



PAL Robotics Pyrène

Two human size humanoid robots in a fully equipped experimental room. LAAS has a long time experience in humanoid robot motion planning and control. After having demonstrated whole-body motion generation capabilities on HRP-2, LAAS is now developing new algorithms to enable physical interaction of humanoid robots with their environment and with humans. The new robot robot Pyrène constructed by Pal Robotics based on the experience of LAAS is powerful and designed to be torque controlled.



Key Features

- Advanced motion-planning and motion-generation software
- harmonic drive reducers
- Large experimental room reproducing parts of the environment of an industrial site. The experimental area is fully covered by MOCAP

Possible Applications

- Physical interaction
- Factory of the future
- Humanoid robotics and biomechanics
- Motion planning
- Whole-body motion generation

Access information

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|-------------------------------------|--|
| Corresponding infrastructure | Centre national de la recherche scientifique The Department of Robotics of LAAS |
| Location | 7 Avenue du Colonel Roche, 31400 Toulouse, France |
| Unit of access | Working day |



Technical specifications

| | |
|---------------------------------|---|
| CPU | i7 (hyperthreaded) |
| Motor max torque | 300 Nm |
| Motor max rotation speed | 56 RPM |
| Bus | last generation EtherCAT bus |
| Vision | RGBD |
| DoF | 32 |
| Height | 1.75m |
| Sensors | 6 axis IMU, force sensors in feet and wrists, torque sensor at each joint , position encoders at the level of motors and joints |
| Weight | 100kg |

Additional information

Additional example of applications may be found [here](https://www.laas.fr/public/en/robots-platform)
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