

Intelligent Robotics

Robot systems can be integrated with cameras and smart sensors and then used in concert with Artificial Intelligence algorithms to enhance their accuracy and adaptability. This is still an emerging field as robotics providers explore partnerships to create these flexible systems.

Why Intelligent Robotics?

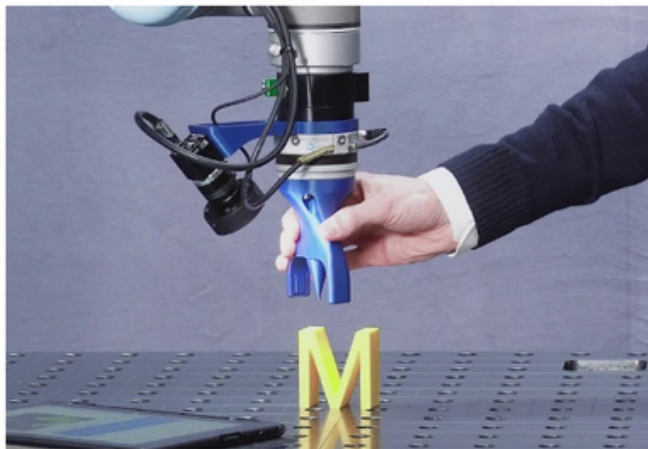
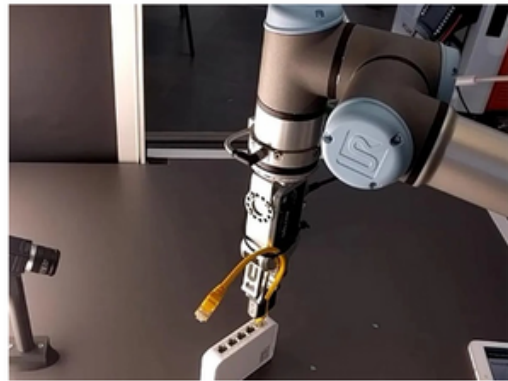
- Flexible training & deployment
- Greater dexterity required
- Eliminate or simplify fixtures
- Dynamic work cell conditions

How is it accomplished?

- Real-time reactions
- AI-based visual alignment
- Intuitive teaching process creates robot adaptability

Application Principles

- Variance compensation
 - Position
 - Shape
 - Movement
- Robotic “hand-eye” coordination



Shop Floor Impacts

- Reduce labor cost
- ROI in less than 1 year
- Improve productivity
- Increase capacity

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Thanks to **Micropsi** for their support in highlighting their solution for sensors integration and robot intelligence.

Additional Suppliers for Intelligent Robotics



Universal Robots (UR) is best known for their collaborative robots, but recent efforts to integrate these robots with sensors, cameras, and artificial intelligence has created the ActiNav line. Among their solutions is their [Bin Picking](#) system that allows the robot to pick randomly oriented parts from a bin without the need for alignment fixtures.

Locus Robotics offers a variety of [autonomous mobile robots](#) (AMR) that can be used for applications like material delivery and warehousing. Thanks to the intelligence in their systems, these robots increase the accuracy of orders picked and move product more efficiently, contributing to lean manufacturing efforts.



ABB offers a wide range of robot systems, including the [IRB 365 Flex Picker](#) delta-style robots. These high speed systems use machine vision cameras to more efficiently pick up randomly-oriented parts from conveyors.