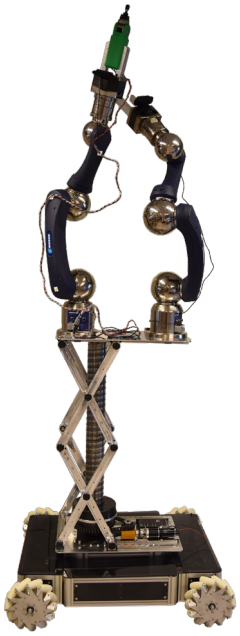
CERNBOT



CERNBot is a robotic platform developed at CERN for complex interventions in presence of hazards like ionisation radiation. The platform is modular and flexible. Its upper module can have two robotic arms installed and can be deployed without the mechanical chassis onto other structures/platforms such as cranes etc. This makes for a very versatile robotic solution. In addition, the chassis is very stable and can be safely operated with two robotic arms installed on a lifting chariot, which allows operations at a height of up to 3m, thus further expanding the versatility of the platform.

CERNBot uses standard industry components for most of it electronics and controls hardware making it a constantly evolving platform as the hardware is upgraded by the manufacturer. This also keeps the cost at a very competitive level for a platform with a payload of up to 250 kg and the capabilities of CERNBot.

AREA OF EXPERTISE

- Robotics

IP STATUS

- Owned by CERN

TECHNOLOGY READINESS LEVEL

- Production

CONTACT

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Find out more at:
kt.cern

APPLICATIONS

- Autonomous and tele-operated interventions in hostile environments in particular in presence of ionising radiation.
- Complex interventions involving coordination of two robotics arms in heights up to 3m.
- Search and rescue tasks.

ADVANTAGES

- Flexible platform, modular the top part can be installed in other platforms (e.g. cranes etc).
- Payload up to 250 kg.
- Two robotic arms that can be mounted on a custom made elevator platform on the robot.
- Software that seamlessly integrates the different arm controls into one user interface.
- Autonomous operation.
- Real time operating system.
- Robust design.
- Very reasonable cost based comparing to commercial platforms with similar capabilities.

LIMITATIONS

- Current version does not support operations on harsh terrain.