

# Quattro 650H/HS

## Four-axis parallel robot achieves high speed and high precision

- Ethernet capability to control the robot through the familiar programming language (IEC 61131-3) of Machine Automation Controller NJ/NX/NY Series
- Four-axis arm evenly distributes the load on the robot
- Fast and high-precision conveyance and assembly
- Designed with a high payload to support multi-hand (multi-picking)
- Supports fast Pick & Place on a fast conveyor
- Meets the sanitary standards of the United States Department of Agriculture for prevention of product contamination
- Maximum working diameter 1,300 mm
- Working height 500 mm
- Maximum payload 15 kg
- Weight 117 kg



## Specifications

Product name		Quattro			
Size		650			
Type		H		HS	
IP		Standard	IP65/67	Standard	
Model		1721□-2600□	1721□-2602□	1721□-2601□	
Number of axes		4			
Mounting		inverted			
Working volume	X,Y axis (stroke)	1300 mm			
	Z axis (stroke)	500 mm			
	theta axis (rotation angle)	0° (fixed) (P30)			
		±46.25° (P31)			
±92.5° (P32)					
±185° (P34)					
Maximum Payload		6 kg (P30: 15kg)			
Repeatability		±0.10mm			
Cycle times, sustained (at 20°C ambient)	Payload 0.1 kg	0.30s *1, 0.46 s *2			
	Payload 1.0 kg	0.36s *1, 0.47 s *2			
	Payload 2.0 kg	0.37s *1, 0.52 s *2			
	Payload 4.0 kg	0.41s *1, 0.58 s *2			
	Payload 6.0 kg	0.43s *1, 0.61 s *2			
Power Requirements		24 VDC: 11 A (eAIB, SmartController) 200 to 240 VAC: 10 A, single-phase			
Protection	Base	Topside of robot	IP20	IP65	IP66
		Underside of robot	IP65	IP65	IP66
	Platform, Arms		IP67		
Environment Requirements	Ambient Temperature		1 to 40°C		
	Humidity Range		5 to 90% (non-condensing)		
Weight		117 kg			
USDA-Accepted for meat and poultry processing		---		Yes	
Basic configuration	Controller		SmartController EX		
	On-board I/O (Input/Output)		12/8		
	Conveyor tracking input		4		
	RS-232C serial communications port		1		
	Programming environment		ACE, PackXpert, ePLC		
	ACE Sight		Yes		
	ePLC Connect		Yes		
ePLC I/O		Yes			
Connectable controller *3		SmartController EX, NJ/NX/NY Series *4			

\*1. Adept cycle, in mm (25/305/25)

\*2. Extended cycle, in mm (25/700/25)

\*3. Choose a controller to suit your application.

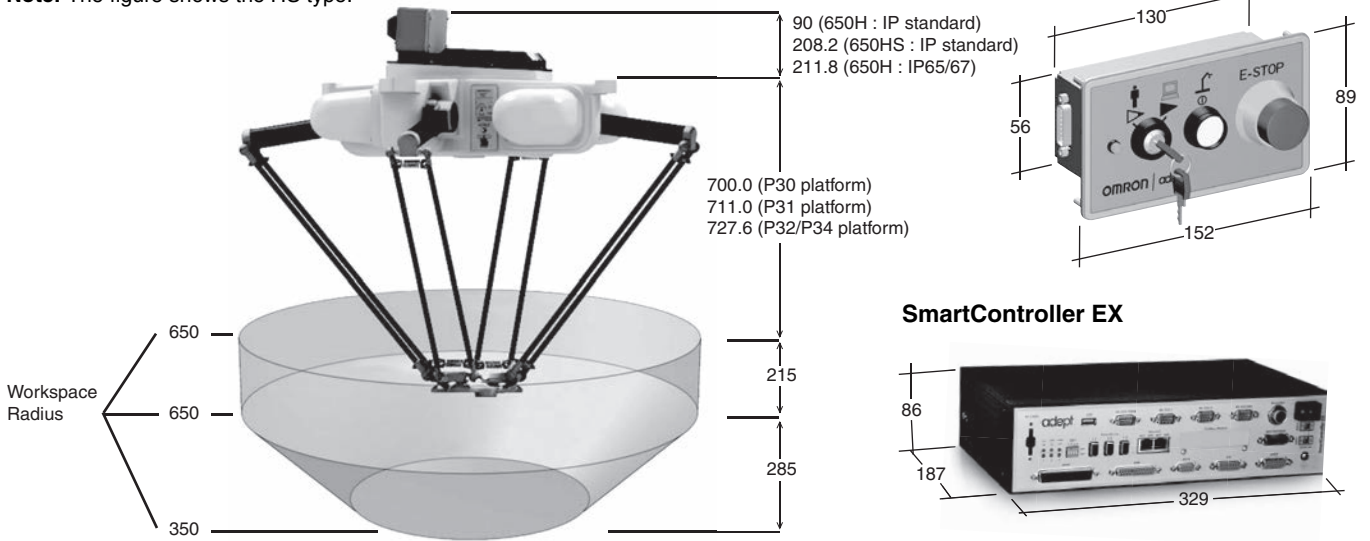
\*4. The robot version 2.3.C or later is required to connect with the NJ/NX/NY Series.

# Dimensions





(Unit: mm)

## Quattro 650H/HS

Note: The figure shows the HS type.



Four choices of platform offer different ranges of rotation.

Appearance				
Type	P30	P31	P32	P34
Rotation angle	No rotation	$\pm 46.25^\circ$	$\pm 92.5^\circ$	$\pm 185^\circ$
Maximum Payload	H: 15 kg, HS: 12 kg	H: 6 kg, HS: 3 kg	H: 6 kg, HS: 3 kg	H: 6 kg, HS: 3 kg

Note: The platform appearances of the H type are shown above. The platform of the HS type is made of stainless steel.

## Robot Parts Code and Bundled Accessories

Type	Quattro with EX Controller			Quattro Add-On		
IP	Standard (H)	Standard (HS)	IP65/67	Standard (H)	Standard (HS)	IP65/67
Quattro P30	17214-26000	17214-26010	17214-26020	17213-26000	17213-26010	17213-26020
Quattro P31	17214-26001	17214-26011	17214-26021	17213-26001	17213-26011	17213-26021
Quattro P32	17214-26002	17214-26012	17214-26022	17213-26002	17213-26012	17213-26022
Quattro P34	17214-26004	17214-26014	17214-26024	17213-26004	17213-26014	17213-26024
Overview	Robot + eAIB+ SmartController EX + required connection cables			Robot + eAIB + required connection cables		
Purpose	Typical for use in single robot system and multi-robot systems.			Typically added to systems with an existing SmartController EX to create multi-robot systems		
Bundled Accessories	<ul style="list-style-type: none"> <li>• XSYS cable with jumpers, 1.8m/6ft (13323-000)</li> <li>• SmartController EX (09200-000)</li> <li>• XSYS cable, 5m/15 ft (11585-000)</li> <li>• 1394 latch cable, 5m/15 ft (13632-045)</li> <li>• Front panel kit (90356-10358)</li> <li>• eV+ license to connect to controller (14529-103)</li> </ul>	<ul style="list-style-type: none"> <li>• XSYS cable with jumpers, 1.8m/6ft (13323-000)</li> <li>• SmartController EX (09200-000)</li> <li>• XSYS cable, 5m/15 ft (11585-000)</li> <li>• 1394 latch cable, 5m/15 ft (13632-045)</li> <li>• Front panel kit (90356-10358)</li> <li>• eV+ license to connect to controller (14529-103)</li> <li>• Cable Seal Kit (09564-000)</li> </ul>	<ul style="list-style-type: none"> <li>• XSYS cable with jumpers, 1.8m/6ft (13323-000)</li> <li>• SmartController EX (09200-000)</li> <li>• XSYS cable, 5m/15 ft (11585-000)</li> <li>• 1394 latch cable, 5m/15 ft (13632-045)</li> <li>• Front panel kit (90356-10358)</li> <li>• eV+ license to connect to controller (14529-103)</li> <li>• Cable Seal Kit (08765-000)</li> </ul>	<ul style="list-style-type: none"> <li>• XSYS cable with jumpers, 1.8m/6ft (13323-000)</li> <li>• XSYS cable, 5m/15 ft (11585-000)</li> <li>• DB9 splitter (00411-000)</li> <li>• 1394 latch cable, 5m/15 ft (13632-045)</li> <li>• eV+ license to connect to controller (14529-103)</li> <li>• Cable Seal Kit (09564-000)</li> </ul>	<ul style="list-style-type: none"> <li>• XSYS cable with jumpers, 1.8m/6ft (13323-000)</li> <li>• XSYS cable, 5m/15 ft (11585-000)</li> <li>• DB9 splitter (00411-000)</li> <li>• 1394 latch cable, 5m/15 ft (13632-045)</li> <li>• eV+ license to connect to controller (14529-103)</li> <li>• Cable Seal Kit (08765-000)</li> </ul>	<ul style="list-style-type: none"> <li>• XSYS cable with jumpers, 1.8m/6ft (13323-000)</li> <li>• XSYS cable, 5m/15 ft (11585-000)</li> <li>• DB9 splitter (00411-000)</li> <li>• 1394 latch cable, 5m/15 ft (13632-045)</li> <li>• eV+ license to connect to controller (14529-103)</li> <li>• Cable Seal Kit (08765-000)</li> </ul>