iRobot Packbot
The Customizable Multi-Mission Robot

Modular, adaptable and expandable, the iRobot 510 PackBot can perform bomb disposal, surveillance and reconnaissance, CBRN detection and HazMat handling operations. Quickly configured based on mission needs, PackBot easily climbs stairs and navigates narrow passages with sure-footed efficiency, relaying real-time video, audio and sensor data while the operator stays at a safer, standoff distance. Applications include: neutralizing roadside bombs, car bombs and other IEDs; screening vehicles, cargo, buildings and people for traces of explosives or chemicals; and searching buildings, bunkers, caves, tunnels and sewers.

Missions

- **Bomb Disposal/ Explosive Ordnance Disposal (EOD)**
  iRobot’s unmanned ground vehicle systems have integrated into military and public safety teams to increase the safe-distance for the operator and enable the controlled neutralization of the device.  
  Each of iRobot’s unmanned ground vehicle systems are able to perform Bomb Disposal/EOD actions and have been deployed for the safe detonation of devices by the military and Public Safety Bomb Disposal and Bomb Squad teams. Each of our tactical robots support a variety of disruptors with secure firing circuits, or deliver charges to neutralize the risk.

- **CBRN/HazMat**
  iRobot Defense & Security systems have been integrated into emergency services teams as well as into standard operations within numerous industrial settings to enable rapid response and real-time detection and identification of Chemical, Biological, Radiological, and Nuclear (CBRN) and HazMat materials.  
  With the help of our robots, CBRN or HazMat teams can rapidly identify and determine the best course of action to mitigate the transfer or exposure to dangerous substances. iRobot products seamlessly integrate numerous third-party sensors and report real-time measurements to responding teams.

- **Check Point/Vehicle Inspections**
  Military Police or Public Safety officers are often exposed to undue risks when determining if cars and trucks entering, exiting or parked near areas of interest pose a threat to personnel or property.  
  iRobot Defense & Security systems are able to provide visual and audible inspections as well as perform explosive, Chemical, Biological, Radiological, and Nuclear and HazMat inspections of vehicles while robot operators remain at safer distances.

- **Explosive Detection**
  The use and deployment of unmanned ground vehicles enables bomb-squad investigators and Explosive Ordnance Disposal squads to more safely determine the best course of action when encountering a suspected device.  
  Our robots provide rapid non-destructive inspection and detection of explosive/bomb materials inside luggage, suspicious packages, improvised explosive devices (IED) and other containment devices. These modular unmanned ground vehicles (UGVs) contain numerous high-resolution color camera systems with low-light or thermal vision and support an expanding array of explosive detection sensors that enable real-time detection of trace explosives from down-range.
• **Persistent Observation**
  The ability to perform long-term, persistent observation to identify the characteristics and elements that may pose a threat or cause harm to individuals and responders is key to mission success.
  iRobot’s Defense and Security family of robots is equipped to advance to a forward position and provide video and audio intelligence for hours at a time. Additional payloads, including NIR and thermal cameras enable the consistent delivery of real-time intelligence in low and no-light environments.

• **Route/Building Clearance**
  The regimented and thorough sweep of a route between points or in a specific area or building is based on predictive intelligence and the ability to identify risks and threats as quickly as possible. Unmanned ground vehicle technology from iRobot is equipped with a mature set of cameras, two-way audio capabilities and can be configured with numerous external sensors and tools to provide much needed predictive intelligence in the sweep of a route or building and saves time on-task for responders.

• **Visual Obscurants**
  Low or no-light areas, smoke, dust, air-borne debris from explosions or fire can greatly hinder responders’ abilities to perform visual inspections and determine their safety or locate suspicious packages.
  When responding to an emergency situation, teams need to determine their safest route to possible casualties and identify any additional risk at hand. Unmanned ground vehicle technology provides agile, portable and mobile systems that can gain entry into difficult to-access locations and can return visual acuity to the mission.

**Robot Specifications**
The man-transportable PackBot, deployable in less than two minutes, can reach speeds of up to 5.8 mph, overcome stairs, obstacles and debris, supports numerous disruptors and a broad array of sensors that deliver predictable intelligence in real-time. PackBot climbs grades up to 60 degrees, is submersible in three feet of water and is operational in all-weather environments. The game-style controller makes the robot easy to use.

Additional components such as payloads, sensors and tools include: Enhanced Awareness Payload (EAP), Manipulator 1.0 (3 link arm), Small Arm Manipulator (SAM), Flir Fido Explosives Detection Kit, LWIR Thermal Camera, HazMat Detection Kit, Route Clearance Kit, Mechanical Cable Cutters, and PAN Disruptor Mount.