

Technology Overview

3D Technology	AI Neural Network
Camera System	Flange or Fixed mounted
Lighting	No external lighting required
Part Size	Any size, multiple camera module options to suit use case
Part Material	Dull, reflective, Transparent all supported
Prediction Speed	< 200ms
Robot Interfaces	Published APIs for all major brands
Environment Modelling	CAD import of cell geometry and robot hardware
Collision Detection	Automated checking of part, gripper and bin/cell collisions
Controller	Industrial PC (Ubuntu Linux)

Precision Data (+/-)

	Standard camera module	Custom camera module
X/Y	1mm	< 1mm
Z	1.5mm	< 1mm
Rotation X/Y	2.5°	< 1.5°
Rotation Z	1°	< 0.8°

Component Data Sheets

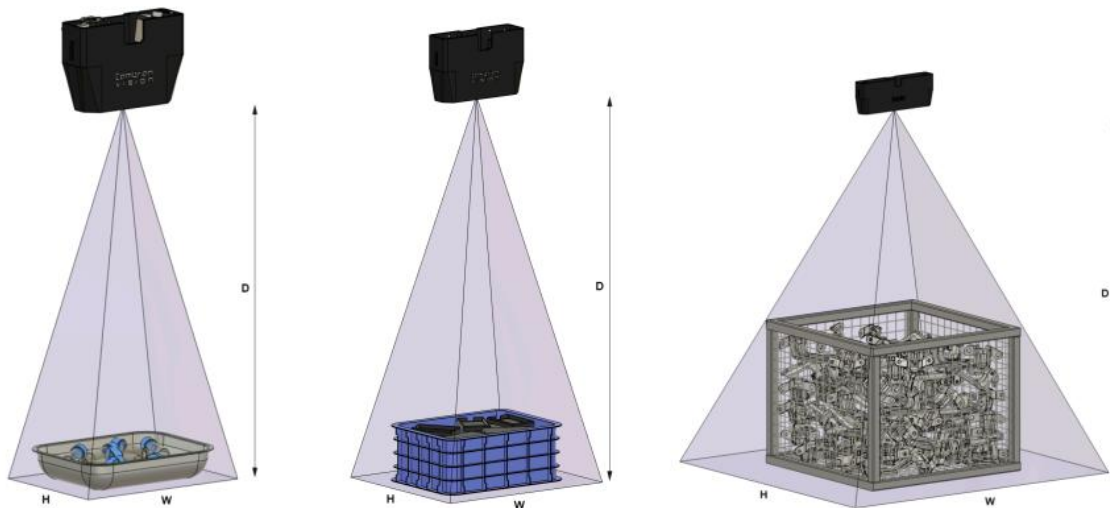
Detailed online documentation & datasheets for all robot APIs and components available at <https://documentation.cambrianrobotics.ai>

Camera Systems

The following Camera systems are available. Custom camera systems available on request.

	Standard (MC-0034)	Wide (MC-0035)	Ultra-Wide (MC-0036)
Working Distance (D)	300 - 800mm	400 - 1000mm	700 - 1200mm
Field of view (near)	180mm x	210mm x	490mm x
(H x W)	200mm	260mm	610mm

Field of view (far)	430mm x	560mm x	1300mm x
(H x W)	530mm	660mm	1500mm
Optimal focal distance	400mm	700mm	1000mm
Focal Length	6mm	6mm	4.5mm
Stereo Separation	80mm	140mm	195mm
Tilt Angle	5°	5°	5°
Case Dimensions	126mm x 87.5mm x 37.15mm	184mm x 87.5mm x 37.15mm	240.5mm x 87.5mm x 38.15mm
Examples	Vials, Bolts, etc. in small KLT	Larger parts in medium KLT	Large bins of parts, usually top mounted camera



Camera & Connection Types

	USB 3.0	Ethernet	
IP Rating	IP30	IP30	IP65/67*
Connector	USB 3.0 Micro-B, screwable	PoE GigE RJ45, screwable	GigE M12, screwable

* IP67 cameras require a custom case / mounting plate