

PRODUCT SUMMARY MPB - 2018/21B

Bench Top Volumetric 3D Image Displays

“Augmented Reality Sand Box” or S-series bench top volumetric 3D image display workstations

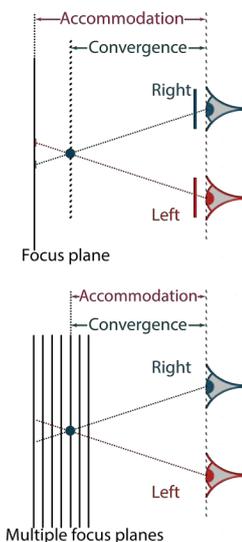
Volumetric 3D image AR “Sand Box” S-series display workstations aimed at professionals in fields requiring visualization of scientific and medical 3D data sets; security related, tactical and traffic information in civil and military environments in relation to geographic and terrain datasets, architectural, urban and environmental 3D designs.

S-series bench top displays will visualize very high resolution data-rich 3D images with interactivity and fusion of real-time data.



Multi-plane technology

Advantages



+ Reproduction of true 3D images in real-time

- without any moving parts
- with all physical and psychological depth cues
- without the need for supplemental headgear
- which are perceptually flicker free

+ The technology is scalable

- can be implemented in large-size displays, as well as in wearable or otherwise portable display devices.

+ Key enabling technology

- the proprietary liquid crystal based optical diffuser element with ultra-low response time

+ Technology matches accommodation and convergence depth cues

- which is a culprit of all currently available conventional stereoscopic 3D imaging methods

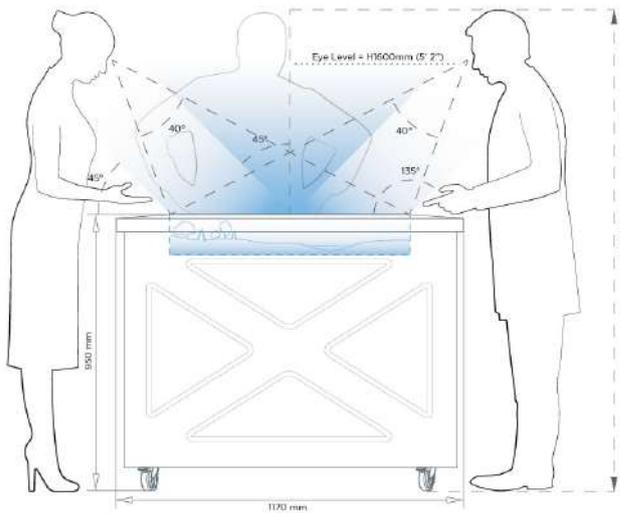
+ Does not cause eyestrain and fatigue

- after longer viewing periods, in comparison to conventional 2D displays or stereo VR/AR headsets*.

*Clinically approved testing in progress

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S-series bench top volumetric 3D image display description



Model Comparison table (preliminary specifications)*

	s3901	s5450
Image characteristics		
Volumetric 3D image dimensions, mm	790 x 590 x 120	1150 x 760 x 160
X, Y, Z resolution, perceivable pixels (voxels)	2048 x 1530 x 40	5120 x 3200 x 40
Physical image focus planes	from 8 to 16	from 8 to 16
Physical addressable voxels, million	from 24 to 48	from 130 to 260
Focus plane spacing	linear	linear
Display operation modes		
Color modes (color bits per voxel)	RGB up to 24 bpv	RGB up to 24 bpv
Grayscale modes	none	12 bit grayscale
Image data bandwidth, Gbps	from 40 to 60	240
Computer and software compatibility		
Data transfer interface	DisplayPort 1.4	DisplayPort 1.4
Compatibility	NVIDIA Quadro P6000	NVIDIA Quadro P6000
Supported operation system	Windows 10, Linux	Windows 10, Linux
Physical Specifications		
System power requirements, W	1200	2200
Physical dimensions, mm	1100 x 890 x 850	1450 x 1060 x 850
Weight, kg	200	300

Status: preliminary information, product in development, to be released as concept devices S3901 by Q1 2019, s5450 by Q4 2019

*All specifications subject to change without notice

Features of Technology

The system delivers high spatial and angular resolution with a real-time 3D image representation capability, at the same time ensuring precise geometry of voxels across the whole screen in all spatial coordinates.

The display technology naturally offers omnidirectional multi-view from practical observation angles, with all the major 3D depth cues (physical and psychological), including true parallax.

Bench top Highlights

LightSpace Technologies S-series bench top 3D display workstations are based around multi-plane time-multiplexed volumetric 3D image display technology at the core of which lies the proprietary switchable diffuser technology and a fast rear image projection.

Bench top display workstation integrates a high performance multi GPU computer with the necessary input devices and means of 3D interactivity. It connects to the external data sources by 10, 40 or 100 Gbit/s optical fiber ethernet interface.

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