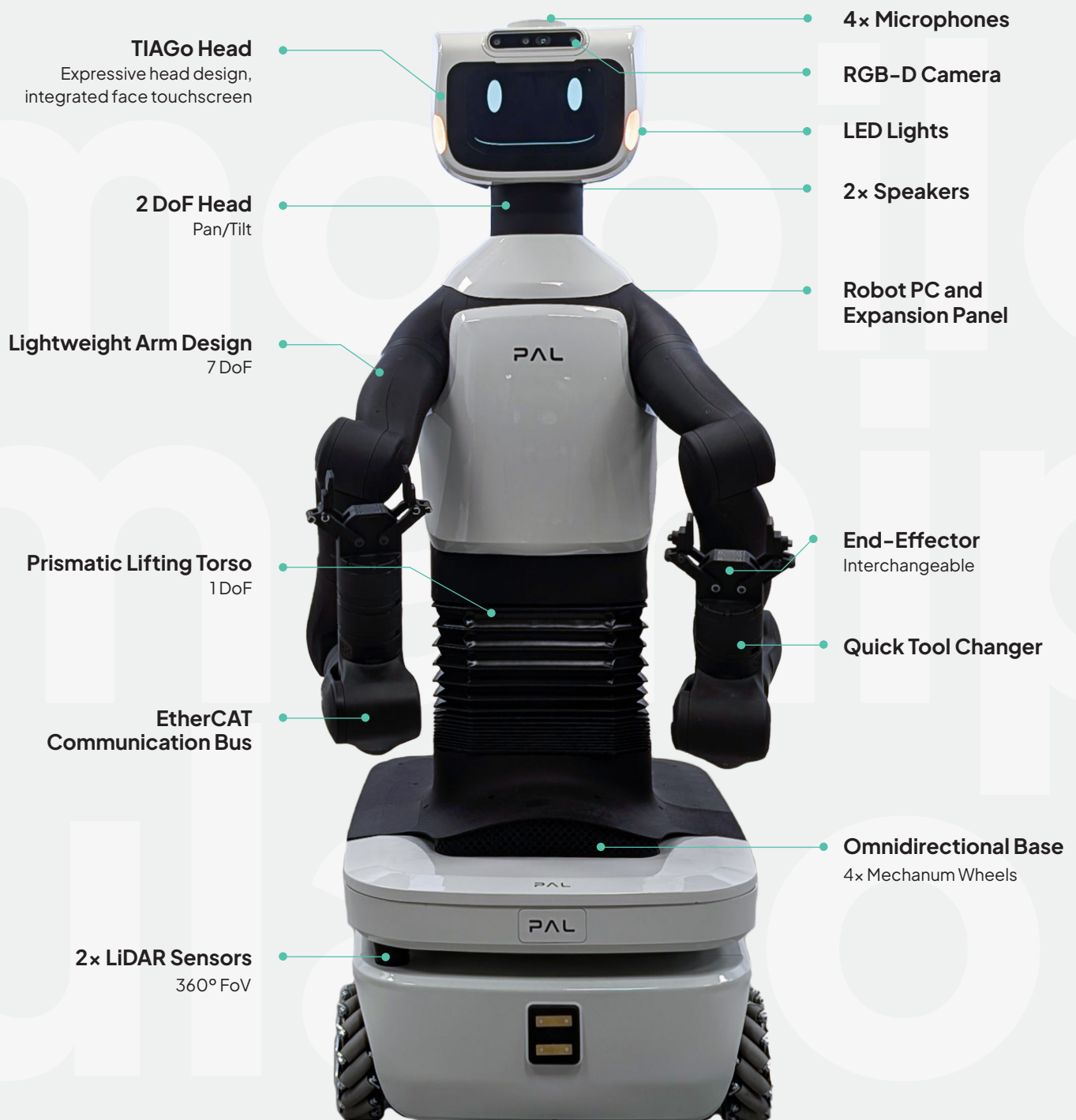


PAL

TIAGo Pro

VERSATILE MOBILE MANIPULATION

Height	Weight	Footprint	Autonomy	Total Workspace	Total DoF
120–155 cm	80 kg	50 x 72 cm	8 hours	7 m ³	23 DoF Including Default Grippers



TIAGo Pro

TECHNICAL SPECIFICATIONS

COMPUTING	CPU	Intel i5, RAM 16 GB, 512GB SSD
	VPN Connection	Wireguard
	Connectivity	Wi-Fi 6 (802.11ax, dual band, 2x2) Bluetooth 5.2

ARMS *	Single Arm Dof	7 DoF
	Torque Sensing	On Each Arm Actuator
	Safety Brakes	6x at Joint Level
	Communication Bus	1 kHz EtherCAT
	Payload <small>(extended arm)</small>	3 kg <small>(excluding end-effector)</small>
	Vertical Reach	92 cm
	Horizontal Reach	236 cm
	End-Effector	2x Parallel Gripper
	Quick Tool Changer	✓
Flange mounting points	✓	

* Other configurations available (single and no arms)

SOFTWARE & DEVELOPMENT	OS	Ubuntu LTS 64-bits PREEMPT-RT
	Middleware	ROS 2
	Controllers	ros2_controller Gravity Compensation
	Web Commander	PAL Web GUI
	Included Software Packages	
	Navigation Stack	✓
	Motion Library	✓
	Integrations	Movelt2 Nav2 ros2_control
	Development Tools	Docker Image with PAL SDK RViz Plugins
	Compatible Simulators	MuJoCo Gazebo

EXPRESSIVE HEAD	Degrees of Freedom	2 DoF (Pan/Tilt)
	Head Camera	RGB-D Camera
	Face Screen	10" Touchscreen
	Stereo Speakers	2x 4W Loudspeakers
	Microphone	4-Mic Array
LEDs	RGB Lights	

LIFTING TORSO	Degrees of Freedom	1 DoF
	Torso Range	35 cm
	Safety Brakes	1x at Joint Level
	Communication Bus	1 kHz EtherCAT
	Detachable Laptop Tray	✓
	User Panel Expansion Ports	2x USB 3 1x HDMI 2x Ethernet 1x Power 5A 36V 1x Power 8A 12V

MOBILE BASE	Drive	Omnidirectional (4 DoF)
	Wheels	4x Mecanum Wheels
	LiDAR Sensors	2x Laser Range Finder 10 m 360° FoV
	Emergency Stop Button	✓

UPGRADES AND ACCESSORIES	CPU	Intel i7, 32 GB RAM, 1 TB SSD
	GPU	NVIDIA Jetson PC
	LiDAR Sensors	2x Laser Range Finder 25m 360° FoV
	Force/Torque Sensors	Wrist 6-axis F/T Sensor

Battery & Charging	
Additional Battery <small>(for increased autonomy)</small>	
Dock Charging Station	
End-Effectors	
Allegro Hand 16 DoF	
4x Xela Fingertips Tactile Sensors <small>(only for Allegro Hand)</small>	
Premium Software Packages	
Premium Maintenance and Service Plans	

MAKE YOUR VISION A REALITY

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