



## Tibi and Dabo robots

Tibi and Dabo are two mobile urban service robots aimed to perform navigation and human robot interaction tasks. Navigation is based on the differential Segway RMP200 platform, able to work in balancing mode, which is useful to overcome low slope ramps. Two 2D horizontal laser range sensors allow obstacle detection and localization. Human robot interaction is achieved with two 2 degrees of freedom (dof) arms, a 3 dof head with some face expressions, a stereo camera, text-to-speech software and a touch screen. They can be used to provide information, guiding and steward services to persons in urban spaces, either alone or both in collaboration.

### Key Features

- Loquendo text-to-speech software with english, spanish and catalan languages

### Possible Applications

- Teleoperation
- 2D navigation in urban environments
- Human robot interaction
- Multirobot systems



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## Access information

<b>Corresponding infrastructure</b>	Universitat Politècnica de Catalunya IRI
<b>Location</b>	C/ Llorens i Artigas 4-6, 08028 Barcelona, Spain
<b>Unit of access</b>	Working day

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## Technical specifications

<b>Computer</b>	Two industrial onboard computers and an external laptop for monitoring
<b>Dimensions</b>	60 (W) x 60 (L) x 160 (H) cm
<b>Weight</b>	about 100 kg
<b>Connectivity</b>	Onboard router for internal network with wi-fi and 3G connectivity
<b>Battery</b>	up to 3h operation time and 8h charge time.
<b>Platform</b>	Segway RMP200, maximum speed ~1m/s
<b>Sensors</b>	Two laser Hokuyo UTM-30LX, Stereo camera Bumblebee2 (placed on the head), Touch screen
<b>Head DoF</b>	3
<b>Arms DoF</b>	2 each
<b>Face</b>	LED face expressions (mouth, eyebrows and cheeks)
<b>Software</b>	ROS

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## Additional information

<http://wiki.iri.upc.edu/index.php/Tibi-Dabo>