

# TALOS<sup>®</sup>

## TECHNICAL SPECIFICATIONS

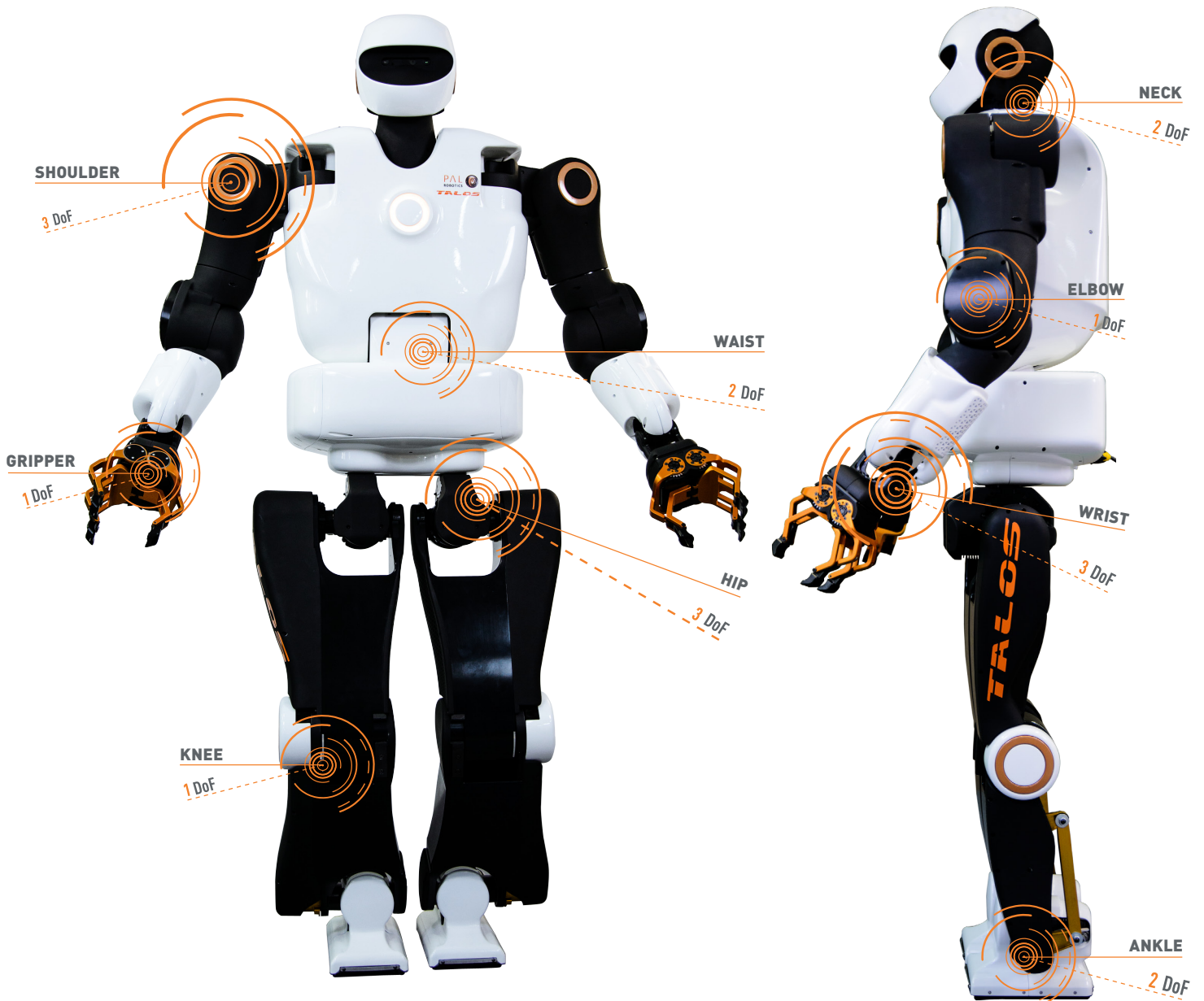
Simulation model available at:  
[wiki.ros.org/Robots/TALOS](http://wiki.ros.org/Robots/TALOS)

### 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)



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<b><u>MANIPULATION</u></b>	<b>Arm/Gripper payload</b> <b>Workspace</b>	6 kg (arm stretched) Large workspace for dexterous bi-manipulation
<b><u>CONNECTIVITY</u></b>	<b>Wi-Fi</b> <b>Ethernet</b> <b>EtherCAT</b> <b>Service Port</b>	802.11 a/b/g/n 5 and 2.4 GHz (Access Point or Client mode) Direct connection to PCs from user panel RJ45 port Possibility to connect external Master to control the robot For tethered Emergency button
<b><u>ELECTRICAL FEATURES</u></b>	<b>Power system</b> <b>Nominal energy</b> <b>Maximum discharge</b> <b>Battery autonomy</b>	Lithium-Ion battery 1080 Wh +100 A 1.5h walking / 3h stand-by
<b><u>HRI INTERFACES</u></b>	<b>Speakers</b> <b>LEDs</b>	5 W, Text to Speech in English included 24 RGB, API for visual effects control
<b><u>SENSORS</u></b>	<b>Force/Torque sensors</b> <b>Torque sensors</b> <b>AHRS - IMU</b>	{x4} 6 axis F/T sensor (in both ankles and wrists) <b>FULL TORQUE SENSOR FEEDBACK IN ALL JOINTS*</b> 1 kHz filtered orientation, gyro, acceleration
<b><u>COMPUTERS</u></b>	<b>Intel Core i7</b>	{x2} control and multimedia PC (COM Express Type-6)
<b><u>SOFTWARE</u></b>	<b>OS</b> <b>Middleware</b> <b>Simulation</b> <b>Control</b> <b>Planning</b>	Ubuntu LTS, Linux RT Preempt ROS, OROCOS Gazebo simulation and URDF model Real-time ros_control loop at +1 kHz MoveIt!
<b><u>VISION</u></b>	<b>Field of view</b> <b>RGB</b> <b>Depth</b>	60° horizontal x 49.5° vertical x 73° diagonal 1280x720 at 30 fps 640x480 at 30 fps, 0.4-8m range
<b><u>HEAD</u></b>	<b>Specs</b> <b>Modular</b>	150° pan range in every head tilt position Fully customizable
<b><u>GRIPPER</u></b>	<b>Specs</b> <b>Modular</b>	3 fingers, 1 actuator with current limit control Fully customizable

\*Except head, wrists and grippers

