

### Uploading aerial survey images benchmarks

Local internet connection speed (upload/download)	200 Mbps
Number of images	100
Image size	150 MP
Volume of 100 images in IIQ format	13.6 GB
Upload time for 100 images in IIQ format	13 min
Volume of 100 images in TIFF format	42.2 GB
Upload time for 100 images in TIFF format	40 min
<b>iX Capture conversion of 100 IIQ images to TIFF</b>	<b>8 min</b>

## **Photomod 6.5.2764 new features**

### **New algorithm for bundle adjustment:**

- significantly speeding up of the adjustment for a block with big and unstable image orientation parameters
- automation detection of incorrect points
- modifications in self-calibration procedure,
- multithread calculations support

### **New distributed processing implementation:**

- speeding up of remote sensing data processing
- increasing the reliability and resistance to local network failures
- new user-friendly interface
- fast tasks managing, immediate task pausing and starting on remote client
- export and viewing of LOG-file directly in distributed processing window
- equal and consequent work loading of clients

### **Radical quality improvements of 3D modeling and visualization:**

- DSM accuracy and details increased
- 3D-model layers and tiles implementation for fast and comfortable displaying
- increasing quality of texturing
- DTM – DSM conversion modifications
- enhancements in satellite imagery 3D modeling

### **New 3D-feature extraction tools:**

- more templates for roof digitizing
- combining, cutting and aligning of 3D vector objects



**Project parameters (aircraft aerial survey):**

**Camera – PhaseOne iXM-RS150F (70mm); Image size – 150 MP (14204 x 10652); File size (TIF) – 432 MB**

Number of images – 100; Forward overlap - 60%; Side overlap – 40%;

Flight altitude – 811 m; GSD – 4.25 cm; Area – 3.0 sq.km;

	Parameters	Photomod 4vCPU/16GB	Photomod 32vCPU/130GB	Photomod 48vCPU/384GB
OS		Win	Win	Win
CPU		4vCPU	32vCPU	48vCPU
RAM		16	130	384
RAM/Core		4GB/core	4GB/core	8GB/core
<b>Image size</b>		<b>&lt;280GB</b>	<b>&lt;280GB</b>	<b>&gt;280GB</b>
Storage type		Enhanced	Enhanced	Enhanced
<b>Application price (\$/h)</b>		<b>\$5.22</b>	<b>\$17.50</b>	<b>\$25.40</b>
<b>Photogrammetric processes</b>				
Build of image pyramid and import (min)		9	10	10
Tie points (matching), bundle block adjustment, self-calibration (min)		132	35	29
<b>Option 1</b>				
DSM (SGM), classify ground points and DTM creation (min)	GSD=1 m	7	3	1
<b>Option 2</b>				
DSM (SGM), classify ground points and DTM creation (min)	GSD=35 cm	36	10	6
Orthophoto for every image (min)	GSD=4.3 cm	19	10	10
Cut lines creation (min)		2	2	2
Orthomosaic (min)	GSD=4.3 cm	8	4	4
<b>Total time with option 1 (h)</b>	GSD=1 m	<b>2.95</b>	<b>1.05</b>	<b>0.93</b>
<b>Total price (\$/h)</b>		<b>\$15.40</b>	<b>\$18.38</b>	<b>\$23.63</b>
<b>Total time with option 2 (h)</b>	GSD=35 cm	<b>3.43</b>	<b>1.17</b>	<b>1.02</b>
<b>Total price (\$/h)</b>		<b>\$17.90</b>	<b>\$20.48</b>	<b>\$25.91</b>