PhotoSound Technologies, Inc.
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3D PhotoAcoustic & Fluorescence Tomography platform (PAFT)

Generation GR-01-0BX (Beta model)

Photoacoustic imaging component

3D imaging	*Yes*
Imaging modes	*Deep tissue, Skin*
Image resolution	*150 μm*
Detection threshold for a 1 μL target	*OD 0.1 cm^{-1}*
Visualized volume	*30 x 30 x 30 mm*
Scan duration	*30 sec*
Continuous multiple scans	*Yes*
Camera enabled	*Yes*

Fluorescence / Bioluminescence imaging component

3D imaging	*Enabled*
Co-registration with photoacoustic data	*Simultaneous, co-registered 3D*
Anatomical registration	*Skin, vasculature, internal organs*
Field of view	*50 x 50 mm*
Detector type	*sCMOS, cooled up to -25 ℃, 16-bit*
Frame rate	*25 fps at 2048 x 2048 pixels*
Exposure time	*0.02 ms – 10 min*

Laser excitation component

Laser type	*OPO, 20 Hz PRF, 50 mJ per pulse, wavelength is tunable on every pulse in the range 680-950 nm*

Software

Photoacoustic DAQ and scanning	*Scope/scanning, *.mat or *.tdms output*
Photoacoustic image reconstruction	*Signal/image processing, multiple 2D slices, 3D volume, *.mat or *.vtk output*
Optical imaging	*Binning, image processing, DR adjustment, *.png *.tif, *.bmp or raw – image out, *.avi or raw – video out*

Other features

Animal life support	*Gas anesthesia*
Animal environment	*Thermal regulation (accuracy 0.1 ℃)*
Dimensions (L x W x H)	*500 x 350 x 550 mm*
Weight	*60 kg*
Power	*110 or 220 VAC (50/60 Hz)*

Upcoming features (*2017*)

Integrated compact OPO laser	• *Laser control from the scanning software* • *Spectroscopic excitation patterns*
Integrated optical and photoacoustic acquisition	*Setting excitation and detection parameters*
Advanced multispectral photoacoustic tomography	*Utilizes co-registered fluorescence data*