

PRODUCT DATASHEET

ES-CV-C00-S002-V001

Industrial Stereo 3D Camera

Binocular Structured Light Camera | 330 Ethernet Stereo 3d Camera Series

Product Overview

The ES-CV-C00-S002-V001 is a binocular structured-light stereo 3D camera for industrial depth sensing and machine vision integration. It combines stereo vision depth sensing, Gigabit Ethernet connectivity and IP67 ingress protection in a compact industrial enclosure. Key specifications include 95 mm baseline, Up to 1280 x 800 @ 30 fps depth resolution and 0.25-20 m+ operating range.

Key Specifications

PARAMETER	VALUE	UNIT
Depth Technology	Stereo Vision	
Depth Resolution and Frame Rate	Up to 1280 x 800 @ 30fps	
Operating Range	0.25 - 20m+	
Depth Field of View	90° x 65° ± 3° @ 2m (1280 x 800)	
Baseline	95	mm
Data Connection	Gigabit Ethernet	
Ingress Protection Rating	IP67	
Dimensions	124mm x 29mm x 50mm	
Weight	220 ± 3	g

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Operating Range	0.25 - 20m+		
Baseline	95	mm	
Depth Field of View	90° x 65° ± 3° @ 2m (1280 x 800)		
Depth Technology	Stereo Vision		
Depth Filter	Visible + NIR-Pass		
Ideal Range	0.25 - 6	m	
Spatial Precision	≤ 0.8% (1280 x 800 @ 2 m & 80% x 90% ROI) ± 1.6% (1280 x 800 @ 4 m & 80% x 80% ROI)		
IMAGING			
Depth Resolution and Frame Rate	Up to 1280 x 800 @ 30fps		
Color Resolution and Frame Rate	Up to 1280 x 800 @ 60fps		
Color Field of View	94° x 68°		Aspect ratio 16:10; Stated variance +3°
	94° x 62°		Aspect ratio 16:9; Stated variance +3°
	82° x 66°		Aspect ratio 4:3; Stated variance +3°
HDR Depth	Supported		
Camera Image Sensor Type	IR: Global Shutter Color: Global Shutter		
ELECTRICAL			
Power Consumption - PoE	< 5.0	W	Peak < 12.0 W
Power Consumption - DC input	< 4.0	W	Peak < 8.5 W
Power Supply - PoE	IEEE 802.3af		
Power Supply - DC input	9-24	V DC	Minimum 1 A
MECHANICAL			
Weight	220 ± 3	g	
Installation Interface - Back	2 x M4		Max torque 0.4 N·m; Max insertion depth 6 mm
Installation Interface - Bottom	4 x M4		Max torque 0.4 N·m; Max insertion depth 6 mm
	1 x 1/4-20 UNC		Max torque 4.0 N·m; Max insertion depth 8 mm

Technical Specifications

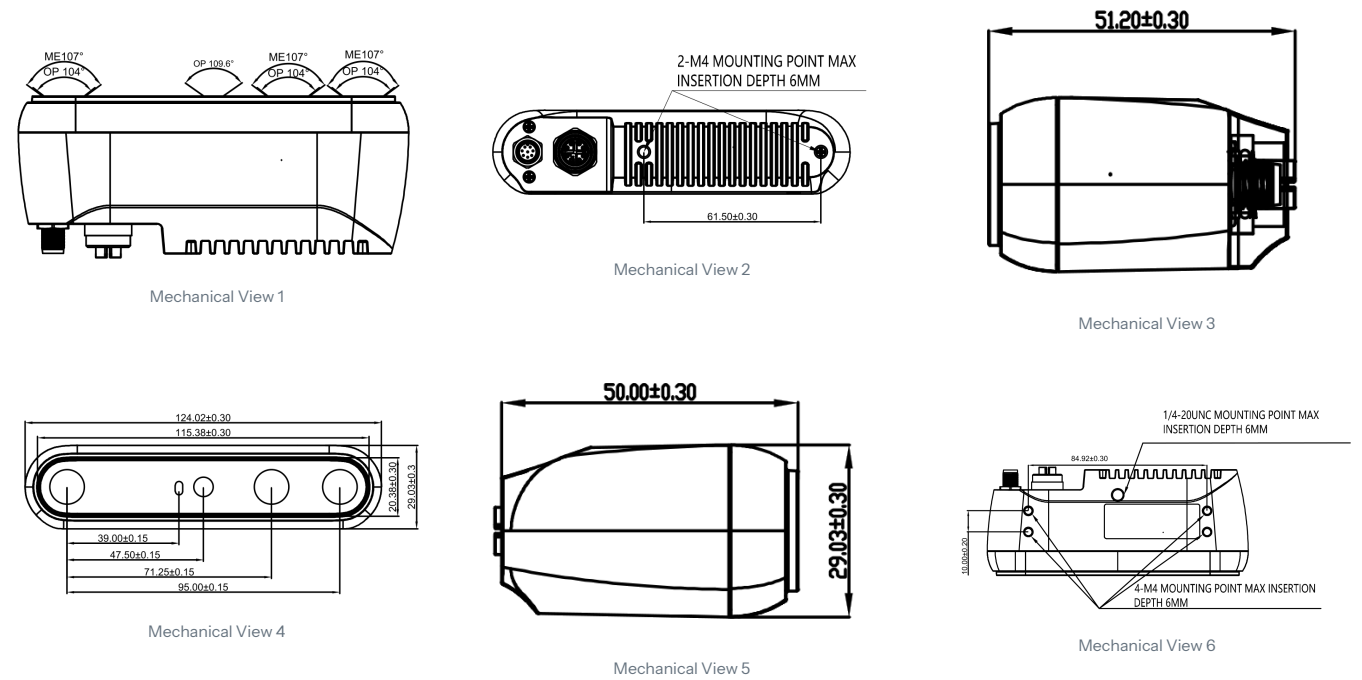
PARAMETER	SPECIFICATION	UNIT	NOTES
INTERFACES			
Data Connection	Gigabit Ethernet		
Interface	Ethernet / PoE		Connector: M12, 8-pin, X-coded; Function: Data transmission and PoE
	Power / I/O / RS485		Connector: M8, 8-pin, A-coded; Function: DC power, asynchronous I/O and RS485
Supported Functions	Hardware Spatial Alignment of Depth to Color Hardware Timestamps, Multi-camera Sync PTP Timing RS485		
IMU	6 DoF, Gyroscope/Accelerometer Sample range: 50 - 1,000Hz		
ENVIRONMENTAL			
Operating Temperature	-10 to 50	°C	15 fps
	-10 to 45	°C	30/60 fps
Relative Humidity	5-90	% RH	Non-condensing
Use Environment	Suitable for indoor and protected outdoor environments		
Backside Case Temperature	-10 to +65	°C	
Storage Temperature	-20 to 70	°C	Short term
	0 to 60	°C	Long term
Storage Humidity	5-90	% RH	Non-condensing
SAFETY			
Ingress Protection Rating	IP67		
RELIABILITY			
Design Lifespan	5	years	Default Operating Mode & Operating Environment.
COMPLIANCE			
Radiated Emissions	≥6	dB	
ESD - Contact discharge	±8	kV	Class A
ESD - Air discharge	±15	kV	Class A
EMC Performance	ESD: Class A; contact discharge: ±8 kV; air discharge: ±15 kV; radiated emissions: ≥6 dB		
CONFIGURATION			
Dimensions	124mm x 29mm x 50mm		
ADDITIONAL SPECIFICATIONS			
Protection Rating	IP67		
Sensor Type	IR: Global Shutter Color: Global Shutter		

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE				UNIT
Weight	220 ± 3				g
Installation Interface	LOCATION	INTERFACE	MAX TORQUE	MAX INSERTION DEPTH	
	Back	2 x M4	0.4 Nm	6 mm	
	Bottom	4 x M4			
			1 x 1/4-20 UNC	4.0 Nm	8 mm
Dimensions	124mm x 29mm x 50mm				

Dimensional Drawings



2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Left ME angle	ME angle 107°
	Left OP angle	OP angle 104°
	Center OP angle	OP angle 109.6°
	Middle-right ME angle	ME angle 107°
	Middle-right OP angle	OP angle 104°
	Right ME angle	ME angle 107°
	Right OP angle	OP angle 104°
Mechanical View 2	M4 mounting point quantity and thread specification	2 × M4 mounting points, maximum
	Maximum insertion depth for M4 mounting points	Maximum insertion depth 6 mm
	Mounting point spacing or locating distance	61.50 ± 0.30 mm
Mechanical View 3	Overall length	51.20 ± 0.30
Mechanical View 4	Overall external length	124.02 ± 0.30 mm
	Inner profile length	115.38 ± 0.30 mm
	Overall external height	29.03 ± 0.30 mm
	Left datum to slotted hole center distance	39.00 ± 0.15 mm
	Left datum to small circular hole center distance	47.50 ± 0.15 mm
	Left datum to middle circular hole center distance	71.25 ± 0.15 mm
	Center distance between left and right end circular holes	95.00 ± 0.15 mm

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 5	Overall length	50.00 ± 0.30
	Overall height	29.03 ± 0.30
Mechanical View 6	1/4-20UNC mounting point maximum insertion depth	1/4-20UNC mounting point, maximum insertion depth 6 mm
	Horizontal length dimension	84.92 ± 0.30 mm
	Vertical height dimension	10.00 ± 0.20 mm
	Four M4 mounting points maximum insertion depth	4× M4 mounting points, maximum insertion depth 6 mm

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01 Specifications are subject to change without notice. Verify the current product configuration before final design release.

02 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.