

IQbot CBRN Modular Robotic System

Across the full spectrum of hazardous operations, the ability to perform CBRN confirmatory reconnaissance tasks immediately from a safe distance is invaluable.



- Rapid reconnaissance of chemical, biological, radiological and nuclear threats
- Versatile modular robotic system
- Broad spectrum mobility
- Robust and reliable
- Compact, powerful and lightweight
- Large payload capacity
- User-friendly operation

Robots can take over dull, dirty and dangerous tasks and help put fewer human lives at risk.

QinetiQ has a 30 year track record in robotics and unmanned systems, with products for explosive ordnance disposal (EOD) and firefighting, such as the Wheelbarrow, Groundhog and Bison and JCB170 firefighting robots. Through our role as the lead R&D provider to the UK Ministry of Defence, we have built a reputation for bringing innovative solutions to the marketplace.

Together with Inficon, manufacturers of the HAPSITE® chemical detection

and identification system, QinetiQ offer a remote sensing system for rapid reconnaissance of chemical, biological, radiological and nuclear (CBRN) threats during initial response and follow on phases of WMD incidents.

The IQbot modular robotic system is the next generation in CBRN robotics and unmanned systems.

This innovative and affordable system is based on a number of principal modules, giving a range of different application-specific baseline variants. These baseline variants can support other specialist modules according to individual user requirements.

In comparison to previous systems, the pioneering IQbot modular system provides greater mobility, payload capacity and duration with reduced operator workload, reduced training requirements, and reduced life cycle costs. For performance, versatility and dependability, the IQbot robotic system is unparalleled.



Remote Console unit

Full Spectrum Mobility

The IQbot system incorporates full track suspension. In this configuration the vehicle is able to operate across the full range of urban and rural terrain, including stairs, obstacles and rough terrain.



Exploded view of IQbot Modular Construction

Payloads

The high payload capacity of the IQbot CBRN robot makes it particularly versatile. A wide range of task-specific payloads can be utilised, including:

- Chemical sensors
- Biological sensors
- Radiological sensors
- TI/IR cameras
- Electronic counter measures

The payloads are secured within a hermetically sealed payload bay internal to the vehicle system. The vehicle has been designed for operation in a CBRN environment for ease of decontamination.

Value for Money

The modular nature of the IQbot system fully supports the implementation of incremental procurement policies. Provision of a software-based training and validation environment at the procurement phase can demonstrate the value that preferred system options will bring to different customers operations.

Fielded Systems

IQbot is rugged, reliable and easily maintained. It has been designed to the latest military standards and guidelines. Combined with its broad range of open standard payload interface options, this makes it the

ideal platform for customer R&D efforts by minimising the integration and test overheads associated with the field-deployment of new technology.

Network Enabled Technology

IQbot fully supports user's integrated systems requirements as well as concepts of network-centric operations. It incorporates network technology at all levels, from its PC-based platform architecture that includes ground-breaking bus technologies, to its digital WLAN or tethered two-way secure communications.

Standardisation

The system is equipped with open standard CIP interfaces for both payloads and the two-way operator command interface. Interoperability, commonality and expandability have been key design objectives.

Partnership

The ethos behind IQbot is the promotion of partnership at all levels. Provision of a practical user-friendly alternative to manned operations and support to low cost incremental acquisition methods have been key design drivers for IQbot.



IQbot hermetically sealed hull, standard track and drive modules

Standard Technical Specification

- Speed: 25km/h metalled road; 10km/h rough terrain
- Payload: 150kg including payload deployment system; 60 litre 19"DIN standard capacity internal payload bay
- Mass: 250kg unladen
- Endurance: more than 5 hrs (mission dependent)
- Sizes: 1.3m(L) x 0.72m(W) x 0.51m(H)

- Mobility: Urban and rural terrain; ground clearance 122-136mm (track dependent); amphibious to 10m (80m with pressure compensation)
- Sensors: two way communications; up to 4 integrated video streams; various proximity sensor options
- Communications: WLAN IEEE802.11b 1km LOS; fibre optic or coax to 250m
- Flexible dry pin joined track
- Li-ion power supply
- IEEE 1394 bus with CIP for modular payloads and "Plug & Play"

Platform Variants

Other task specific configurations are available to meet the remote operations requirements of a broad range of applications from Littoral Zone Operations to Urban Warfighting.



IQbot featuring HAPSITE® integrated chemical sensor



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