

CATEGORY SELECTION GUIDE

Binocular Structured Light Camera Category Selection Guide

Binocular structured-light cameras calculate scene depth from paired imaging and structured-light information while providing a color image for robotic vision, recognition and inspection tasks that require spatial and surface data. Product Platform and SKU selection depends primarily on working range, depth and color resolution, field of view, installation dimensions, data connectivity, power and environmental conditions.

CATEGORY SELECTION GUIDE

CATEGORY	CURRENT CATALOG	REVISION / ISSUE
Binocular Structured Light Camera	2 Product Platforms / 2 SKUs	R01 2026-09-04

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01 | Category Scope and Objective

Item	Current category
Product catalog	2 Product Platforms / 2 SKUs
Suitable use	Binocular depth acquisition and color imaging in robots, 3D inspection and automated equipment.

02 | Product Principle and Typical Applications

Product overview

Binocular structured-light cameras calculate depth from paired imaging and optical pattern information while providing color images for vision tasks requiring spatial position and surface information.

Typical applications

Short-range picking and localization

For short-range applications, first check working range, depth resolution, USB data connection and installation space.

Medium- and long-range 3D inspection

For medium- and long-range inspection, first check field of view, operating range, network connection, synchronization and ingress protection.

03 | Selection Inputs

Prepare before selection

- Record the target working distance, operating range and field of view.
- Confirm depth/color resolution, frame rate and spatial precision.
- Confirm USB or Gigabit Ethernet/PoE data connection and synchronization requirements.
- Confirm installation dimensions, power, consumption, temperature and ingress protection.

04 | Product Platform Catalog



Binocular Structured Light Camera Product Platform 01

This Product Platform contains 1 SKU using binocular stereo vision for depth. Start with working range, depth resolution and installation interface, then confirm field of view, data connection, power and environment.

1SKU



Binocular Structured Light Camera Product Platform 02

This Product Platform contains 1 SKU using binocular stereo vision for depth. Start with working range, depth resolution and installation interface, then confirm field of view, data connection, power and environment.

1SKU

05 | Product Platform and SKU Selection Path

- Build Product Platform candidates from working distance, operating range and field of view.
- Check vision performance from depth/color resolution, frame rate and spatial precision.
- Confirm system integration from data connection, power, synchronization and mounting interface.

04 Enter SKU refinement within the platform and verify the parameter combination for each SKU.

Selection note

The two Product Platforms differ in working range and connection method. Use the platform for navigation, then verify distance, interface and environmental parameters at SKU level.

06 | Selection Parameters and SKU Refinement

Product Platform parameter span

Product Platform	SKUs	Depth Technology	Ideal Range	Operating Range	Dimensions	Data Connection	Power Supply	Depth Resolution and Frame Rate	Color Resolution and Frame Rate	Ingress Protection
Binocular Structured Light Camera Product Platform 01	1	Stereo Vision	7 - 50cm	4 - 100cm	42 x 42 x 23mm	USB 3.0 (recommended) & USB 2.0	DC 5V & 1700mA	Up to 1280 x 800 @ 30fps 848 x 530 @ 60fps	Up to 1280 x 800 @ 60fps	IP54 (only when the Type-C interface is properly connected and the screws are tightened)
Binocular Structured Light Camera Product Platform 02	1	Stereo Vision	0.25 - 6m	0.25 - 20m+	124mm x 29mm x 50mm	Gigabit Ethernet	POE: IEEE 802.3af DC: 1A @ 9V - 24V	Up to 1280 x 800 @ 30fps	Up to 1280 x 800 @ 60fps	IP67

SKU shortlist matrix

SKU	Product Platform	Operating Range	Dimensions	Data Connection	Power Supply	Ingress Protection	Weight
ES-CV-C00-S001-V001	Binocular Structured Light Camera Product Platform 01	4 - 100cm	42 x 42 x 23mm	USB 3.0 (recommended) & USB 2.0	DC 5V & 1700mA	IP54 (only when the Type-C interface is properly connected and the screws are tightened)	68
ES-CV-C00-S002-V001	Binocular Structured Light Camera Product Platform 02	0.25 - 20m+	124mm x 29mm x 50mm	Gigabit Ethernet	POE: IEEE 802.3af DC: 1A @ 9V - 24V	IP67	220g ± 3g

07 | Integration Checklist

Design inputs

- 01** Check baseline, field of view, working distance and mounting orientation.
- 02** Check data cabling, synchronization, power and controller drivers.
- 03** Check temperature, humidity, ingress protection and connector-securing conditions.

08 | Engineering Use and Verification Notice

Engineering verification

- 01** Before design freeze, verify mechanical, electrical, vision interfaces and controlled engineering documents for the specific SKU.
- 02** Do not infer missing accuracy, frame-rate or compatibility data from an SKU code or a single working-distance value.
- 03** Use the Datasheet and Dimensional & Integration Guide as the primary engineering verification documents.

Responsibility boundary

This guide organizes candidate scope. Final selection, interface confirmation and system responsibility remain subject to controlled engineering documents for the specific SKU and project verification.