



OCT '22 SMALL ROBOT UPDATES

IRB 1300 Introduction

ABB Robotics



IRB 1300 Small 6-axis Robot

Smart adaptation according to various application requirements

12kg/1400mm

7kg/1400mm

10kg/1150mm

11kg/900mm

Customer Value Proposition



01

Reach & Payload

Rich selection to explore more business possibilities

02

Performance

Leading speed & repeatability satisfy various application needs

03

Compact & Light Weight

Slim body and light weight make space-limited applications possible



Productivity

Up to **27%** faster cycle times for increased productivity and efficiency



Efficiency

More options to support efficient application development



Compactness

80%+ space savings from its counterpart, making robot deployment more spacious efficient



Light Weight

60% lighter than its counterpart, making robot deployment easier than ever

Powered by



OmniCore
E10



OmniCore
C30



OmniCore
C90XT

Target for



Electronics



General
Industry



CSSR



Auto Tier-1

Introduction





IRB 1300: Class-leading powerful performance in a compact package

IRB 1300



For electronics, General Industries, Auto Tier 1, food & beverage, and logistics industries that need compact and small footprint for confined space, IRB 1300 offer over 50 percent weight reduction, only one-sixth the footprint, and up to 27 percent faster cycle times to enhance both productivity and production-line flexibility.

Customer value proposition

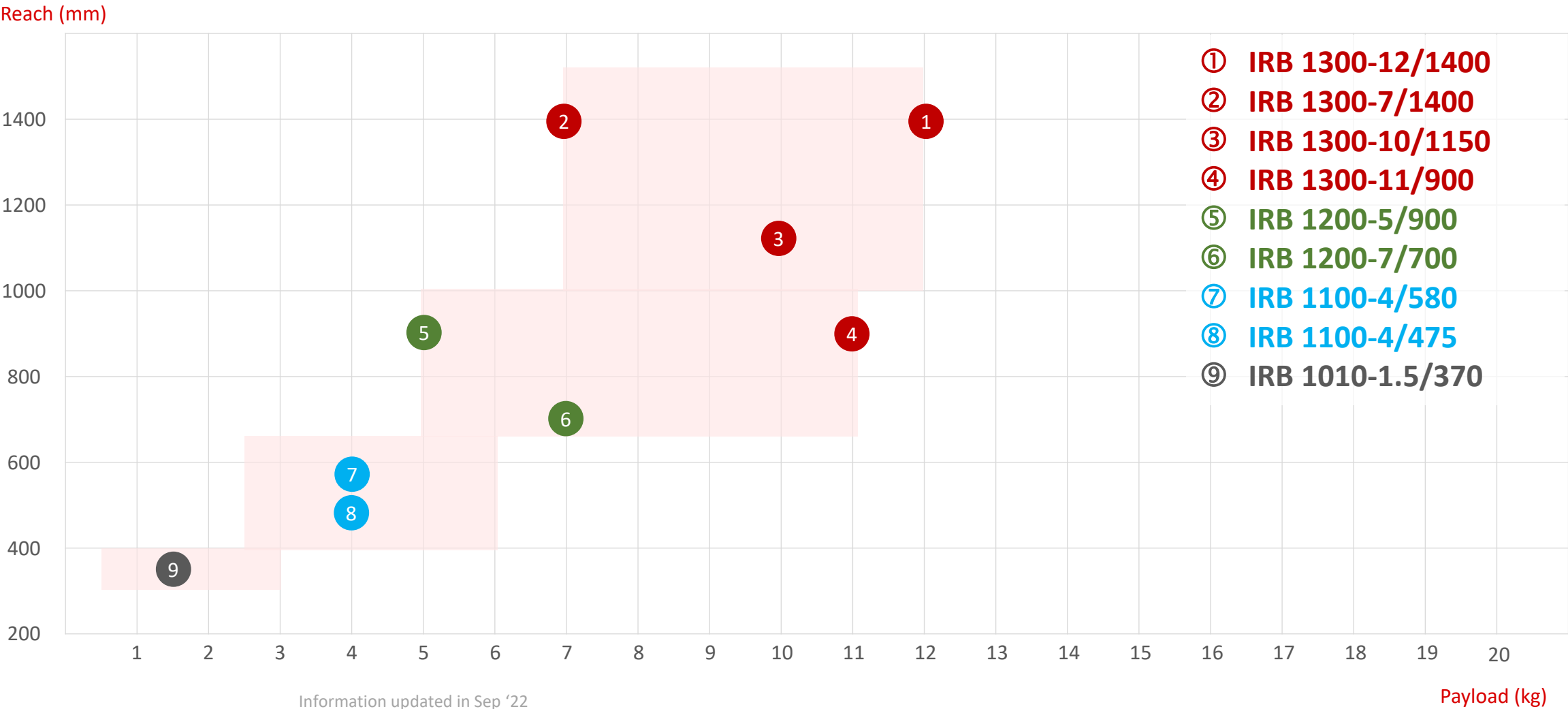
| | |
|---|--|
|  Productivity Up to 27% faster cycle times for increased productivity and efficiency ¹ |  Flexibility 1/6 the footprint allows customers to maximize space utilization ² |
|  Quality 26 new designs assure product reliability |  Simplicity Up to 60% of weight reduction makes robot deployment much easier than ever ² |

1) Compared IRB 1300-7/1400 with IRB 1600-6/1450
2) Compared with IRB 1600



Small Robot Family

6-axis small robot application mapping chart

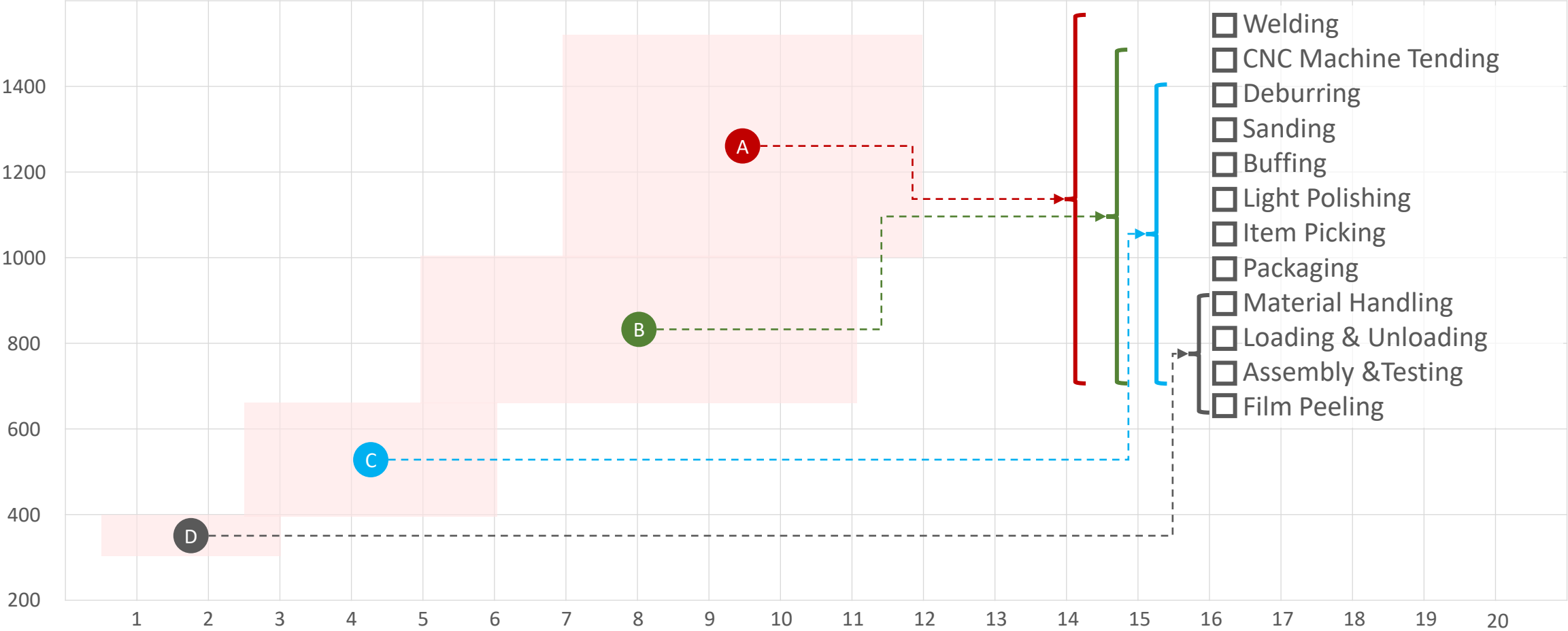




Small Robot Family

6-axis small robot application mapping chart

Reach (mm)

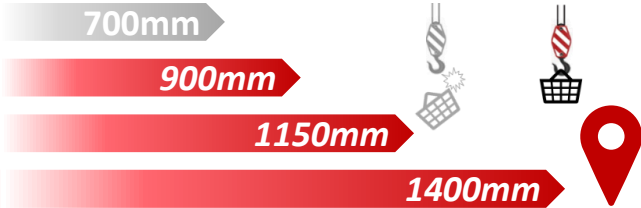

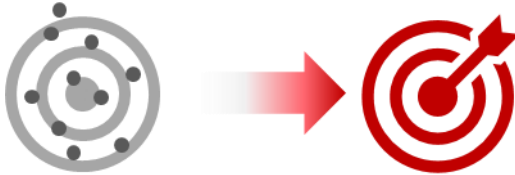


Information updated in Sep '22

Payload (kg)

IRB 1300: To Penetrate & Expand


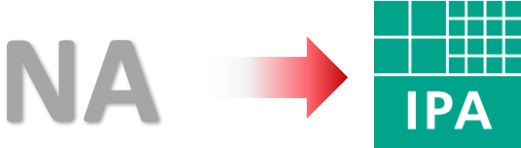
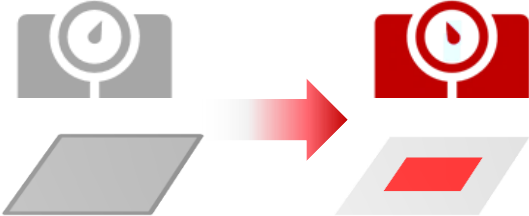
Key features, advantages and benefits

| | Feature | Advantage | Benefit |
|-----------------------|---------------------------------|------------------------|---|
| Reach & Payload | 900/1150/1400mm 11/10/7/12kg | Exclusive in the class |  |
| Speed (Cycle Time) | 0.37~0.43s | Leading in the class |  |
| Repeatability (RP) | 0.02~0.03mm | Leading in the class |  |



IRB 1300: To Penetrate & Expand

Key features, advantages and benefits

| | Feature | Advantage | Benefit |
|--|---|----------------------|---|
| Ingress Protection (IP) | IP40 (default) IP67 (option) Foundry Plus 2 (option) | Best in the class |  |
| Cleanroom (CR) | ISO4 (option) | Leading in the class |  |
| Light Weight & Compact (Footprint) | 60%+ Reduction ¹ 80%+ Downsizing ¹ | Improvements |  |



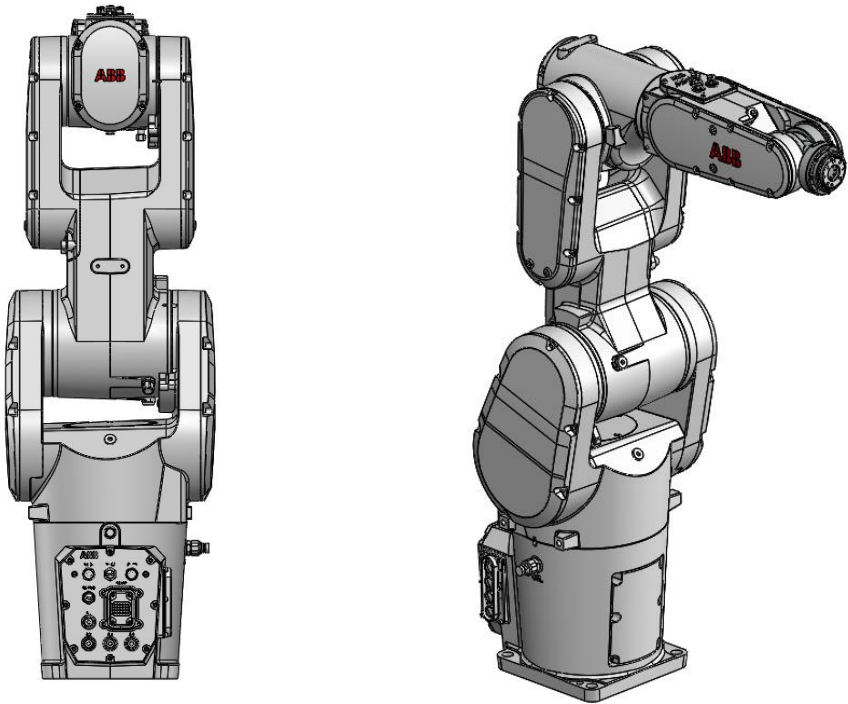
IRB 1300 Standard Version: Introduction

Outstanding performance

Specifications

| Robot version | IRB 1300-11/0.9 | IRB 1300-10/1.15 | IRB 1300-7/1.4 | IRB 1300-12/1.4 |
|-------------------------------------|--|------------------|----------------|-----------------|
| Reach (m) | 0.9 | 1.15 | 1.4 | 1.4 |
| Payload (kg) | 11 | 10 | 7 | 12 |
| Armload (kg) | 1 | 0.5 | 0.5 | 0.5 |
| Number of axes | 6 | | | |
| Protection | IP40 (Standard)/IP67, CR, Foundry plus ² (Optional) | | | |
| Mounting | Any angle | | | |
| Controller | Omnicores | | | |
| Integrated signal and power supply | 24 Signals on wrist (C1+C2+C3) (Optional) | | | |
| Integrated air supply | Ø6 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 | 0.02mm | 0.023mm | 0.03mm | 0.05mm |
| 1 kg picking cycle | | | | |
| 25 x 300 x 25 mm | 0.37s | 0.43s | 0.43s | 0.38s |
| Physical | | | | |
| Robot base | 220x220mm | | | |
| Robot weight | 75 kg | 77 kg | 79 kg | 79 kg |

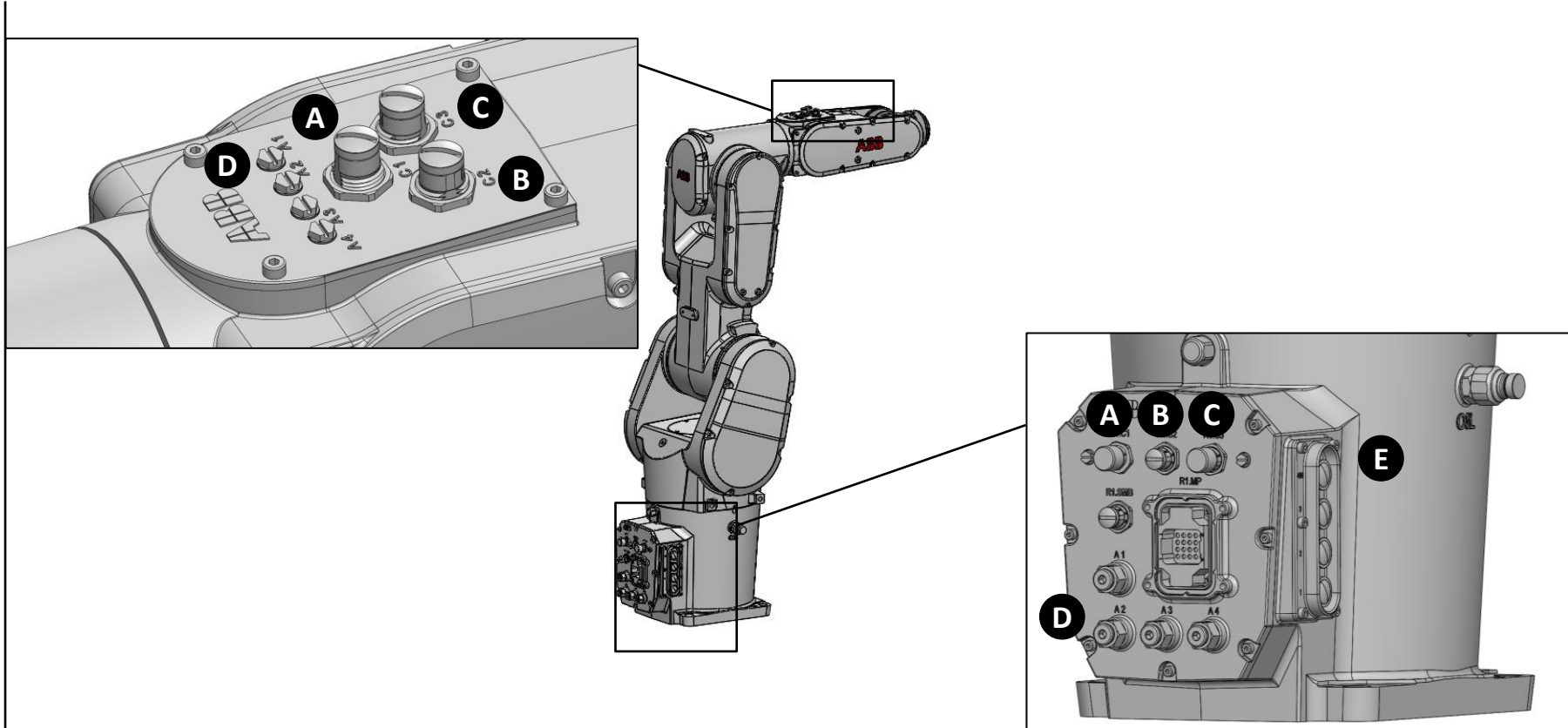
Front & Rear View



IRB 1300 Standard Version: Introduction

Customer interfaces

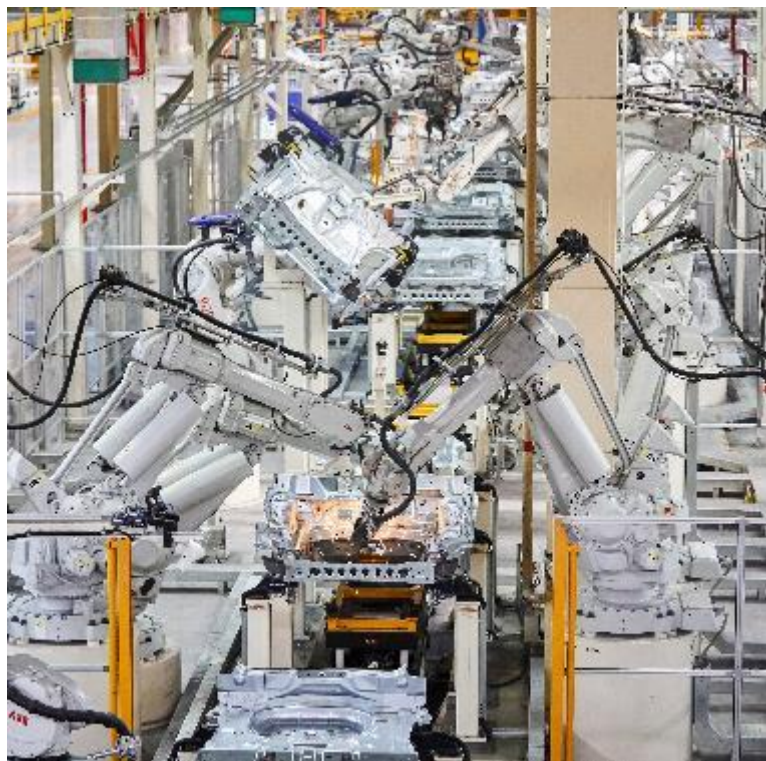
- A. 12 x customer signals
30V, 1.5A
- B. 8 x customer signals
30V, 1A or 1Gbits/s
- C. 4 x customer signals
60V DC, 4A or 25V AC,
4A
- D. 4 x air, 6bar (inner hose
diameter 6mm)
- E. Break Release (axis 1,
2, 3 and 4+5+6)



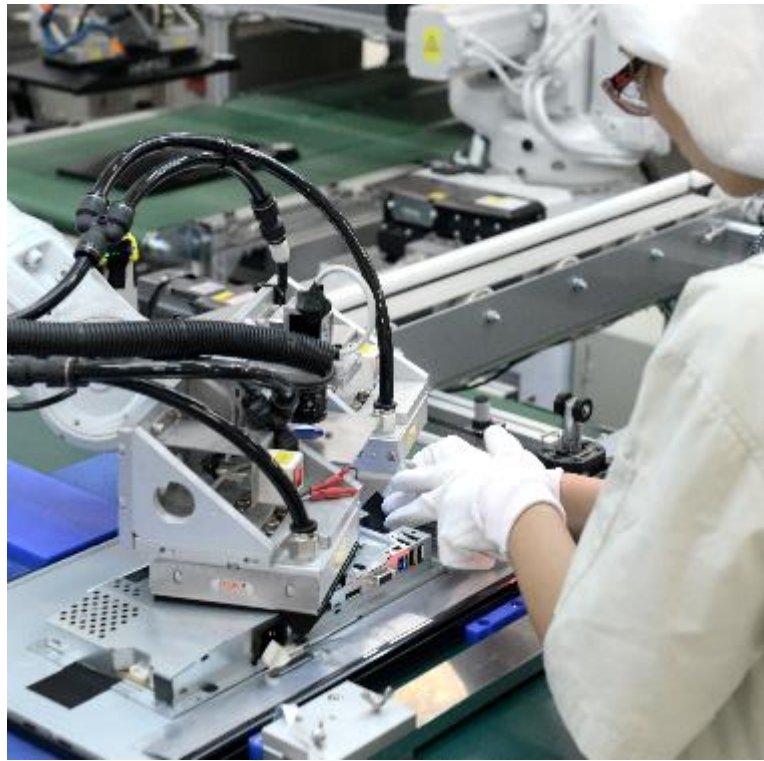
IRB 1300 Standard Version: Target Applications

Targeted Industry: Solution for All Business Lines

Automotive



Electronics



GI and CSSR

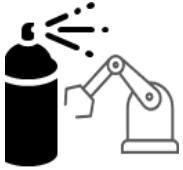


Full Support on Clean Room Capability

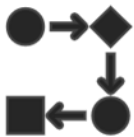
From ISO 5 to the highest ISO 1



Over 20 delicate sealing components to prevent particle generation



Implementing 4 additional processes to ensure painting quality for cleanliness maintenance



Optimizing manufacturing flow to exclude odds of particle attachment



Endorsed by #1 prestige institution for guarantee on clean room performance

Clean Room (CR) Option



IRB 1100

ISO 4



IRB 1200

ISO 3



IRB 1300

ISO 4



IRB 910INV

ISO 1



IRB 920T

ISO 5

Wider and Stronger Ingress Protection Options

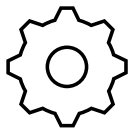
From IP54, IP67 to Foundry Plus2



Over 30 delicate sealing components to prevent dust and liquid intrusion



Over 20 dedicated gaskets and glue to enhance specific protection area



Exclusive Foundry Plus 2 equips robot with stainless steel at designed area as rust-free capability



Optimizing all screw design to assure protection level

Ingress Protection (IP) Option



IRB 1100

IRB 1200

IRB 1300

IP67

IP67

IP67

Foundry Plus

Foundry Plus2



IRB 910INV

IP54



IRB 920T

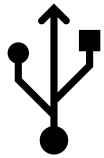
IP54

ESD Compliant

Comply IEC 61340-5-1 & ANSI ESD S20.20 directive



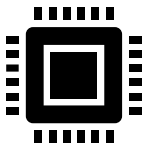
High quality metal structure design guarantees good conductivity without residual charges



Well-grounded body ensures way to quickly discharge



Comply resistance measurement test



Suitable for electronic manufacturing

ESD Compliant Design



IRB 1100

IRB 1200

IRB 1300



IRB 910INV



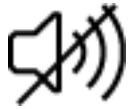
IRB 920T



IRB 1010

ABB Unique Function – New Generation of Controller: OmniCore

More motion control functions for you to exploit and make best use



Intelligent thermal fan for noise control



Integrated 24V power supply system



Rich Ethernet and I/O connection



New generation of powerful teach pendant with intuitively graphical interface

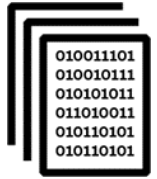


ABB Unique Function – New Generation of Controller: OmniCore

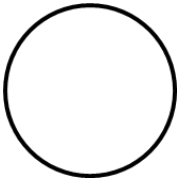
More motion control functions for you to exploit and make best use



Intelligent collision avoidance and detection



Supporting multitasking and efficient programming environment

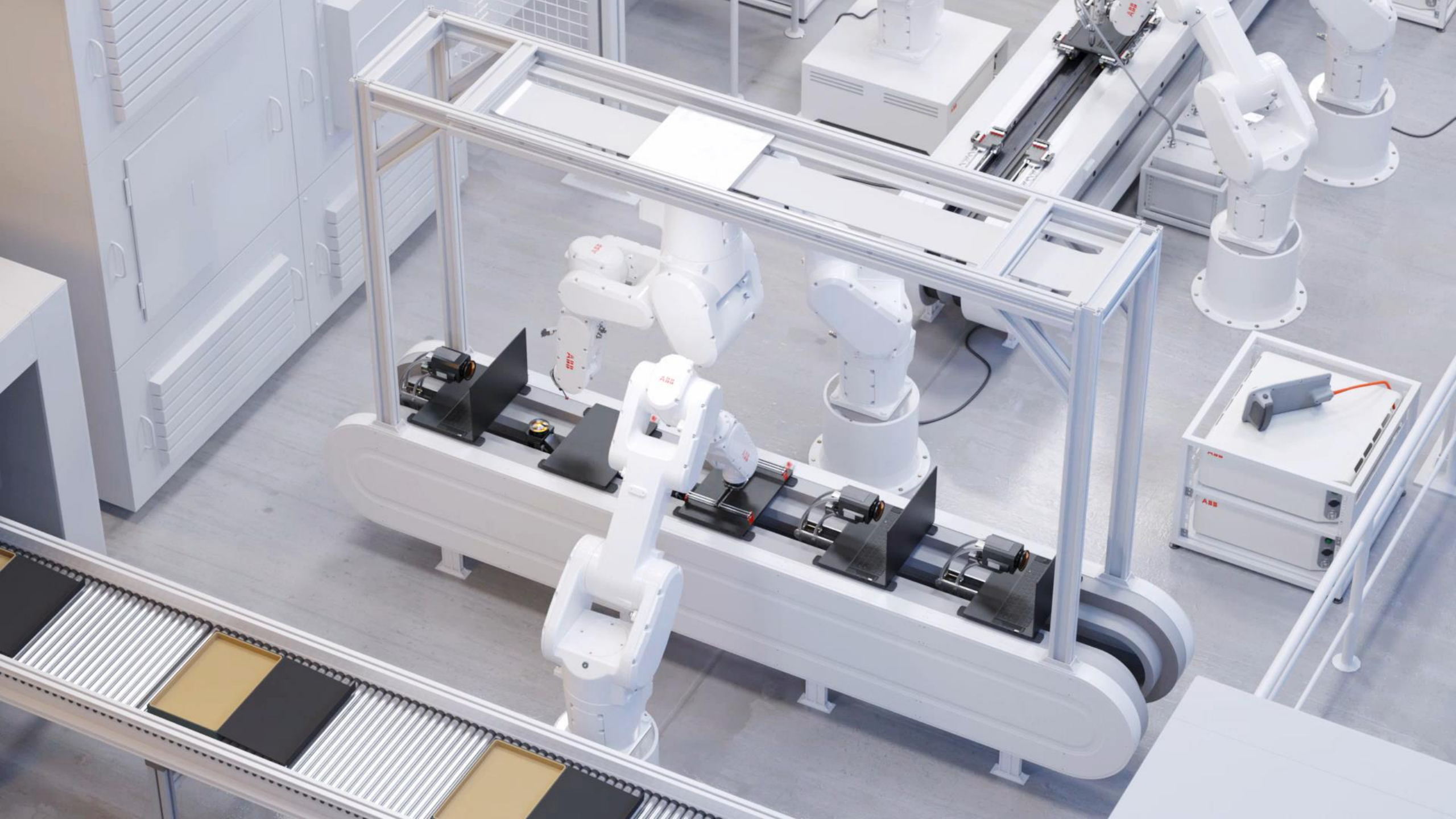


Exclusive path accuracy enhancement and management function



Seamlessly integrated with powerful RobotStudio





ABB