

**THE NEXT STEP  
IN TACTICAL  
WARFIGHTER  
CAPABILITY**

## Today's warfighters face new threats in Military Operations Urban Terrain (MOUT) warfare, terrorism and other 21st century battle environments ...

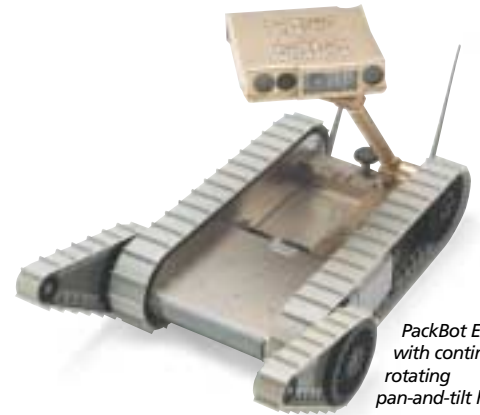
**Before sending in soldiers, send in PackBot.** PackBot™ is a battle-tested, unmanned ground vehicle (UGV) designed for operations in MOUT and other 21st century battle missions. This lightweight, rugged robot can be hand carried and deployed by a single soldier.

Already proven in two recent theaters of war – Afghanistan and Iraq – PackBot is the ideal “point man” to search dangerous or inaccessible areas, providing soldiers with a safe first look so they know what to expect and how to respond.

**Intelligence, Surveillance and Reconnaissance.** PackBot allows soldiers to stay at a safe standoff distance while the robot relays real-time video, sounds and sensor readings. Buildings, bunkers, caves, tunnels, sewers, collapsed

- Used by U.S. ground troops in Afghanistan (2002) to help clear caves and bunkers, search buildings and cross live anti-personnel mine fields.
- Used by U.S. ground troops in Iraq (2003) to help clear buildings and complexes and search suspect vehicles.

structures and other areas that are dangerous or inaccessible to humans can be remotely searched with a PackBot to make sure there are no surprises – booby traps, mines, weapons caches or enemy soldiers.



PackBot Explorer with continuous rotating pan-and-tilt head

### **Battle Damage Assessment.**

PackBot is ideal for performing real-time battle damage assessment in dangerous or denied areas.

### **Hostage/Barricade Situations.**

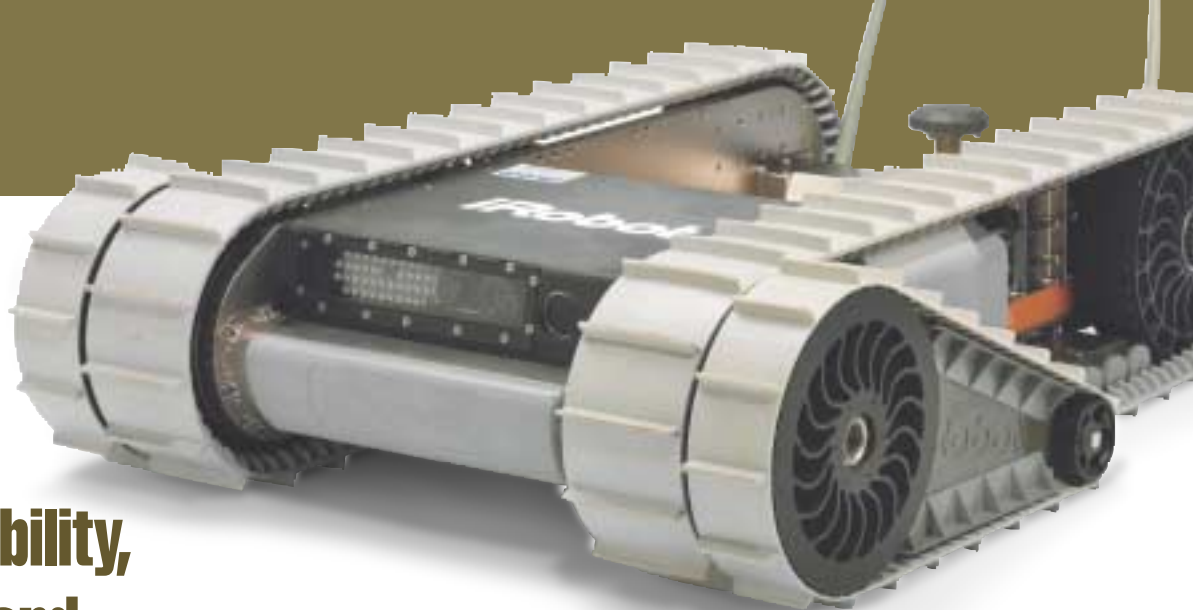
PackBot can enter the danger zone before officers are exposed to risk. Functioning as the incident commander's remote “eyes and ears,” PackBot can help assess the situation and ensure the appropriate response. Risks to enforcement personnel, suspects and communities are reduced. PackBot often pays for itself in just one or two call-outs – just ask our customers.

*Soldiers on the ground ensure mission success. PackBot provides soldiers with the situational awareness they need before entering hazardous areas.*

*A single soldier can control several PackBots for optimal deployment. Several controller options, including ruggedized notebooks and soldier-wearable computers, provide the real-time tactical information needed to safeguard our warfighters.*



*PackBot Scout with QuickFlip™ flippers in stowed position*



## Superior Mobility, Reliability and Performance.



### Onboard Intelligence.

PackBot's robotic control system is built around a ruggedized Pentium® processor delivering unprecedented processing power in a man-portable robot. Multiple sensors integrated into the chassis – including a GPS receiver, electronic compass, absolute orientation sensors and temperature sensors – keep PackBot in touch with its environment. And state-of-the-art electronics enhance payload integration capabilities. For example, each payload port is equipped with Ethernet, USB, power and two channels of video. There is no limit to the types of payloads PackBot can support.

PackBot's software architecture supports multiple modes of operation ranging from basic tele-operation through full autonomy. Assist behaviors allow operators to focus on mission success instead of the robot. For example, PackBot's intelligent power management system constantly monitors the health and status of the batteries to ensure long mission life. And its all-digital architecture, with full data and video logging, aids in post-mission analysis.

*"PackBot is as tough, if not tougher, than any piece of military equipment I have ever used."*

*– Colonel, Afghanistan, 2002.*



### Rapid Deployment.

In PackBot's Scout configuration, the robot weighs a mere 18 kilograms and is less than 20 centimeters high. PackBot can be loaded into a MOLLE pack, carried into combat and deployed in minutes. No specialized equipment is necessary. Once deployed, it can quickly traverse narrow, difficult, hard-to-access terrain and cover open ground at speeds up to 14 kilometers per hour.



### Unmatched Mobility.

PackBot's patented, self-righting mobility platform is equipped with dual QuickFlip™ track articulations. These "flippers" are capable of continuous 360-degree rotation and propel the robot up stairs, over curbs and through daunting obstacles such as rocks, rubble and debris. If PackBot flips over during operations, the robot simply uses its flippers to perform a self-righting maneuver within seconds. PackBot's flexible ToughTrac™ polymer tracks eject debris and maneuver over any surface with sure-footed efficiency, quickly positioning its payloads for optimum mission success. PackBot can climb grades up to 60% and survive submersion in water up to 2 meters deep.



### Unprecedented Survivability.

PackBot's tough, impact-resistant chassis is designed to survive a 2-meter drop onto concrete (400 Gs), being thrown through a window, tumbling down stairs and being deployed from low-altitude helicopters. With its specially ruggedized all-digital architecture and hardened low-profile sensor payloads, this is one tough robot.



### Multi-Mission Flexibility.

PackBot offers multi-mission flexibility and customization options on a single proven chassis. With eight separate payload bays, interchangeable mission-specific payloads like sensors, optics, weapons and extra power can be selected. Commanders can specify how the robot is used, change payloads, employ sensors and adjust the level of human control required to meet the needs of each individual mission. With its modular payloads and quick release flippers, PackBot can be reconfigured and quickly broken down for easy transport.

# "THE ROBOT SHOULD GO IN FIRST"

– 101st Airborne Division commander as his team uses PackBot to conduct search-and-surveillance of Taliban compound, Afghanistan, 2002

*"It pretty much maneuvers over all terrain."  
– Sergeant 1st Class, Iraq, 2003.*

*"With the PackBot you know what to expect when you go into an objective."  
– Soldier, Co. 326 Engineers, 101st Airborne, Najaf, Iraq, 2003.*

*"When we looked at which robots to bring to Afghanistan, other candidates were either too heavy, or the lighter ones weren't robust enough."  
– Colonel, Afghanistan, 2002.*

*"The (PackBot) proved to be a capable, reliable, and robust platform."  
– Independent test ran by Southwest Research Institute (SwRI), Small Robotic Vehicle Test Bed, June 2001.*



PackBot chassis shown without payloads. Add Scout, Explorer or EOD payloads to configure the PackBot for your missions.

## PackBot: A complete system solution from the innovators at iRobot

PackBot offers a complete robotic solution from the recognized leader in robotic technology – iRobot Corporation. The PackBot family of robots offers three rugged turnkey configurations: PackBot Scout, PackBot Explorer and PackBot EOD. All models share the same innovative, battle-tested PackBot chassis.



**PackBot Scout:** This PackBot configuration represents the new standard in lightweight unmanned reconnaissance and tactical warfare vehicles – a standard by which all other robots will be judged. Less than 20 centimeters high and only 18 kilograms fully loaded, PackBot Scout offers five open payload bays for maximum upgrade potential. Rated at 400+ Gs, the Scout is our most rugged PackBot configuration.



**PackBot Explorer:** The Explorer adds a continuous rotating pan-and-tilt head that can rise from the chassis and allow operators to peer over obstacles and gain greater perspective. The Explorer payload is loaded with multiple cameras, a laser pointer, audio and other sensors for unparalleled surveillance and reconnaissance performance.



**PackBot EOD:** Weighing only 24 kilograms fully loaded, the versatile PackBot EOD configuration conducts improvised explosive device (IED) and conventional ordnance disposal tasks. Its OmniReach™ Manipulator System can extend a full two meters, safely disrupting hard-to-access explosive devices, military ordnance, land mines and other devices. Yet with its low profile, PackBot EOD's manipulator can operate in very tight spaces, such as in sewers or under many types of automobiles.

## iRobot: Leading the Robotic Revolution

iRobot is the largest manufacturer of mobile robots in the world. We are pioneering breakthroughs in robot mobility, autonomy and ruggedness. These advances are being applied to systems that perform dangerous jobs including reconnaissance, mine countermeasures, explosive ordnance disposal and hazardous materials handling.



Working closely with end users, we turn their requirements and ideas into product. Through early deployment and spiral development, iRobot is transforming the way robotic equipment is fielded. We provide soldiers with the equipment they need today while developing technology to meet the challenges of tomorrow.

**When it comes to dangerous missions, put PackBot on your team.**

**FOR PRICING AND A SAMPLE CD SHOWING PACKBOT IN ACTION, PLEASE CALL 1-888-7ROBOTS.**

[www.packbot.com](http://www.packbot.com)

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