TIAGo

A versatile and scalable mobile manipulator with integrated perception and AI capabilities

FACT SHEET

PAL Robotics S.L.

Price	Starting at 48,000 €
Geographic availability	Europe, Asia, Japan, US, Latin America

Hardware configuration	• 2x 20 Ah 36 V battery packs (8-10h autonomy)
	• Charging at 100-240 VAC with external charger (40.8 V 8 A) connected to:
	  ○ Manual plug on the robot
	  ○ Dock Station (automatic charging)
	• Expansion ports:
	  ○ 2x USB
	  ○ 2x GigE
	  ○ 1x 12 V 5 A power supply
	  ○ CAN Service port

Sensors	• Laser rangefinder 5.6 / 10 / 25 m range • 6 DoF IMU in the base • Sensor currents at each arm and gripper joints • ATI mini45 6-axis Force/Torque sensor on the wrist • Endoscopic camera on gripper • Orbbec Astra / Astra S / Astra Pro in head

Low-level interface	• API language(s): ROS API (C++, Python)
	• Interface frequency: 100 Hz
	• Command level:
	  ○ Position / Velocity / Torque
	  ○ Joint space / Cartesian space
	• Robot state: q, dq, effort (current consumption), temperature
	• Model available at 100 Hz (computed by RBDL from URDF)
	• Gripper commands: position, max current
	• Gripper state: aperture, current consumption, temperature
	• Gripper access frequency: 100 Hz
	• Hardware connectivity:
	  ○ Ethernet
	  ○ Wi-Fi
	• Protocol: TCP/IP
	• Minimum requirements external computer:
	  ○ Any computer ready to run Ubuntu 16.04 + ROS Kinetic
	  ○ NVIDIA GPU recommended for graphical visualization purposes