



Intelligent Vision-Guidance for Robots

Vision-guided robots should be
the norm, not the exception.

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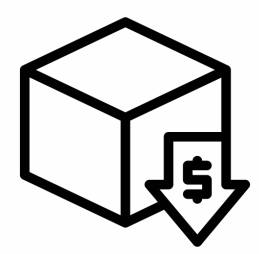
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Give robots the power to see

Redefining automation with vision-guided robotics

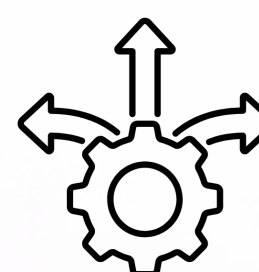
At Inbolt we believe that every robot should have eyes. In 2025, automation should begin with vision guided programming, not with designing jigs.

Our product Inbolt, is the first step toward fully autonomous robotics, starting by giving robots the ability to see.



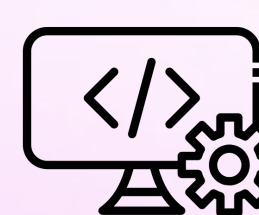
Lower automation costs

Eliminate the need for custom jigs and fixtures by using vision-guided robotics, significantly reducing setup and hardware expenses.



Greater flexibility

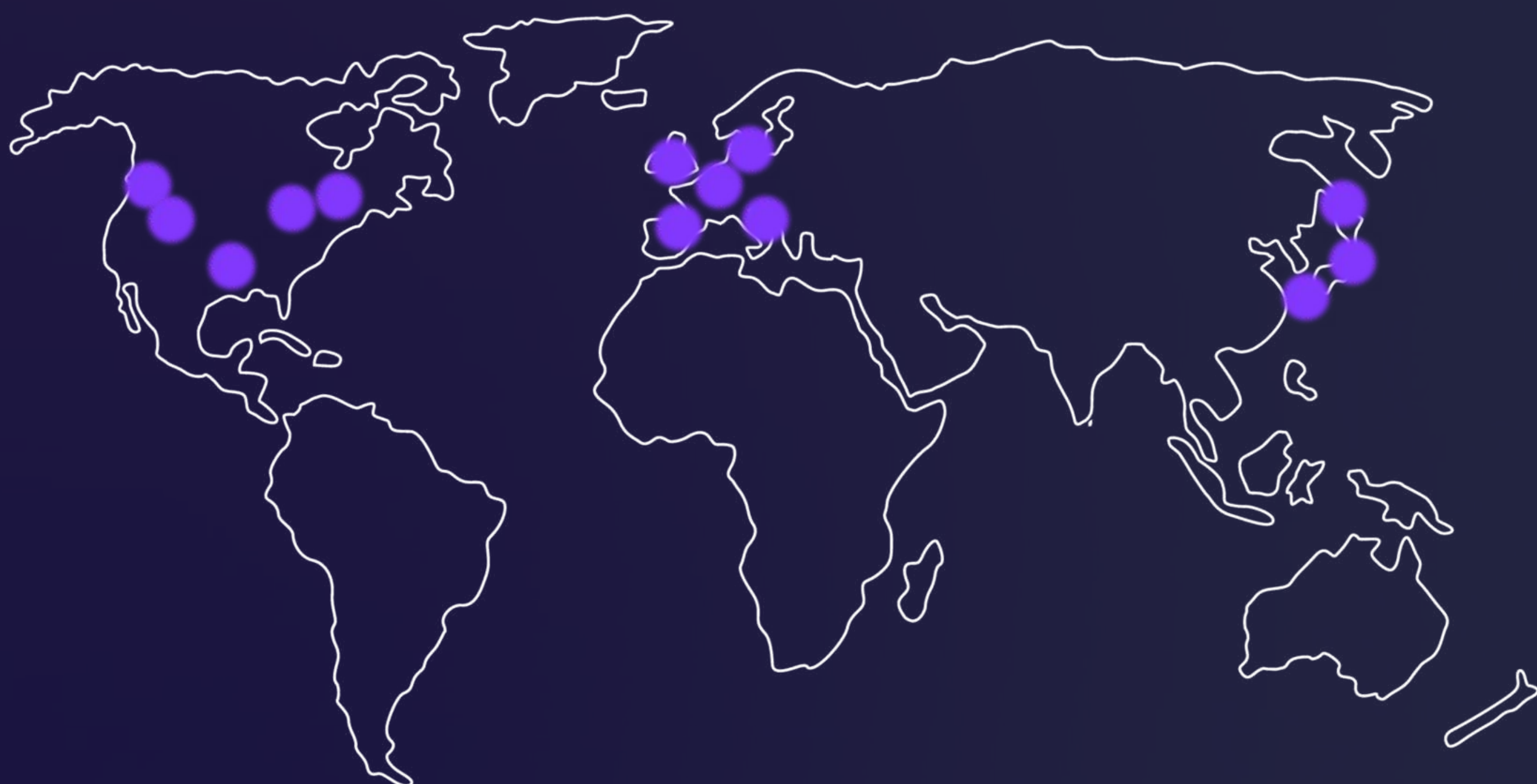
Adapt quickly to new parts or processes without redesigning tooling—vision systems enable dynamic, multi-tasking robots.



Faster commissioning

Minimize engineering time with faster programming, allowing you to get production lines running in days, not weeks.

Deployed in over 150 plants



Trusted by leading brands

 TOYOTA

 STELLANTIS

 thyssenkrupp



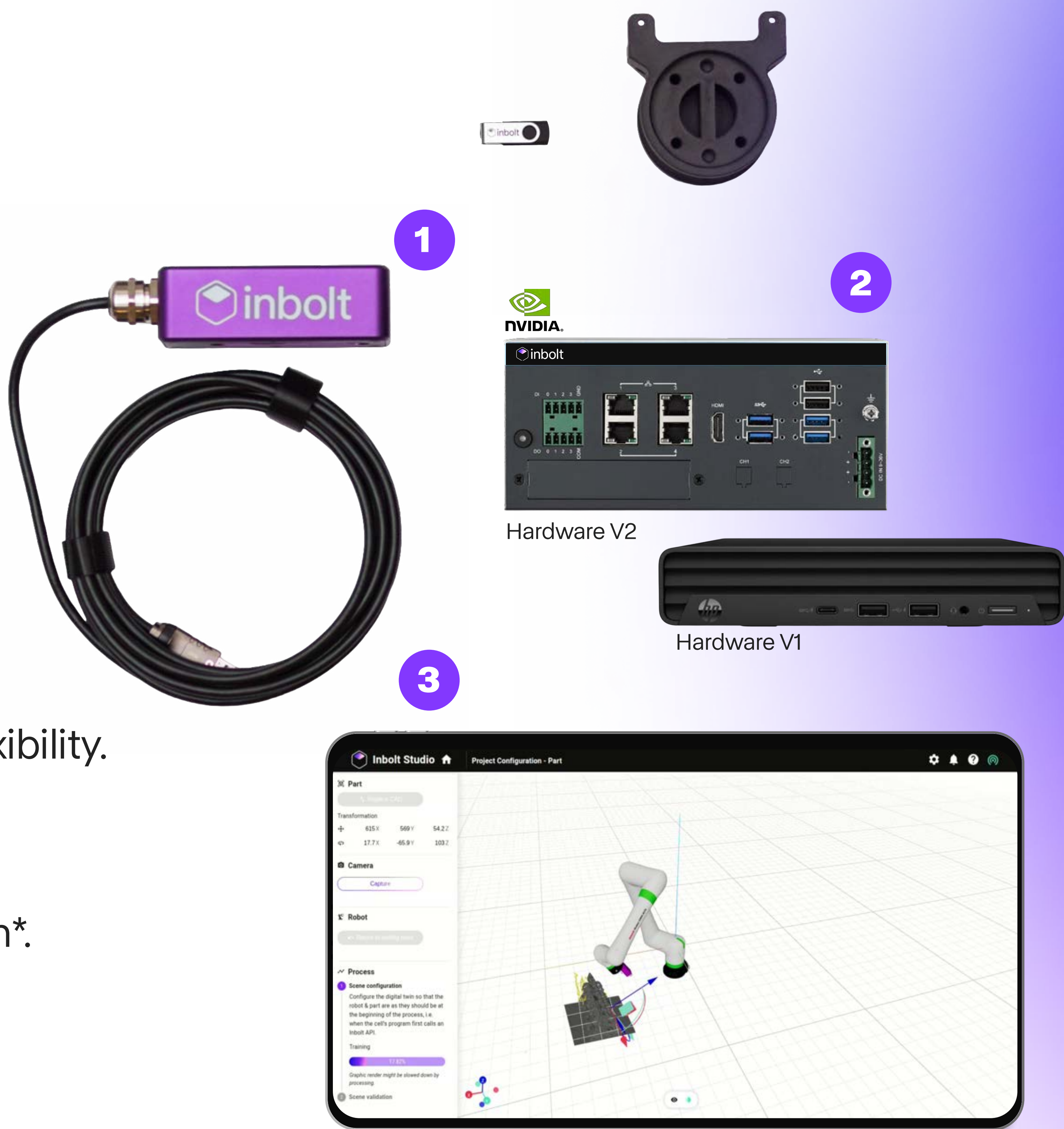
 RENAULT



Discover Inbolt

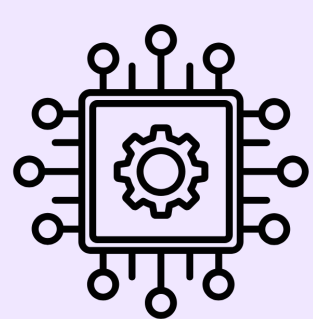
3D vision, intuitive programming and AI

- 1 3D Camera**
 Robot-mounted camera for maximum flexibility.
- 2 Inbolt Controller**
 Industrial-grade, running on NVIDIA Jetson*.
- 3 Inbolt Studio**
 Intuitive software for vision programming.

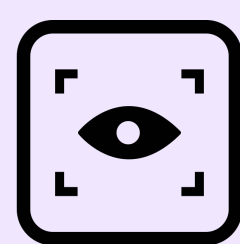


**Only Hardware V2 Runs NVIDIA Jetson.*

The technology



AI-powered part localization
 Accurate 3D position detection using vision and CAD-trained AI models.



Unmatched detection reliability
 Achieves 100% part detection rate during runtime, even in challenging environments.

Key features

Hardware agnostic

Choose the best fit camera for your application.

Intuitive training

On-premise setup and deployment in under 10 minutes with a user-friendly interface.

Lighting independent

Performs reliably even in low-light or dark factory environments.

Robust and versatile

Delivers consistent performance across diverse parts, setups, and environments.

The new era of vision software is here

Inbolt Studio: vision programming made simple

An intuitive programming interface for you to program your robot guidance application. The only data required in input is a CAD model of the part to locate. No need to build time consuming data sets or fine tune complex vision parameters. Just one generalist AI to process all types CAD models.

Inbolt Studio works out of the box, even for users with no computer vision expertise. Train a new project on a robot in under 10 minutes, with no internet connection required.

Key features:

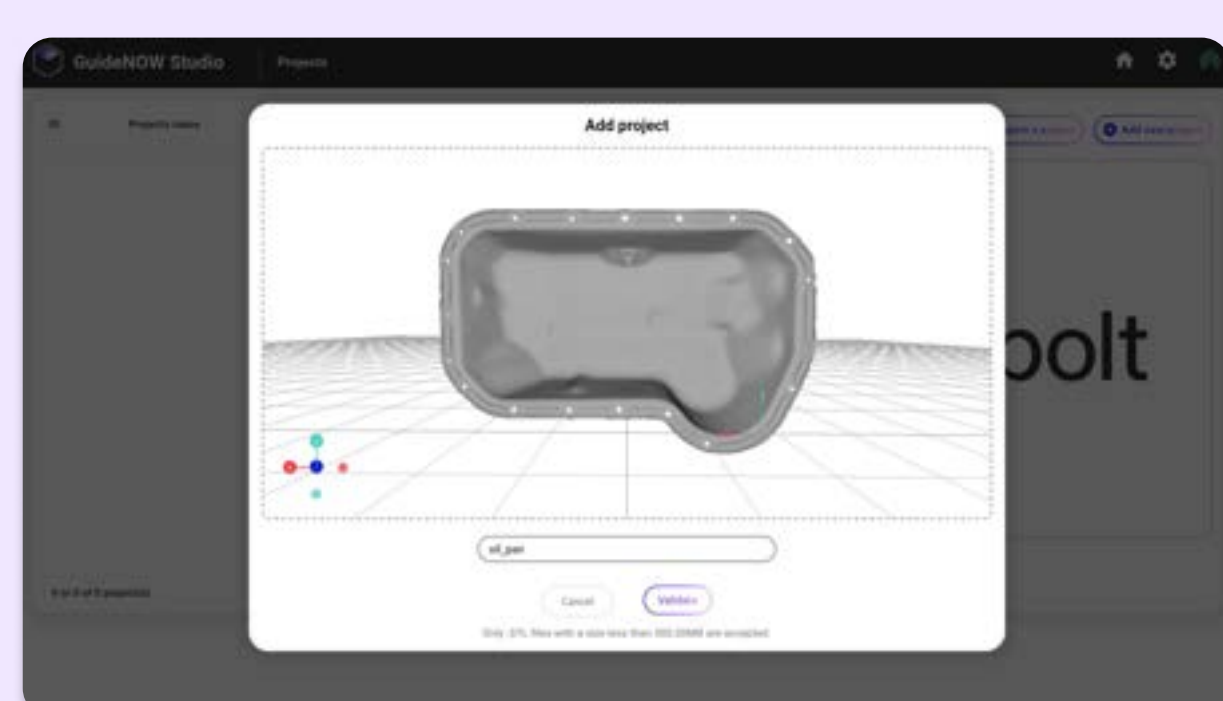
- Assisted hand-eye calibration
- On-premise AI training
- Store and manage up to 70 CAD models directly on the controller



The execution layer between the digital twin of your station and the reality of the line

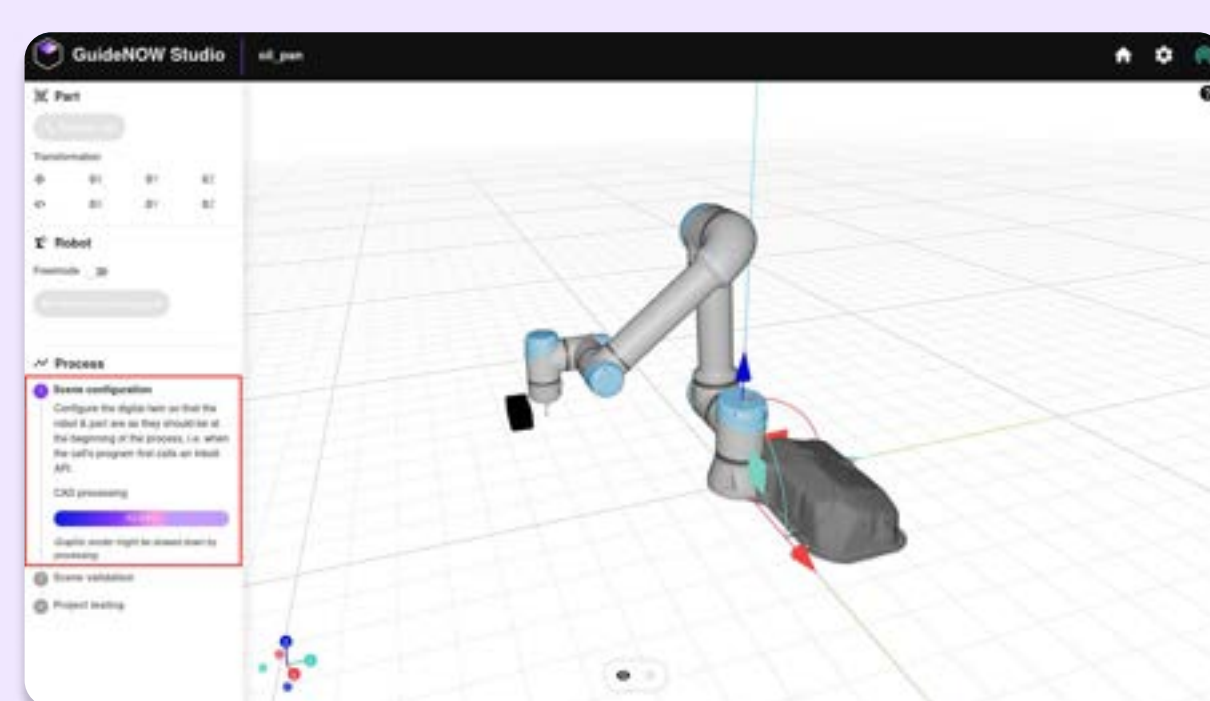
Step 1

Import the CAD model or 3D scan of the part.



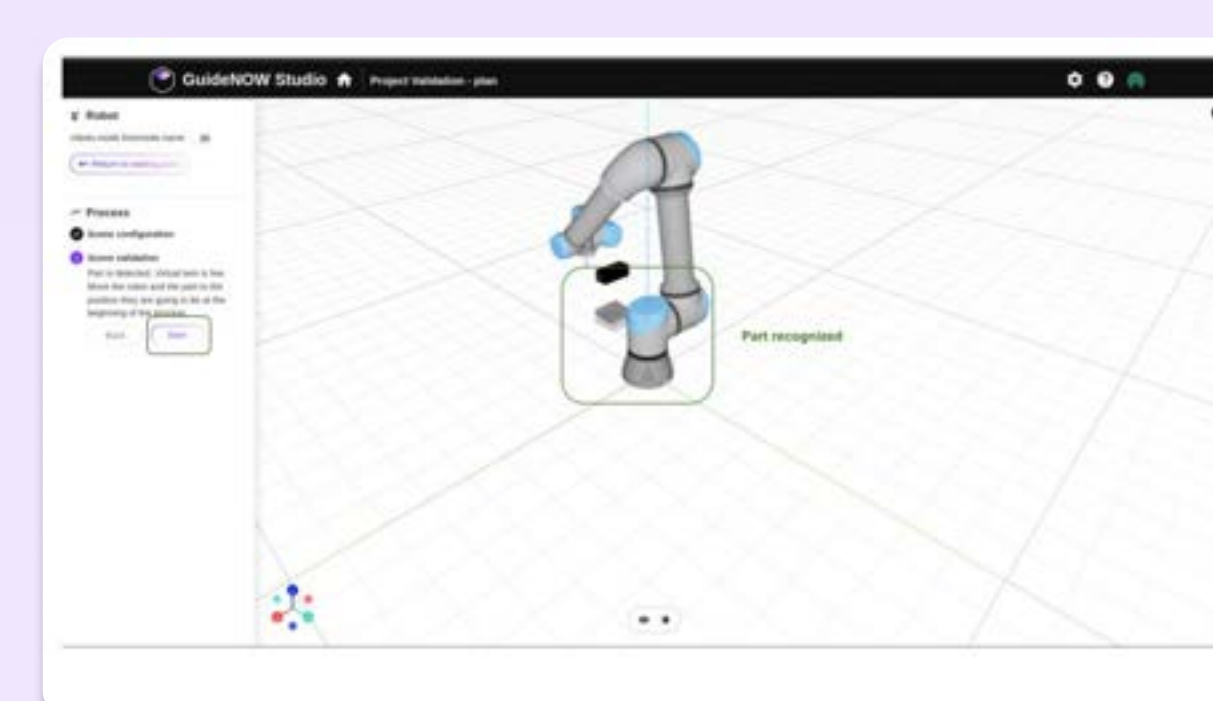
Step 2

Build a basic digital twin of your station to give Inbolt AI context about the expected environment.



Step 3

Activate the camera and verify that the system correctly detects and locates the part.



No need for precise fixturing, vision is the new standard.

Flexible deployment across all environments

Automate any station, new or existing



Stationary workstations

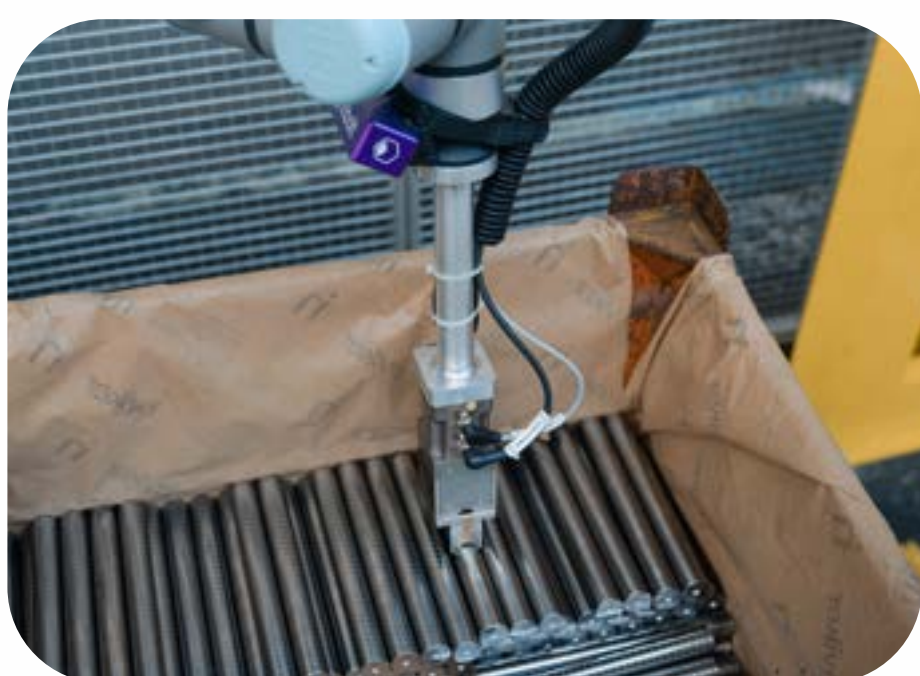
Automate your static manufacturing lines easily and cost-effectively. No jigs or manual adjustments needed.



Continuously moving lines

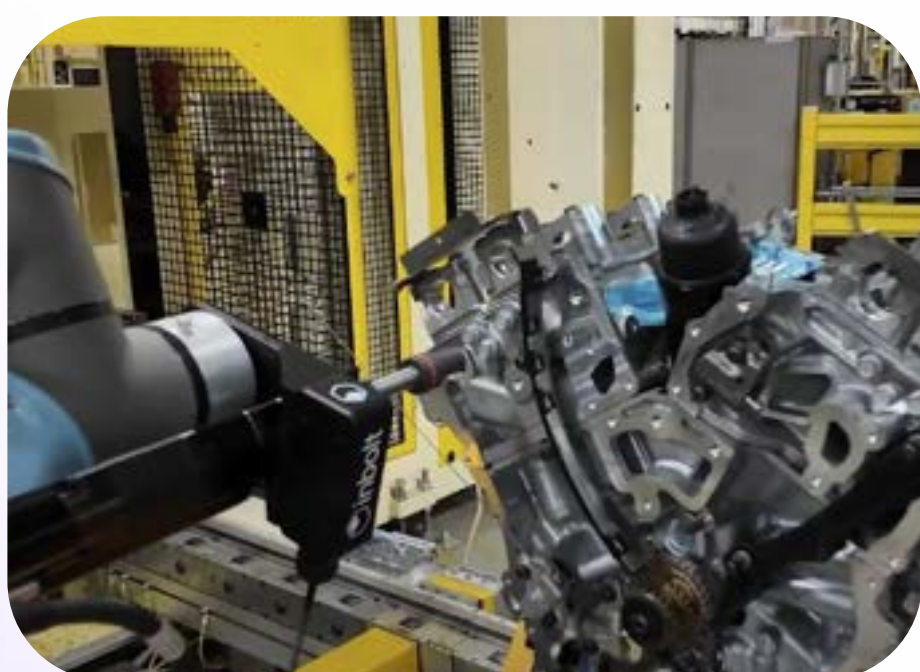
Inbolt is the only solution that enables real-time part detection and robot guidance directly on moving lines.

Versatile applications across manufacturing tasks



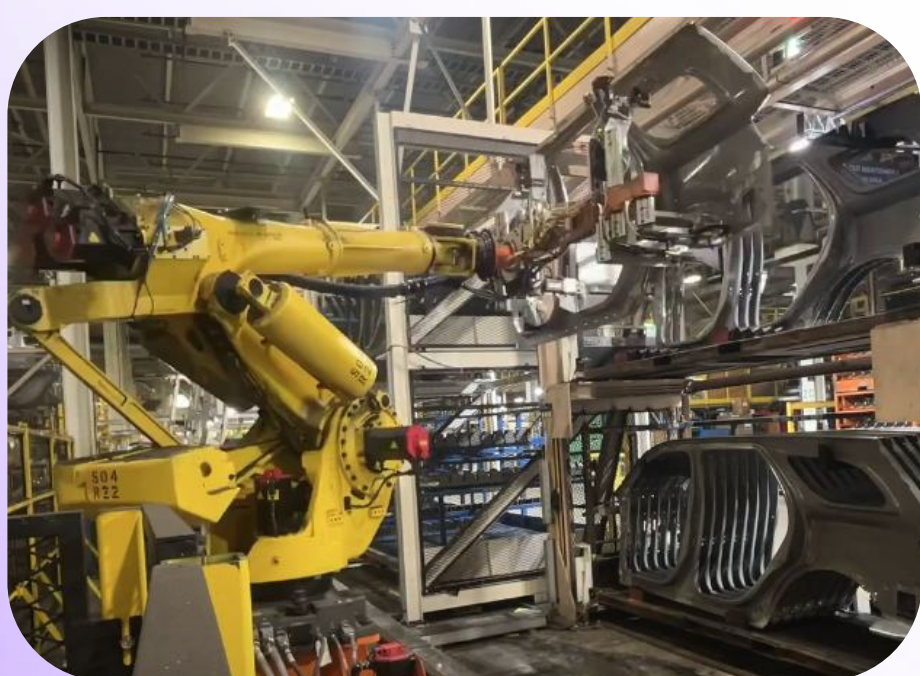
Bin picking & depalletization

Accurately locate parts for fast, fixture-free bin picking and depalletization.



Fastening

Ensure precise torque and angle control in critical assemblies. Automate screw tightening to boost quality and efficiency.



Pick & place and de-racking

Automate the removal of parts from racks to reduce manual labor and streamline assembly workflows.



Dispensing

Automate adhesive application with precision to ensure consistent bonding and sealing across complex surfaces.

Select the right 3D camera for your project

Specifications to match your application needs

The standard camera suits most general use cases, including stationary and moving setups. The high-precision camera is recommended for applications requiring greater accuracy or handling smaller or flat parts.



Camera	Standard camera	High-precision camera
Stationary	Yes	Yes
Dynamic	Yes	No
Bin picking	Yes	Yes
Size of the part	> 10 x 10 x 10 cm	> 2 x 2 x 2 cm
Part types	Painted, machined	Painted, machined, semi-transparent



Reduce custom
fixturing.
Rely on vision.

Runtime specifications by use case

Robust, real-time performance,
wherever vision is needed

Continuously moving line applications

Standard camera	
Part detection time	100 ms
Max line speed	300 mm/sec
Localization precision	1 mm
Latency	80 ms
Refresh rate	80 Hz

Stationary workstation applications

	Standard camera	High-precision camera
Part detection time	100 ms	300 ms
Localization precision	0.5 mm	< 0.3 mm

Bin picking applications

	Standard camera	High-precision camera
Pick detection time	0.5 sec	1 sec
Localization precision	1 mm	0.5 mm

Hardware specifications

Technical specifications for Inbolt’s vision hardware and edge AI controller

Camera specifications



Camera	Standard camera	High-precision camera
Technology	Active depth stereo (IR based)	Structured light
Size	110 x 60 x 60 mm	169 x 124 x 56 mm
Weight	377g	1000g
FoV	87° x 58°	52.84° x 45.14°
Resolution	640x480	2448 x 2048
Power consumption	max 700mA at 5V	max 120 W
IP rating	IP 65	IP 65
Cables	Minimum Bend Radius: 10.00mm Pull Force: 200N	Minimum Bend Radius: R28 / 17mm Pull Force: 1200N

Controller specifications

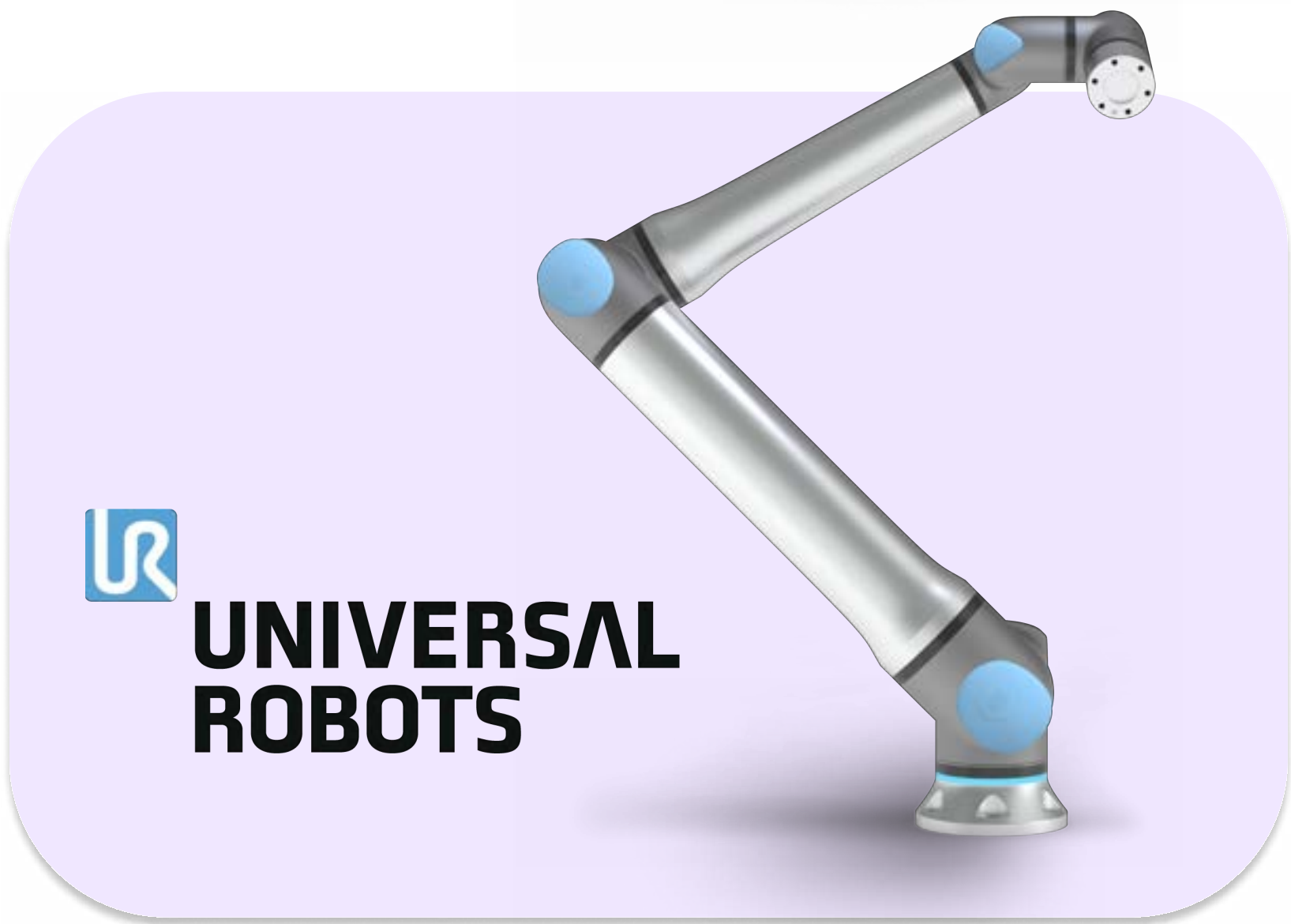


Controller	Inbolt controller
Size	192 x 230 x 87 mm
Power consumption	Input Voltage: 9 ~ 36 VDC, 16~4 A (depending on input voltage) Power Modes: AT/ATX (default AT)
Cables	Power Adapter: Input: 100~240V~ AC, 3A max, 50/60Hz
Vibration/Shock resistance	3Grms / 10G (fanless)

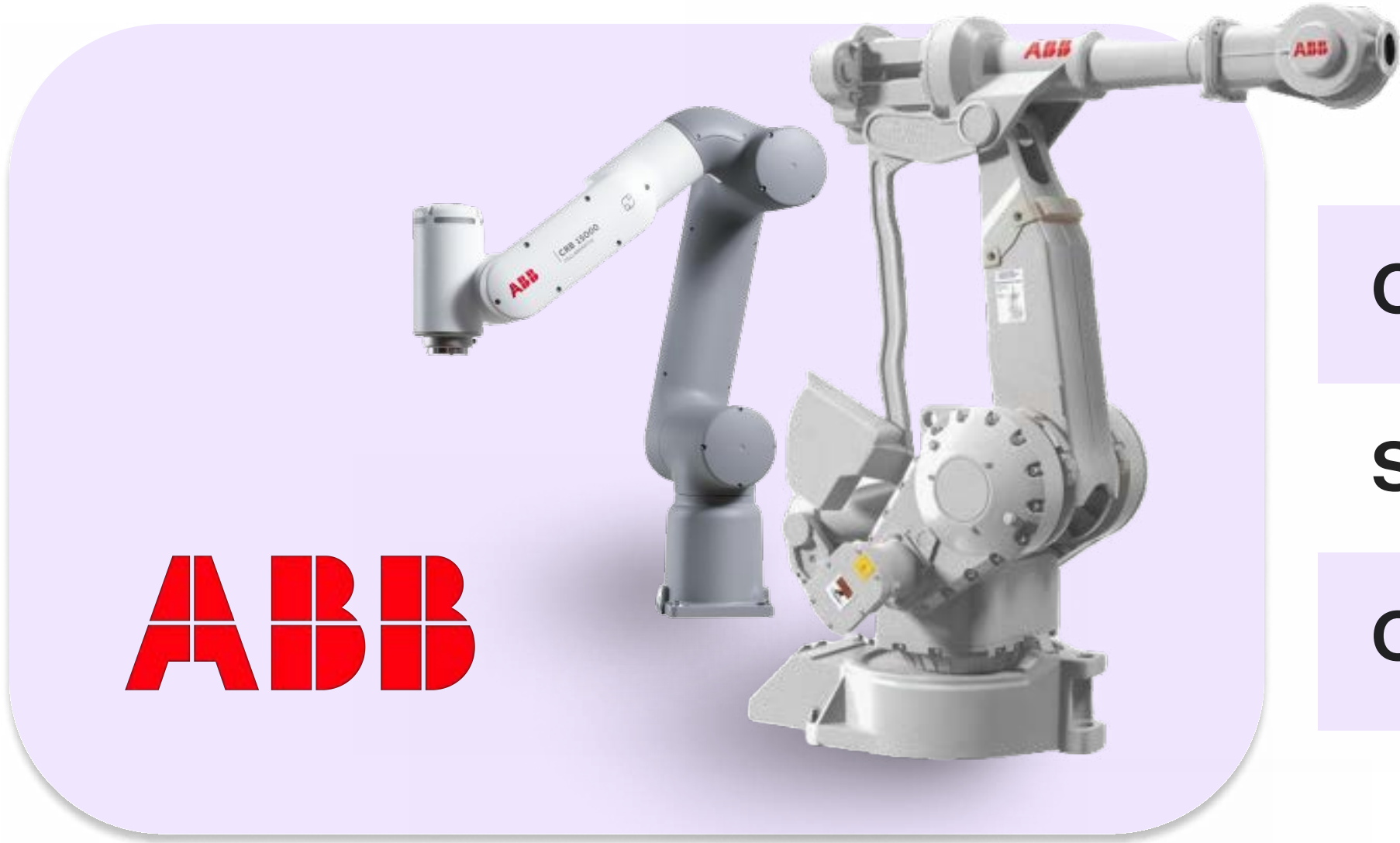
Seamless integration with leading robot brands



	Stationary	Moving line
Controller	RJ3iB, R30iA, R30iB & R50iA	R30iB+/Mini+/Mate+ & R50iA
Software	v6.0 (and above)	v9.0 & P84 patch (and above)
Options required	User Socket Messaging (R648)	User Socket Messaging (R648), Stream Motion (J519) & KAREL R632



	Stationary	Moving line
Controller	CB3, e-Series and UR Series	e-Series & UR Series
Software	PolyScope 5 (5.13 and above)	PolyScope 5 (5.13 and above)
Options required	RTDE (included out of the box)	RTDE (included out of the box)



	Stationary	Moving line
Controller	Omnicores and IRC5	Omnicores and IRC5
Software	RobotWare version 6.0.1 or later	RobotWare version 6.0.1 or later
Options required	Socket Messaging (included)	Externally Guided Motion (EGM)



	Stationary	Moving line
Controller	KR C4 or KR C5	Coming soon
Software	KSS 8.2, 8.3, 8.5, 8.6, or 8.7.	Coming soon
Options required	Ethernet KRL Interface (EKI)	Coming soon



	Stationary	Moving line
Controller	All controllers with PDL2	Coming soon
Software	Any	Coming soon
Options required	Read/Write on TCP/IP (CR17926300)	Coming soon



	Stationary	Moving line
Controller	YRC1000 or YRC1000micro	Coming soon
Software	From YAS2.94.00-00 or YBS2.31.00-00	Coming soon
Options required	MotoPlus & Ethernet enabled	Coming soon



Customer wins powered by Inbolt

Automating new workstations

Automate new stations faster with lower CAPEX, no need for custom jigs or complex integration.

Stellantis

"What really stood out was how flexible and powerful Inbolt's system is once it's up and running".

Robotics Project Manager

Location: Valenciennes, France

Return on investment: 12 months

Industry: Automotive



Beko

"We thought this task was too complex to automate because of the irregular parts and positioning. Inbolt handled everything accurately."

Systems Engineering Manager

Location: Poland

Return on investment: 12 months

Industry: Home appliances



Stellantis

"We are very happy with the automation. We've seen nearly no malfunctions and our results in the water tests are very good. Repairs per thousand have gone to zero."

Automation Engineer

Location: Cologne, Germany

Return on investment: 12 months

Industry: Automotive



Improving efficiency on existing workstations

Boost existing station efficiency by eliminating errors from part misplacement and positioning.

Stellantis

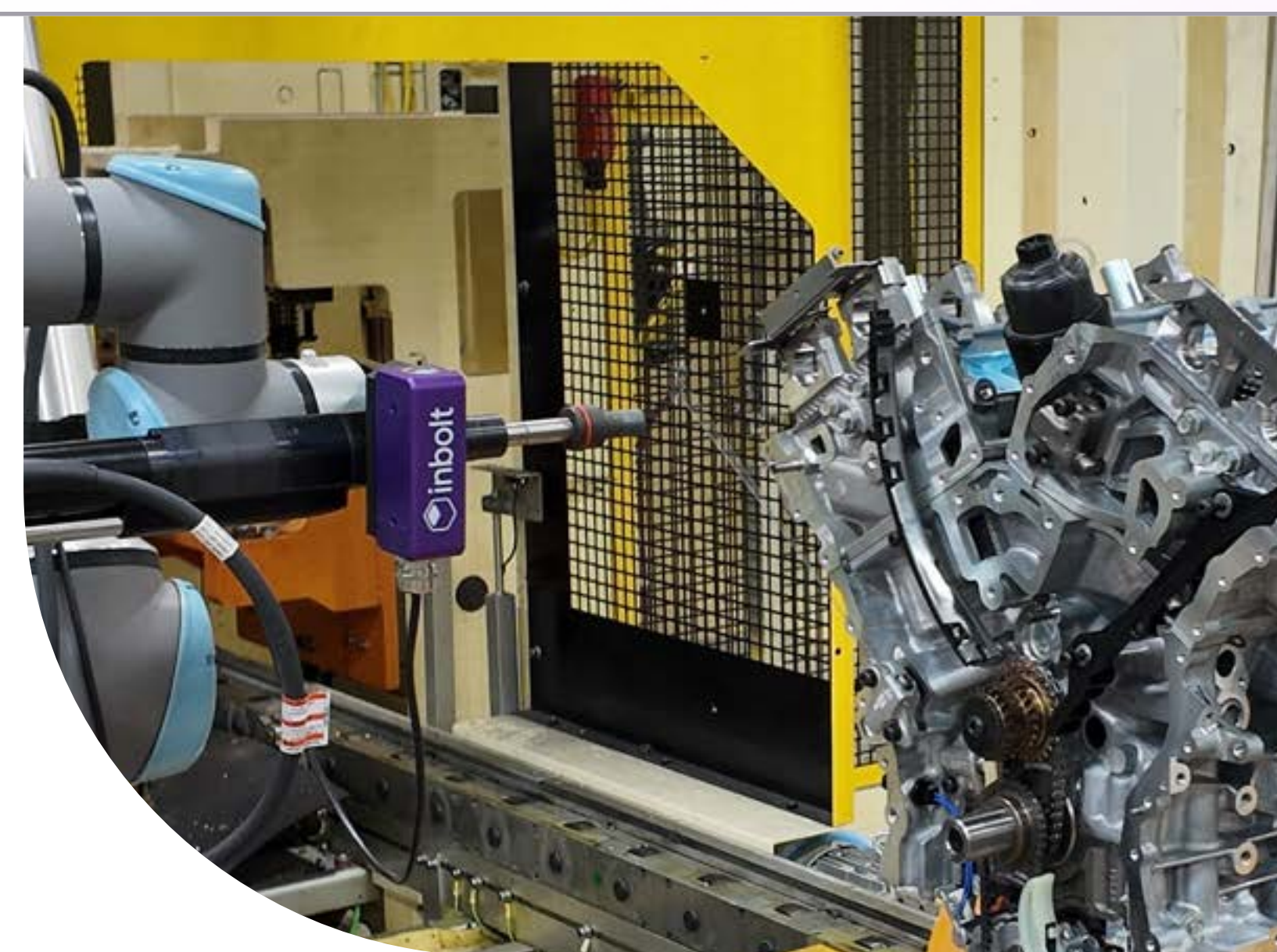
"Streamlining our engine tightening process meant fewer adjustments, and more consistent results on the station."

Plant Manager

Location: Trenton, United States

Return on investment: 90% reduction in part reject rate

Industry: Automotive



Stellantis

"Implementing vision to retrofit the line transformed a high-risk, high-maintenance station into a reliable and robust cell."

Maintenance Manager

Location: Jefferson, United States

Return on investment: 3 months

Industry: Automotive





About Inbolt

Inbolt delivers intelligent vision-guidance for robots, combining real-time 3D vision and AI to automate unpredictable manufacturing environments. Trusted by brands like Stellantis, Toyota, and Ford, their system adapts to moving lines, part variation, and imperfect conditions, boosting uptime, cutting costs, and accelerating the path to autonomous factories.

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