

MAiRA[®] MULTI-SENSING INTELLIGENT ROBOTIC ASSISTANT

Datasheet



MAiRA[®] is the first truly collaborative robot.

With fully integrated novel sensors and an unprecedented integration of artificial intelligence in control systems and applications MAiRA[®] is leading a new era of robots. The robust and rigid design combines the performance of a high-end machine with easy programming and infinite possibilities for interaction – both for beginners and experts. MAiRA[®] tears down the boundaries between humans and machines and brings them closer together for good.

General Robot Specification MAiRA Pro M

Payload	12-15 kg / 26.5-33.1 lbs*
Reach	1.400 mm / 55.1 in
Degrees of Freedom	6 or 7 rotating joints
Weight	48 or 51.5 kg / 105.8 or 113.5 lbs
Robot Mounting	Any orientation
IP classification	IP65
Data, Media & Power	Complete inner harness and ducts
Footprint Base	Ø 240 mm / 9.45 in
Status Illumination	RGB LED on each axis
Tgt. Performance Level	Pld Cat.3 / SIL3
Tgt. Repeatability	Up to ± 0.01 mm / ± 0.00039 in

* Dynamic Workspace

TCP Connector Flange

Hole pattern	DIN ISO 9409-1-50-7-M6
Compressed Air	3 x Push-Pull-Plug – 3mm OD
EtherCAT	M8 4-pin-A-F IEC 61076-2-104
GPIO	M8 8-pin-A-M IEC 61076-2-104
I/O power supply	24V 600mA
Interfaces	EtherCAT/FSoE, GPIO, CAN Bus, Modbus, IO-Link

Sensors

Vision	3D RGB-D Camera
Force/Torque	6-DOF F/T-Sensor in Flange
Guidance by Touch	Smart Sensitive 6-DOF Sensor Skin
Safety	Touchless Safe Human Detection
Sound	3D Voice Recognition Sensor

Movement

	Working Range	Maximum speed
A1	± 360°	120°/Sec.
A2	± 120°	120°/Sec.
A3	± 270°	150°/Sec.
A4	± 150°	150°/Sec.
A5	± 270°	200°/Sec.
A6	± 160°	200°/Sec.
A7	± 360° / endless optional	360°/Sec.

Software & Controller

Motion Controller	Real-Time NR-Motion Master
Machine Learning (ML) Kernel	Smart Applications, Performance Enhancement
Open Architecture	3rd Party Apps, Access to Low Level Controllers & Sensor Data
Software Interfaces	Robot, Sensor & AI SDKs
Safety Architecture	Safe Master & FSoE Communication
Safety Features	Safe- Position, Speed, Torque, Zones, Limits



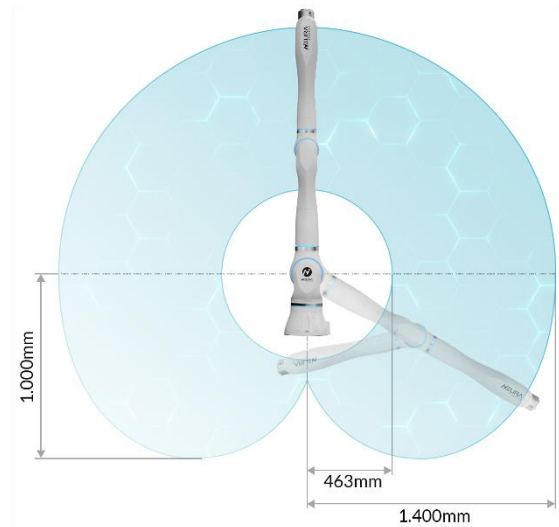
Control Box

Dimensions	450 mm x 380 mm x 210 mm 17.7 in x 15 in x 8.3 in
Weight	25 kg / 55.1 lbs
Power Supply	100-240 VAC, 50/60 Hz, 3,2 kW
Interfaces	EtherCAT/FSoE, TCP/IP, USB 3.0, GPIO

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Programming Features

Smart GUI	NR Easy Programming Interface
Fast Programming	Shortcut Buttons, Voice Control, Gesture Control, Dynamic Path and Force Recording
Human-Robot-Interaction	Visual-, Audio- and Force-Feedback, Face Recognition, Motion Tracking
Environment Visualization	3D CAD Data & Sensor Data



Teach Pendant

Dimensions	285 mm x 228 mm x 95 mm 11.2 in x 9 in x 3.7 in
Resolution	1280 x 800
Display	10.1" touchscreen
Cable Length	5 m / 197 in

Note:

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