

# OMRON™ Collaborative Robot HW 3.1 / 3.2

## Compatible Plug & Play Kits



# OMRON











OMRON ROBOTICS AND SAFETY TECHNOLOGIES











[automation.omron.com](http://automation.omron.com)










OMRON has partnered with a select number of companies to offer a wide variety of peripherals that quickly and easily integrate with our cobots, allowing for a faster deployment and return on investment. Collectively referred to as Plug & Play devices, they are designed to serve a broad range of customer applications. OMRON recommends the devices and software listed in this compatible list for our OMRON TM Cobot HW3.1/3.2 models, including TM5-700, TM5-900, TM12, TM14, TM16 and TM20.












All listed devices are ready-to-use solutions that will help you speed up the automation process. The listed devices may need specially designed software to link to OMRON Cobot arms. Please check the device supplier's website for the most up-to-date version.











## Compatible Plug & Play Hardware








Category	Appearance	Manufacturer	Product Name	SKU Number*	Description
Grippers		Robotiq	Adaptive Gripper 2-Finger 85/140 for OMRON TM robot	85 kit: AGC-OMRON-KIT-85 140 kit: AGC-OMRON-KIT-140	A 2-finger adaptive gripper that can adapt to parts of various shapes and sizes. Comes in two stroke options – 85 mm and 140 mm. Each kit includes: - End effector coupling kit - 10 m communication cable - RS485 to RS232 converter - RS485 to USB converter - Screw kit - Quick start guide
			Hand-E gripper for OMRON TM robot	HND-OMRON-KIT	A 2-finger parallel gripper with an IP67 rating. 50 mm stroke. Each kit includes: - Fingertip starting kit - End effector coupling kit - 10 m communication cable - RS485 to RS232 converter - RS485 to USB converter - Screw kit - Quick start guide
			EPick for OMRON TM robot	VAC-OMRON-EPICK-KIT1	A vacuum gripper that uses an integrated vacuum generator. Each kit includes: - Basic gripper unit - End effector coupling kit - 10 m communication cable - RS485 to RS232 converter - RS485 to USB converter - Quick start guide - Vacuum cup(s): 1.5 bellows, 55 mm dia.
				VAC-OMRON-EPICK-KIT2	KIT1 includes 1 vacuum cup KIT2 has a suction system for 2 cups KIT4 has a suction system for 4 cups
				VAC-OMRON-EPICK-KIT4	
			AirPick for OMRON TM robot	VAC-OMRON-AIRPICK-KIT1	A vacuum gripper that uses an external pneumatic supply. Each kit includes: - Basic gripper unit - Tubing 8 mm x 8 m - End effector coupling kit - RS485 to RS232 converter - RS485 to USB converter - Quick start guide - Vacuum cup(s): 1.5 bellows, 55 mm dia.
				VAC-OMRON-AIRPICK-KIT2	KIT1 includes 1 vacuum cup KIT2 has a suction system for 2 cups KIT4 has a suction system for 4 cups
				VA-OMRON-AIRPICK-KIT4	
			I/O Coupling	IO-CPL-OMRON-KIT	Component that connects the Robotiq adaptive/vacuum gripper to the wrist of the OMRON TM robot to eliminate the need for an external serial communication cable. Each kit includes: - I/O Coupling - Screw kit - Micro-USB to USB cable - 16G USB Stick
			Dual-Grip Adapter Plate	AGC-APL-159-002	Adapter plate and mounting screws to mount two grippers onto the OMRON TM robot.

Category	Appearance	Manufacturer	Product Name	SKU Number*	Description
Grippers		Robotiq	2F-85 Dual kit for OMRON Robots 2F-140 Dual kit for OMRON Robots HAND-E Dual kit for OMRON Robots	OMRON-DUAL-AGC-85 OMRON-DUAL-AGC-140 OMRON-DUAL-HND	Kit that enables dual gripper setting. Each kit includes: - Chosen gripper x 2 - Mechanical coupling x 2 - USB to RS485 Adapter - Communication Cable - M12 5 Pins Splitter - Dual-Grip Adapter Plate - Screw kit x 2
		OnRobot	RG2 Gripper	102012	Electric 2-finger gripper. Each kit includes: - RG2 Gripper - Fingertip adapters (pre-mounted) - Integrated Quick OnRobot Changer (tool side) - Torx key
			RG2-FT	102075	The RG2-FT has 2 force/torque sensors and 2 time-of-flight-based proximity sensors integrated in the fingertips. It is a state of the art gripper with added sensing and intelligence, capable of controlling the robot and itself to achieve what the operator would like it to do, even when the exact parameters cannot be programmed in advance. It includes: - RG2-FT Gripper - Fingertip adapter (pre-mounted) - Cable - Cable holder and screws  Required for mounting on the robot: - single Quick OnRobot Changer (robot side) - dual Quick OnRobot Changer (robot side) - HEX QC  Required for connecting to the robot: - connection kit with compute box
			RG6 Gripper	102021	Electric 2-finger gripper with larger stroke. Each kit includes: - RG2 Gripper - Fingertip adapters (pre-mounted) - Integrated Quick OnRobot Changer (tool side) - Torx key
			VG10 Electric Vacuum Gripper	101661	Flexible and adjustable electrical vacuum gripper. Each kit includes: - VG10 Gripper - 30 mm dia. suction cups x 16 (pre-mounted) - Integrated Quick OnRobot Changer (tool side) - 40 mm dia. suction cups x 4 - 15 mm dia. suction cups x 4 - Blind screws x16 - Positioning arrows - Torx key
			Gecko Gripper	104086 SP1 104087 SP3 104088 SP5	Compact, lightweight Gecko Single Pad Gripper requires no cables, electricity, air or programming. The Gecko SP is available in 3 sizes; SP1, SP3, and SP5 named after the gripper payload in kilos, featuring the ability to lift a wide range of flat, smooth, shiny or perforated surfaces. Options are: - Gecko SP1 (with 35 mm pad) - Gecko SP3 (with 60 mm pad) - Gecko SP5 (with 75 mm pad)
			Robot Kit	113761	This kit must be purchased for the use of OnRobot grippers on OMRON TM collaborative robot. Each kit includes: - Compute Box - Power supply - Adapter plate (included in all kits but only necessary for VG10 and Gecko grippers) - USB stick with software components and User Manual - Device cable 5 m - UTP cable 0.5 m - I/O cable 0.3 m - Cable management hook/loop
			2FG7 Parallel Gripper	103666	The 3FG15 is ideal for gripping a wide range of cylindrical objects in machine-tending applications such as CNC lathe machines. The gripper design automatically centers workpieces, with payload up to 15 kg. It includes: - 3FG15 - Torx Key T20 - 3 x Steel Fingertip 13 dia. - 3 x Rubber Fingertip 16.5 dia.
			Soft Gripper	103546 SG Base Part 103689 SG-a-H 103860 SG-a-S 103691 SG-b-H	This is available with three interchangeable silicon-molded cups to handle a wide array of irregular shapes and delicate items, making it ideal for pick-and-place applications in food and beverage and other "clean" production applications. The silicon cups are dishwasher-safe and comply with FDA 21 CFR (for non-fatty items) and EC 1935/2004 for food handling. Maximum payload of 2.2 kg, and grip dimensions range from 11 mm to 118 mm, depending on cup used.
			F2G7 Parallel Gripper	106376	This parallel gripper is used for tight spaces and demanding payloads. Ready for use almost anywhere, with IP67 rating for harsh environments and ISO Class 5 certification for cleanroom use.

Category	Appearance	Manufacturer	Product Name	SKU Number*	Description
Grippers		OnRobot	MG10 Magnet Gripper	105202	This versatile electric magnetic gripper is used for safe and precise collaborative applications. Built-in intelligence with easily adjustable force and part detection ensures reliable handling of a wide range of part sizes and weights.
			VGC10	102844	This flexible electric vacuum gripper has changeable suction cup options for unlimited customization possibilities. It's smaller and half the weight of VG10 but with the same payload. It includes: <ul style="list-style-type: none"> <li>- 40 mm dia. Vacuum Cups</li> <li>- 30 mm dia. Vacuum Cups</li> <li>- 15 mm dia. Vacuum Cups</li> <li>- Fittings</li> <li>- Push-in fittings</li> <li>- M6 x 10 mm Screws</li> <li>- Blind Screws</li> <li>- Torx T30</li> <li>- 3 mm hex keys</li> <li>- Adapter Plate</li> <li>- Extension pipe 50 mm</li> </ul>
			VGP20 Vacuum Gripper	107242 107567	This powerful electric vacuum gripper is ideal for cardboard box palletizing. Built-in intelligence and multichannel functionality ensures failsafe, flexible operation. The following attachment is required to prevent mechanical interference with camera module: <ul style="list-style-type: none"> <li>- VGP20 Extender 50 mm</li> </ul>
		Schmalz	ROB-SET ECBPi OMRON	10.03.01.00544	Complete vacuum gripper for collaborative robots. Each kit includes: <ul style="list-style-type: none"> <li>- Vacuum generator (ECBPi)</li> <li>- End-effector coupling kit</li> <li>- Connection cable</li> <li>- Mounting flange</li> <li>- Flat suction cup</li> <li>- Bellows suction cup</li> <li>- Bolts and t-nuts</li> <li>- Operating instructions</li> </ul>
			ROB-SET FXCB OMRON	10.01.43.00120	Area gripper equipped with integrated pneumatic vacuum generation. (Needs external air supply.) Each kit includes: <ul style="list-style-type: none"> <li>- Pneumatic area gripper (FXCB)</li> <li>- Connection cable</li> <li>- Mounting flange</li> <li>- Bolts and t-nuts</li> <li>- Operating instructions</li> </ul>
		Schunk	Co-act EGP-C 40-N-N-TMID Co-act EGP-C 40-N-N-TMEK Co-act EGP-C 64-N-N-TMEK	1374363 1375931 1400578	Electric 2-finger parallel gripper certified for collaborative operation. Actuation and communication via 24 VDC and digital I/O. Each kit includes: <ul style="list-style-type: none"> <li>- Co-act EGP-C gripper</li> <li>- Assembly and Operating Manual</li> <li>- Accessory pack</li> </ul>
			Co-act AUB EGP 40/12 Co-act AUB EGP 40/24 AUB Co-act EGP 64/20 AUB Co-act EGP 64/40	1401285 1401286 1401294 1401297	Gripping fingers for Co-act EGP-C.
		SMC	Air Gripper	JMHZ2X7400B-TM	Air gripper equipped with a high precision linear guide. Compact, lightweight product with high gripping force due to air operation. Operate by simply connecting one air supply tube and an electrical wiring M8 connector. Each kit includes: <ul style="list-style-type: none"> <li>- Air gripper unit</li> <li>- Parallel pin (6 x 10 mm) x 1</li> <li>- Hexagon socket head cap screw (M6 x 23) x 4</li> <li>- Protective cover x 1 set (valve side, S.W side)</li> <li>- Hexagon socket head cap screw (M4x10) x 4</li> <li>- Tube for piping (TU0425BU) 2 m</li> <li>- User manual</li> </ul>
			Vacuum Gripper	ZXP-X1	Operate by simply connecting one compressed air supply tube and an electrical wiring M8 connector. The wide variety of SMC suction cup variations can apply to a wide range of picking applications. The adsorbing detection is made easy with sensor signals. Each kit includes: <ul style="list-style-type: none"> <li>- Vacuum gripper unit</li> <li>- Robot mounting flange</li> <li>- 6 x 10, parallel pin</li> <li>- 8 pcs x M6 x 10, Hexagon socket head cap screw</li> <li>- 2 m, Polyurethane tube: TU0604</li> <li>- Plug 4 pcs (cup mounting flange)</li> <li>- 4 pcs x suction cup with adapter (suction cup)</li> </ul>

Category	Appearance	Manufacturer	Product Name	SKU Number*	Description
		CKD	Compact Gripper RLSH-TM	RLSH-A20D1N-L1-FY2-TM	Small, lightweight, pneumatic gripper with high gripping force. Easy installation with a dedicated common flange and tool-less replacement with a clamp ring, and teaching support is supported with the dedicated software "Pneumatic Gripper." Equipped with an edgeless resin cover and an LED indicator lamp that is visible 360°, it is designed with consideration for safety and supports the introduction of collaborative robots by all customers.
			Long Stroke Gripper RHLF-TM	RHLF-16CS-FY2-TM	
			3-way Finger Gripper RCKL-TM	RCKL-16CS-FY3-TM	
Tool Changers		KOSMEK	Robotic Tool Changer	Master Cylinder: SWR0070-M□□ SWR0120-M□□ Conversion Plate Set: SWRZ0070-MF4 SWRZ0120-MF4 Tool Adapter: SWR0070-T-□ SWR0120-T-□	High-precision robotic tool changer with many features enables multiple functions of robots and setup time reduction. It enhances the productivity of the automated production line.
			Manual Robotic Hand Changer	Master Cylinder SXR0030-M; Adapter Plate SXRZ0030-MF4; Tool Adapter SXR0030-TF4	Manual Robotic Hand Changer enables quick, intuitive change of robotic tools. Technical knowledge is not required -- operators with diverse skills levels can easily use the Manual Robotic Hand Changer. Adapter Plate includes: - Parallel Pin dia. 5×8 - Parallel Pin dia. 6×12 - 4 Hexagonal Socket Low Head Cap Screws (M6×1×10) - 4 Hexagonal Socket Head Cap Screws (M5×0.8×14)
		OnRobot	Quick OnRobot Changer Robot side 4.5 A	104277	Manual tool changer to attach on the robot's end-of-arm. Either the Quick OnRobot Changer (robot side) or the Dual Quick OnRobot Changer must be purchased for use of all OnRobot grippers. Each kit includes: - Quick OnRobot Changer robot side - Screws - Torx key
			Quick OnRobot Changer - Tool side	102014	Manual tool changer to attach on the tool side. (All OnRobot grippers have this component integrated, so this is only necessary when user is developing their own tool.)
			Quick OnRobot Changer Kit 4.5 A	105925	Each kit includes: - Quick OnRobot Changer (robot side) x 1 - Quick OnRobot Changer (tool side) x 2 - Torx key - Screws and pins
			Dual Quick OnRobot Changer 4,5A	104293	Manual tool changer to attach on the robot's end-of-arm for dual gripper configuration. Either the Quick OnRobot Changer (robot side) or the Dual Quick OnRobot Changer must be purchased for use of all OnRobot grippers. Each kit includes: - Dual Quick OnRobot Changer - Screws - Torx key
	3D Bin Picking		Pick-it	Pick-it M	PI-M-2.0
		Pick-it M-HD		PI-M-HD	Plug & Play 3D camera and software for picking objects sized 10x10x5mm or larger. Each kit includes: - Pre-calibrated 3D camera - Pick-it software - Industrial processor - 3G dongle to connect directly to Pick-it support - Calibration plate and ROI box teaching markers - All connection cables (plug & play) - Quick start guide

Category	Appearance	Manufacturer	Product Name	SKU Number*	Description
Screw Driving		Kilews	Screw Driving Solution Kit	-	Kilews screwdriver kit and pneumatic control box. Each kit includes: <ul style="list-style-type: none"> <li>- Screwdriver SKD-BN512LM</li> <li>- Power Controller SKP-32BC-60W</li> <li>- Flange E31700-3</li> <li>- Air Nozzle KD-TM-B500</li> <li>- Signal box</li> <li>- Pneumatic control box</li> <li>- Installation guide</li> </ul>
			Screwdriver	103961 105121 104363 104374 105870	Smart screwdriver with screw feeder easily automates multiple screw driving processes with no downtime for manual changeovers. Precise torque control and intelligent error detection ensure quality and consistency. The following accessories are required depending on the screw size. <ul style="list-style-type: none"> <li>- Screwdriver Accessory Kit Metric: Screwdriver bits system for various screw types and sizes</li> <li>- Screw Feeder M1-6: Automatic feeder for M1 to 6 size screws</li> <li>- Screw Feeder M2-6: Automatic feeder for M2 to 6 size screws</li> <li>- Angle Bracket</li> </ul>
Sanding and Polishing		OnRobot	Sander	104876	Complete electric random orbital sander for a wide range of various automated surface finishing applications - from sanding and buffing to polishing and cleaning. The Sander comes with everything out of the box, and operates without external air supply. Each kit includes: <ul style="list-style-type: none"> <li>- Sander</li> <li>- Power supply</li> <li>- Tool cable M12</li> <li>- Polishing pad</li> <li>- 2x grits 80, 120, 220, 400</li> <li>- Pad wrench 24 mm</li> </ul> (Works with optional automated Grit Changer accessory kit SKU # 105125)
Vision		Basler	GigE camera, color, 5 MP, CMOS 2/3 inch, 23 fps	acA2440-20gc, Global Shutter	External camera for eye-to-hand robot applications. Maximum 2 external cameras per robot.
			GigE camera, mono, 5 MP, CMOS 2/3 inch, 23 fps	acA2440-20gm, Global Shutter	
			GigE, camera, color, 10 MP, CMOS 1/2.3 inch, 10 fps	acA3800-10gc, Rolling Shutter	
			GigE, camera, mono, 10 MP, CMOS 1/2.3 inch, 10 fps	acA3800-10gm, Rolling Shutter	
		Basler	GigE, camera, color, 12.2 MP, CMOS 1/1.7 inch, 8 fps	acA4024-8gc, Rolling Shutter	External camera for eye-to-hand robot applications. Maximum 2 external cameras per robot.
			GigE, camera, mono, 12.2 MP, CMOS 1/1.7 inch, 8 fps	acA4024-8gm, Rolling Shutter	
			GigE camera, color, 5 MP, CMOS 1/2.5 inch, 14 fps	acA2500-14gc, Rolling Shutter	
			GigE camera, mono, 5 MP, CMOS 1/2.5 inch, 14 fps	acA2500-14gm, Rolling Shutter	
	Basler	GigE camera, color, 5 MP, CMOS 1 inch, 21 fps	acA2500-20gc, Global Shutter	External camera for eye-to-hand robot applications. Maximum 2 external cameras per robot.	
		GigE camera, mono, 5 MP, CMOS 1 inch, 21 fps	acA2500-20gm, Global Shutter		
		Canon	Canon Industrial Imaging Platform Vision Edition for OMRON model	Vision Edition-T	Vision Edition-T is a dedicated model for Omron's TM series of collaborative robots. The unit uses network camera pan-tilt-zoom functionality to perform image processing over a wider range, sending these results to the robot. This product provides more recognition and image processing of robot surroundings, more reach and angle of view, and further expansion of robot abilities.
Force Sensor		ATI	Axia80	9105-TM-Axia80	Six-axis force/torque sensor with EtherCAT communication. Each kit includes: <ul style="list-style-type: none"> <li>- Interface plate</li> <li>- Power and Ethernet cable</li> <li>- Digital delivery of calibration documents and user manual</li> </ul>
		Robotiq	FT-300	FTS-300-OMRON-KIT	Six-axis force/torque sensor with RS485 Serial Communication. Each kit includes: <ul style="list-style-type: none"> <li>- Coupling</li> <li>- RS485 to RS232 converter</li> <li>- Power and communication cable with USB adapter</li> <li>- Screw kit</li> </ul>
		OnRobot	HEX-E/H	- 100551 HEX-H w/ EtherCAT Converter & Flange A - 100535 HEX-E w/ EtherCAT Converter & Flange A	HEX six-axis force torque sensors use a unique, optical principle to detect the smallest forces acting on the tool, with EtherCAT communication. The OnRobot force control software package is optimized for these sensors. It includes: <ul style="list-style-type: none"> <li>- HEX-E or HEX H</li> <li>- Mounting plate</li> <li>- Screws</li> <li>- Cable</li> <li>- Torx key</li> </ul> Required to connect the sensor to the robots: <ul style="list-style-type: none"> <li>- Connection kit with Compute Box</li> </ul>

Category	Appearance	Manufacturer	Product Name	SKU Number*	Description
7th Axis		Ewellix	LIFTKIT	LIFTKIT-OM-601	A ready-to-install system that includes a telescopic column with a mounting interface and controller. Stroke options (mm): 500, 600, 700, 800, 900. Each kit includes: -Telescopic pillar -Controller -TM attachment plate -Bottom fixation plate -Handswitch -Cables and screws
Connectivity		ADLINK	EtherCAT I/O Expansion Modules KIT	EPS - 9905+6000+203 2+1132	A Kit that includes: chassis w/ EtherCAT ports and voltage input, 32-channel digital output module, 32-channel digital input module.
			EtherCAT I/O Expansion Modules (DO Module)	EPS-2032	32-channel digital output module.
			EtherCAT I/O Expansion Modules (DI Module)	EPS-1132	32-channel digital input module.
		Advantech	Serial Device Server EKI-1524-CE	EKI-1524-CE	External device with serial ports that communicates with the robot via TCP/IP.
Modbus to PROFINET Gateways			EKI-1242IPNMS	A gateway to transform OMRON TM cobot's Modbus to PROFINET, whereby OMRON TM cobot as slave could communicate with PROFINET master devices.	
Cable Management		Murrplastik	FHS-C-SET TM5 (TM5-700 & TM5-900)	83693500	Cable management dress pack. Each kit includes: - Conduit (Cable routing hose, Length:2 m, Interior dia.: ~21 mm)
			FHS-C-SET TM12 / TM14 (TM12 & TM14)	83693501	- 4 x Attachment straps - 2 x End plugs - Cable insertion tool - Installation instructions
			FHS-RS-SET TM5 (TM5-700 & TM5-900)	83693506	Cable management dress pack. Each kit includes: - Conduit (Cable routing hose, Length:2 m, Interior dia.: ~21 mm)
			FHS-RS-SET TM12 / TM14 (TM12 & TM14)	83693507	- 2 x Conduit clamps - Self-retracting hose guide (2 x Ball joint fixing, Ball joint strain relief, Feedback system, System holder) - Tool-end clamp - End sleeve - Cable puller - Installation instructions
Simulation Software		RoboDK	RoboDk Simulation Software	N/A, Download	RoboDK is a powerful and cost-effective simulator and programming tool. No programming skills are required to generate complex robot path. Custom 3D model can be imported to quickly simulate real life application.
Teach Pendant		NexCobot	TP Package-Plug&Play for OM	TP-100-1	A handheld operating teach pendant, well-integrated with OMRON TM Robot. Features an ergonomic housing with safety elements, 10.1 inch WXGA resolution panel and multi-touch p-cap.

Manufacturer SKU numbers are not OMRON part numbers. Refer to the manufacturer for more information.

