

SEBI

The first live light field video camera



THE ONLY SOLUTION FOR CAPTURING AND PROCESSING THE ENTIRE LIGHT SPECTRUM



VOLUMETRIC
IMAGES



HIGHEST
RESOLUTION



LIVE RESULTS



HIGH ACCURACY
MEASUREMENTS



SEBI

SEBI is a high-resolution light field camera capable of obtaining depth and color information in real-time enabling live video. Using Wootpix proprietary technology, accurate depth information is extracted from the focal stack through every pixel in the image sensor.

The camera runs at 156 FPS capturing depth information at 6 different “Z” distances, allowing to reconstruct all-in-focus images and depth maps at 26 FPS. The many technology possibilities make SEBI the camera of the future.





SEBI DEVELOPMENT KIT

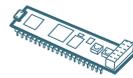
The development kit contains the SEBI camera, a high speed liquid lens, one FPGA lens controller synchronizing the liquid lens and the image sensor, and a PC for live algorithm processing with Wootpix proprietary software. Using the SEBI preview software, the camera can acquire either snapshots or video sequences, obtaining an all-in-focus image and a corresponding depth map for each image frame.



CAMERA



LENS



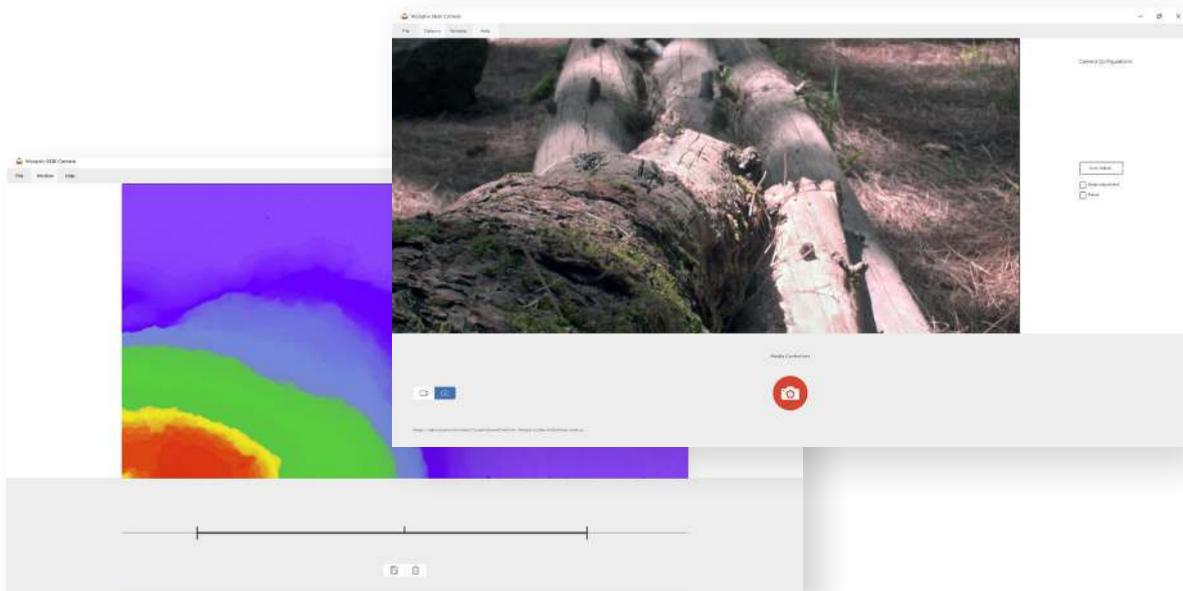
FPGA LENS
CONTROLLER



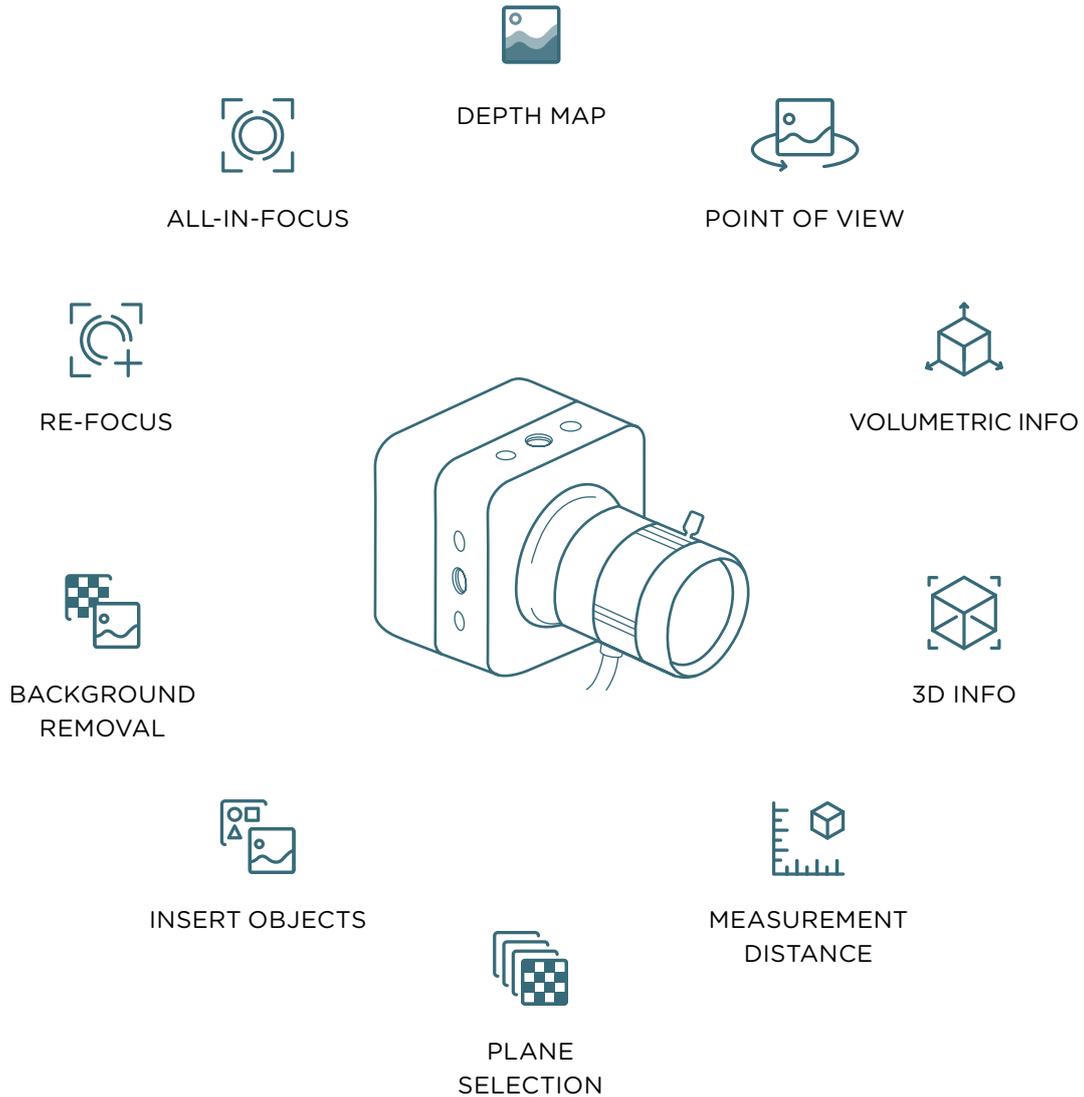
PC

SEBI PREVIEW SOFTWARE

The SEBI preview software enables the use and control of the SEBI camera, it allows the user to capture 3D images (RGB and Z), and to render the light field video in live at multiple types of displays such as conventional 2D monitors, light field displays, 3D autostereoscopic screens among other that includes the depth information.

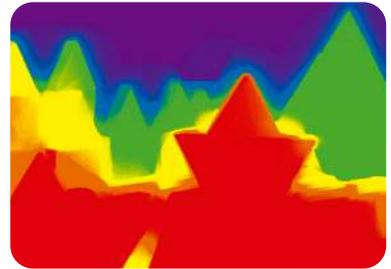
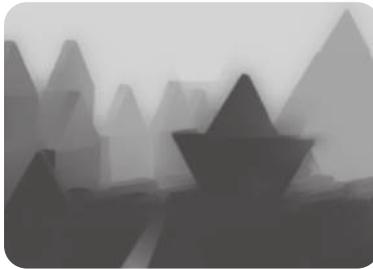
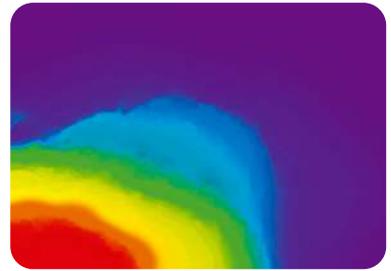
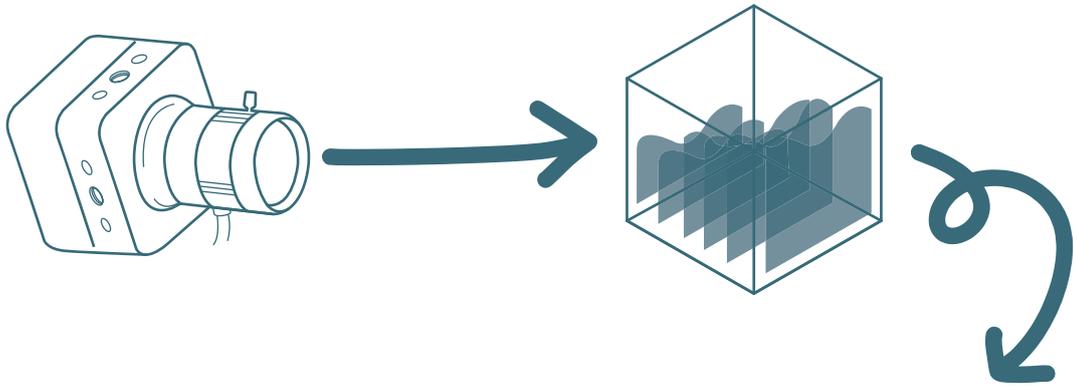


SEBI BENEFITS



THE ULTIMATE IMAGE SOLUTIONS

SEBI SAMPLES

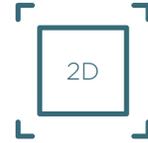


ALL-IN-FOCUS / RGB

DEPTH MAP

COLOR DEPTH MAP

DISPLAY OPTIONS



APPLICATIONS



LIGHT FIELD

The light field is a vector function that describes the amount of light flowing in every direction through every point.

A classic light field camera uses additional mechanisms to capture not only the 2D information, but also the direction of the light rays arriving to the sensor. With this information the light field can be approximated.

These classic light field cameras use an array of cameras or an array of micro lenses to capture the direction of the light rays.



WOOPTIX LIGHT FIELD

What Wootix does is a different approximation of the light field: instead of capturing with multiple cameras or lenses, we use a variable focus lens to obtain different projections of the light field. Once these projections are obtained, the light field is approximated.

This is a way to obtain light field information without the loss of resolution of the micro lenses and with the convenience of using only one camera instead of an array of them.

Wootix light field does not need of microlenses or any other resolution killer. It provides full resolution of the sensor in live giving volumetric information of the scene.

Wootix is a developer of light field and wavefront phase imaging platform designed to acquire all information about the light, using a single lens utilizing the full sensor resolution.

The company's technique enables everyone to achieve their vision with more data points at high frame rate and volumetric images and video.



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