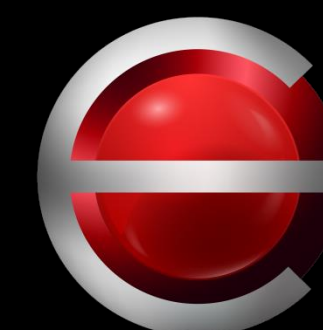




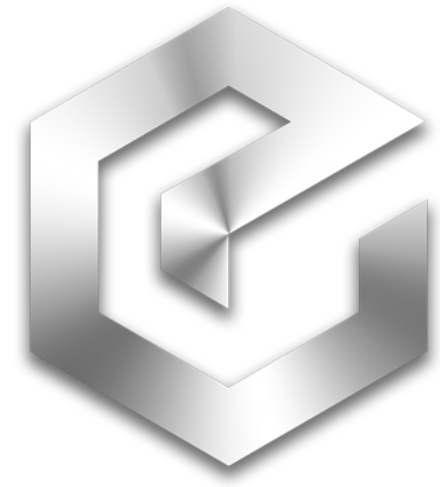
eCapture
Depth Camera

Stereo Vision Depth Sensing Expert

Powered by



eYS3D
Microelectronics

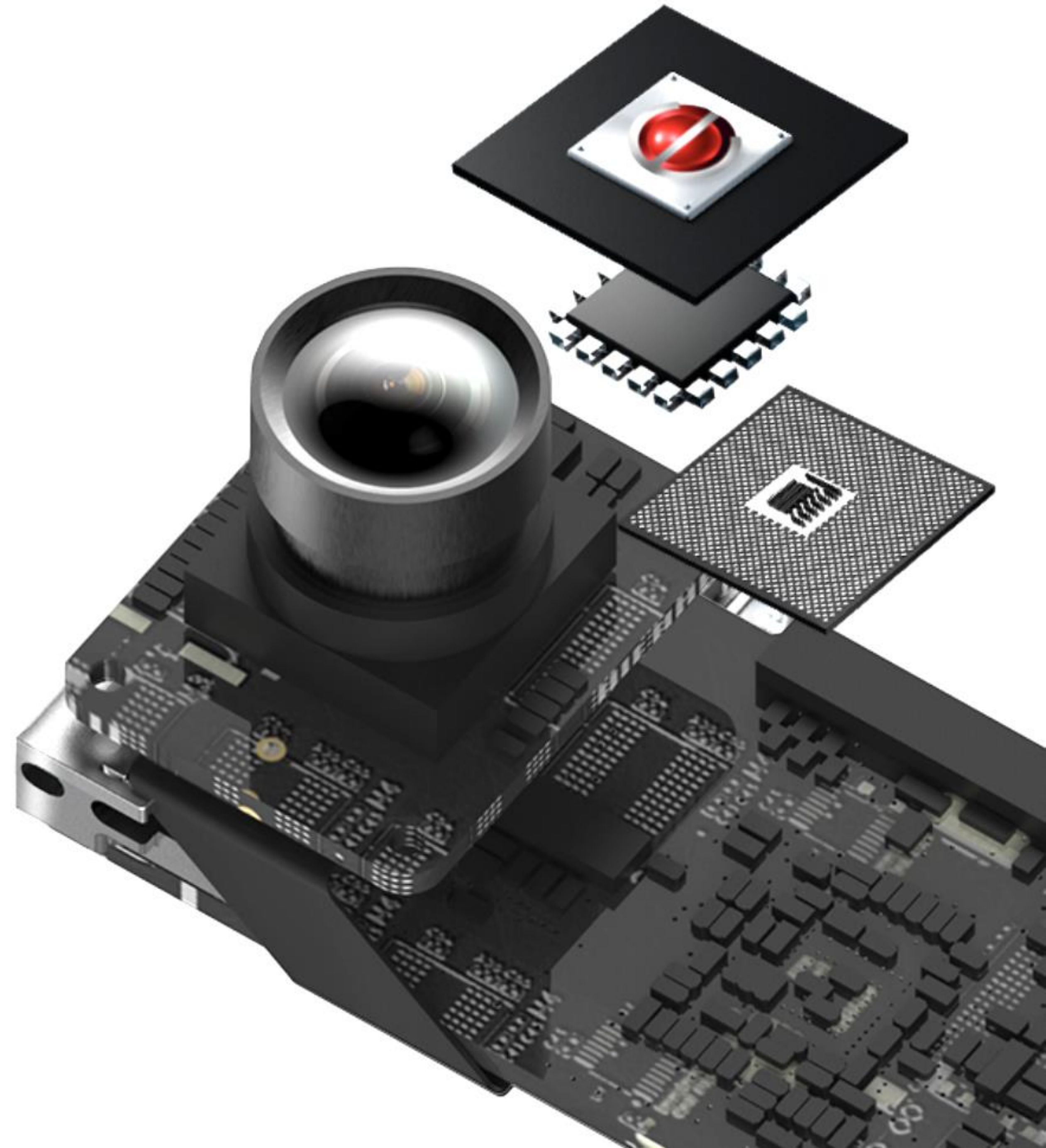


eCapture

Module Products

Global Shutter ASV Module

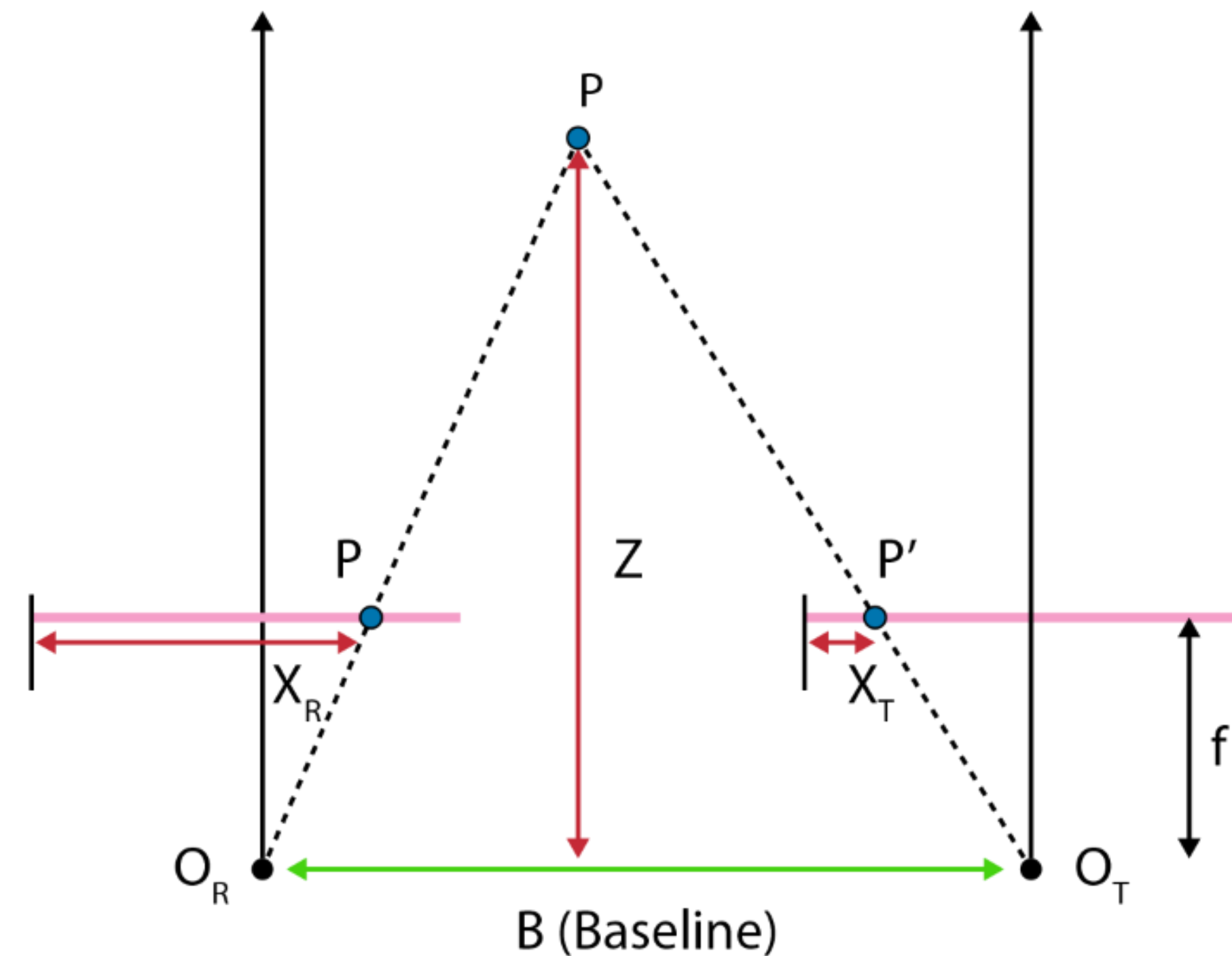
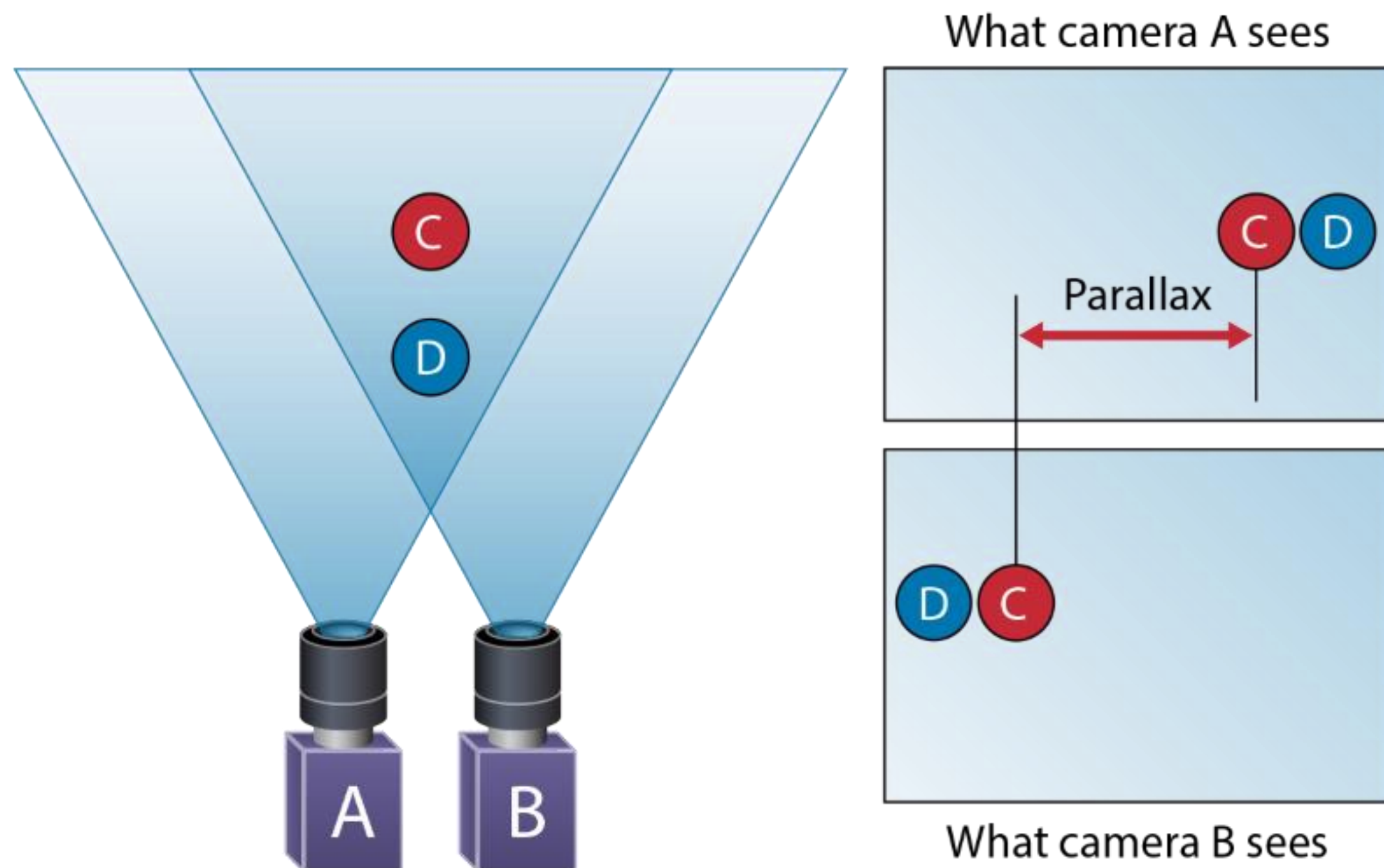
- G53



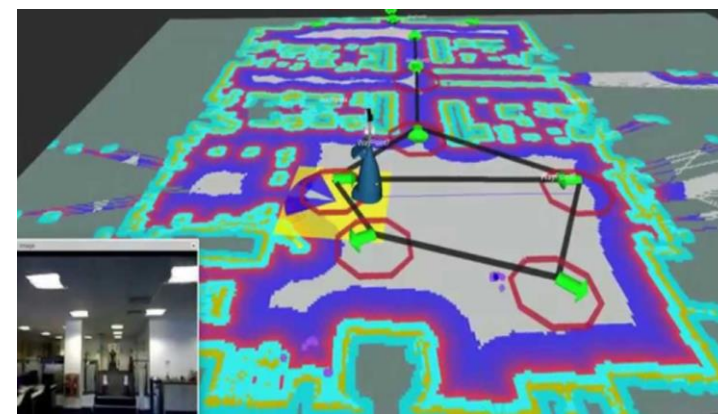
How Stereo Vision Works

The distance extraction in stereo vision is based on triangulation between two sensors whose baseline (B) and focal plane (f) is known. The disparity – a key parameter all triangulation methods - is calculated by processing the images of both sensors (rectification and matching algorithm) and extracting the correspondences.

The maximum detectable depth range is proportional to the baseline (B) and the sensor resolution. The final depth resolution is mainly limited by matching and calibration errors.



LifeSense Depth Camera G53



Example Application
Robotic for Tracking and Navigation

Product Description

G53 is the smallest stereo camera available in the market, producing high-quality 3d Depth information with only 10cm of blind zone. The small form factor nature of the camera allows the ease of installation and design-in to compact systems. With superior short-range performance, eCapture's G53 fits applications in robotics for object avoidance to assembly line inspection. G53 is the most cost-effective solution for a wide range of applications.

While it is difficult for conventional passive stereo technology to detect objects without textures, G53 is capable of capturing such objects by adopting coded Active IR technology. With dual output mode which outputs undistorted colour images from the same stereo pair of depth capture, G53 is a more cost-efficient solution compared to the conventional 3 sensors solution for both high-quality depth and RGB images.

Getting Started

To Buy : Please Contact an Authorized Distributor or (www.ecapture.com)

- eAP87603GN53 Single Camera Unit, USB Cable, Flexible Tripod
- Bulk Packs of Module Only (MOQ 20)

Preliminary

Camera Features

Environment	Outdoor/Indoor	
Depth Technology	Active IR Stereo (Global Shutter)	
Depth FOV (H x V)	H50 x V32.5	
Depth Output Resolution &Frame Rate	Up to 640 x 400p Up to 30FPS	(USB End Point 2 streaming out) (Supports various *color image +depth map modes)
RGB Output	640 x 400 or Left+Right 1280 x 400	(USB End Point 1 streaming out)
Minimum Depth Distance (Min-z)	15cm, Varies depending on MTF Index	
Maximum Range	200cm, Varies depending on performance accuracy & ambient conditions.	
Total Power	< 2.00W	

Major Components

Lens H x V x D	H56 x V43.2 x D67 Degree FoV Lens
Processing Chip	1 x eSP876 HD Depth Map Processor
Illuminators	1 x eYs3D 830nm IR Dot Projectors

Physical

Enclosure Material	Polished Metallic
Stereo Baseline	3.0cm
Connector	USB2.0 Micro-B
Product Dimension Length x Depth x Height	50 x 14.9 x 20 mm

Application & Benefits

Usage Scenario	Fast Motional and Movable Electronics	
Robotics, AGV/AMR, Drone	Obstacle Avoidance	Object Tracking
Small Form Factor	Robotics	Quick Proto-type for new product

Software Development Kit



Windows 10/8.1 64-bit



X86: Linux Ubuntu 18.04/16.04 64-bit
Nvidia TX2 : ARM Linux Ubuntu 18.04



Android 8 & 9



X86: Linux Ubuntu 18.04/16.04 64-bit
Nvidia TX2 : ARM Linux Ubuntu 18.04



V-SLAM, real-time control integration



AI lib and AMR platform integration



Tracker, AOI, feature detection image recognition development



Skeleton/gesture in gaming development



eYs3D Viewer

eYs3D Quality Test Tool

Debugging Tool

Calibration Tool

Firmware Update Tool

