TALOS®

TECHNICAL SPECIFICATIONS
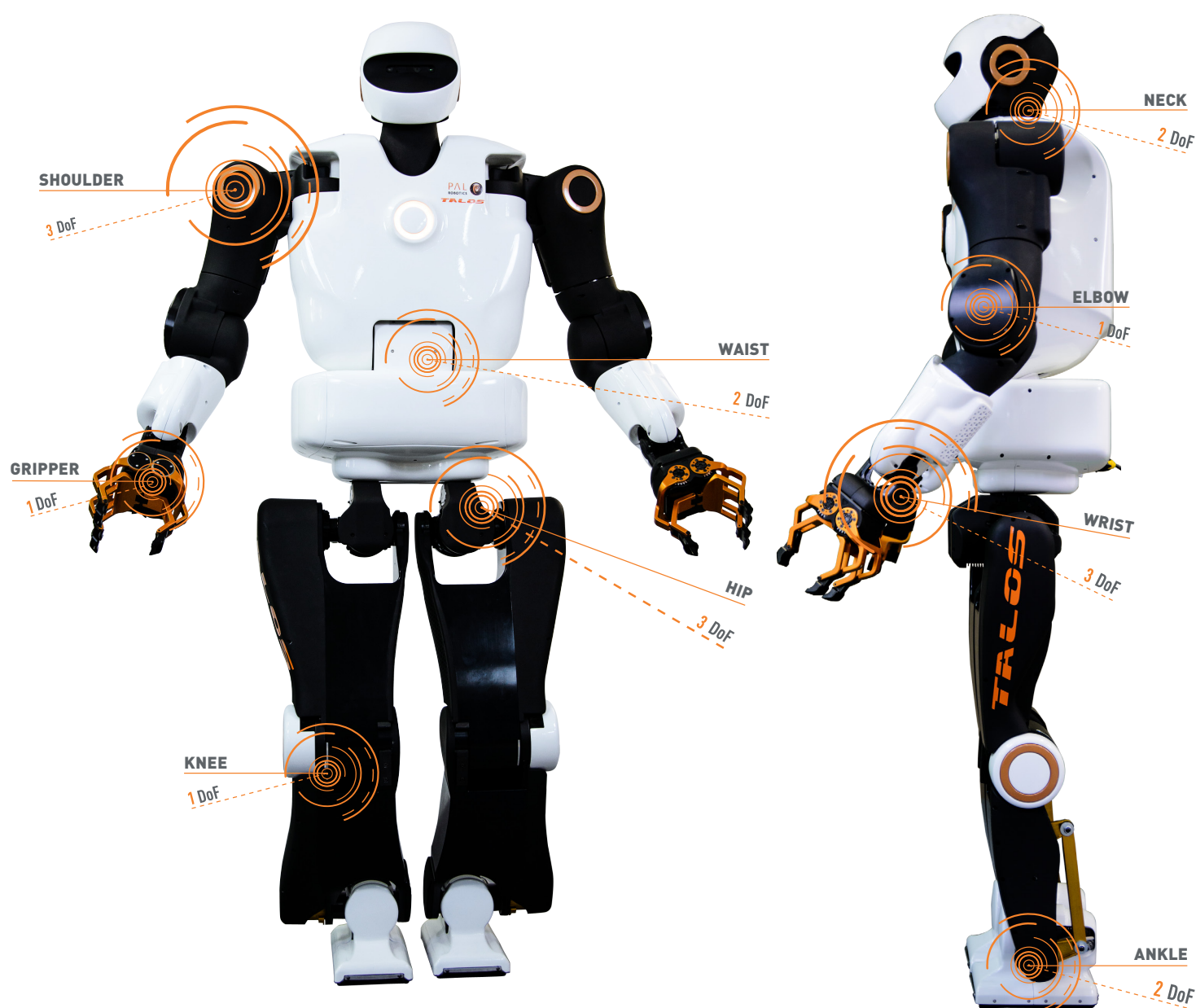
GENERAL FEATURES

Height 175 cm
Weight 95 kg

32 DEGREES OF FREEDOM (DoF)

Legs	6 (x2)	Waist	2
Arms	7 (x2)	Neck	2
Gripper	1 (x2)		

SHOULDER
3 DoF

GRIPPER
1 DoF

KNEE
1 DoF

WAIST
2 DoF

HIP
3 DoF

NECK
2 DoF

ELBOW
1 DoF

WRIST
3 DoF

ANKLE
2 DoF

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

MANIPULATION		
	Arm/Gripper payload	6 kg (arm stretched)
	Workspace	Large workspace for dexterous bi-manipulation

CONNECTIVITY		
	Wi-Fi	802.11 a/b/g/n 5 and 2.4 GHz (Access Point or Client mode)
	Ethernet	Direct connection to PCs from user panel RJ45 port
	EtherCAT	Possibility to connect external Master to control the robot
	Service Port	For tethered Emergency button

ELECTRICAL FEATURES		
	Power system	Lithium-Ion battery
	Nominal energy	1080 Wh
	Maximum discharge	+100 A
	Battery autonomy	1.5h walking / 3h stand-by

HRI INTERFACES		
	Speakers	5 W, Text to Speech in English included
	LEDs	24 RGB, API for visual effects control

SENSORS		
	Force/Torque sensors	(x4) 6 axis F/T sensor (in both ankles and wrists)
	Torque sensors	FULL **TORQUE SENSOR FEEDBACK** IN ALL JOINTS*
	AHRS - IMU	1 kHz filtered orientation, gryo, acceleration

COMPUTERS		
	Intel Core i7	(x2) control and multimedia PC (COM Express Type-6)

SOFTWARE		
	OS	Ubuntu LTS, Linux RT Preempt
	Middleware	ROS, OROCOS
	Simulation	Gazebo simulation and URDF model
	Control	Real-time ros_control loop at +1 kHz
	Planning	MoveIt!

VISION		
	Field of view	60º horizontal x 49.5º vertical x 73º diagonal
	RGB	1280x720 at 30 fps
	Depth	640x480 at 30 fps, 0.4-8m range

HEAD		
	Specs	150º pan range in every head tilt position
	Modular	Fully customizable

GRIPPER		
	Specs	3 fingers, 1 actuator with current limit control
	Modular	Fully customizable

*Except head, wrists and grippers