

MILITARY ROBOTS

I&R - ITIS PININFARINA

"Throwable" Robot

These robots are a perfect tool to give soldiers in the field "eyes" on a potentially hazardous situation without placing themselves in harm's way. With soldiers often operating in difficult terrain or entering buildings, the easiest way to get such robots into place is usually to throw them.

The U.S. Army and Marine Corps are working to create small, easily transportable "throwable" robots.

These robots are to be equipped with surveillance cameras designed to analyse confined spaces, buildings, tunnels and other potentially dangerous locations.



iRobot 110 First Look robot

First Look is designed to provide persistent observation and investigation of confined spaces.

It is also built to survive 4.6 m drops on concrete and is waterproof to 0.9 m.

Once on the ground it can right itself when flipped over, climb steps up to 20 cm high, overcome curbs and other obstacles, turn in place and travel at speeds of up to 5.5 km/h.

On a typical mission it will get six hours of runtime, extending up to 10 hours when performing stationary video monitoring. It has four built-in cameras facing different directions and also features infrared illumination for low light and no light operations.



MacroUSA's Armadillo V2

The Armadillo comes with two front, one rear and two side color day/night cameras to provide a 360-degree field of view. Capable of carrying a 3 kg payload, the robot can also be fitted with an optional turret with thermal camera that rotates 180-degrees. The robot has three speed modes: Creep, Normal and Escape, in which it can reach speeds of up to 5 km/h. It also has the ability to climb 45-degree slopes - depending on the surface material - and can be fitted with an optional climbing kit to tackle stairs.



QinetiQ Dragon Runner

Originally developed for the U.S. Marine Corps, the basic model Dragon Runner is a little heavier and bigger than the First Look, but is still small and light enough to be carried in a standard-issue pack. It features a modular design that allows it to be fitted out with whatever combination of treads, cameras and sensors.

Able to move at up to 8 km/h, the Dragon Runner can lift from 2.3 - 4.5 kg with its optional manipulator arm that features a rotating shoulder, wrist and grippers. Other options include day/night camera, pan/tilt/zoom cameras, motion detectors and a listening capability.



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Bibliography

<http://www.gizmag.com/us-military-throwable-robots/20052/>