

# Datasheet

## @Work Platform „Arthur“



**13.628€**  
without robot arm

Introducing our low-cost mobile robot platform Arthur, which serves as a reference platform for research and education in mobile manipulation, allowing researchers, developers, and robotics students to write their own control and application software.

This enables tasks such as machine operations or transporting components in the context of „Industry 4.0“. Arthur consists of a chassis with omnidirectional movement capability, onto which a robot arm like the igus ReBeL can be mounted (for information on pricing of the robot arm, visit [www.igus.de](http://www.igus.de)).

### Application possibilities

- Programming of autonomous obstacle avoidance navigation
- Operate machines (pressing buttons or opening/closing drawers)
- Implementing fully autonomous task planning and execution
- Picking and placing various components
- Testing human-robot cooperation
- Object recognition and localisation

**EduArt**

## Usage in the RoboCup@Work league

With Arthur, we are offering students as well as research and development companies a budget-friendly way to learn about different aspects of mobile robotics. In addition to the customisable robot platform, we also provide you with a digital twin that you can tweak in terms of hardware or programming before using it. Arthur can be adapted to any hardware setup you plan to use.

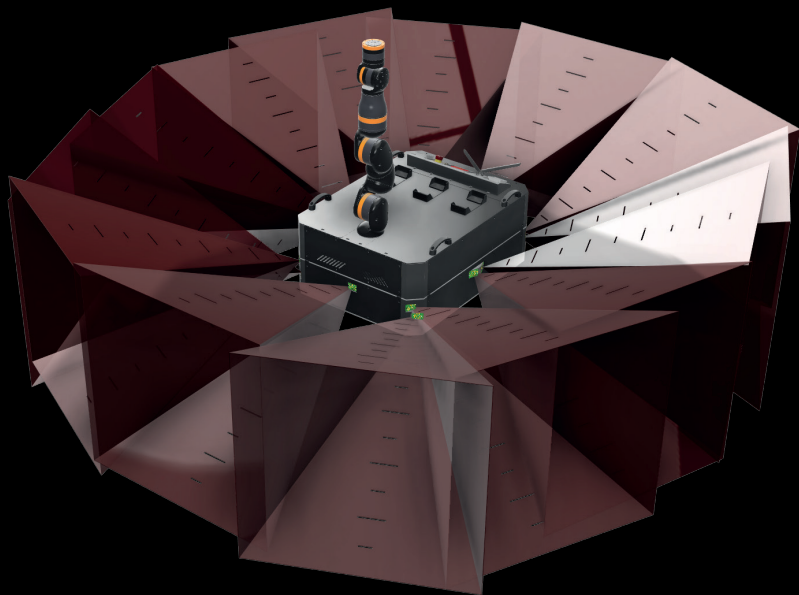
Students from almost any technical course can join in developing the robot platform and compete together in the RoboCup@Work league. It's not just about learning how to build hardware or software for the robot, but also about sharing knowledge with teams from all over the world in the RoboCup@Work league.

### Technical Data

|                             |                                                                                                                                                                                                                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Connectivity options</b> | <ul style="list-style-type: none"><li>▪ Wireless network (WiFi)</li><li>▪ Wired network (Ethernet)</li><li>▪ Universal Serial Bus (USB 3.0 &amp; 2.0)</li><li>▪ Controller Area Network (CAN)</li><li>▪ Raspberry Pi compatible GPIOs: I / O, I<sup>2</sup>C, SPI, UART</li></ul>                     |
| <b>Integrated sensors</b>   | <ul style="list-style-type: none"><li>▪ 14 × 3D Time-of-Flight sensors (ToF)</li><li>▪ 6 DOF inertial measurement unit (IMU)</li><li>▪ Wheel odometry</li><li>▪ Build-in high precision incremental encoder</li><li>▪ Up to 3 LiDAR sensors</li><li>▪ Additional: olive™ AI CAMERA (3 TOPs)</li></ul> |
| <b>Embedded system</b>      | <ul style="list-style-type: none"><li>▪ Raspberry Pi 5</li></ul>                                                                                                                                                                                                                                      |
| <b>Operating time</b>       | <ul style="list-style-type: none"><li>▪ Up to 8 h of driving time</li></ul>                                                                                                                                                                                                                           |
| <b>Charging time</b>        | <ul style="list-style-type: none"><li>▪ 3 h</li></ul>                                                                                                                                                                                                                                                 |
| <b>Kinematics</b>           | <ul style="list-style-type: none"><li>▪ Mecanum steering (omnidirectional)</li></ul>                                                                                                                                                                                                                  |

|                                  |                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Bluetooth-controller</b>      | <ul style="list-style-type: none"> <li>▪ PlayStation® 5 controller</li> <li>▪ Additional: Steam Deck</li> </ul> |
| <b>Max. speed</b>                | <ul style="list-style-type: none"> <li>▪ 0.7852 m / s</li> </ul>                                                |
| <b>Payload</b>                   | <ul style="list-style-type: none"> <li>▪ 30 kg without arm</li> </ul>                                           |
| <b>Available voltage outputs</b> | <ul style="list-style-type: none"> <li>▪ 44.8 V DC</li> <li>▪ 24 V DC</li> </ul>                                |
| <b>Battery specification</b>     | <ul style="list-style-type: none"> <li>▪ 6 Ah, 268 Wh Lithium Iron Phosphate (LiFePO4)</li> </ul>               |
| <b>Size [L x W x H]</b>          | <ul style="list-style-type: none"> <li>▪ 400 – 800 mm × 350 – 600 mm × 320 mm</li> </ul>                        |
| <b>Weight</b>                    | <ul style="list-style-type: none"> <li>▪ approx. 50 kg without the robot arm, depending on size</li> </ul>      |

For more information, including configuration options and pricing, please visit our website or contact us directly.



## Contact

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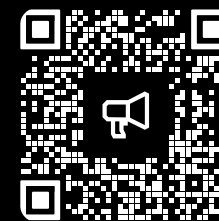
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[www.eduart-robotik.com](http://www.eduart-robotik.com)



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