FAIRINO

FAIRINO 3D MECHANICAL GALVO CAMERA

Industrial-Grade 3D Vision Solution

Sub-Millimeter Accuracy **Full-Scenario Adaptability**

Intelligent Interference Suppression

Equipped with binocular structured light and galvo scanning technology, it breaks through the limits of industrial 3D measurement. Purpose-built for **industrial automation, laser welding, and 3D reconstruction**!

Super Lightweight Design to Maximize Production Space

Ultra-Compact Size Saves Installation Space;
Ultra-Lightweight Design Enables Wide Application Across Various Payloads and Robot Arm Spans.

Sub-Millimeter Precision, Capturing Industrial Details

Measurement accuracy is better than 0.05% @ 1100 mm, with a point cloud resolution of 1280×1024 and Z-axis repeatability of 0.2 mm, enabling precise reconstruction of complex structures including curved surfaces and deep cavities.

All-Metal Body, Durability Upgraded

Metal housing offers impact resistance and deformation durability, significantly improves heat dissipation efficiency, ensuring stable operation in environments from -10°C to 70°C;
Front splash-proof cover effectively protects against harsh industrial conditions.

Intelligent Interference Resistance, Seamless Performance in Complex Environments

Multi-Frame Fusion Algorithm Overcomes Industry Challenges Such as Metal Reflections, Missing Points on Black Absorptive Materials, and Noise on Polished Surfaces, Delivering Clear and Distortion-Free Imaging;
Pre-Calibrated Factory Configuration Enables Plug-and-Play Operation Without Manual Adjustment.

Large Depth of Field and Wide Field of View, Flexibly Extending Applications

Working Distance: 350 mm - 1100 mm, Covering Both Near and Far Field Scanning;
Supports Multi-Camera Fusion for Easy Expansion to Large-Scale Workpiece Inspection.

FRSV-Nano-Pro

Application Scenarios

Full-Chain Visual Empowerment for Industrial Automation

Visual Positioning

Provides real-time 3D coordinates for welding, palletizing, CNC Pick&Place, and bin-picking solutions, enabling dynamic grasping and path planning.

Industrial Quality Inspection

High-precision dimensional measurement and deformation detection to meet the quality inspection requirements of industries such as 3C electronics and automotive parts.

3D Reconstruction

High-precision scanning enables physical object digital modeling and the creation of digital twins to support full lifecycle quality traceability and analysis.

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Official website Youtube X

Key Parameters
Industrial-Grade Performance Configuration

Field of View (FOV)	FOV:52°*50° (H*V)
Near Field	329mmx287mm@350mm
Far Field	1021mmx881mm@1100mm
Working Range	350mm~1100mm (varies with environment)
Point Cloud Resolution ; Accuracy	1280 x 1024; <0.05%@1100mm
Point Cloud Frame Rate; Operating Current; Data Interface	<3 Hz; 1A; GigE
Power Supply	POE (Power over Ethernet)
Trigger Mode	Software Trigger / Hardware Trigger
Data Types	Raw Image (Monochrome); Depth, Point Cloud
Supported OS	Windows / Ubuntu
Operating Temperature	Operating: -10℃ to 70℃; Recommended: 0℃ to 50℃
Weight ; Safety	482 g (without motorized protective cover); Laser Class 3R

Product Dimensions

FRSV-Nano-Pro:

139 * 61.5 * 46mm
(without camera cover)

FRSV-Nano-Pro-C:

139 * 63.8 * 58mm
(with camera cover)

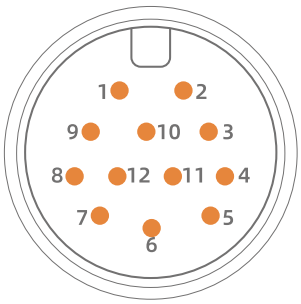
Camera Interface

Camera Communication Control Interface Cable (Mandatory)

Table 1 POE Network Cable

No.	Description
1	TRIN- (External Trigger Input Positive)
2	TX4- (Network)
3	TX4+ (Network)
4	TX3- (Network)
5	TX3+ (Network)
6	TX2- (Network)
7	TX2+ (Network)
8	TX1- (Network)
9	TX1+ (Network)
10	TRIN+ (External Trigger Input Negative)
11	TROUT- (Trigger Output Negative)
12	TROUT+ (Trigger Output Positive)

Illustration



Camera Protective Cover External Control Interface Cable (Optional)

Table 2 Protective Cover External Control Cable

No.	Description
1	24V (External Power Supply Positive)
2	0V (External Power Supply Negative)
3	OUT (Status Output)
4	IN (Open/Close Cover Control)

Illustration