CANON INDUSTRIAL IMAGING PLATFORM

Image processing software to enhance application capability of UR robots

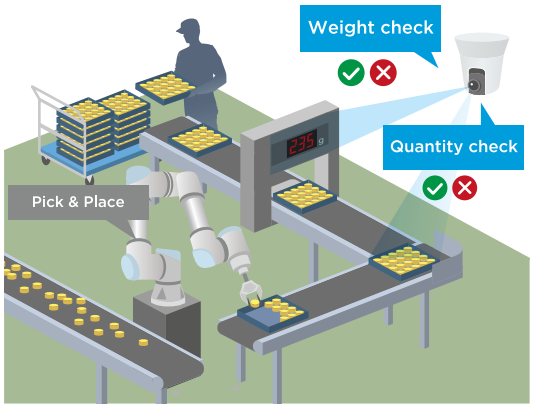
VISION EDITION-U

Image processing software for UR robots

UNIVERSAL ROBOTS+ Certified

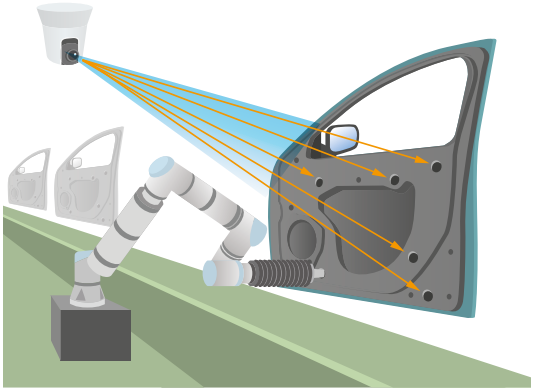
Image processing feature covering the whole robotic automation process

Vision Edition-U counts the parts quantity and reads weight to ensure correct pack contents. A wide range of image processing functions ensures the efficiency at every step of the robotic automation process and keeps a high standard of output.



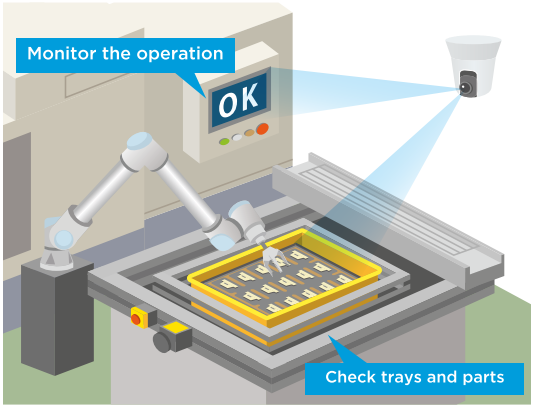
Single camera, multiple point inspection

Vision Edition-U can inspect screw holes made, or parts fitted by the robot using image processing. Thanks to a flexible Pan/Tilt/Zoom camera, large areas such as a car door can be inspected by a single camera and eliminate human inspection errors.



Automate machine tending with image processing

By monitoring the display of a CNC machine, Vision Edition-U facilitates robots to perform machine tending. This is a simple and fast method of achieving the task without a hard-wired connection. It eliminates the necessity of operator assistance and provides longer, uninterrupted hours of operation.



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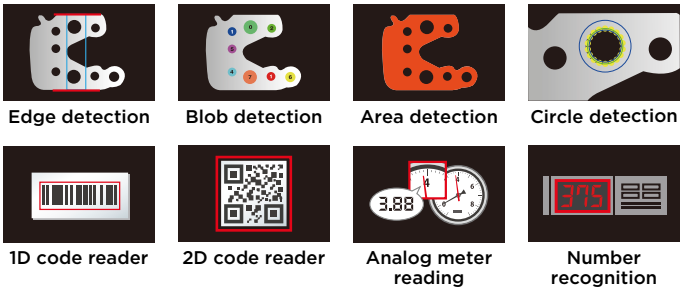
Extensive image processing capability

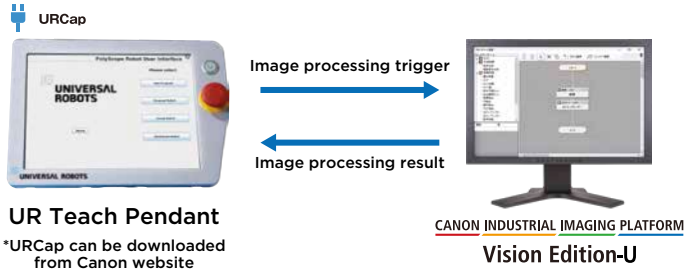
Vision Edition-U provides various image processing features such as 1D/2D code and character reading, pattern matching and shape detection to expand collaborative robot application.



Simple implementation with intuitive programming

Vision Edition-U has intuitive drag & drop flowchart JOB programming. UR controller triggers Vision Edition-U image processing and receives the result to control the robot.

(Certified by Universal Robots)



Technical Specifications

SOFTWARE FUNCTIONS

CAMERA OPERATION FUNCTIONS	Imaging, network camera position, network camera movement correction, grid PTZ
BRANCH PROCESSING FUNCTIONS	Branch processing, multiple branching conditions
IMAGE PROCESSING FUNCTIONS	Density inspection, area, edge position, edge width, arc edge, approximate straight line edge, angle detection, circle detection, ellipse detection, blob detection, 1D code reader, 2D code reader, number recognition, character recognition, analogue meter reading, colour detection
MODEL MATCHING FUNCTIONS	NCC matching, Shape matching
CALCULATION FUNCTIONS	Four basic calculations, angle calculations, multiple branching conditions calculation, maximum value/ minimum value, numerical formula calculations, output value statistical, two straight line intersection, two point calculation
IMAGE ENHANCEMENT FILTERS	Grayscale binarization, contract -> expand, expand -> contract, Sobel filter, image subtraction

SYSTEM OPERATION

SIMULTANEOUS CAMERA CONNECTIONS	Maximum 4 cameras per program
SIMULTANEOUS ROBOT CONNECTIONS	1 robot
JOB TRIGGER INPUT	Robot, internal timer trigger (trigger count & trigger interval)
DATA OUTPUT (AS CSV LOG DATA FILE) TO FTP SERVER	Detected value (coordinate, edge position etc), 1D code/2D code/number/character/analogue meter/ colour detection RGB value
FTP TRANSFER	Log images, log data, screenshots
SIMULATION MODE DATA	Log images, log data or from external USB memory device
LOG RECORDS	Log images, log data, archive images, screenshots

SUPPORTED DEVICES

CANON NETWORK CAMERA	VB-H45, VB-S30D Mk II, VB-S30VE, VB-S910F, N10-W02
AXIS NETWORK CAMERA	P1214, P1224-E, M1065-LW, M5065, V5915, P3905-R Mk II, P3915-R Mk II
ROBOT	Universal Robots UR3e, UR5e, UR10e (PolyScope 5.4.0 or later), UR3, UR5, UR10 (PolyScope 3.10.0 or later)
PC	Siemens Simatic IPC427E (Windows 10 IoT Enterprise 2016 LTSB 64bit) , HPE Edgeline GL20 (Windows 10 Pro 64bit)

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