



Eureka AI Vision System™

📷 Eureka 3D Camera + 🎯 Eureka Controller

An advanced AI vision solution that gives robots eyes and brain.



The Eureka AI Vision System™, composed of **the Eureka Controller** and **the Eureka 3D Camera**, is a next-generation AI vision solution that expands the capabilities of industrial and collaborative robots. It simplifies applications that were previously challenging with conventional vision systems like bin picking, precise pick and place, and quality inspection.

◆ No CAD or Training Needed

The Eureka Vision System automatically identifies a workpiece's position, orientation, and optimal gripping method.

◆ Reliable Detection of Difficult Objects

Accurately captures glossy, semi-transparent, thin, or complex-shaped objects.

◆ Real-Time Path Planning with Obstacle Avoidance

Generates optimized robot paths in real time, safely avoiding obstacles

◆ Quick and Easy Setup

Fully integrated system enables setup in as little as half a day

◆ Sub-Millimeter Accuracy

Native high-precision calibration technology provides sub-millimeter pick-and-place accuracy

◆ Wide Compatibility with Robots and PLCs

Seamlessly integrates with major robots and PLCs to accelerate automation.

Build precision pick & place systems faster than ever

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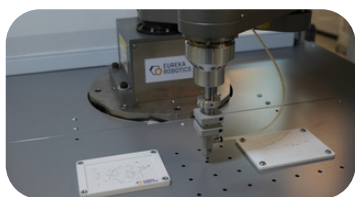
Eureka Controller

One-stop Solution for Robotics & AI Vision Applications



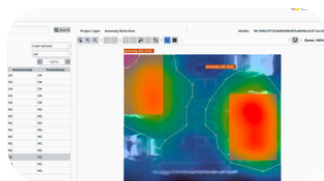
The Eureka Controller seamlessly connects to robots, cameras, sensors, and PLCs, orchestrates them in powerful Robotics & AI applications.

◆ High-Accuracy Calibration



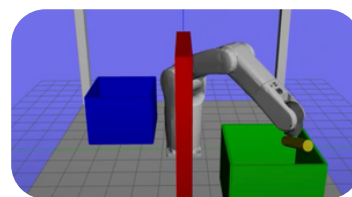
- Sub-millimeter accuracy (<0.2 mm) for vision-guided tasks
- Calibrates robots, cameras, and tools for precious picking
- Uses standard 2D or Eureka 3D cameras – no other specialized equipment required

◆ Deep-Learning-Based Computer Vision



- Easy tools for labeling, AI model tuning, training, and inference
- Defect and anomaly detection with out-of-box, powerful, pre-trained models for high success rate
- Scalable cloud-based training

◆ Real-Time Motion Planning



- Automatically generates optimal robot paths
- Avoids collisions using full environment awareness
- Fast path computation times (<1 sec) for real-time operations
- Adapts to changing environments and object layouts

Model	EC3-A1
Power Supply & Voltage	9 ~ 36 V DC
Power Consumption	45.7 W (typ), 108 W (max)
I/O	Modbus/TCP, Modbus/RTU, Ethernet/IP
Dimensions (W x D x H)	192 x 230 x 77 mm
Ambient Temperature Range	-20 ~ 50°C

Eureka 3D Camera

Supercharged with AI to Power Your 3D Vision Applications



The Eureka 3D Camera adds 3D vision to your robots—no costly hardware or complex software needed. Fully integrated with the Eureka Controller, it makes getting started fast and easy.

◆ AI-Based 3D Reconstruction

- Deep learning enables 3D reconstruction without pattern projection or TOF.
- Handles semi-transparent and challenging materials

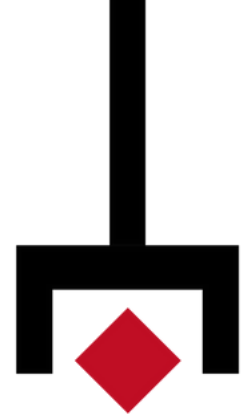
◆ Flexible & Scalable Design

- Easy to install and configure
- Supports a wide range of FOVs and resolutions
- Handles objects of all sizes - from tiny to large, all shapes

◆ Fast & Accurate 3D Vision

- Simple pipeline, from vision to picking
- <1s processing time for fast cycle tasks
- Masterless models available for easy deployment
- Generates dense and accurate point clouds (<1 mm)

Model	ECA2-156-N	ECA3-120-F1	ECA3-156-F2	ECA3-156-F3
Recommended working distance	500 - 1200 mm	300 - 600 mm	600 - 1200 mm	1200 - 4000 mm
FOV @ min distance	300 x 255 mm	210 x 188 mm	454 x 374 mm	917 x 746 mm
FOV @ max distance	950 x 620 mm	448 x 376 mm	918 x 749 mm	3186 x 2486 mm
Resolution Max	1920 x 1080 px	1440 x 1080 px	1440 x 1080 px	1440 x 1080 px
Typical capture time	0.5 - 1.2 s	0.1 - 1.2 s	0.1 - 1.2 s	0.1 - 1.2 s
Dimensions (W x D x H)	256 x 165 x 60 mm	160 x 80 x 40 mm	195 x 80 x 40 mm	195 x 80 x 40 mm
Weight	2.7 kg	0.6 kg	0.7 kg	0.7 kg



Application Use Cases



◆ 3D Picking and QC of Automotive Parts

- bin picking and inspection of glossy side mirror covers
- Handles picking, classification, and inspection with AI-driven sub-millimeter defect detection



Watch the video



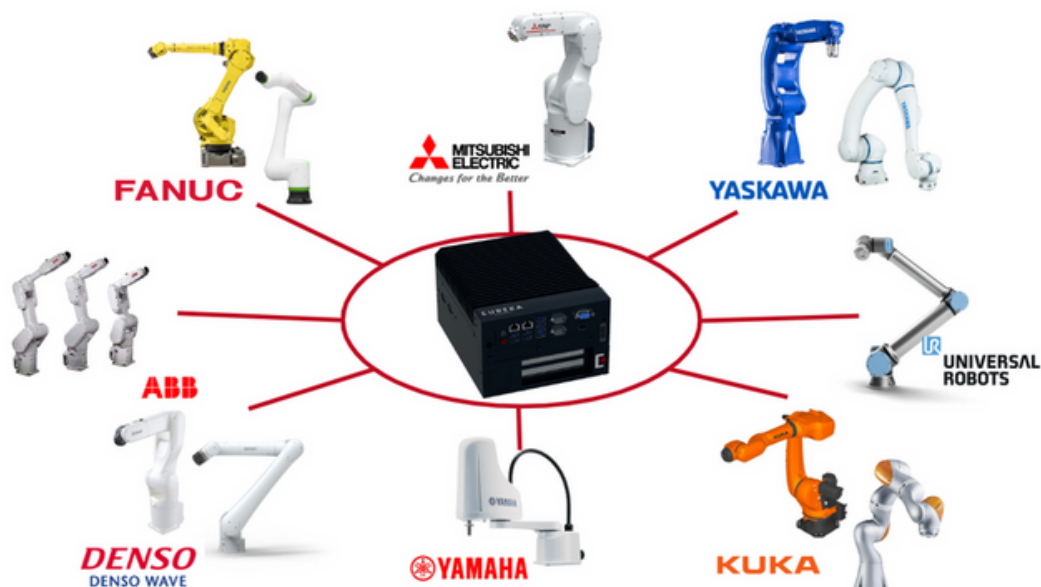
◆ Registration-free 3D Picking

- Pilot with Mitsui Fudosan at e-commerce site
- Picks random items without prior training
- AI controller detects objects and plans optimal, collision-free paths
- Ideal for logistics and kitting in automotive and electronics



Watch the video

Available for Major Brands



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