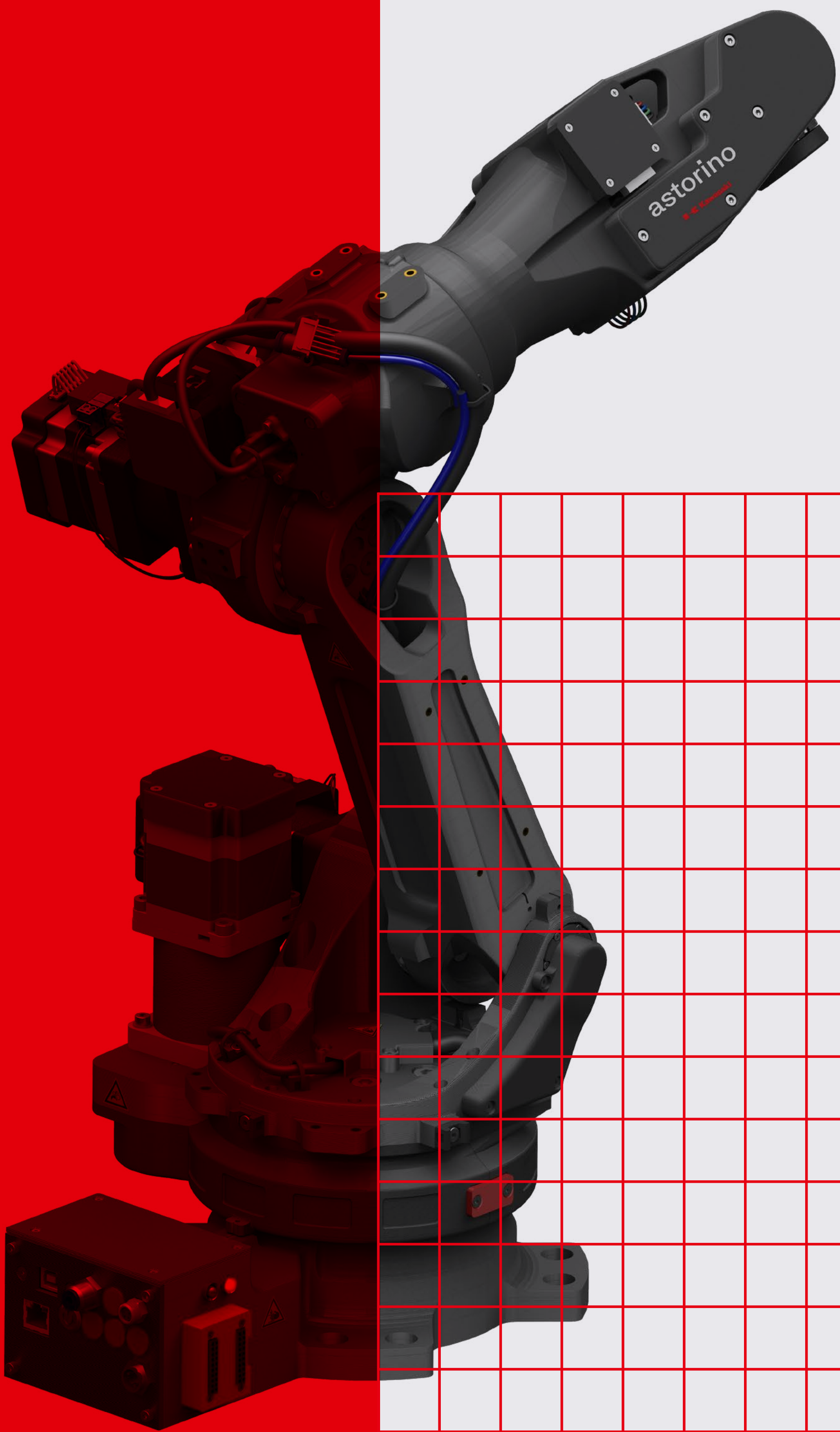
astorino

Kawasaki

Educational robot programmed like industrial robots

Educational Robot

Variants and additional options



V.06.2025H

Designed and manufactured in the EU

Basic features

- educational robot with 6 degrees of freedom (like an industrial robot),
- programmed like industrial robots, which prepares for robotics engineer profession
- 99% of the robot construction parts are 3D printed (popular PET-G filament),
- built-in control system (microcontroller in the robot base),
- industrial robot development environment: dedicated firmware, free software and free code editor,
- possibility of additional options, e.g. vision system, cube feeder with optical sensor, robot track (7th axis), 4 kinds of grippers, 24 V I/O module with power supply,
- brakes on the 2nd and 3rd axis,
- STL files supplied with the robot for self-repair/printing of 3D print damaged parts,
- outstanding technical support: manuals, instructions, lessons outlines (option), rapid parts replacement.

Technical data

- Gears with backlash of < 5 arcmin
- Repeatability +/-0.2 mm
- 600 MHz CPU
- 8 I/O 3.3 V module

	axis	range	speed [°/s]
Robot arm parameters	JT1	±158°	38
	JT2	-90.0÷127.0	26
	JT3	0°÷168°	26
	JT4	-240.0÷240.0	67.5
	JT5	-120.0÷120.0	67.5
	JT6	-360.0÷360.0	195
Payload	1 kg		

CHECK OUT FULL TECHNICAL DATA AND OPERATION MANUAL:

Where has the idea for creating Kawasaki Robotics ASTORINO come from?

I couldn't find such a robot, so I've invented one... to ensure that learning is inspiring, great fun and a pathway to the profession of the future.

Marek Niewiadomski

Inventor and constructor of Kawasaki Robotics ASTORINO

Kawasaki Robotics ASTORINO allows robotics to be taught at universities at a level previously unattainable. We change the availability ratio from 15 students per 1 robot, to 2-3 students per 1 robot.

– Marek Niewiadomski
Inventor and constructor of Kawasaki Robotics ASTORINO robots

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Students get the opportunity to learn robotics in a practical and safe way towards real applications in industry. By investing in this solution, the university is raising the quality of industrial robotics teaching and thus its prestige.

– Andrzej Garbacki
Robotics Department Director, ASTOR

As an Automation and Robotics student, I must admit that Kawasaki Robotics ASTORINO is a great initiative that was much needed. Each student can touch and program such a robot!

– Michał Styś
Graduate of Automation and Robotics at AGH University of Science and Technology (Krakow, Poland)

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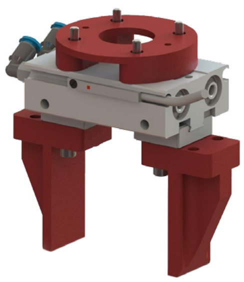
Basic product

→ astorino educational robot, 3D printed, basic variant, assembled, B-version

- complete control system (with a microcontroller)
- dedicated astorino software for control, visualisation and robot programming
- e-stop (24V)
- USB / Ethernet communication
- Modbus TCP protocol
- 8 I/O 3.3V module
- 24V power supply
- brakes for 2^{nd} and 3^{rd} axis
- accelerometer for collision detection
- simplified CAD file of the robot
- STL files for parts reprint
- user manual, programming manual, calibration manual, training materials for teachers
- safety manual
- technical support

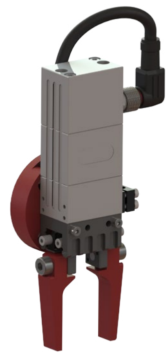
→ astorino robot pneumatic gripper

- 2-jaw gripper
- 8 mm spacing per jaw, 16 mm total
- electrovalve
- installation harness
- mounting brackets
- doesn’t include compressor



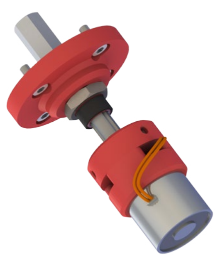
→ astorino robot electric gripper

- 2-jaw gripper
- 24V power supply
- 0.3 kg compression force
- 4 mm spacing per jaw, 8 mm total
- installation harness
- mounting brackets



→ astorino robot magnetic gripper

- 24V electromagnet
- linear compensator
- installation harness
- mounting brackets



→ astorino robot vacuum gripper

- electrovalve
- pneumatic lines
- mounting brackets
- suction cup with line compensator
- vacuum ejector

Additional options

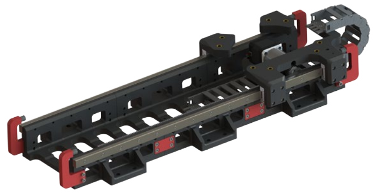
→ Teach Pendant for the astorino robot

– identical to industrial robot teach pendants,
– touch screen, membrane keyboard,
– E-STOP button
– 3 m cables
– dimensions 250 × 160 × 70 mm

→ astorino robot vision system

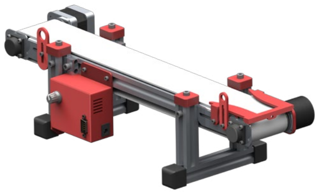
– OpenMV camera
– Python programming
– communication with the robot through serial port

→ astorino robot linear track



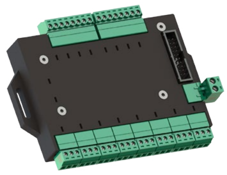
– standard length: 60 cm
– additional axis for the robot
– 3D printed
– compatible with the astorino robot

→ astorino robot educational conveyor



– 45 cm length
– payload 0.5 kg
– software included
– dimensions: 450 × 150 × 120 mm

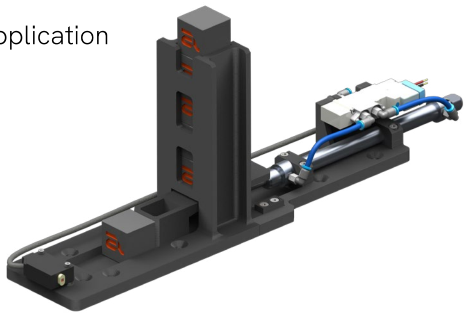
→ 24V I/O module for the astorino robot



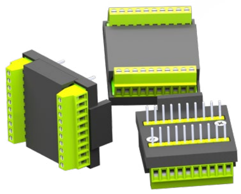
– power supply 24V
– PNP or NPN outputs
– PNP inputs
– installation harness

→ astorino robot cube feeder

– equipment for cube feeder application
– actuator
– optic sensor
– electrovalve

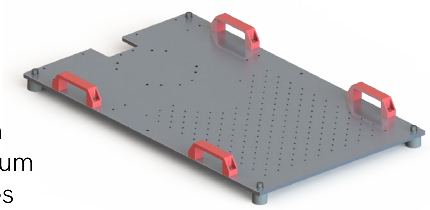


→ astorino robot Input/output adapter



– for the astorino SimBox controller
– allows for easy connection of external devices, e.g. Arduino, via screw connectors
– 3.3V additionally protected power line
– 100mA fuse
– dimensions 35 × 29 mm

→ astorino robot base plate



– dimensions: 800 × 500 × 10 mm
– made from aluminum
– 180 mounting holes
– added 4 plastic grips for handling

→ SimBox: Stand-alone controller for the astorino robot

– allows for robot simulation in astorino software,
– without using the physical robot arm
– allows for full programming activities
– USB connector and cable,
– Ethernet port
– I/O 3.3V
– dimensions 84 × 80 × 52 mm

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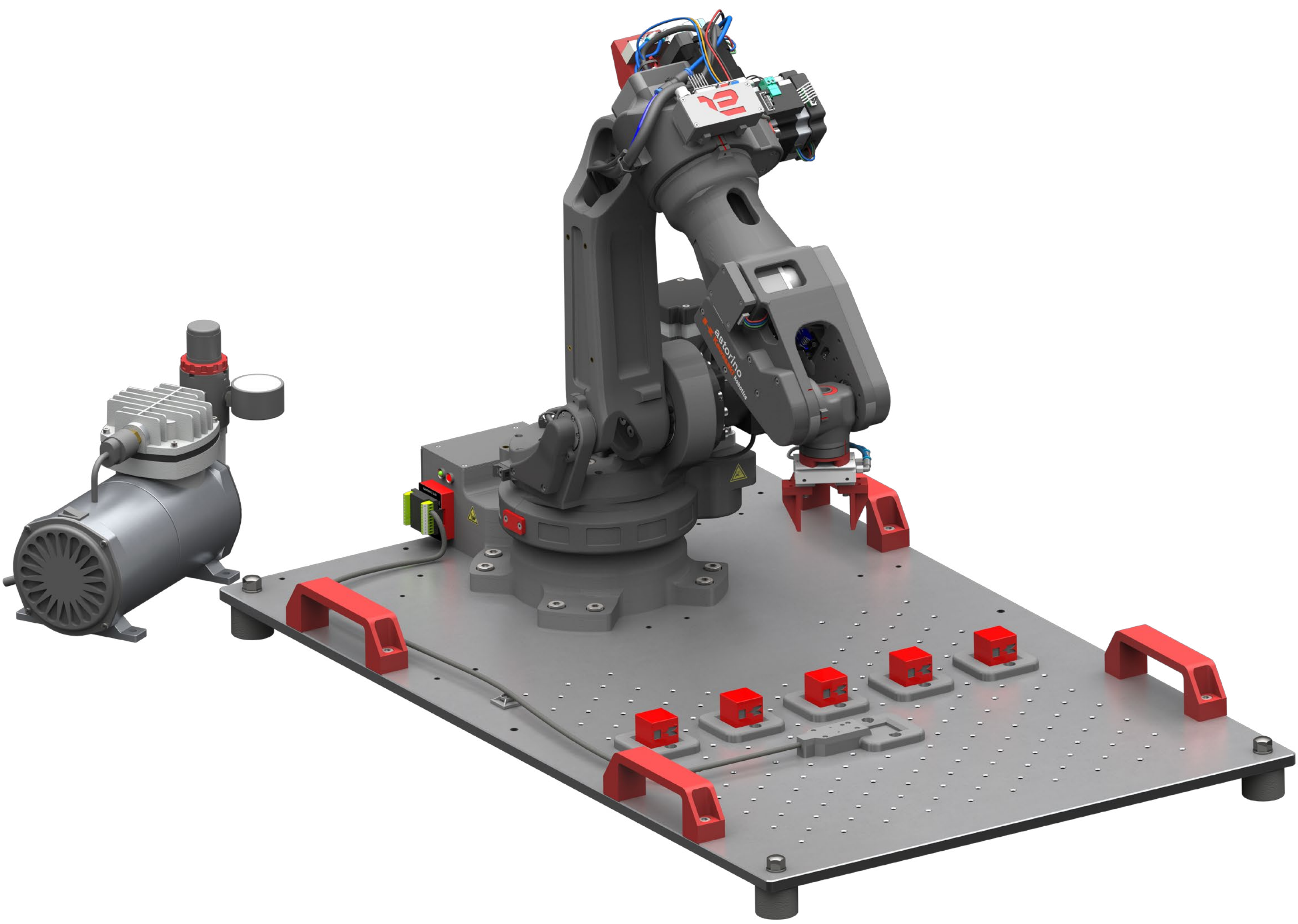
astorino ECO station



→ astorino training station for educational purposes

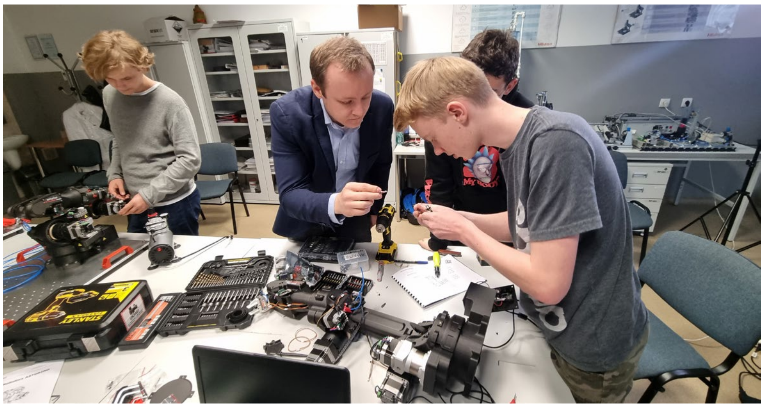
- robot, assembled
- mounting plate
- pneumatic gripper with compressor and power supply
- built-in control system
- dedicated software and firmware on a pendrive
- collision detection
- CAD file of the robot
- user manual, programming manual
- safety manual
- technical support
- 24 V E-STOP external button
- USB/Ethernet communication
- Modbus TCP communication
- 8 I/O 3.3 V module
- 24V power supply
- assembly service
- lesson outlines (basic level and intermediate level, coming soon)
- access to e-learning classes in English

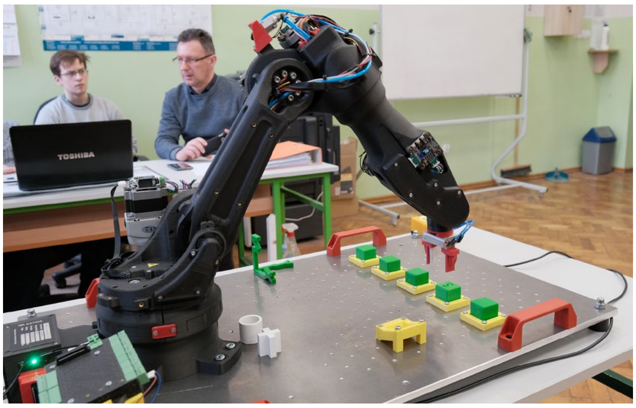
astorino PRO station

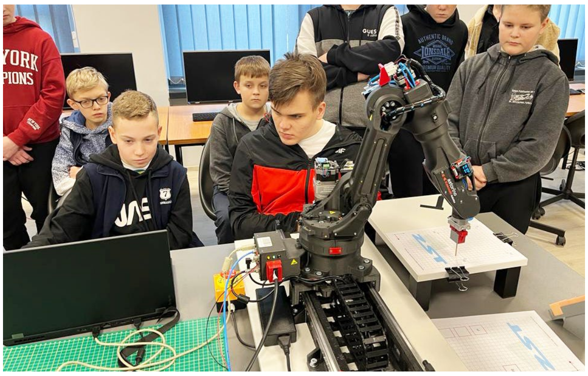
→ astorino training station for educational purposes

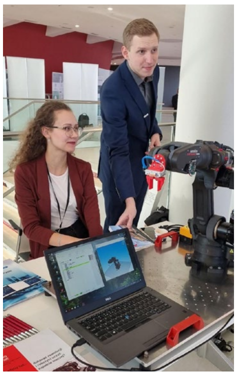
- astorino robot assembled with pneumatic gripper
- mounting plate integrated with worktable
- compressor and power supply for the pneumatic gripper
- embedded control system
- dedicated astorino software for visualisation, control and programming of the robot
- collision detection function (accelerometer)
- brakes on 2^{nd} and 3^{rd} axis
- vision system compatible with the robot
- buttons for individual programming
- E-stop button
- USB/Ethernet communication
- Modbus TCP protocol
- 8 I/O 3.3V module and 24V I/O module
- 24V power supply
- simplified CAD file of the robot
- user manual, programming manual
- technical support
- assembly fee included in the price

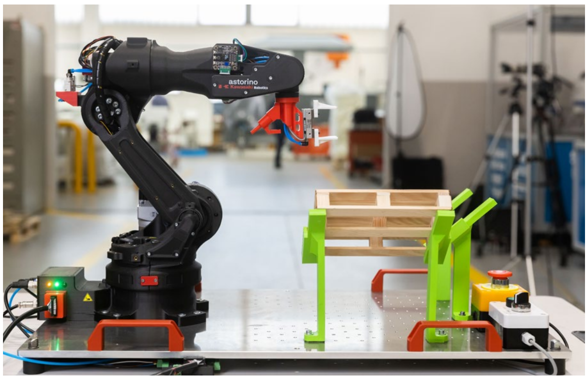
Join the **education revolution** with Kawasaki Robotics astorino











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