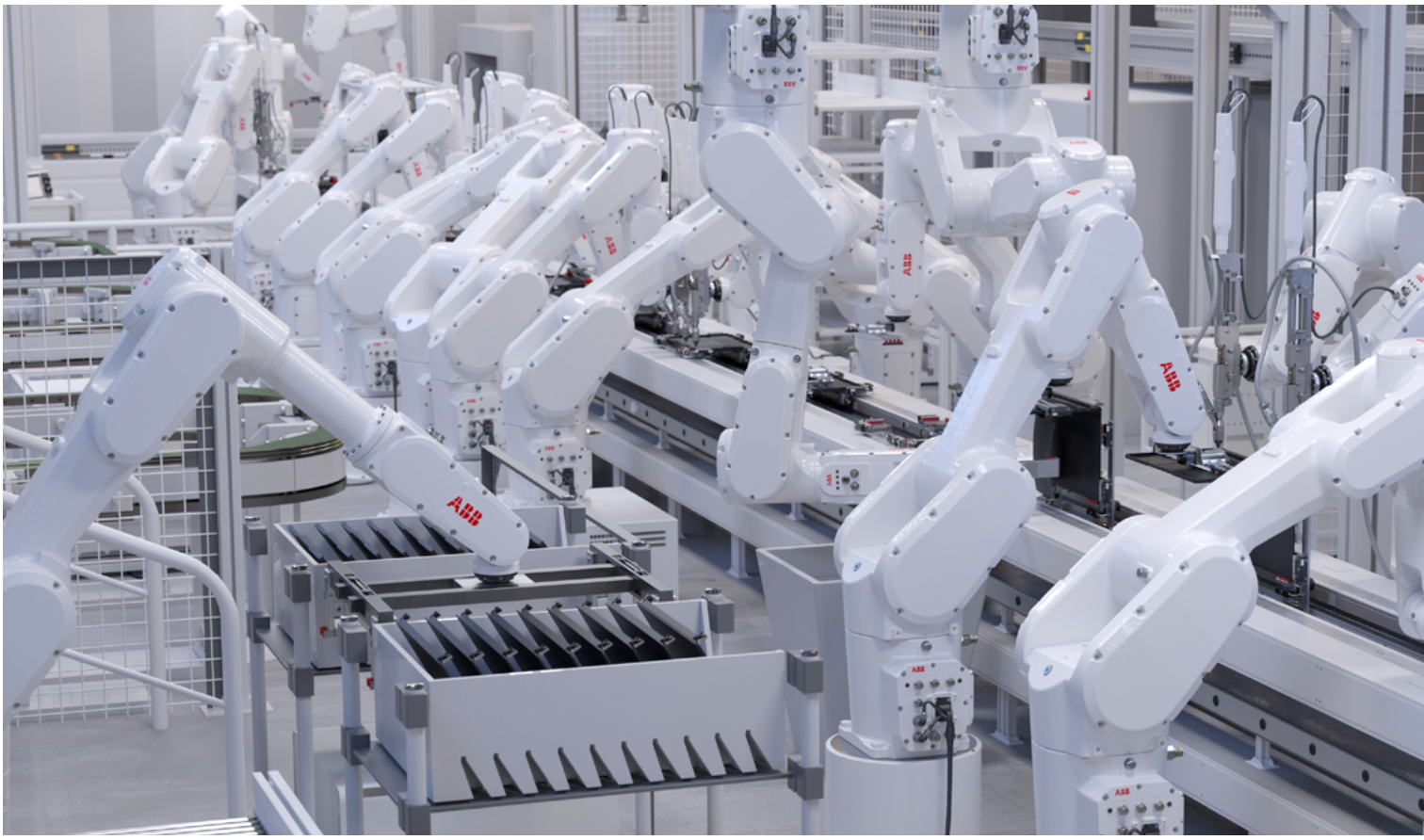
ROBOTICS

IRB 1300

Class-leading powerful performance in a compact package



IRB 1300 dramatically improves cycle times with class-leading lifting ability, reach and path accuracy, in a smaller footprint to enhance productivity and production-line flexibility.

Key benefits:

- Compact design allows deployment in confined spaces.
- Productivity: 27 percent shorter cycle times for increased productivity.
- Flexibility: 83 percent smaller footprint maximizes space utilization.
- Quality: 26 new designs assure product reliability
- Simplicity: 60 percent lighter makes robot deployment easier than ever.

Table of contents

004 High lifting capacity

005 IRB 1300 enhanced with protection

006 Key industries and applications

007 Key benefits

008 Technical

009 Unique functions

010 IRB 1300
Class-leading powerful
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High lifting capacity

High lifting capacity
The IRB 1300 six-axis industrial robot has the reach and lifting capacity to serve high load applications in electronics, general industry, food & beverage, logistics and tier 1 automotive production. Available in three main load/reach versions - 11 kg/0.9 m, 10 kg/1.15 m, and 7 kg/1.4 m - the 11 kg variant offers the highest payload of any robot in its class.

More production in a smaller space
Meeting the need to maximize production capacity while saving on space, the ABB IRB 1300 is nearly 60 percent lighter and one-sixth the footprint of ABB's IRB 1600 robot. Occupying just 220 mm by 220 mm of floor space, the IRB 1300 enables more robots to be deployed in a given area.

Faster cycle times speed up production
Rapid production is ensured by the IRB 1300's 27 percent improvement in cycle times. Combined with greater payload and reach, the IRB 1300 can be used for a wide range of tasks in materials handling, machine tending, polishing, and assembly and testing applications.

Advanced motion control
Complex applications such as polishing and machine tending are made possible by ABB's OmniCore controller, giving the IRB 1300 advanced motion control and best-in-class path accuracy.

The IRB 1300 offers 20 Input/Output (I/O) ports, 50 percent more than its predecessor, to enable the IRB 1300 to be used with more sophisticated grippers or end-effectors, allowing users to improve productivity by handling an increased number of work pieces simultaneously.

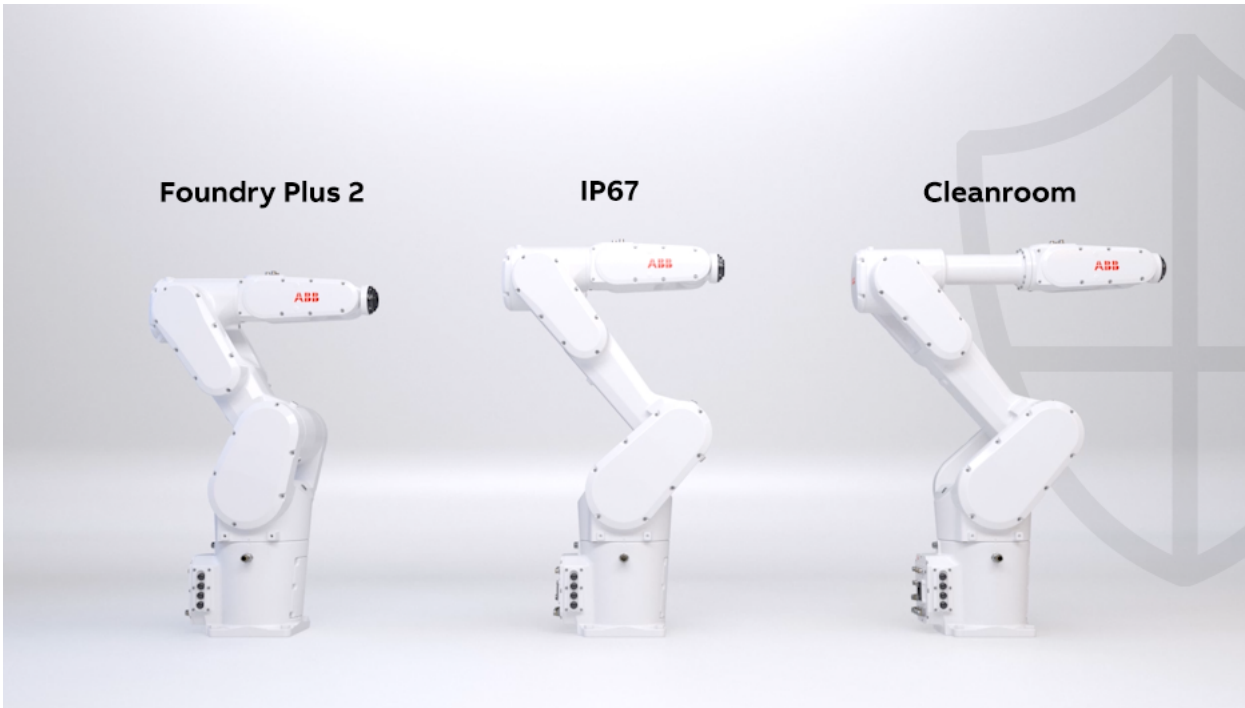
Main applications
- Material handling
- Machine tending
- Polishing, deburring, sanding
- Assembly and testing
- Loading and unloading
- Welding
- Packing
- Item picking

IRB 1300 enhanced with protection

IRB 1300 features IP67, Foundry Plus 2 and cleanroom ISO 4 versions, enabling new applications in harsh and contamination-free production environments.

Foundry Plus 2 and IP67
The addition of IP67 and Foundry Plus 2 protection enables the use of ABB's IRB 1300 in environments with high levels of liquids and dust. This is achieved by preventing intrusion by sealing all electrical components, which enables in a variety of processes in industries including electronics manufacture, Automotive, and metals fabrication. The Foundry Plus 2 version includes the use of stainless steel on the end effector. This will prevent rusting that can occur when liquids are applied to wash away dust particles and metallic debris. By helping to protect against premature wear, this feature can help to prolong the robot's service life, minimizing disruption caused by downtime and unscheduled repairs.

Cleanroom
For applications requiring a clean production environment, in industries such as pharmaceuticals and semiconductor manufacturing, the IRB 1300 ISO 4 cleanroom version features a number of measures to help eliminate the risk of contamination. Key features include the use of chemical resistant exterior paint which helps avoid paint degradation when using cleaning agents that protect against bacteria. The robot's design also minimizes the number of gaps where bacteria could form, providing an added level of protection, while a particle filter and a fully sealed design prevent grease, oil and particles from coming into contact with the products being handled.



Key industries and applications

Electronics
Fast and compact and offering class-leading lifting and reach capabilities, the IRB 1300 is the perfect solution for boosting productivity in electronics polishing, deburring, sanding, buffering, assembly & testing, screw driving applications. Weighing 60 percent less and with an 83 percent smaller footprint than its predecessor, the IRB 1300 is ideal for use in confined spaces, while its 27 percent faster speed, longer reach, and higher payload enable heavier loads to be moved more quickly over longer distances.

General Industry
Rugged and compact, the IRB 1300 can be deployed in machine tending applications to handle multiple CNC machines. Available with optional IP67 protection against solid particles and water ingress, or Foundry Plus 2 designed for the extremely harsh conditions in foundries and other metal processing plants, the IRB 1300 is well-suited for applications in the most demanding environments.

Food & Beverage and Logistics
27 percent faster than its predecessor and offering a variety of payload and reach options, the IRB 1300 is the ideal solution for ensuring fast and efficient picking and packing in food and beverage and logistics applications. It can pick different size parcels, cartons and boxes from high speed systems.

Auto Tier 1
The IRB 1300 is designed for Auto Tier 1 and automotive electronics applications where operational space is a concern. With its higher payload and longer reach, it also helps to open new possibilities for using small robots for a range of other potential Auto Tier 1 applications for all car parts such as welding, cutting, materials handling, machining, and assembly and testing.

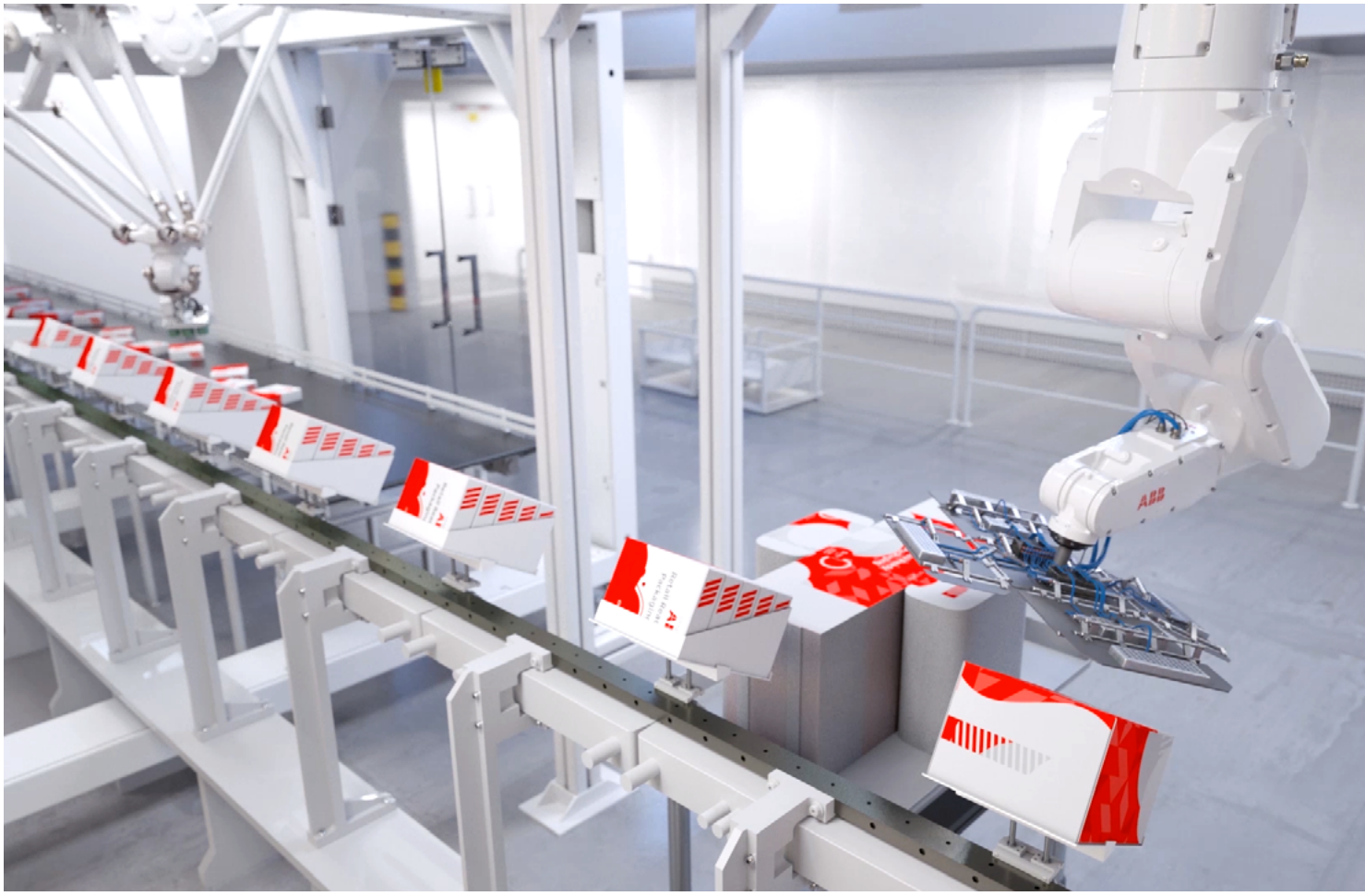
Key benefits

Productivity
27 percent shorter cycle times for increased productivity*

Flexibility
83 percent smaller footprint maximize space utilization**

Quality
26 new designs assure product reliability

Simplicity
60 percent lighter makes robot deployment easier than ever**



*Compared IRB 1300-7/1400 with IRB 1600-6/1450
**Compared with IRB 1600

Technical

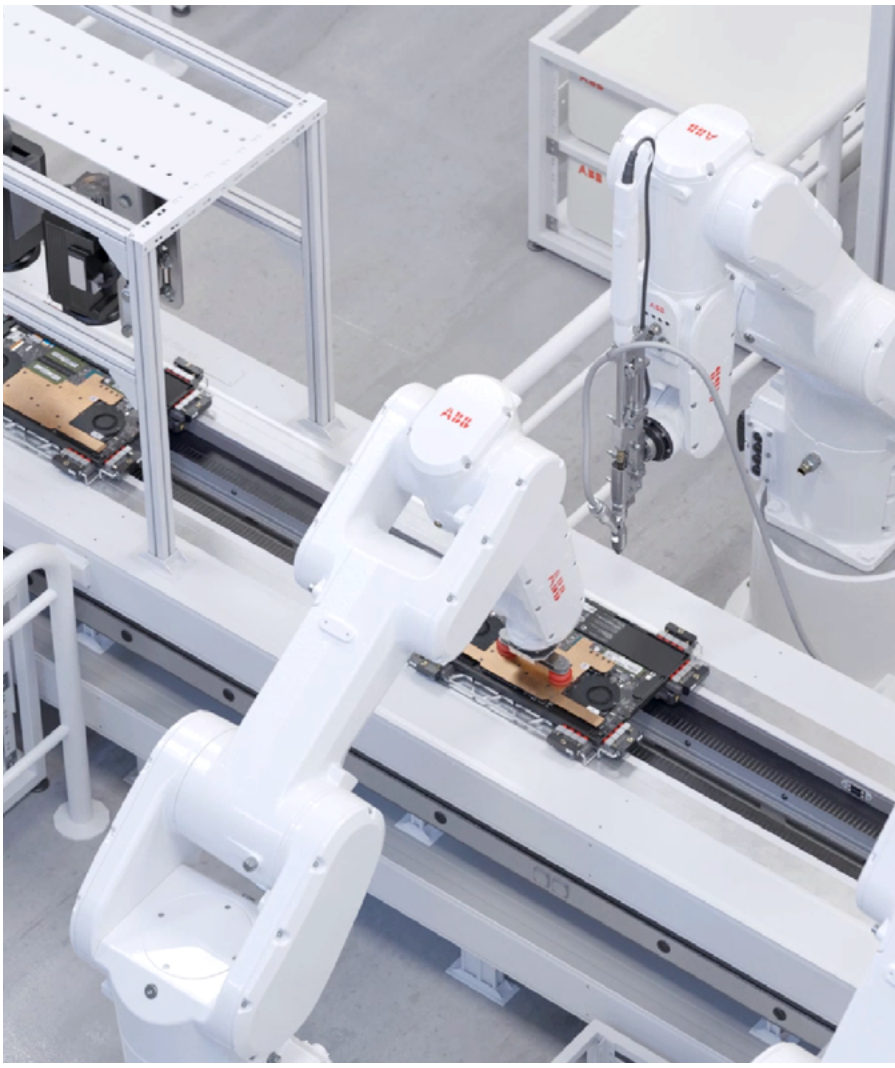
OmniCore controller
Delivers the ultimate value in flexibility, connectivity and performance.

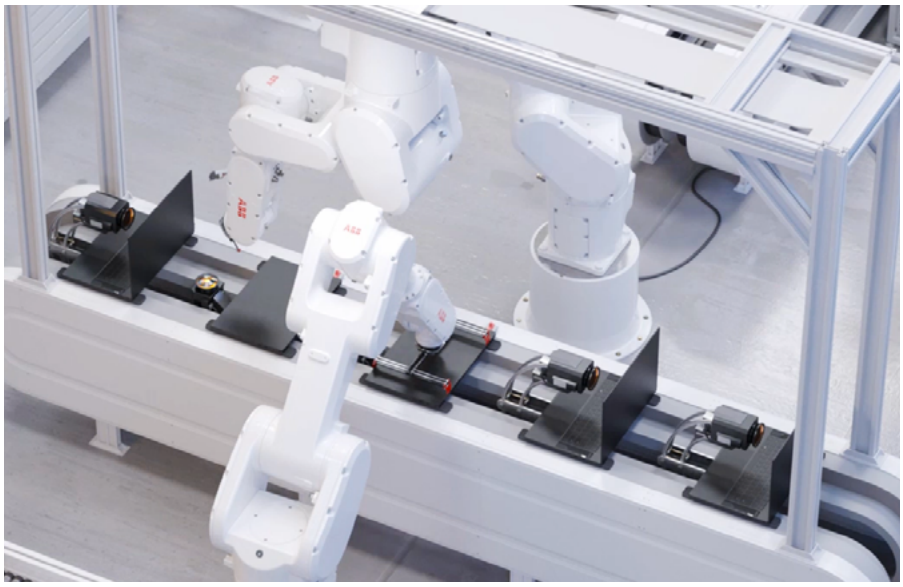
FlexPendant
Intuitive and multi-touch.

Robot version	**IRB 1300-11/0.9**	**IRB 1300-10/1.15**	**IRB 1300-7/1.4**
Reach (m)	0.9	1.15	1.4
Payload (kg)	11	10	7
Armload (kg)	1	0.5	0.5
Number of axes		6	
Protection		IP40 (Standard) IP67, CR, Foundry plus² (Optional)	
Mounting		Any angle	
Controller		OmniCore	
Integrated signal and power supply		24 Signals on wrist (C1+C2+C3) (Optional)	
Integrated air supply		Φ6 x 4 air on wrist (Max. 6 Bar) (Optional)	
Integrated ethernet		One 1000 Base-T ethernet port (Optional)	
Performance (according to ISO 9283)			
Repeatability, RP (mm)	0.02mm	0.023mm	0.03mm
1 kg picking cycle			
25 x 300 x 25 mm	0.42s	0.45s	0.45s
Physical			
Robot base		220x220mm	
Robot weight	74.5 kg	77 kg	78.5 kg

Unique functions

1. **ESD Compliant**
   IEC 61340-5-1 & ANSI ESD S20.20 directive.
2. **Richer selection for I/O Connection**
   Universal connectors and air hose
3. **Wider and stronger ingress protection options**
   From IP54, IP67 to Foundry Plus
4. **Full support on cleanroom capability**
   From ISO 4 to the highest ISO 1

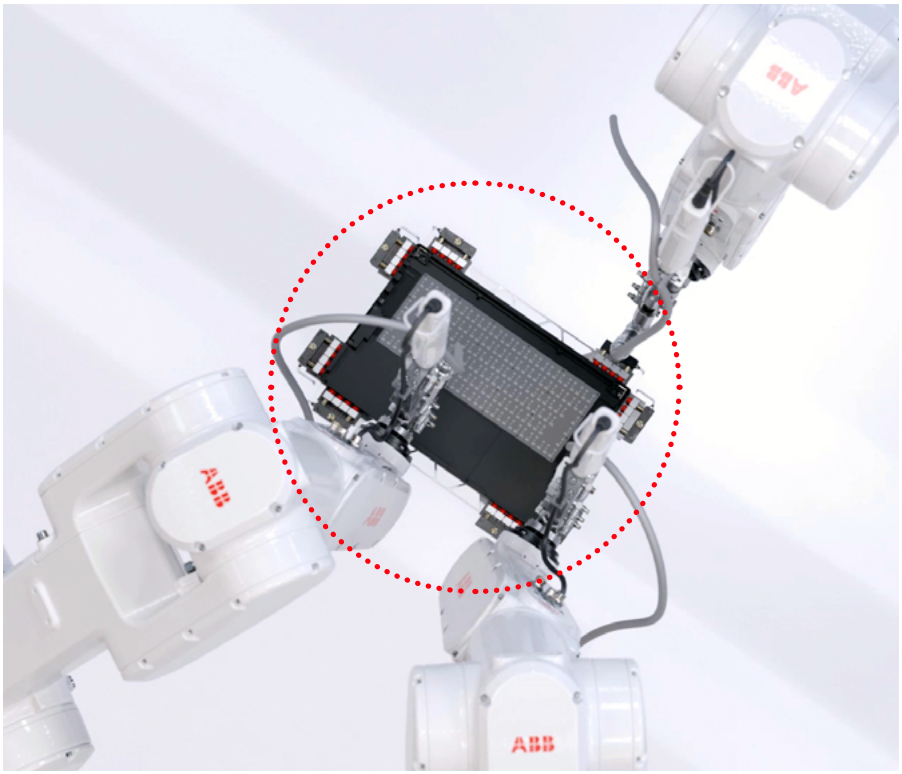




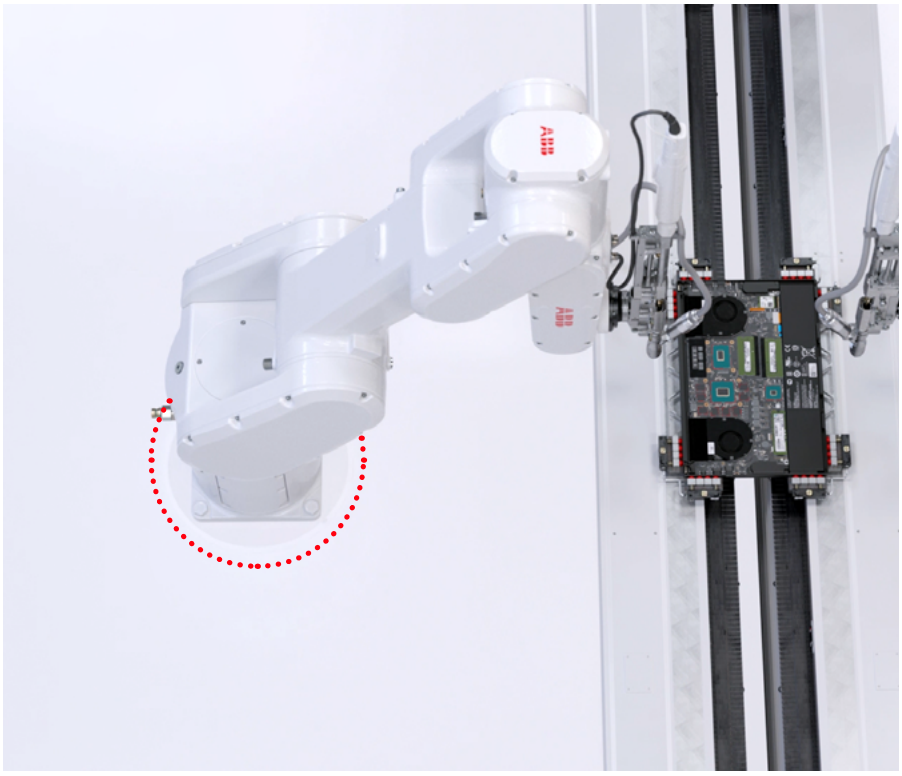
IRB 1300

Class-leading powerful performance in a compact package

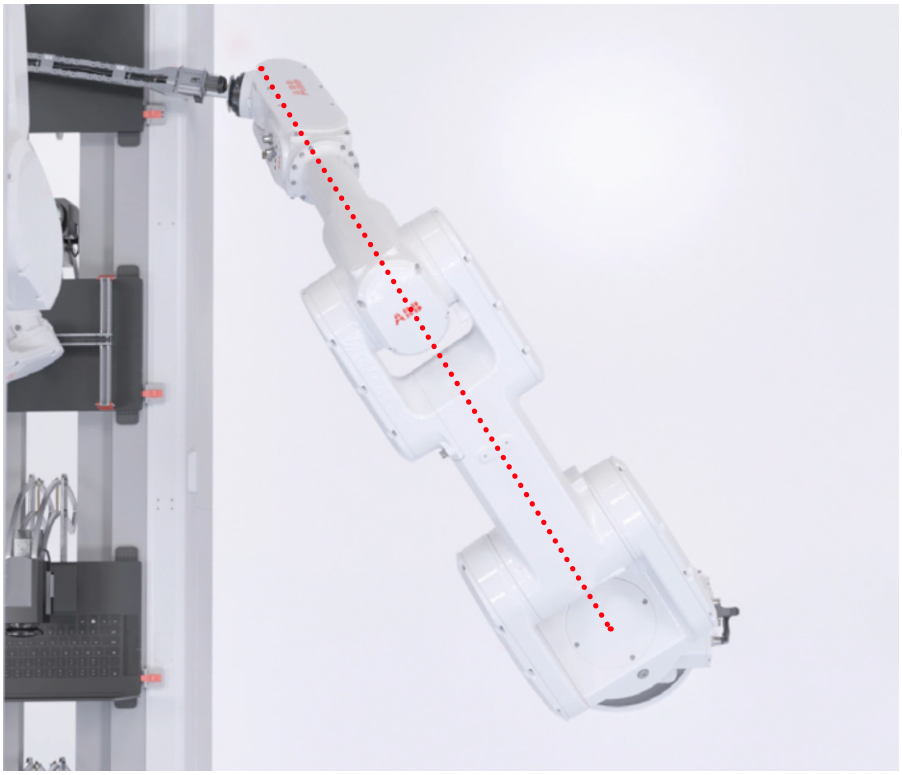
27 percent faster cycle times
Unmatched path accuracy



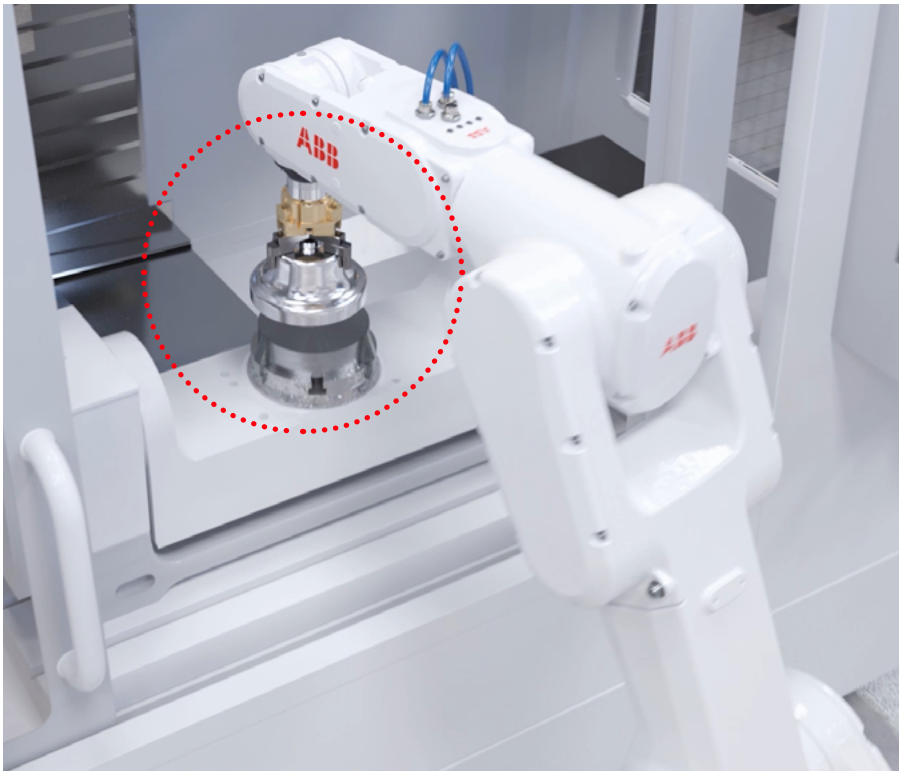
83 percent smaller footprint
Ideal for confined spaces



Up to a 1.4 m reach
Maximum production line flexibility



Up to 11 kg payload
Handles heavy, complex objects



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