New releases - Robot UR & Product

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Product release/update

What's new?

OnRobot Eyes (New Version)

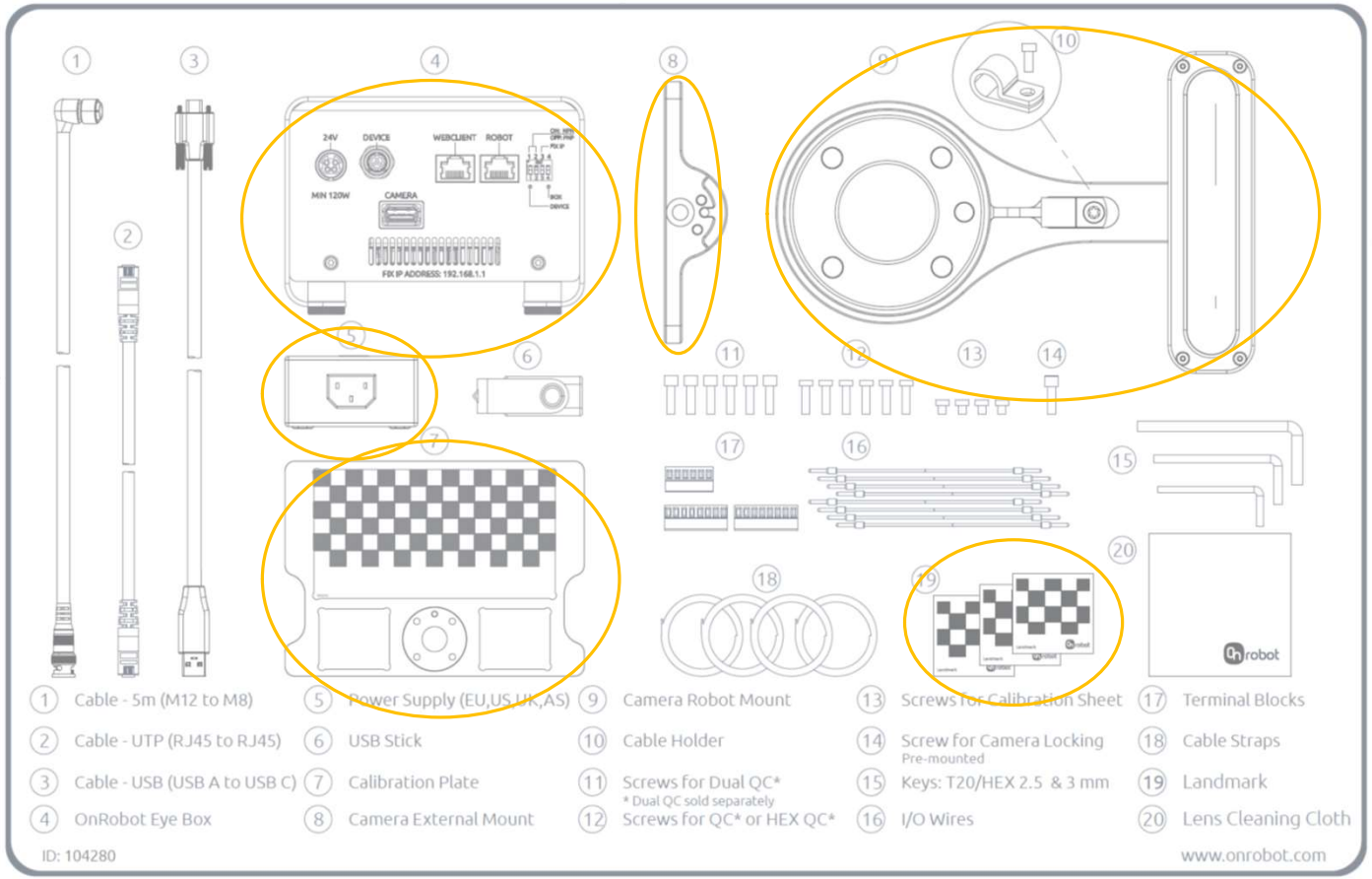
Suction Cups for foil and bags Ø25

OnRobot Eyes

New version available

OnRobot Eyes – Package content

Product update Launch – OnRobot Eyes



The OR Eyes package contain all essential cables. If needed robot adapter plate must be ordered separate and will be delivered with the OR Eyes.

What's important to know!

OnRobot Eyes

Min. Eye Box Software version: 5.2.0

EtherNet/IP
or WebLogic™

Upgraded Eye Box HW V 1.2
(Contains Compute Box v3.4)

English

User Manual v1.2.0

WebLogic™ in separate manual for all supported brands

NOTE:

Replacement of old Eyes equipment is carried out as RMA

Robot brand	SW version
UR	5.2.0

New functionalities

Eyes updates

- Improvement on detection
  - One shot detection
  - Blob-detection
  - Gripper clearance added
- Contour and color inspection added
- Landmark feature
- Setup update
  - Camera position saved upon teaching of Camera View for easy access

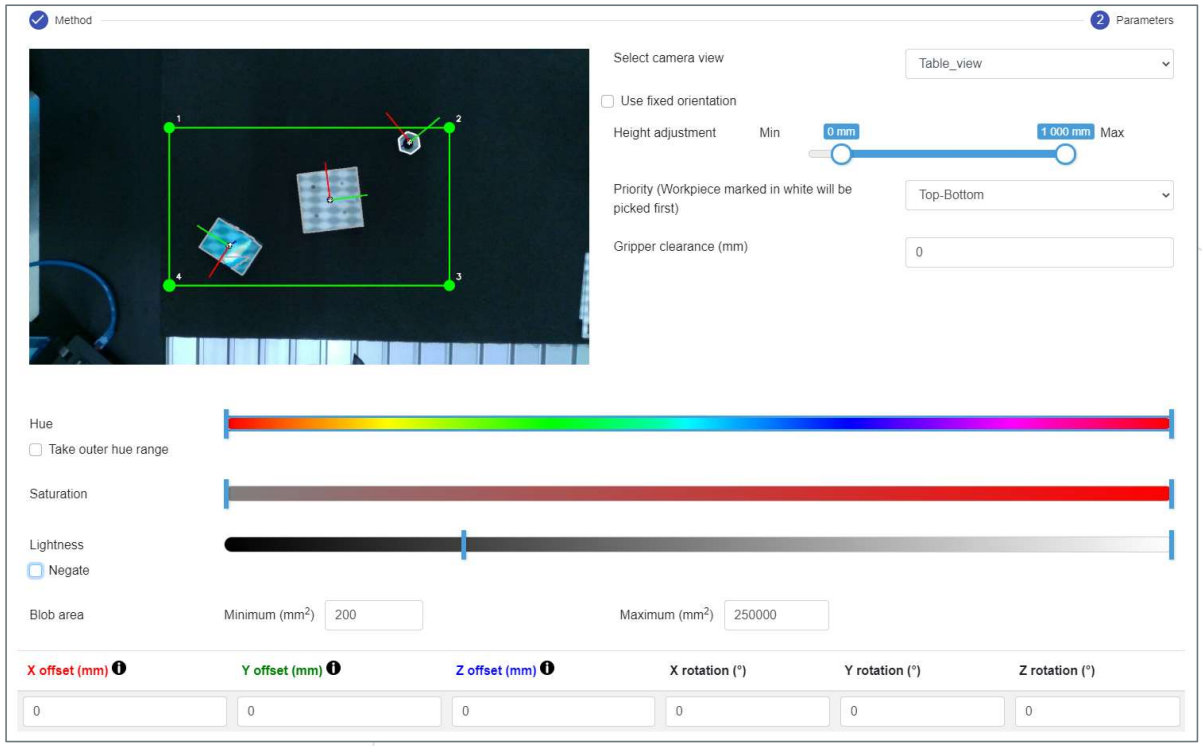
Eyes feature

- Color and size (Blob) detector

The detection is based on a color and size range and everything corresponding to these requirements are detected

Can be used to pick objects that vary slightly in shape or color

The system will return the center position with rotation as close to the natural axis of the workpiece as possible



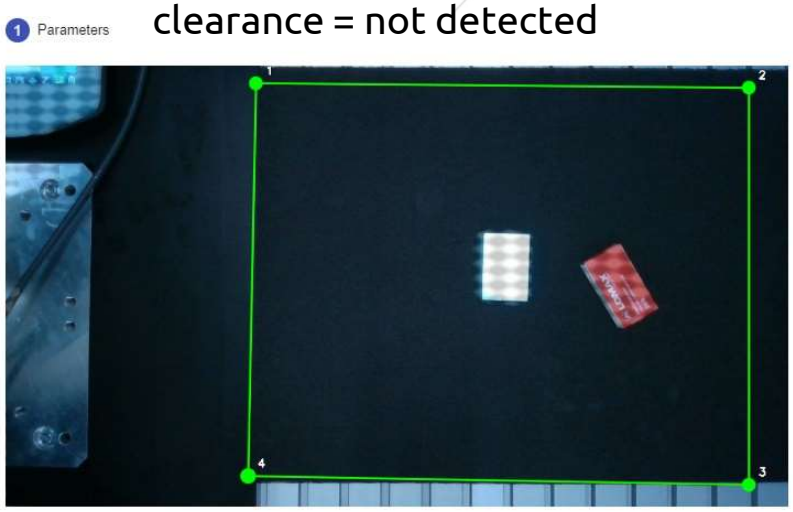
Eyes Feature

Clearance

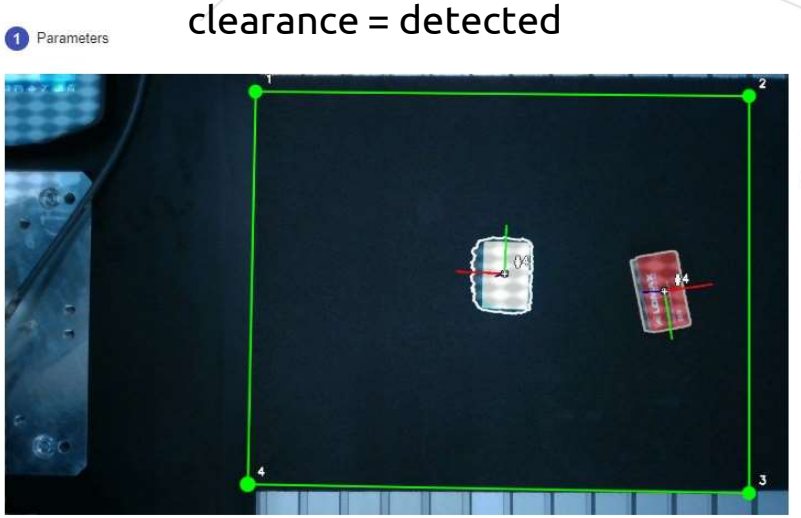
To avoid collision to close objects it is possible to set gripper clearance.

Example below clearance is set to 50 mm

Objects closer than clearance = not detected



Objects further away than clearance = detected



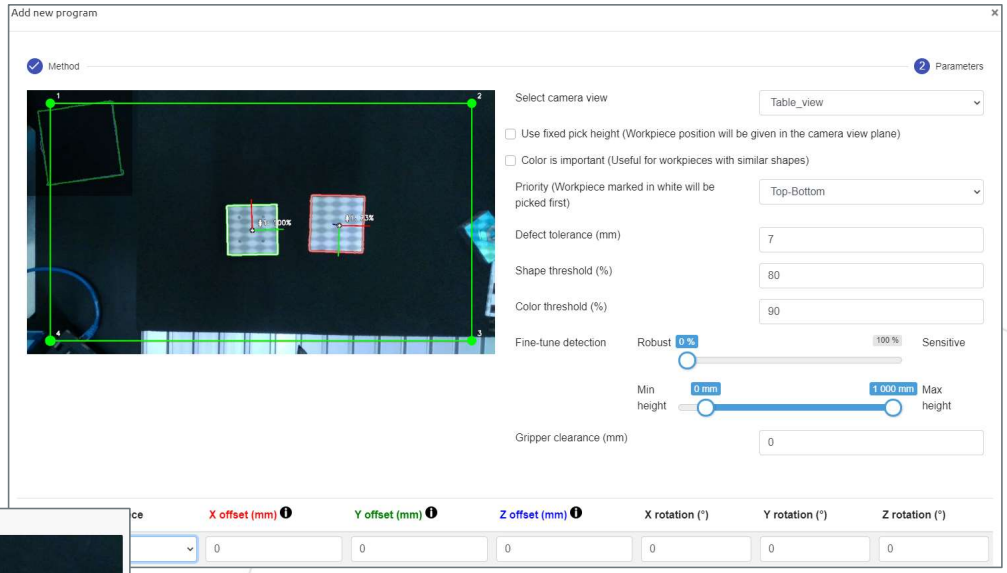
Eyes feature

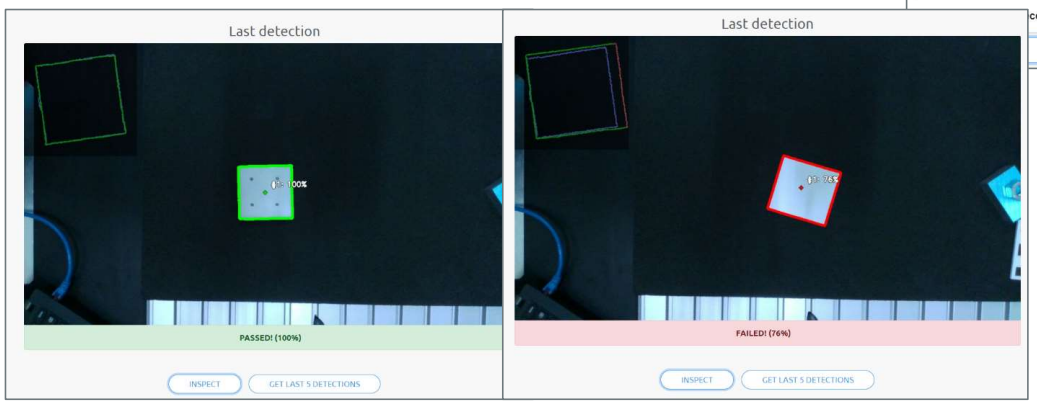
Inspection

Inspection compares the outer contour of a workpiece to a model.

It can be made in standard view with position data available or as close-up without position data

The model is shown in upper left corner with workpiece contour on top making it possible to use it to make inspections without a robot as well





Eyes feature

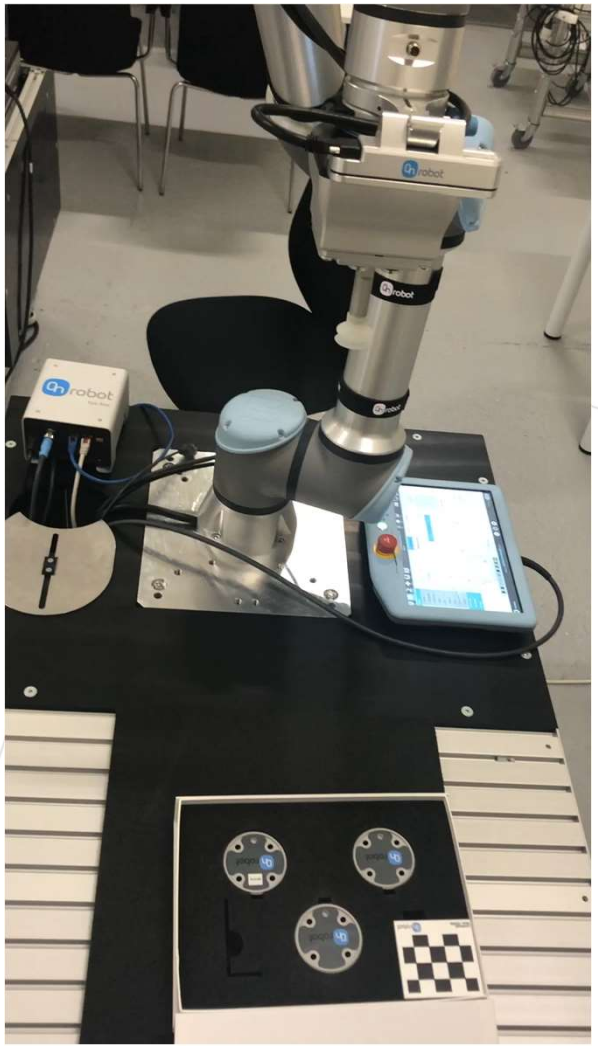
Landmark

From the WebClient it is possible to detect the Landmarks to check that they are detected properly.

The utilization is made in the different robots, where the landmark-function can be used to update a Feature/Frame where movements can be made relative this.

To get high precision with the landmarks, it is proposed that a dual detection is made.
This is done as described in the robot specific manuals.

First detection is made to find the landmark, and a movement to below 30cm from the landmark should be made.
Second detection updates the frame from the closer position giving higher precision.



Value Proposition

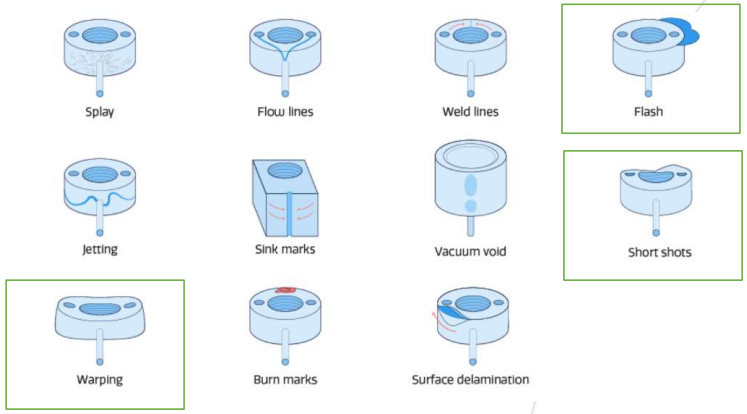
1. One-shot detection for multiple objects minimizes cycle time
2. Inspect objects using color and contour detection – with or without a robot, and ensure consistent quality
3. Automatic landmark calibration enables dynamic working environments and mobile robot setups

Application examples (1)

Contour inspection

IMM and die-cast machine tending

- IMM and die-cast inspection: There are several common defects associated with IMM and die-casting such as short shots (mold cavity not completely filled) flashes (created by excess material and warping (bent or twisted out of shape)



Note: not suitable for CNC machine inspection (higher precision needed). Remember only outer contour can be inspected at this point (therefore applications related to e.g. common assembly inspection is currently not supported)

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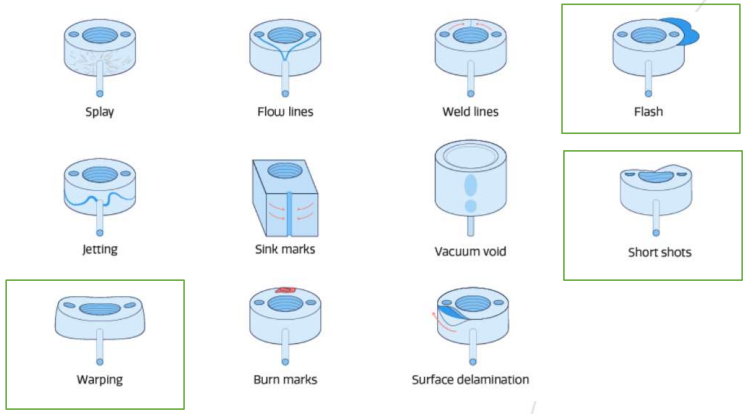

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Application examples (2)

Landmark

CNC machine tending

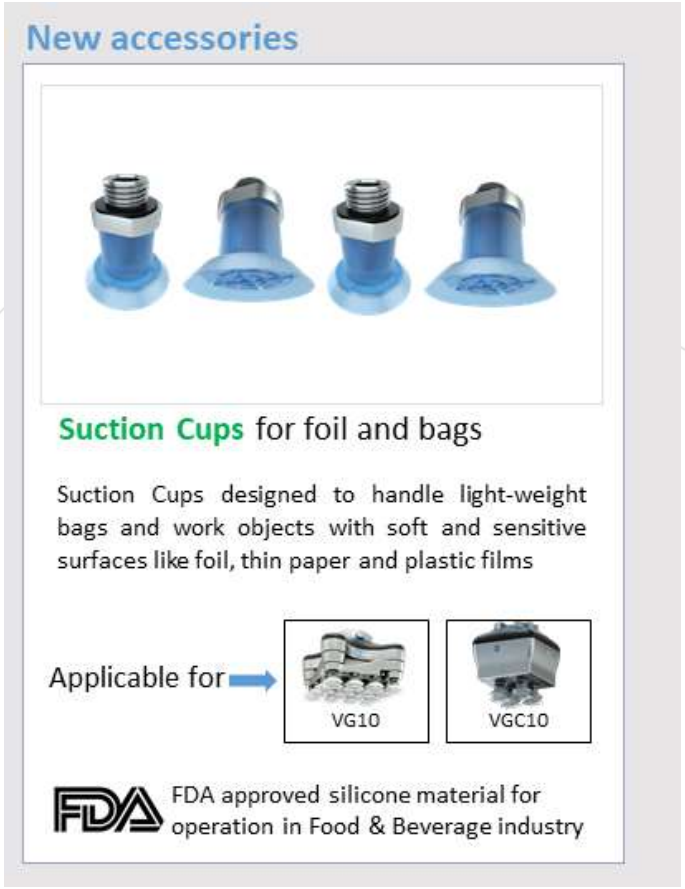
- Scenario 1: Variable in-feed (e.g. mobile trays/carts, mobile robots) and fixed robot position. One robot tends one CNC machine
- Scenario 2: Robot mounted on mobile robot. Robot tends multiple setups with fixed in-feed. Instead of reteaching positions when a robot is wheeled up to a CNC machine tending task, the landmark can be used to automatically offset the motion, ensuring that no reteaching is necessary

Other applications

- Material handling (e.g. packaging), assembly (e.g. screwdriving), material removal/addition (e.g. sanding, gluing) – common for all applications is that the setup allows for randomness in work object and/or setup positions

Suction Cups for foil and bags Ø25

Accessories



Suction cups – Bags and foils

Extended Vacuum Gripper ability:

- Enables picking of foils and plastic bags
  - Suction Cups designed to handle light-weight bags and work objects with soft and sensitive surfaces like foil, thin paper and plastic films
- Raising the payload for foil surfaces
  - The lip design on the suction cups prevents thin surfaces to get wrinkled and stabilizes the lifting, improving the performance significantly for targeted surfaces and materials
- FDA approved silicone for food and beverage applications
  - FDA (Food & Drug Administration USA) approved silicone material expands the application capabilities for VG10 and VGC10 in Food & Beverage industry

Part numbers:

#105922

Film wrinkling

Foil and bag cup

Standard

Suction cups – Bags and foils

	Ø25 mm				Ø30 mm			
Number of cups	1	2	3	4	1	2	3	4
Surface	Payload [kg]				Payload [kg]			
Foil	0.83	1.07	1.43	1.57	0.06	0.04	0.01	0.01
Matt foil	1.08	1.71	2.23	3.21	1.23	2.38	3.15	2.65
Foil – round shape	1.28	2.32	3.32	4.25	1.42	1.40	1.33	1.38
Plastic bag	0.32	0.54	0.63	0.74	0.09	0.10	0.11	0.09

Part numbers:

#105922

Package content

- 4 cups with G1/8 thread

Suction cup overview

Where to use

Application / surface / material	Cup silicone blend	Cup Foil and bags	Not targeted
Oily sheet metal	✓		
Dry sheet metal	✓		
Glass handling	✓		
Plastic injection molded parts	✓		
Bag handling		✓	
Bag opening/thin paper - slip sheets/film		✓	
Corrugated / cardboard			Not targeted
Food contact materials (FDA & EU), non-detectable			Not targeted
Food contact materials (FDA & EU), detectable			Not targeted
Electronic / semiconductor			Not targeted
High/low temp cup (plastic)			Not targeted
Mark Free			Not targeted
Environment	**Suction cup**		
Oily	✓		
Dust	✓		
Food, secondary food handling (packaging / palletizing, not in direct contact)	✓	✓	
Food, primary food handling (in direct contact with product)			Not targeted
High temp			Not targeted
Low temp			Not targeted
Chemicals			Not targeted
Pharma / clean room			Not targeted

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