

# IRT 710

## Large track motion platform



The IRT 710 modular track motion platform offers best-in-class performance guaranteeing high speed, unparalleled accuracy, and maximum flexibility for robot's 7<sup>th</sup> axis and material transfer applications.

### Superior performance

ABB's IRT 710 Track Motion platform greatly extends the robot's working area, allowing a single robot to serve multiple machines.

With speeds\* up to 2.0 m/s, accelerations\* up to 2.5 m/s<sup>2</sup>, and high repeatability of ±0.02 mm, the IRT 710 Track Motion platform offers industry-leading performance. The path accuracy and speed are optimized using ABB's unique TrueMove™ and QuickMove™ motion control solutions.

IRT 710 supports medium to large articulated robots from the IRB 4400 to the IRB 7600 and palletized robots from the IRB 460 to the IRB 760.

### Flexible modular design

The IRT 710 is based on a highly modular and compact concept that allows for flexible deployment in different lengths. Its modular design reduces planning and engineering efforts.

Made up of standard one-meter modules as well as an optional 1.5-meter end module, the IRT 710 Track Motion platform fits most applications and can be easily updated for production evolution.

The platform supports up to four carriages for robot and transfer applications and is available in various options for use cases such as spot welding and material handling.

### Key benefits

- Speed up to 2.0 m/s and acceleration up to 2.5m/s<sup>2</sup> depending on the robot or application
- High repeatability of ±0.02 mm
- With ABB's unique TrueMove™ and QuickMove™ motion control
- Compact modular design for flexible development
- Easy to use – featuring an integrated levelling system
- Entirely protected – cable chain inside track
- High reliability, low maintenance, easy to repair
- Available in a broad range of options for varies application
- Driven by ABB's IRC5 or OmniCore industrial robot controller

\*Depending on the robot and application

Options	IRT 710	IRT 710 OmniCore
Track type	Robot or transfer	Robot
Carriages	1~4 pieces	1~2 in standard offer
Track length	3 to 40 modules of 1m length	3 to 21 modules of 1m length
Track travel direction	Standard or mirrored	Standard or mirrored
Robot orientation	0, 45, 90, 135, 180, 225, 270, 315	
Robot pedestals	Supported up to 750mm limitation for robot type in specification	
Cable chain position	Standard In middle, left and right side of the track in options	
Cable packages	Robot Cables, Customer power/ Customer signals (CP/CS), application cables for material handling and spot welding	

#### Transfer application

	Max. speed (m/s)	1.8m/s
<b>IRT 710</b>	Acceleration (m/s <sup>2</sup> )	Up to 2 m/s <sup>2</sup>
	Pose repeatability, RP (mm)	± 0.02
	Payload	3000kg

\* Not for IRT 710 OmniCore

Pos	Description	Numerical value or formula
L	Track length	170mm+L2+L3
L1	Bottom to Carriage	545mm 527mm/530mm*
L2	Track Module length (without the Right Terminal Module)	(N** - 1) x 1000mm
L3	Right terminal module length	1000mm or 1500mm***
L4	Carriage length	900mm or 1000mm****
L5, L5' and L5''	Distance between two feet	L5=500mm L5' = 600mm*** and L5'' = 800mm ***
W1	Total width	1000mm
W2	Total width (foot print)	980mm
W3	Distance between leveling screw	870mm

\*For Robot 4600, 4400 L1 is 530mm and transfer is 527mm for IRT 710 Robot 4600 OmniCore and 4400 Omnicore is 530mm for IRT 710 OmniCore

\*\*Track module number, N=3~21 for IRT 710 OmniCore N=3~40 for IRT 710

\*\*\*Only valid when option 1500mm end was selected

\*\*\*\*Only valid when transfer carriage was selected

#### Robot application

IRT 710	IRT 710 OmniCore	Max. Speed (m/s)	Acceleration (m/s <sup>2</sup> )	Pose repeatability, RP (mm)
IRB 7600	IRB7600 OmniCore	1.8m/s	Up to 2.0 m/s <sup>2</sup>	± 0.02
IRB 6700	IRB 6700 OmniCore			
IRB 6660	IRB 6710/6720/6730/6740			
IRB 6650S	IRB 6650S OmniCore			
IRB 6620				
IRB 760	IRB 760 OmniCore			
IRB 660	IRB 660 OmniCore			
IRB 460	IRB 460 OmniCore			
IRB 4600	IRB 4600 OmniCore IRB 4400 OmniCore IRB 5710/5720	2.0m/s	Up to 2.5 m/s <sup>2</sup>	
IRB 4400		1.43m/s		

