Protecting warfighters and first responders

with additional mission capabilities

*iRobot*<sup>®</sup>

IRobot offers a complete line of accessories for the iRobot PackBot have been delivered worldwide as of tactical mobile robot. Each accessory adds additional capabilities to the robot, expanding its range and scope of missions.

Additional spare parts are also available.

For more information or a quote, contact iRobot at sales@irobot.com or toll-free in the U.S. at 888.776.2687. International customers, call +1.781.430.3090.

Based on user feedback, this edition of the iRobot® PackBot® Accessories Catalog features a variety of new solutions to make the PackBot more functional and easier to use:

The Aware® 2 Software Upgrade
• The iRobot PackBot Upgrade Kit
Parallel Grippers.     Page 4
Mechanical Cable Cutter     Page 4
Head-Mounted Hook     Page 5
Head-Mounted Infrared Illuminator
HazMat Kit     Page 7
Enhanced Awareness Payload
Single Hand Controller Kit with USB
PeraDis® .45 Caliber Recoilless Water Disrupter
Inverter 12/24 Volt for PCC
Cigarette Lighter Adapter for MicroCharger
2.4 & 4.9 GHz Radio OCU Modules

Throughout this catalog, you'll find many robot accessories, communications accessories, control unit accessories, power accessories and more.

Thank you for your suggestions – and please keep them coming; we continually improve our robots and accessories based on your feedback.



# Aware<sup>®</sup> 2 Software Upgrade

The Aware 2 software upgrade provides several enhancements over the legacy software.

# Features include:

built-in help, plug-and-play arms/accessories, high-resolution video, improved user interface, self-damage prevent, and many more. In addition to the base features, Aware 2 provides a platform for third-party sensor development and is a foundation for advanced autonomy features.

# Upgrade your robot to a 510 PackBot

The iRobot PackBot Upgrade Kit retrofits previous-generation PackBot robots including the PackBot EOD and PackBot MK1(MTRS) — with the latest hardware and software of the 510 PackBot.

- Make your PackBot faster, stronger and easier to use...
- Cost effectively upgrade to current-generation hardware and software...
- Enhance the robot's capabilities right away and quickly integrate future tools...

# Upgrade Kit Improvements and Benefits









#### QuickClamp Picatinny Rail Kit

Attaches to the QuickClamp Fireset or QuickClamp Accessory Mount, allowing the user to attach Picatinny compatible items, such as tactical lights, sensors.

Part # 15088



#### Mechanical Cable Cutter

Designed for cutting cable, this tool quickly attaches to the gripper finger base plate. Features a wire guide for capturing the wire. Cuts insulated copper cable up to a thickness of 2.5mm2, Fully mechanical tool, does not require any modifications to the robot. Sold directly from ELP and warranty information is provided by the manufacturer.



#### Picatinny Rail Tube Mount Kit

Attaches to any of the PackBot arm tubes allowing the user to attach Picatinny-compatible items, such as tactical lights, sensors, and lasers.
Installs quickly using only a

Part # 15089



#### 4 Bar Parallel Gripper Finger Kit

The gripper fingers make it easier for PackBot operators to pick up objects. The updated gripper design keeps the while they open and close, offering a more natural and dexterous grasping method, particularly for

Part # 4210202



#### Three Case Shipping Option Rugged, lightweight cases for

PackBot robot and control unit.
Cases enable easier transport in smaller vehicles and as checked luggage on commercial aircraft. Cases feature five press and pull latches, three double-layered soft-grip handles, two lockable hasps, inline wheels and a telescoping handle. 31.3" L x 20.4" W x 12.2" H

Part # 15831





#### Adjustable Gripper Finger Kit

This field replaceable kit allows the user to set the gripper fingers in various positions by manually adjusting a screw, resulting customization based on user preferences or mission needs

Part # 17845



#### WB-2 Glass Breaker

Quickly and cleanly breaks vehicle windows and building glass. Specially constructed from reinforced metal and plastic composite. Features and lower rail for additional Mounts to the robot using the QuickClamp Picatinny Rail Kit (sold separately).

Part # 19368



# Head-Mounted Hook

Allows PackBot to move objects at the height of the attack head (up to 82 inches on certain models). Ideal for opening overhead bins on buses, trains and airplanes. Quickly attaches to the QuickClamp Accessory Mount, providing a second mount for other compatible accessories. Includes three manipulators: hook, probe and customizable probe.

Part # 4194767



# M3X Tactical Illuminator Flashlight with X-Series Flip-Up Filter

Increases low-light performance of robot. Provides peak output of 125+ lumens. Includes the X-Series Flip-Up Filter (infrared) which fits over the bezel assembly, Lithium battery provides approximately one hour of run time. Mounts to the robot using the QuickClamp Picatinny Rail Kit or Picatinny Rail Mount Kit (sold separately).

Part # 19478



#### Head-Mounted Infrared Illuminator

Increases low-light performance of robot. Continuously adjustable beam is 100% eye safe, tested class 1 Shockproof Usable with all night vision systems. Lithium battery provides approximately 3 hours of run time. Mounts to the free side of the robot's head using an adjustable holder. Sold directly from ELP and warranty information is provided by the manufacturer. Visit www.elp-gmbh.de



#### Composite Window for Low Light Upgrade Kit

Window upgrade improves low-light attack cam performance when operating with lights on. Uses integrated light baffle that blocks light refraction in recommended for PackBot EOD.

Part # 18105



For more information or a quote, contact IRobot at sales@irobot.com or toll-free in the U.S. at 888.776.2687. International customers, call +(1) 781.430.3090.



#### QuickClamp Fireset with Accessory Connector

Allows for fast and reliable installation and removal of a variety of head-mounted accessories, including disrupters. Fireset includes binding posts for electrical initiation of pyrotechnic devices over a secure, encrypted Safe Firing System, Includes an expansion or third-party developers. The connector provides power and receives data and video. Users may standard mount.

Part # 18207



#### QuickClamp Fireset without Accessory Connector

Allows for fast and reliable installation and removal of a variety of head-mounted accessories, including disrupters. Fireset includes binding posts for electrical initiation of pyrotechnic devices over a secure, encrypted Safe Firing System. Users may adapt new tools to this standard mount.

Part # 14107



#### QuickClamp Mount with Accessory Connector

Allows for fast and reliable installation and removal of a variety of head-mounted accessories. Includes an accessory connector for expansion or third party developers. The connector provides power and receives USB and video data, Users may adapt new tools to this standard mount. Note: Disrupters cannot be fired from a robot equipped with this accessory.

Part # 19468



# QuickClamp Accessory Mount

Modular clamp system Supports various disrupters and tools, including PAN, Proparms, and Richmond. Once installed tools and disrupter mounts attach and remove in seconds without tools. Users may adapt new tools to standard mount.

Part # 14065



#### PackBot Blast Shield with Clutch Upgrade Kit

Upgrade the blast shield of your PackBot EOD. Improved clutch design provides longer product life.

Part # 18215



#### Enhanced Awareness Payload (EAP)

Add more cameras, sense and functionality to your iRobot 510 FasTac. The EAP, which features a wide-angle drive camera, two-way audio, white and infrared illumination and an accessory port.

Part # 4207006



#### ICx Fido® Explosives Detection Kit

Add remote explosives detection capability to PackBot to protect personnel. Sensor employs ultra-sensitive vapor detection. Sensor data is relaved to the PCC or OCU in visual and audio formats. Sensor data is relaved to the operator controller unit in visual and audio formats. Fido sensor can be removed and purposes. Kit includes payloadto-robot adaptor. Addition software may be required.

Part # 19479



# LWIR Thermal

Compact, lightweight camera features large field of view and provides increased situational awareness. detection and identification in fog, smoke, low light and no light. Additional software

may be required Part # 4177974



#### HazMat Kit Add hazardous materials

detection to your PackBot. Multiple integrated sensors provide TIC, TIM, Blood Blister, VOC. Radiological and Temperature/ Humidity detection and reporting. Includes MultiRAE® sensor, LCD Sensor, Radiac sensor, calibration accessories and extra filter packs for MultiRAE, sieve packs, confidence tester, battery cassette for LCD, accessory brick, payload assembly with Temp/Humidity Sensor, sealed hard case for sensors and accessories, rugged shipping cases, user manual and documentation and Additional hardware and required. Available in late 2009

Part # 4185339

For more information or a quote, contact iRobot at sales@irobot.com or toll-free in the U.S. at 888.776.2687. International customers, call +(1) 781.430.3090.





#### Replacement PackBot Flipper Track (Rounded)

Streamlined tracks with rounded cleats minimize detracking and optical fiber entanglement while delivering maneuverability through rough and varied terrain. Includes two tracks; sold as a pair. (Replacement Main PackBot Track sold separately.)

Part # 18287



#### Replacement Main PackBot Track (Rounded)

Streamlined tracks with rounded cleats minimize detracking and optical fiber entanglement while delivering the same maneuverability through rough and varied terrain. Includes two tracks; sold as a pair. (Replacement Flipper Track sold senarately)



# Flipper Tool Bar Kit

mount between PackBot's front flippers. Uses robot flippers to move implements up and down with great dexterity and strength, Attaches and detaches tools. Flipper Tool Bar Kit is indexable in 22.5° increments Disassembles for compact storage. Includes one repositionable Ripper Blade" implement. Other tools sold separately. Requires Flipper Drill Guide Kit if flippers are not pre-drilled.

Part # 12889



#### Main Ordnance Lift Kit Supports multiple tools that

mount at rear of PackBot. It has a large lift capacity handling ordnance up to 155mm shells weighing about 100 lbs (45 kg). Uses robot flippers to power Attaches and detaches in seconds without the use of tools. Main Ordnance Lift Kit is indexable in 22.5° increments. Implements attach and detach without the use of tools. Disassembles for compact storage space. Includes four repositionable "Ordnance Tine" Drill Guide Kit if flippers are

Part # 12894





#### Route Clearance Tool Kit Tools include a rake, scoop,

mine fork, probe and hook for digging, probing and identifying buried obstacles. Tools mount to the Flipper Tool Bar Kit and Main Ordnance Lift Kit. (Both sold separately.)



- X-ray generator mounts and imaging solutions Mounts for electronic jammer systems
- Hook and line attachments and applications

Order items directly from ELP at www.elp-gmbh.de.



### Hand Controller Upgrade Kit

Allows the user to make a legacy PCC compatible with the new Hand Controller. Includes two hand controllers with Fischer connectors, a hard drive with mounting bracket, a Quick Reference Guide and supporting documentation. Easy-to-learn and use, the hand on-robot training time.

Part # 16953 (for PackBot EOD)
Part # 17839 (for PackBot (MTRS) MK1)



#### Single Hand Controller Kit with Fischer Connector

For use with a previously purchased PCC and/or system with hand controller software support enabled. Also for use as an additional controller. Includes one hand controller, a quick reference guide and supporting documentation. Easy-to-learn and use, the hand controller improves ease-of-operation and reduces on-robot training time.

Part # 17364



# Single Hand Controller Kit with USB

For use with the rugged laptop Operator Control Unit (OCU). Includes one hand controller, a quick reference guide and supporting documentation. Easy-to-learn and use, the hand controller improves operation and reduces



# Audio and Video Out Cable for PCC

Converts A/V signals to three standard RCA plugs. Plugs into standard PackBot PCC Audio Video Out connector Allows screen to be displayed on composite external monitor and audio to be played over speakers. Full screen information and audio can be recorded to external device (camcorder, DVD recorder, VCR) in real time, Cable approximately 2 m in length.

Part # 10636





For more information or a quote, contact iRobot at sales@irobot.com or toll-free in the U.S. at 888.776.2687. International customers, call +(1) 781.430.3090.

iRobot platforms support a variety of disrupters. Disrupters can be electrically initiated or Shock Tube initiated. Contact disrupter manufacturer for details. Electrical initiation can be provided by iRobot PackBot Safe Firing System. Shock Tube initiation requires the Single Channel Shock Tube Initiator.

Note: Robots incapable of firing disrupters due to their original configurations can be adapted to accept disrupters. Contact iRobot for more information.



#### PAN Disrupter<sup>™</sup> Mount

Allows easy installation of the PAN Disrupter on Link 2 of the iRobot 510 PackBot. Gas shock absorbers dissipate recoil when the disrupter is fired, ensuring robot safety and minimal recoil. QuickClamp Accessory Mount is required for installation. Firing the PAN Disrupter also requires Single Channel Shock Tube Initiator. Percussion-Actuated Non-electric (PAN) Disrupter is vailable from Ideal Products Inc. at 859.255.7738.

Part # 17955



#### Richmond Recoilless Disrupter Mount

Attaches at QuickClamp Accessory Mount. Includes two integrated lasers for seconds. Supports Richmond RF12-12. RE50-28 M2 and RE70 M3. Quick Clamp Accessory Mount is required to install this disrupter mount Order disrupters directly from

Part # 14111



#### Proparms 12.5 mm Recoilless® Disrupter Mount

at QuickClamp Fireset and QuickClamp Accessory Mount to support the Proparms This mount attaches and removes from clamp in seconds. Order Proparms disrupters directly from





#### Proparms 20 mm Recoilless® Disrupter Mount

Modular clamp system attach at QuickClamp Accessory Mount to the Proparms 20 m Recoilless Disrupter. QuickClamp Accessory Mount is required to install this disrupter mount. Attaches and removes from clamp in seconds. Order Proparms disrupters directly





#### PeraDis® .45 Caliber Recoilless Water Disrupter

Initiated by a spring loaded firing pin, unlike other designs that use electrically initiated cartridges. Consequently, avoid EMC problems, the safety concerns with regards to air transport and the high storage cost of electrical initiated cartridges. Sold directly from ELP and warranty information is provided by the manufacturer. Visit www.elp-gmbh.de



#### Safe Firing System Key or Code Plug Kit

Key is interchangeable with original PackBot EOD or PackBot 510 with EOD Kit key. No reprogramming required. Insert key in firing circuit and use as normal. Includes iRobot-logo lanyard.

Part # 12126



#### Single Channel Shock Tube Initiator

Gives users the ability to initiate shock tube from the firing circuit on the Safe Firing System. Attaches Fireset. Mounts and dismounts from robot in seconds. Good for 10,000 shots. For disrupters that require shock tube initiation such

Part # 16637



### CMD Spool Kit

Allows the operator to place a charge, then back off to a safe standoff distance before firing the device using the safe firing cable (25m) outspooling smoothly. Spool attaches and removes from mount in seconds without tools. Mount attaches to the QuickClamp Fireset for compatible robots.

Part # 13647

For more information or a quote, contact IRobot at sales@irobot.com or toll-free in the U.S. at 888.776.2687. International customers, call +(1) 781.430.3090.





Power Accessories

#### DC Power Cable for PCC

Allows PCC to be powered directly by 24 Volt military vehicles. 3m long cable allows flexible cable routing. Plugs into standard PCC. External 24 Volt DC-in connector. Uses

Part # 12128

AC Power Cable



### for PCC Adapts to your MicroCharger

Power Cable to allow you to power the PCC from an AC wall outlet

Part # 12129



# Inverter 12/24 Volt for

Allows mobile operation of the PCC without batteries. PCC is powered by 12 Volt or 24 Volt on-board vehicle power source Includes a car/truck connecting cable (plugs into cigarette lighter), a PCC connecting cable, and one inverter. Accord the device bears the CE-Label. Sold directly from ELP and war the manufacturer. Visit www.elp-gmbh.de



#### BB-2590/U Lithium Battery

battery with state-of-charge display. Use of two BB-2590/U batteries per cradle recommended for optimum performance. Check with shipper for domestic and international shipping guidelines. (Some robots also require the BB-2590/U Battery Retrofit Kit - Part # 18616.)

Part # 4151798



#### RCV BB-2590/U Battery Retrofit Kit

Retrofits PackBot robots enabling use of the BB-2590/U Lithium ion rechargeable battery in current use. Plug-andplay kit includes a cradle that accommodates two batteries. recommended for optimum performance. BB-2590/U batteries not included.

Part # 18616



#### AC Adapter Kit for PCC

Produces regulated 24 Volts for PCC external power. Kit includes AC adapter that accepts 120-240 AC Voltage input range. Plugs into standard PCC external 24 Volt DC-in connector. Modular cord set allows adaptation to local mains.

Part # 13618



#### BB-2590/U Battery Charger, 8 Bay, High Rate Portable battery charger for field

or depot use. Charges 8 batteries in 8 hours or less with easy-tofollow LED lighting sequences. adapters, each with 2 slots. Charges 2 batteries simultaneously, with 6 batteries in queue.) Charges and maintains a variety mating adapter. Charging system is upgradeable in the field or a desktop environment through the RS232 port and a computer link. (Note: Requires four Dual BB-2590/U Battery Charge Adapters - Part # 4180844.)

Part # 18587



# Part # 4180844

BB-2590/U Battery

Dual BB-2590/U Battery

battery charger, adapter charges one or two BB-2590/U batteries

in 3.5 hours or less. Adapter

required for use with the BB-2590/U Battery Charger,

Dual, High Rate (Part # 18586) and BB-2590/U Battery Charger,

8 Bay, High Rate (Part # 18587).

Charger Adapter

Used with the appropriate

Charger, Single, Low Rate Single-station battery charger for BB-2590/U batteries. Charges

BB-2590/U within 10 hours. Part # 18584



#### BB-2590/U Battery Charger, Dual, High Rate

Portable battery charger designed for field or depot use. Charges two batteries simultaneously follow LED lighting sequences. of military communication and electronic (CE) batteries using designated adapter. Charging system is upgradeable in the field RS232 port. (Note: Requires one Dual BB-2590/U Battery Charger Adapter - Part # 4180844.)

Part # 18586



# BB-2590/U Battery Charger, Single, Medium Rate

Single-station battery charger can wered from 115/230 Vac, 50/60 Hz mains power or from 12Vdc automotive power sources. Unit charges BB-2590/U in six hours or less.

Part # 18585





Power Accessories

# Single MicroCharger Kit

Charges NiCad Battery Pack. Charger housing employs dustproof / waterproof design. 24 Volt DC input option for Indicator LEDs provide charger status. AC Adapter accepts 120 - 240 AC Voltage input range. Modular cord set allows adaptation to local mains. Mounting tabs allow charger housing to be positively secured. Kit includes case.

Part # 12863



#### Dual MicroCharger Kit

Charges NiCad Battery Pack. Charger housing employs dustproof / waterproof design. 24 Volt DC input option for Indicator LEDs provide charge status. AC Adapter accepts 120 - 240 AC Voltage input range. Modular cord set mains. Mounting tabs allow charger housing to be positively secured. Kit includes case

Part # 13086





#### Cigarette Lighter Adapter for MicroCharger

Allows direct connection of the MicroCharger to the on-board vehicle power source, whether it's 12 Volt or 24 Volt. 2 meter connecting cable allows flexible cable routing. Includes 2 connecting cables. Sold directly from ELP and warranty information is provided by Visit www.elp-ambh.de



#### NiCad Battery Pack with LCD Battery Power Display

Compatible with all PackBot robots and selected robot control units, such as the PCC.





# NiCad Battery

Increases run time of the PackBot by allowing installation of additional NiCad batteries in one battery ports. (One kit per

Part # 8009



#### 2.4 GHz Long Range Antenna Kit

Increases PackBot's wireless radio communications from -300m to ~800m (line of sight). Uses two high-gain directional cables included. Waterproof and dustproof design. Cables screw onto standard PCC antenna connectors.



Versatile clamp attaches antenna to military vehicles and structures. Disassembles into Elevates antennas 2.5m above



Tripod Mounted Antenna Includes tripod with adjustable legs.

Part # 13971



#### Universal SmartSpool™ Fiber Optic Spooler

Allows operator to drive robot with fiber optic cable. Includes 820 ft. (520m) of optical fiber, automatic tangle and excess tension. Software may be required.

Part # 18335



#### 2.4 GHz Radio OCU Module

2.4 GHz radio and the Operator Control Unit. Includes 2.4 GHz Radio OCU module and antenna.



#### CommSelect™ 5140 Kit

Communications link providing improved radio performance that is less susceptible to 2.4 GHz noise. Includes radio payload with integral antenna that fits in the PackBot payload bay and external radio with integral antenna that mounts to the outside of PCC.

Part # 4153795



#### 4.9 GHz Communications Package for Laptop OCU

Includes 4.9 GHz radio payload with integral antenna that fits in the PackBot payload bay and external radio with integral antenna that mounts to the outside of OCU

Part # 4182668



# Fiber-Ethernet Converter Box and OCU Fiber Module

Enables compatibility between the Universal SmartSpool™ Fiber Optic Spooler and the Operator

Part # 4180888



For more information or a quote, contact iRobot at sales@irobot.com or toll-free in the U.S. at 888.776.2687. International customers, call +(1) 781.430.3090.



Developer accessories and services are intended to support third-party technical development and the productization of the resulting work. iRobot views collaboration with external developers as an essential way to provide a broad range of new capabilities to warfighters and first responders.

Note: Several Developer Support Packages are available. Packages include a block of engineering support time, documentation, robot models and interface descriptions. For more information, contact devsupport@irobot.com



#### Single Wide Payload Tub Kit

a single payload slot in the rear of any PackBot chassis: cover plate; internal mounting plate for securing payload components; integrated payload connector and Paybreak Light Kit that provide standard access to PackBot





# Programming Tether

Custom Ethernet and Serial cable for interfacing Part # 5606





### Double Wide Payload Tub Kit

Part # 4131560

of any PackBot chassis; cover plate; internal mounting plate for securing payload components; integrated payload connector and standard access to PackBot Part # 4131240



### AC Power Adapter Kit

development on PackBot. Kit that plugs into the side-pod payload bay connector usually used by the NiCad battery.

### Part # 13808



### Triple Wide Payload Tub Kit

spans all three payload slots in the rear of any PackBot chassis; cove plate; internal mounting plate for securing payload components Paybreak Light Kit that provide standard access to PackBot interfaces; and a full set of spares. Part # 4131243



### Paybreak Light Kit

development on PackBot by providing standard electrical interfaces to the system. The Paybreak Light Kit provides Ethernet, Regulated 5V and 12V, Unregulated 18-30V and two NTSC

Part # 4131242

#### **Product Training**

iRobot offers a wide range of flexible and targeted training support packages designed to meet the training needs of our customers. Taught by iRobot master trainers, training courses are designed to meet all levels of operator experience. Training is conducted at iRobot's corporate training center in Bedford, Training courses include comprehensive course materials (CBT, etc.) and cover product overviews, robot operation, hands-on exercises and training guides maintenance and refresher courses. Train-the-Trainer certification.

For more information, contact: training@irobot.com

### Product Support

iRobot offers product support by telephone, e-mail and on the web.

- Spare parts and accessories A full line of spare parts and accessories is available to keep your robots working.
- Depot repairs and upgrades Extensive services ensure your robots are properly repaired and equipped with the latest features and functionality
- Technical support Get fast answers to your technical questions by telephone, e-mail, or on the web.
- Support website Download product manuals, maintenance Asked Questions (FAQ's) and more.
- Customer training iRobot provides a wide range of

For questions, contact iRobot Support at packbot-support@irobot.com or by telephone at 781.430.3030.



# iRobot: The Robot Company

iRobot is a global leader in practical robots. Founded in 1990, iRobot designs and builds tactical mobile robots that provide enhanced situational awareness and increase mission success for warfighters and first responders.

With nearly two decades of leadership in the robot industry, iRobot remains committed to establishing platforms for invention and discovery, building key partnerships to develop mission-critical payloads and delivering robots that improve the standards of safety and living worldwide.



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