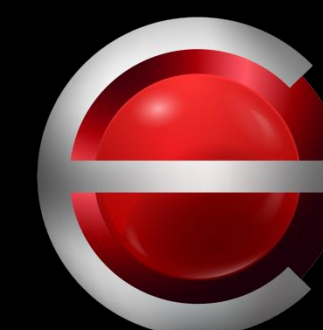




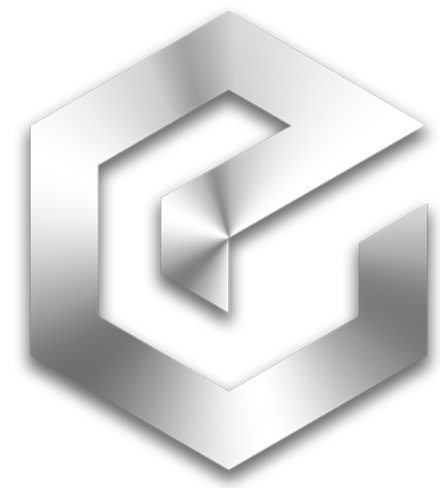
eCapture
Depth Camera

Stereo Vision Depth Sensing Expert

Powered by



eYS3D
Microelectronics



eCapture

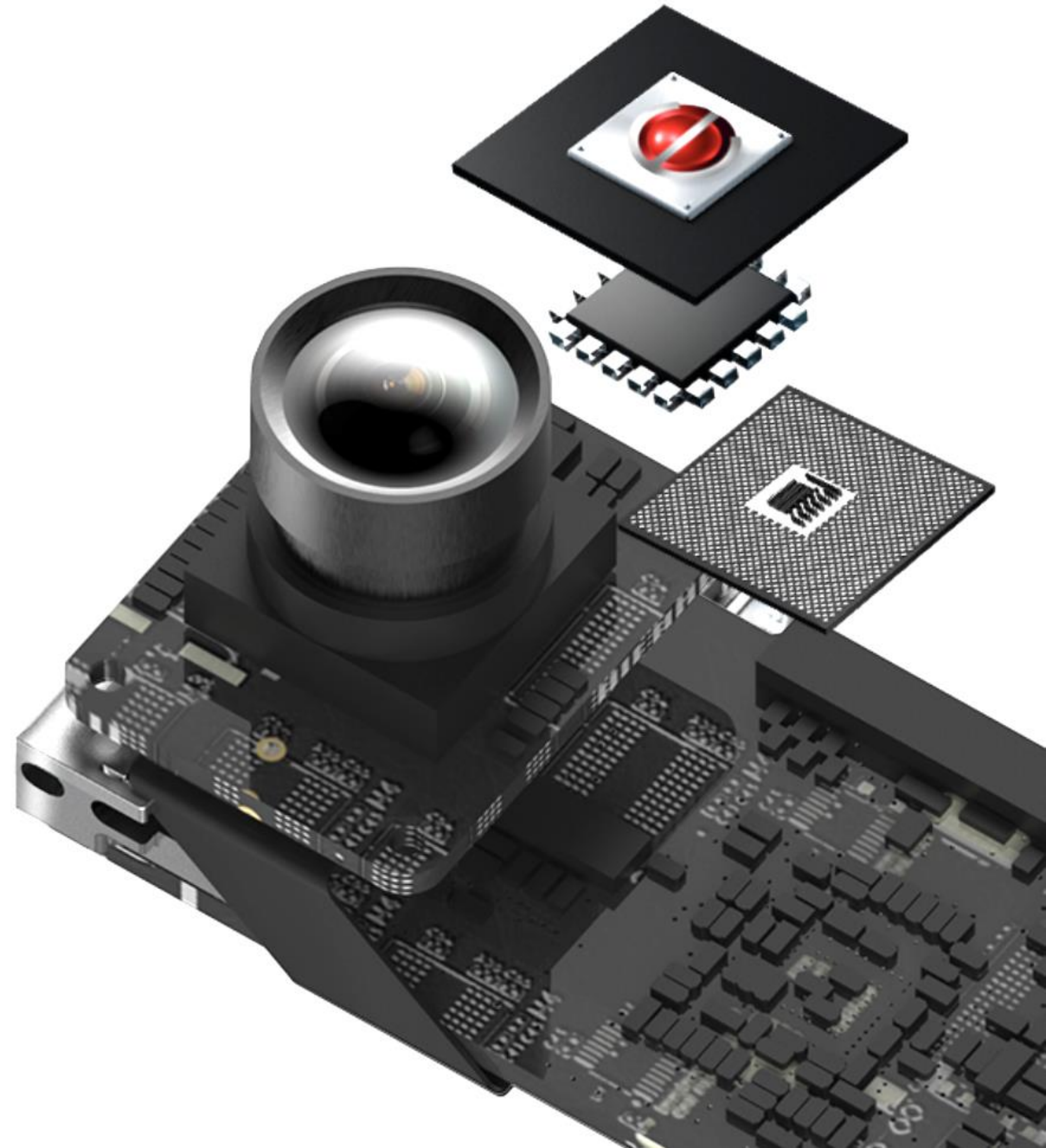
Module Products

Global Shutter ASV Module

- G50

Rolling Shutter ASV Module

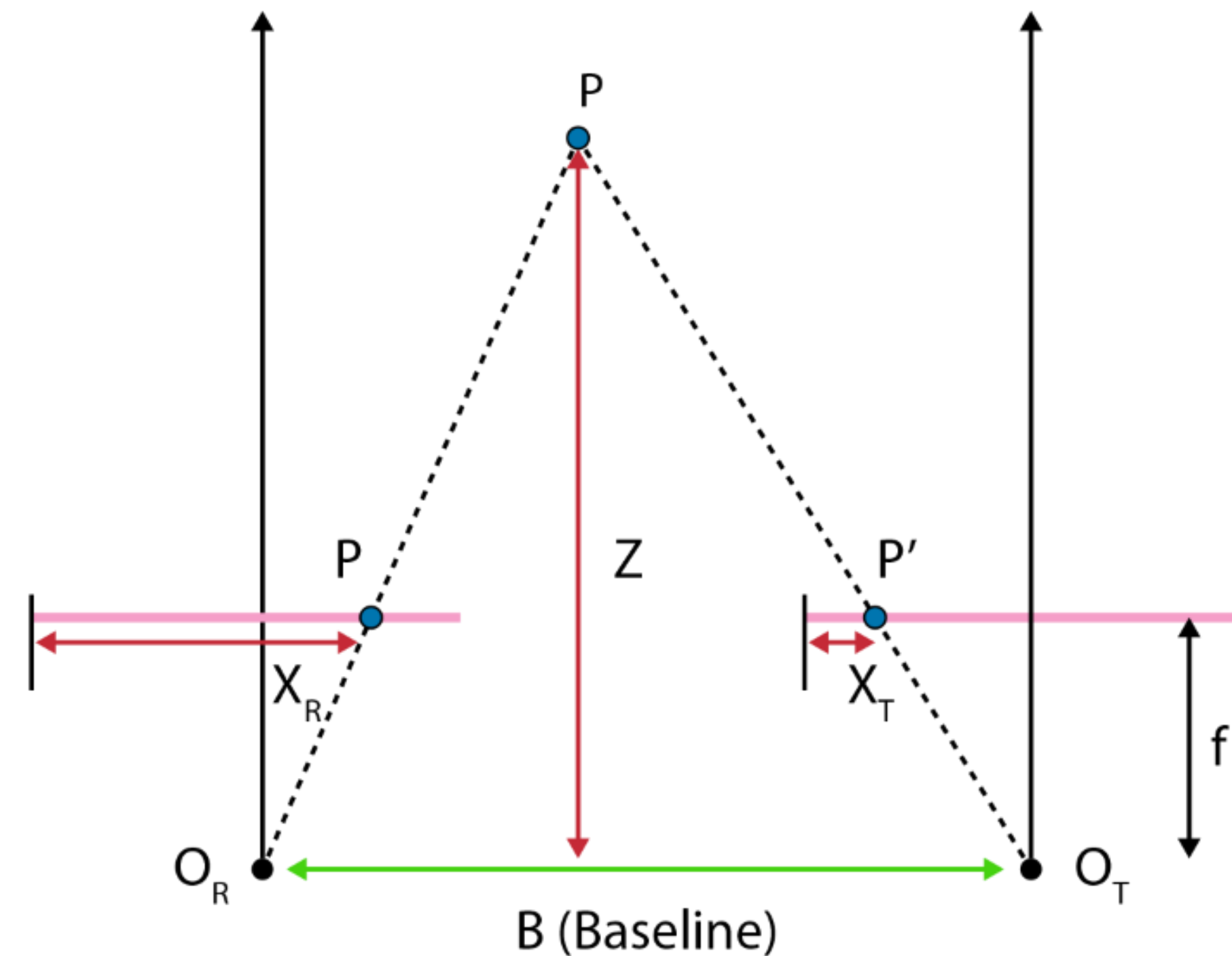
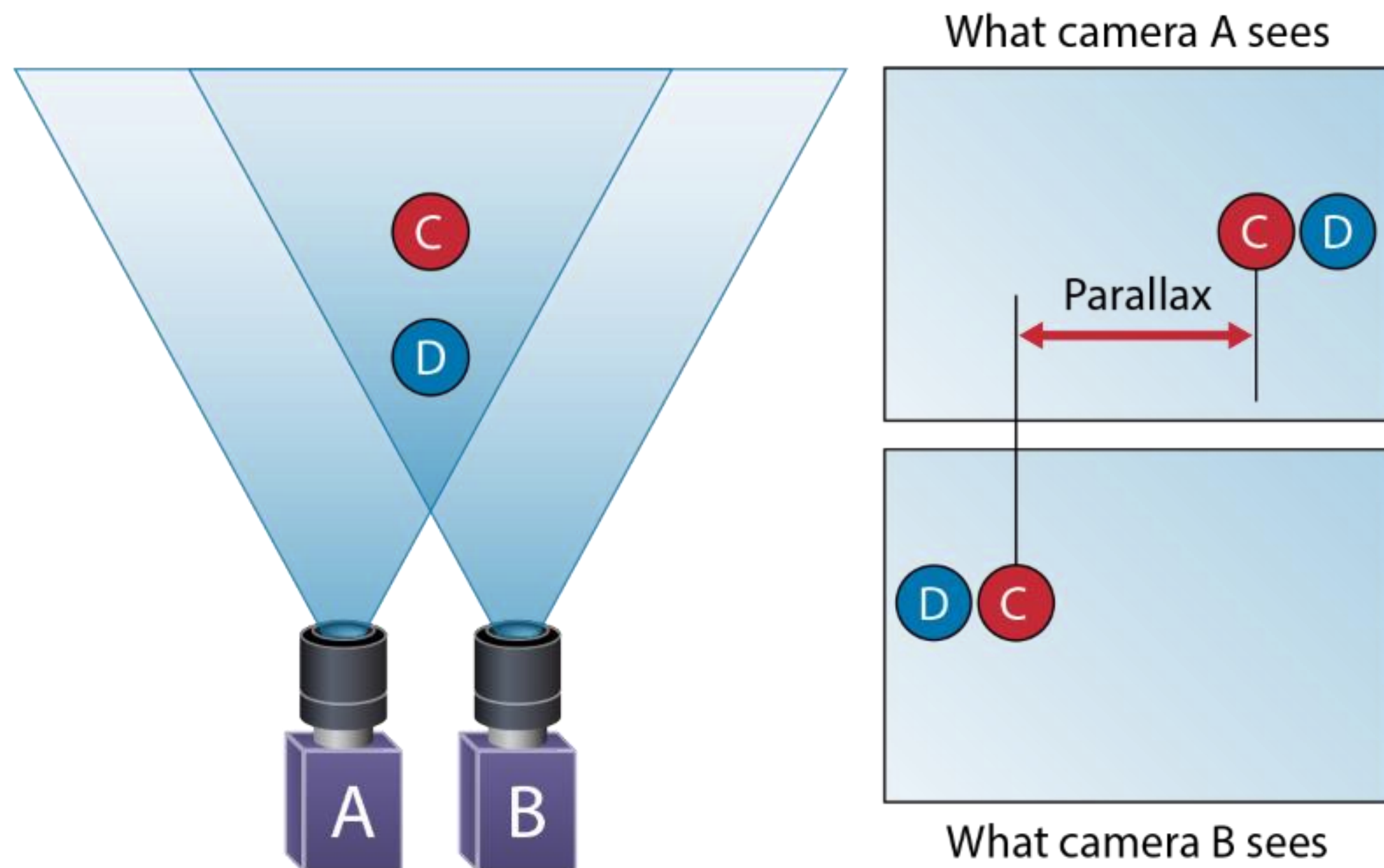
- R50



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 G50



Example Application
Co-Bot Eye-in-Hand System

Product Description

The eCapture™ Depth Camera G50 is a Stereo Depth Camera with a global shutter sensor setting and 50 degree depth FoV. This offers implacable quality of 3D data creation at optimal range. The camera includes 2 RGB sensor pairs for various resolutions of stereo RGB and depth disparity/distance map output via USB and is ideal for object and scene understanding in the field of robotic and co-bot/eye-in-hand camera systems. The camera is designed to ease the setup process and prototyping flexibility. It is suitable for a wide range of depth and computer vision applications in fast motion or static 3D scanning. With excellent indoor and outdoor depth output performance, it makes the camera ideal if you are installing depth in your product for the first time or in low to mid volume production. The eCapture™ Depth Camera G50 is also available in a lower cost PCBA package for bulk orders.

The eCapture™ Depth Camera G50 includes the eCapture™ SDK supporting Windows®, Linux and Android OS with support for multiple different programming languages and wrapper APIs.

Getting Started

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

- eAP87606D60 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 V30
Depth Output Resolution &Frame Rate	Up to 1280 x 720p (USB End Point 2 streaming out) Up to 60FPS (Supports various *color image +depth map modes)
RGB Output	1280 x 720 or Left+Right 2560 x 720 (USB End Point 1 streaming out)
Minimum Depth Distance (Min-z)	40cm, Varies depending on MTF Index
Maximum Range	450cm, Varies depending on performance accuracy & ambient conditions
Total Power	< 2.00W

Major Components

Sensor	2 x AR0135 (GS) : RGB Pair
Lens H x V x D	H56 x V40 x D70 Degree FoV Lens
Processing Chip	1 x eSP876 HD Depth Map Processor
Illuminators	4 x VCSEL 850nm IR Dot Projectors

Physical

Enclosure Material	Polished Metallic
Stereo Baseline	6.0cm
Connector	1 x USB3.2 Gen 1x1 and/or USB2.0 Micro-B
Product Dimension Length x Depth x Height	99.55 x 27.4. x 29.03 mm

Application & Benefits

Usage Scenario	Fast Motional and Movable Electronics
Scanning	Object Recognition
Co-Bot / Eye-In-Hand System	Robotic
AGV/AMR, Drone	Quick Proto-type for new product

LifeSense Depth Camera R50



Example Application
Face Authentication System

Product Description

The eCapture™ Depth Camera R50 is a Stereo Depth Camera with rolling shutter sensors and 50 degree angle Field of View (FoV) lenses. The camera includes 2 RGB sensors for various resolutions of stereo RGB and depth disparity/distance map output via USB, It is ideal for start-ups and small businesses, hardware prototyping, educational and innovative software applications. The camera is designed to be flexible and easy to setup. It is suitable for wide range of depth and computer vision applications in static or slow-motion devices with excellent indoor and outdoor depth output performance. Competitive pricing makes the camera ideal if you are installing depth in your product for the first time or plan small volume production.

The eCapture™ Depth Camera R50 includes the eCapture™ SDK supporting, Windows®, Linux and Android OS with support for multiple different programming languages and wrapper APIs.

Getting Started

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

- eAP87606GN10 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 (Rolling Shutter)
Depth FOV (H x V)	H50 x V28
Depth Output Resolution &Frame Rate	Up to 1280 x 720p (USB End Point 2 streaming out) Up to 60FPS (Supports various *color image +depth map modes)
RGB Output	1280 x 720 or Left+Right 2560 x 720 (USB End Point 1 streaming out)
Multi-Camera Sync	6-pin Header
Minimum Depth Distance (Min-z)	35cm, Varies depending on MTF Index
Maximum Range	350cm, Varies depending on performance accuracy & ambient conditions.
Total Power	< 2.00W

Major Components

Sensor	2 x SOI-H65 (RS) : RGB Pair
Lens H x V x D	H56 x V40 x D70 Degree FoV Lens
Processing Chip	1 x eSP876 HD Depth Map Processor
Illuminators	1 x eYs3D 830nm IR Dot Projectors

Physical

Enclosure Material	Plastic
Stereo Baseline	6.0cm
Connector	1 x USB3.2 Gen 1x1 and/or USB2.0 Micro-B
Product Dimension Length x Depth x Height	116.5 x 29.5 x 36.8 mm

Application & Benefits

Usage Scenario	Static or Slow-motion Electronic Devices	
	Scanning	Object Recognition
	Facial Recognition	Touchless Gesture Control
	Object Avoidance	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

