15
Equivalent 35mm focal length	50mm
Filter size	Ø67mm
Lens hood	bayonet
Dimensions	49.5 x 77mm
Weight	400g

Lens caps and bayonet lens hood included with lens

Phase One Digital 120mm f4.0 Lens



Optical construction	9 elements, 8 groups
Angle of view	33°
Minimum aperture	f/32
Diaphragm	automatic
Focusing	auto focus/manual
Minimum focusing distance	40cm
Maximum magnification ration	1:1
Equivalent 35mm focal length	73mm
Filter size	Ø67mm
Lens hood	built-in
Dimensions	111 x 83mm
Weight	835g

Phase One Digital 150mm f2.8 Lens



Optical construction	8 elements, 7 groups
Angle of view	26°
Minimum aperture	f/22
Diaphragm	automatic
Focusing	auto focus/manual
Minimum focusing distance	1.0m
Maximum magnification ration	0.10
Equivalent 35mm focal length	93mm
Filter size	Ø72mm
Lens hood	bayonet
Dimensions	120 x 85mm
Weight	790g

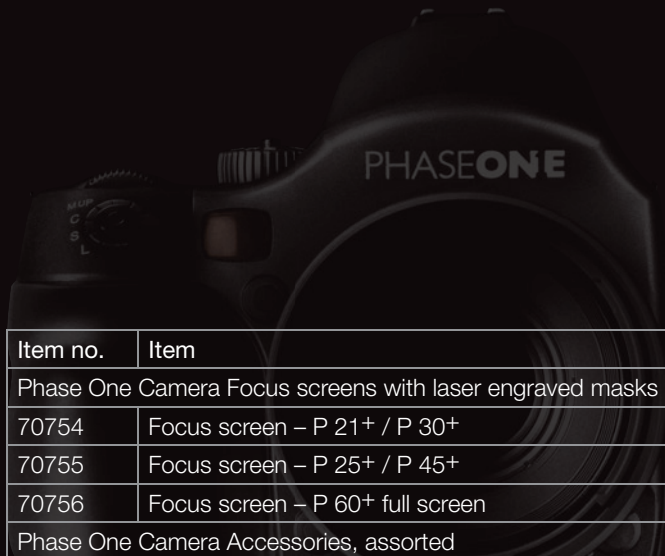
Lens caps and bayonet lens hood included with lens

Phase One Digital 75-150mm f4.5 Zoom Lens



Optical construction	11 elements, 10 groups
Angle of view	26 ~ 50°
Minimum aperture	f/32
Diaphragm	automatic
Focusing	auto focus/manual
Minimum focusing distance	1.0m
Maximum magnification ration	0.09 ~ 0.16
Equivalent 35mm focal length	47 ~ 93mm
Filter size	Ø77mm
Lens hood	built-in
Dimensions	145 x 86mm
Weight	1.14kg

Phase One Camera System accessories



Item no.	Item
Phase One Camera Focus screens with laser engraved masks	
70754	Focus screen – P 21+ / P 30+
70755	Focus screen – P 25+ / P 45+
70756	Focus screen – P 60+ full screen
Phase One Camera Accessories, assorted	
70226	Phase One 645 Multimount, Hasselblad V lenses
70222	Phase One 645 Camera battery cassette
70235	Phase One 645 Camera front and back cap set
70432002	Phase One Camera strap



Capture One 4 PRO



Focus on photography and empower your RAW captures with Capture One 4 PRO. Patented and Patent Pending technology provides a powerful experience, truly consistent in the most unique ways, previously only available with film. Experience your whole shoot as if it is a single roll of film process at the lab. Stop workflow that treats each file individually, and decrease post-production significantly with Capture One 4 PRO.

Capture One 4

Start your journey to better capture with Capture One 4, our simple, easy to use RAW workflow software. Spend more time concentrating on your subject and not post-production.

Features in Capture One 4 and Capture One 4 PRO

Feature/function	PRO	4
Mac and PC support with transferable computer activation	√	√
Import utility with preview	√	√
Support for most popular DSLRs and Phase One digital backs	√	√
Tethered shooting directly into Capture One	√	
Overlay feature for composition or layouts	√	
Multiple monitor support	√	
Customizable workspaces, tool tabs and floating tools	√	
Instant, customizable Web contact sheet	√	√
Selective color adjustment for image colors and camera profiles	√	
Styles tool for applying your custom looks to existing or new captures. Provides an easy way to be creative with RAW files.	√	
CMYK color proofing and output	√	
High dynamic range tool to recover shadow or highlight detail	√	√
Simple Moiré Suppression tool to help eliminate color moiré	√	
Lens correction tools – Chromatic aberration, purple fringing, pincushion and barrel distortion, vignetting control and sharpness falloff	√	
Process multiple files with unique recipes from a single RAW file	√	

www.phaseone.com

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