

# Phase One 4-Band Solution

## Capture 100MP 4-Band imagery

With the increasing demand for combined NIR and RGB aerial imagery for applications such as crop analysis for growth optimization, vegetation health and environmental contamination as well as projects including city observation for green site monitoring, Phase One has developed a fully automatic solution for capturing and processing 4-Band multispectral imagery\*, using two high-resolution, Phase One aerial cameras, specifically designed for the photogrammetric airborne market.

## Simplifying your workflow

The 4-Band solution includes two synchronized Phase One metric calibrated cameras (RGB and NIR) mounted side by side on a specially designed base plate, an iX Controller computer and the iX Capture software.

The software automatically generates distortion-free images and performs fine co-registration of pixels from the NIR to the RGB images, including processing different image sizes.



RGB image



NIR image



CIR image



NDVI image

## The users can generate the following products:

- 4-Band combined NIR and RGB (RGBN) TIFF (4-Band CIR)
- 3-Band combined NIR and RGB (NRG) TIFF (3-Band CIR)
- NDVI (Normalized Difference Vegetation Index) TIFF
- Distortion-free / corrected RGB TIFF
- Distortion-free / corrected NIR TIFF
- RGB TIFF
- NIR TIFF

## One solution for multiple applications

The perfect choice for any 4-Band precise requirements.

- Cost effective solution
- Flexible: two cameras that can be used in different combinations (together or stand-alone) for varied simultaneous projects.
- Lightweight and compact: easy to install in small aerial platforms
- Simple workflow, reducing hours spent post-processing
- Reliable output: accurate high resolution images

\*Configuration options: 100 MP, or 80 MP/60 MP  
Upgrade options available for existing camera customers

## iX Capture

iX Capture is a professional Capture and processing application that was created exclusively for shooting with Phase One aerial camera systems.

Used together with Phase One aerial cameras, this professional capture and processing software enables full control over one or multiple cameras, enabling an operator to easily monitor and control every aspect of aerial digital data acquisition.

Designed for use with a touchscreen or mouse, iX Capture makes inflight camera changes as easy as tapping a button. It contains all of the essential tools for high-end performance in one package to enable you to capture, monitor and process images in a fast, flexible and efficient workflow.

iX Capture exports raw images to TIFF and JPG files, distortion corrected TIFF images and batch processes RGB and NIR into CIR and NDVI products.

## iX Controller

Designed to provide the ultimate in speed, the Phase One iX Controller acts as a central hub of your aerial camera system, controlling multiple cameras. Working with up to 6 separate USB 3 ports, the iX Controller delivers record breaking I/O speeds.

- 4th Generation Intel® Core™ i7
- Fanless cooling
- Rugged construction
- 8 GB of RAM
- Drives two displays
- Powers and drives multiple cameras
- Pre-installed with iX Capture
- Two removable solid state drives (SSD)
- Small footprint, easily integrated into any aircraft



## Specifications

			
<b>Model</b>	iXU-RS1000	iXU-RS180	iXU-RS160 Achromatic
<b>Maximum shutter speed</b>		1/2500 s	
<b>Forward Motion Compensation option</b>	x	✓	✓
<b>Resolution</b>	11608 x 8708 100 MP	10328 x 7760 80 MP	8964 x 6716 60 MP
<b>Pixel size</b>	4.6 microns	5.2 microns	6.0 micron
<b>Light sensitivity (ISO)</b>	50-6400	35-800	200-3200
<b>Full resolution frame</b>	0.6 s	1.25 s	1.1s
<b>RAW file compression (approx)</b>	IIQ large: 100 MB IIQ small: 65 MB	IIQ large: 80 MB IIQ small: 54 MB	IQ large: 60 MB IIQ small: 40 MB
<b>NIR Range</b>	830µm +		720µm +
<b>High speed USB 3.0 Connectivity</b>		✓	
<b>iX Link</b>		✓	
<b>Maximum power consumption</b>	10 W		12 W
<b>Dynamic range</b>	> 84 db		> 72 db
<b>Weight (without lens)</b>		.940 kg/2.1 lb	
<b>With 40 mm Rodenstock</b>		1.640 kg/3.6 lb	
<b>With 50 mm Rodenstock</b>		1.680 kg/3.7 lb	
<b>With 70 mm Rodenstock</b>		1.440 kg/3.2 lb	