OmniCore ™ Controllers
Powering future-ready, sustainable robots today

The OmniCore platform powers our extensive robot portfolio, providing future-proof, scalable control to automate almost any imageable application with the industry's broadest robotics offering.

Bundling more value than any other robotic controller, Omnicore delivers on our hallmark promise of robust motion control and safety while integrating top-tier cyber security, connectivity, integrated sensor and AI processing.

Key benefits

Highest productivity and quality
With OmniCore, robots achieve class-leading motion control with path accuracy down to 0.6 mm, even with multiple robots operating at maximum speeds of 1600 mm/s.

Commitment to sustainability
Featuring built-in power back into the grid and re-generation technology to achieve up to 20% energy savings compared to its predecessor.

Cybersecurity and full traceability
Built-in cybersecurity and traceability features allow businesses to increase quality and productivity by reducing downtime.

Future proof design
Designed for easy integration of market-leading computing power, enabling AI, Cloud, and advanced vision systems.reducing downtime.

Unmatched scalability
OmniCore powers the market's most extensive range of robots and manipulators, providing 5 different controllers that run on the same platform.

Safety
OmniCore complies with future safety standards and includes up to 100 safety configurations to meet the needs of diverse use cases.

Easy integration
The integration of all major communication protocols in a single controller platform accelerates commissioning times from weeks to days, with additional gains from the leading number of pre-engineered application software tools and over up to 1000 time-saving features.

Benefits of FlexPendant

• Develop personalized operator interfaces for the FlexPendant.

• Create tailored solutions for customized function packages.

• Design your own icon on the FlexPendant.

• Access key features using the multi-touch display.

• Unplug during operation and share among several robots (Hot swappable).

Automating any imaginable applications

OmniCore works with all major robotics communication protocols, allowing simple integration of sensors, cameras, conveyors, track motions, and other peripherals. OmniCore enables the concurrent, high-speed, and high-accuracy control of external devices, such as spot-welders, paint heads, or glue dispensers, and robot motion. This facilitates very precise applications such as high-path-accuracy arc welding, spot welding, mobile phone display assembly, dispensing, gluing, laser cutting, as well as material handling, machine tending, picking & packaging, and palletizing.

OmniCore™ Controller technical features

OmniCore E10	OmniCore C30	OmniCore C90XT	OmniCore V250XT	OmniCore V400XT
Ultra-slim controller powering the widest range of robots on the market in the electronics and general industry.	Small, powerful and supporting a variety of applications in the food & beverage, electronics, and general industry.	Rugged for harsh environment, yet compact and powerful in the food & beverage, electronics, and general industry.	Versatile, powerful, and supporting the wide range of robots and applications in the EV, automotive, logistic, and GI.	Versatile, powerful, and supporting the wide range of robots and applications in the EV, automotive, logistic, and GI.
Designed to power SCARA robots and articulated robots up to IRB 1300.	Designed to power Delta, SCARA, Cobot, articulated robots up to IRB 1600.	Designed to power Delta, SCARA, Cobot, articulated robots up to IRB 1600.	Designed to power articulated and palletizing robots up to IRB 6790.	Designed to power articulated and palletizing robots up to IRB 8700.
1 ~, 100-230VAC, 2-hot (US)	1 ~, 100-230VAC, 2-hot (US)	1 ~, 100-230VAC, 2-hot (US)	3 ~, 380 – 480 VAC	3 ~, 380 – 480 VAC
RCD: 300mA (Industrial)	RCD: 300mA (Industrial) / 30mA (Cobot)	RCD: 300mA (Industrial)	RCD: 300mA (Industrial)	RCD: 300mA (Industrial)
Built-in I/O	Internal Scalable I/O (only base)	Internal Scalable I/O	Internal Scalable I/O	Internal Scalable I/O x2
External Scalable I/O (only non-safe)	External Scalable I/O	External Scalable I/O	External Scalable I/O	External Scalable I/O
No SafeMove	SafeMove	SafeMove	SafeMove	SafeMove
No ADU	No ADU	1 ADU	3 ADU	6 ADU
Standing, Rack mount, Design front	Standing, Rack mount, Vertical mount, Desktop Design	Standing, Stackable	Standing, Stackable	Standing, Stackable
Integrated vision	Integrated vision	Integrated vision	Integrated vision	Integrated vision
No Conveyor tracking	Conveyor tracking	Conveyor tracking	Conveyor tracking	Conveyor tracking
No PickMaster® Twin	PickMaster® Twin	PickMaster® Twin	PickMaster® Twin	PickMaster® Twin
Built-in 24V/4A	Built-in 24V/4A + 8A optional	Built-in 24V/4A + 4A optional + ODVA optional	Built-in 24V/4A + 4A optional + ODVA optional	Built-in 24V/4A + 4A optional + ODVA optional
IP20	IP20	IP54	IP54	IP54
		MultiMove	MultiMove	MultiMove

Industrial - all other industrial robots except for CRB 15000 and CRB 14050
RCD - Residual Current Device (Earth fault protection)
ADU - Addition Drive Unit

Robots powered by OmniCore™
Which controller support which robot?

		E10	C30	C90XT	V250XT	V400XT
Articulated robots	IRB 1010	●	●			
	IRB 1090	●				
	IRB 1100	●	●	●		
	IRB 12O0	●	●	●		
	IRB 1300	●	●	●	●	●
	IRB 1510		●	●		
	IRB 1520		●	●	●	●
	IRB 1600		●	●	●	●
	IRB 2400				●	●
	IRB 2600				●	●
	IRB 4400				●	●
	IRB 4600				●	●
	IRB 57x0				●	●
	IRB 6650S				●	●
	IRB 6660				●	●
	IRB 6700				●	●
	IRB 67x0				●	●
	IRB 6790				●	●
	IRB 7600					●
	IRB 77x0					●
	IRB 8700					●
Palletizer robots	IRB 460				●	●
	IRB 660				●	●
	IRB 760					●
SCARA robots	IRB 910 INV	●	●	●		
	IRB 920	●	●	●		
	IRB 930	●	●	●		
Delta robots	IRB 360		●			
	IRB 365		●			
	IRB 390				●	●
Cobots	IRB 14050		●			
	CRB 15000		●			
	CRB 1100		●			
	CRB 1300		●	●		

▢ Robots ONLY available on OmniCore™