

TIAGo[®]

TECHNICAL SPECIFICATIONS

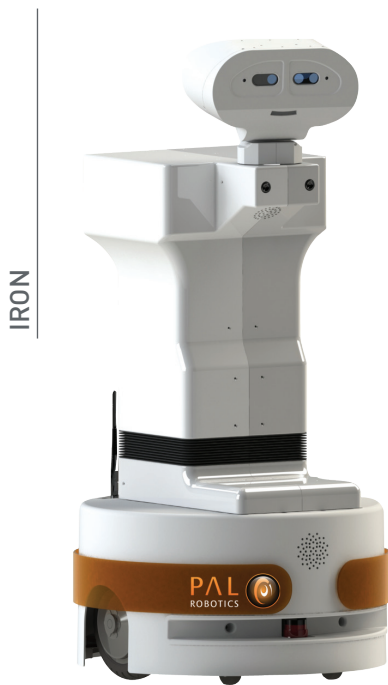
Simulation model available at:
wiki.ros.org/Robots/TIAGo

GENERAL FEATURES

Height 110 - 145 cm
Weight 70 Kg
Footprint ø 54 cm

DEGREES OF FREEDOM (DoF)

Torso lift 1
Mobile base 2
Head 2
Arm 7
TOTAL 12
 (without end-effector)




CONFIGURATION	IRON	STEEL	TITANIUM
Mobile Base	✓	✓	✓
Navigation Laser	5.50m	5.50m	10m
Lifting Torso	✓	✓	✓
Pan-tilt head	✓	✓	✓
7 DoF arm		✓	✓
End-effector		Parallel Gripper	5 finger hand
Force/torque sensor			✓

* Upgrade Kits available in order to evolve the Iron version to Steel and Titanium

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<u>BODY</u>	Arm payload (at full extension)	2 Kg	
	Arm reach (without end-effector)	87 cm	
	Torso lift	35 cm	
<u>MOBILE BASE</u>	Differential drive	✓	
	Max speed	1 m/s	
	Operation environment	Indoor	
<u>CONNECTIVITY</u>	Wireless connectivity	802.11 n/ac 2x2 Dual Band Wi-Fi Bluetooth 4.0	
<u>ELECTRICAL FEATURES</u>	Battery 36V 20Ah	1 battery / 2 batteries	
	Battery Autonomy	4-5h / 6 - 10h	
<u>SENSORS</u>	Base	Laser 5.5m or 10m range, rear sonars 3x1m range	
	IMU (Base)	6 DoF	
	Motors	Actuators current feedback	
	Torso	Stereo microphones	
	Head	RGB-D camera	
<u>COMPUTER</u>	CPU	Intel i5 / i7 Haswell	
	RAM	4 GB / 8 GB / 16 GB	
	Hard Drive	60 GB / 120 GB SSD	
<u>SOFTWARE</u>	OS	Ubuntu Linux LTS	
	Open source middleware	ROS	
	Periodic updates/patches	✓	
	Arm with	position / velocity / effort control	
	Eye-hand calibration suit	✓	
<u>SUPPORT</u>	Training	On demand	
	Maintenance plan	On demand	
	Ticketing system	✓	
	Online helpdesk	✓	
	Research community forum	✓	
<u>EXTENSIBILITY</u>	Laptop tray	✓	
	Mounting Points	On head and laptop tray	
	USB ports	1x USB3, 1x USB2	
	Ethernet ports	2x Gigabit	
	Power supply	12V / 5A	
<u>OPTIONALS</u>	End-effector	5 finger underactuated hand / Parallel gripper	
	Wrist sensor	Force/torque sensor	
	Whole body control	✓	

