

Asguard v2

Mobile Scout Robot

System Description

The Asguard v2 is a leg-wheel hybrid which can be used in difficult outdoor environments. The system was designed on the basis of its predecessor Asguard v1. The main improvement of the v1 system is in the improved weight and the full water shielding. Asguard v2 does not rely on an external power supply, but can operate for multiple hours with its on-board batteries. The system can be tele-operated via videolink and carry payloads of multiple kg in mass.

The robot was designed to be used in harsh outdoor environment with a focus on security and outdoor surveillances as well as on disaster mitigation missions. For those applications, a robot has to transport a variety of mission-depending application sensors inside a difficult terrain.

Technical Details

- **Dimension:** 0.95 m x 0.54 m x 0.42 m
- **Weight:** 9.5 kg
- **Payload:** 3.5 kg
- **Runtime:** ca. 5 h
- **Power supply:**
 - Lithium Polymer Batteries:
1 x 33.6 V 10000 mAh
- **Actuators/Motors:**
 - 4 x 80 Watts DC-Motor: Faulhaber
planetary gear 46:1
- **Sensors:**
 - Motor shaft encoders
 - Motor current measurement
- **Communication:**
 - Long Range radio RF Modem: AMBER Wireless
AMB8385
- **Computer:**
 - STM32F103 Microcontroller for wheel control



Application: Space Robotics
SAR & Security Robotics

Projects: **iMoby**
Intelligent Mobility
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