# MONGURD – Canister Launched UAV

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A group of students from the Technion, Israel Institute of Technology in Haifa developed a unique Unmanned Ariel Vehicle. The lightweight drone (less than 110lbs / 50kg) will be launched from special canister equipped with a rocket motor. The drone will be able to carry a payload of up to 44lbs (20kg) which includes two cameras (both day and night), navigation, communication and even weapons (both lethal and less/non lethal).

The Technion drone debut Multi Operational National Guard or MONGURD was the result of work done by nine students in a period of a year and was recently demonstrated at the 47th Israel Annual Conference on Aerospace Sciences, which is took place on February 21, 2007 in Tel Aviv and at the Technion along several other works including a UAV to UAV refueling technology developed by a different Technion team.

The MONGURD was developed to meet highly demanding specifications. The UAV should be able to stay in the air for up to 10 hours at a maximum altitude of 10,000 feet. It should have a cruising speed of 60 knots (70 mph) and a top speed of 90 knots (103 mph), a day and night camera and the capability to launch from the ground/sea/air using a canister. All these futures should be implemented in a drone weighing just over 100lbs – a daunting mission indeed.

The project was supervised by **Mr. Dror Artzi** from RAFAEL, Israel's Armament Development Authority. In 2006 RAFAEL demonstrated a different commercial Canister launched UAV called SkyLite. The SkyLite uses a parachute and air bags in order to land and similar ideas were also adopted on the MONGURD project During the development of the MONGURD the team evaluated dozes of existing UAVs from around the world and determined that no other existing drone has the capabilities to meet the endurance, altitude and payload requirements set under the restricting weight limitations. The success of the team can thus be viewed as a world class achievement. The team completed the design stage and built a scaled model which performed several test flights before it crashed due to a problem with its engine (which was bought as an off-the shelf part and was not designed by the team).