

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

Eureka's AI identifies parts and grasping methods automatically, no CAD data or training required.



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

Out-of-box support for major robot brands, cameras, and PLCs provides seamless automation integration

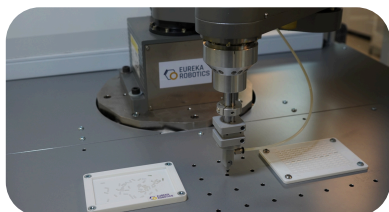
Eureka Controller

One-stop Solution for Robotics & AI Vision Applications



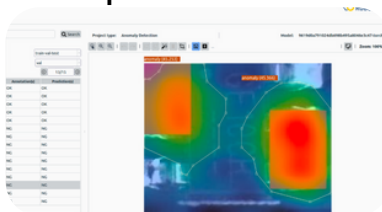
The Eureka Controller seamlessly connects to robots, cameras, sensors, and PLCs, orchestrates them in powerful Robotics & AI applications.

◆ High-Accuracy Calibration



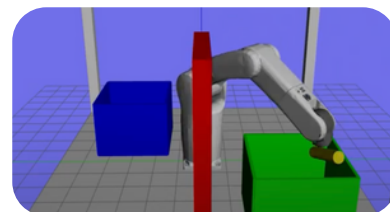
- Sub-millimeter accuracy (<0.2 mm) for vision-guided tasks
- Calibrates robots, cameras, and tools for precious picking
- Uses standard 2D or Eureka 3D cameras – no other specialized equipment required

◆ 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	Eureka Controller
Power Supply & Voltage Power Consumption	9~36V DC 45.7 W (typ), 108 W (max)
I/O Ports	Modbus/TCP, Modbus/RTU, Ethernet/IP
Dimensions (W x D x H)	230 x 192 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)

Eureka 3D Camera-G2

High-resolution standard model

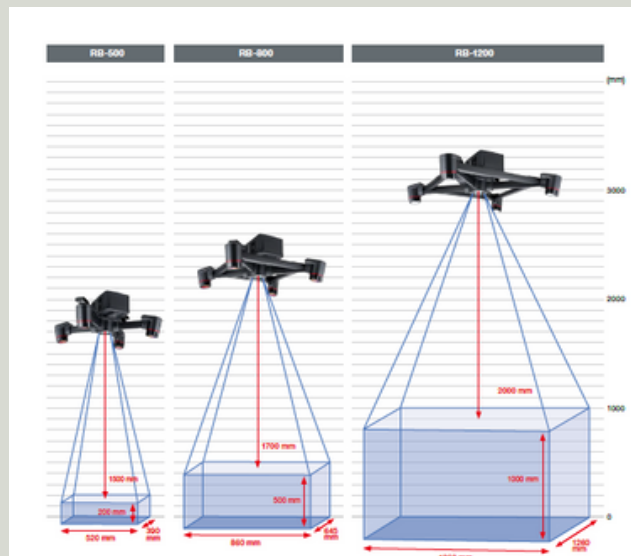
- Recommended Working Distance: 0.5 ~ 1.2m / 1.6 ~ 3.9 ft
- Resolution (Max): 1920 x 1880 px
- FoV
 - 300 x 255 mm @0.5 m / 11.8 x 10.1 in @1.6 ft
 - 950 x 620 mm @1.2 m / 37.4 x 24.4 in @3.9 ft
- Frame Rate (Max): 5 FPS
- Dimensions: 250 x 165 x 60 mm / 9.8 x 6.5 x 2.4 in
- Weight: 2.7kg / 6.0lb



Eureka 3D Camera-G3

Lightweight, compact, high-speed processing model tracks moving workpieces with a global shutter.
Available in three sizes with different fields of view

- Recommended Working Distance: 0.5 ~ 3.0 m / 1.6 ~ 9.8 ft
- Resolution (Max): 1440 x 1080 px
- Frame Rate (Max): 11 FPS





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

