

Peraton
REMOTEC

PRODUCT CATALOG

PERATON REMOTEC

KEEPING DANGER AT A DISTANCE



Remotec, a subsidiary of Peraton, has more than 30 years of experience designing, producing, and fielding unmanned ground vehicles (UGV)—more than any other company. Users around the world depend on Peraton Remotec UGVs every day to help them meet a wide range of missions and scenarios. Our customers know that they can trust the rugged, reliable, and proven Andros™ systems—with the added confidence that Peraton Remotec will be there to support them. With over 2,500 systems in the field, Peraton Remotec is the standard by which all other UGVs are measured. Our customers include the U.S. military, U.S. government civilian agencies, state and local governments, foreign government agencies, and commercial entities.

Remotec offers the widest range of UGVs and accessories on the market, providing many options to our customers to meet their requirements without compromising capabilities.

We work closely with our customers, including our U.S. government customers, to develop additional capabilities and features that will meet new and emerging threats, and where feasible, we design an upgrade path to add these new capabilities and features to fielded systems.

The ability to integrate new capabilities on the fielded systems ensures Andros users will be able to respond to evolving threats while providing maximum value.

All of Remotec's unmanned vehicle systems are ISO 9001:2015 compliant and are designed to meet IP65 dust and water resistance standards, MIL-STD-882E Safety Standards and MIL-STD-810G Environmental Standards.

DO THE CAN'T BE DONE.

TABLE OF CONTENTS

ANDROS FX	4
ANDROS FX TECHNICAL SPECIFICATIONS	6
ANDROS SPARTAN	8
ANDROS SPARTAN TECHNICAL SPECIFICATIONS	10
ANDROS TITUS	12
ANDROS TITUS TECHNICAL SPECIFICATIONS	14
ANDROS WOLVERINE	16
ANDROS WOLVERINE TECHNICAL SPECIFICATIONS ...	18
ANDROS SR1	20
ANDROS SR1 TECHNICAL SPECIFICATIONS	22
TRAINING AND SERVICES	24
CONTROL SYSTEM AND DATA LINK	26
UPGRADES	29
ACCESSORIES	34
MAINTENANCE AND MISCELLANEOUS	37
CONTACT INFORMATION	39



ANDROS FX

UNMANNED GROUND VEHICLE SYSTEM

Andros™ FX was designed with the user in mind, created from the ground up based on more than 30 years of Remotec UGV experience and guided by our customers' requirements.

Combining both advanced mobility and high dexterity in one vehicle, the Andros FX provides unmatched capabilities to defeat vehicle-borne improvised explosive devices (IED) in addition to many others—maintaining Andros' global reputation as a rugged, reliable, easy-to-use vehicle.

Track-Pod Mobility

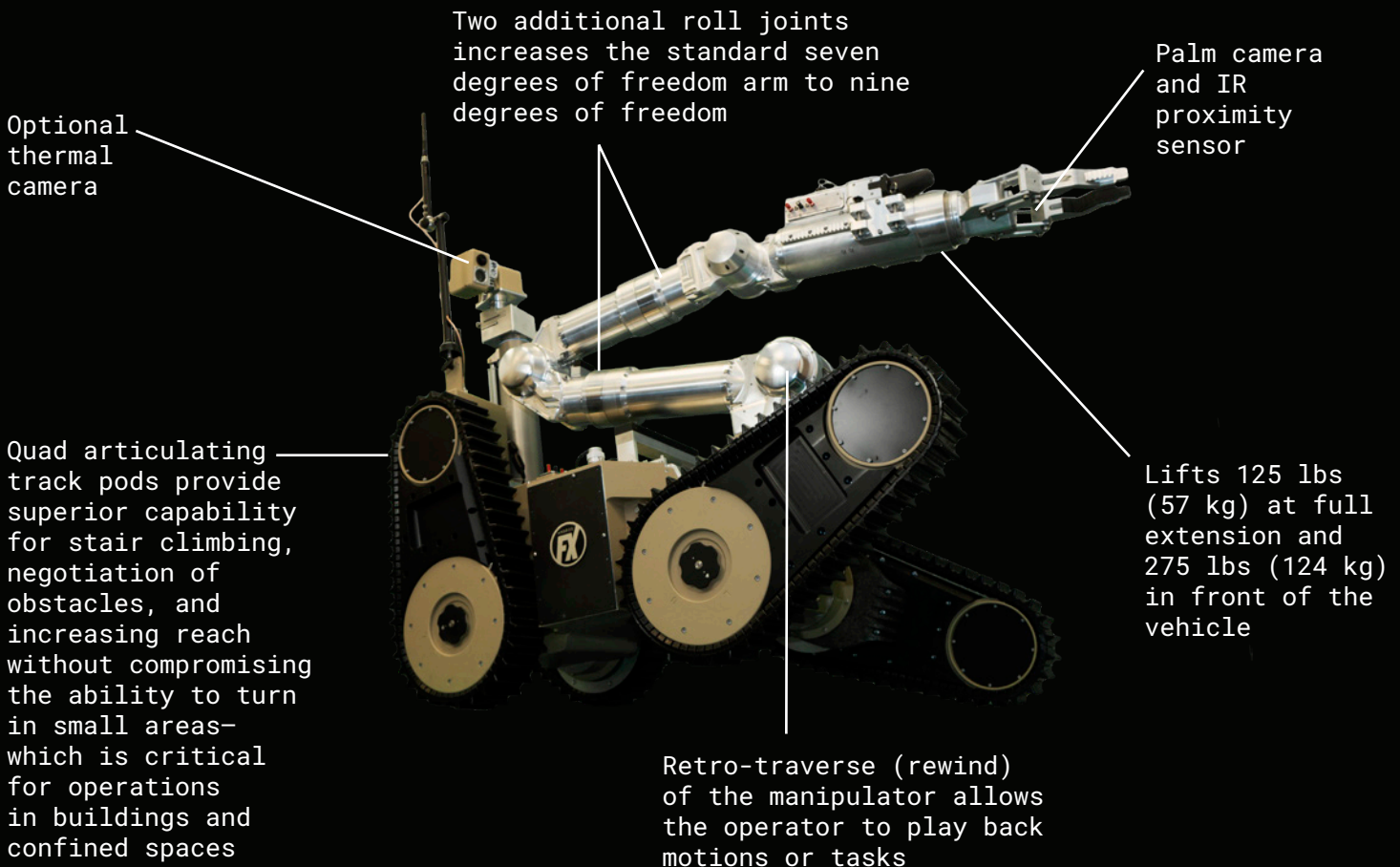
- Quad articulators provide the mobility needed for a wide range of indoor and outdoor scenarios
- Each track pod can be controlled individually to level the vehicle on uneven terrain, increasing the flexibility of employment and minimizing concerns about vehicle tip overs

Nine Degrees of Freedom Manipulator

- Two additional roll joints provide the ability to access vehicles and maneuver in confined spaces such as parking lots and buildings previously out of reach
- Significantly increased lift capacity of objects and greater dexterity for handling the toughest missions
- Gripper palm camera with lights and range estimator for faster, more accurate grasping

Improved Menu System

- 18 factory presets allow for rapid positioning of the arm and articulators
- 3-D vehicle avatar helps operators view and visualize the configuration of the arm and the articulators
- One of four cameras can be displayed
- Single camera mode offers three picture-in-picture camera windows that can be moved and resized
- Diagnostic and maintenance information provided via touch screen graphics



ANDROS FX

TECHNICAL SPECIFICATIONS

Dimensions

- Height: 55" (1397 mm)
- Width: 28" (711 mm)
- Length: 42" (1066 mm) tracks up

Weight

- 1000 lbs (454 kg)

Mobility

- Articulated tracks with position feedback capable of individual control
- Slope: 45° incline and stairs
- Speed: 0-5 mph (0-8 kph)
- Traverse: gap opening up to 27" (686mm) and obstacles up to 25" (635 mm)
- Turning: 48" (1219 mm)

Manipulator

- Variable speed control for precision
- Dual-sided quick change accessory mounting system
- Torso Rotate: +/-150° w/ position feedback
- Shoulder: 221° w/position feedback
- Lower Arm Roll: +/-170° w/ position feedback
- Elbow: 223° w/position feedback
- Upper Arm Roll: +/-170° w/ position feedback
- Wrist Pitch: 215° w/position feedback
- Wrist Extend: 6" (152.4 mm)
- Grip Rotate: 360° continuous w/feedback
- Gripper: 0"- 8" (0-203 mm) open/close
- Gripper Force: 0-125 psi (0-609 kPa)
- Gripper Range Estimator: 3.9-31.5 in (10-80 cm)
- Lifting: 275 lbs at 18" (124 kg at 457 mm); 125 lbs (57 kg) at full extension
- Vertical Reach: 137" (3480 mm) with tracks down and arm fully extended
- Horizontal Reach: 97.5" (2464 mm) from front of vehicle chassis

Cameras

- Surveillance
 - Color camera with IR switching
 - 360x zoom

- Extra low light color pan/tilt/zoom with full 360°continuous pan, +/- 90°tilt
- Auto/manual focus and iris
- LED lights with remote switching from LED to iris
- Vertical surveillance camera extend: 24" (609 mm)
- Arm
 - Color camera that switches to B&W in low light conditions
 - LED lights with remote switching from LED to IR
 - Optional surveillance pan/tilt camera with optional thermal camera
- Front and Rear Drive
 - Color camera that switches to B&W in low light conditions with fixed focus and auto iris
 - Sensitive to IR illumination
- Palm Camera
 - Color camera that switches to B&W in low light conditions with fixed focus and auto iris
 - Sensitive to IR illumination
- Optional Thermal Camera
 - Mounted in surveillance pan/tilt
- Optional Tool Camera
 - B&W low light with fixed focus and auto iris
 - Optional laser enhancing lens
 - Sensitive to IR illumination

Operator Control Unit

- Ruggedized COTS (commercial off the shelf) laptop w/touchscreen
- Game-style controller
- BB2590 battery with 110VAC/220VAC charger
- Optional legacy style switchbox controller

Audio

- Two-way audio system with weatherproof speaker and microphone

Communication

- 2000 ft (610 m) fiber optic cable reel
- 5W—license required

Radio

- 1000 m+ line of sight
- 500 m non line of sight

Electrical

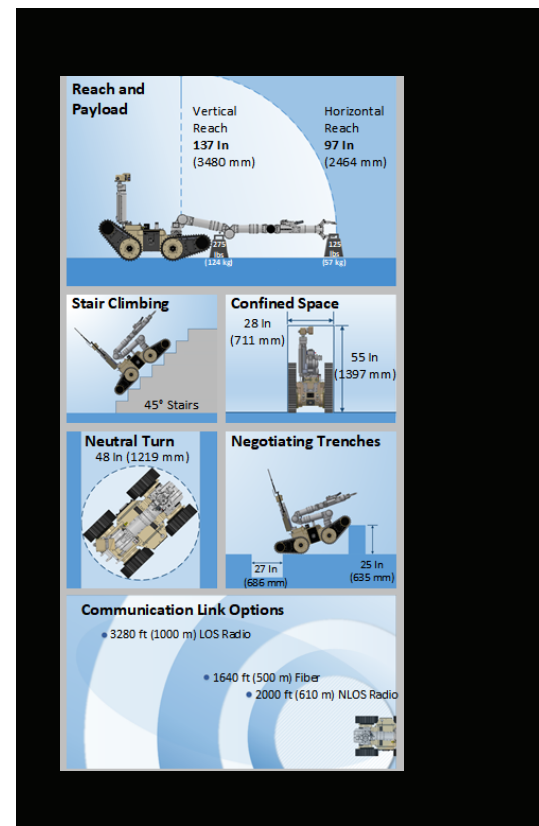
- 7 isolated firing circuits: 24VDC
- Power supply: 36VDC 55 amp-hr gel cell battery pack; battery charger, 110 or 220VAC operation

Environmental

- Designed to meet IP65
- Sealed, weather resistant enclosure
- Wet or dry surfaces
- Operating temperatures -20°C to +50°C

Other

- 2.5 days of operator/maintenance training in Clinton, TN
- One year limited warranty





ANDROS SPARTAN

UNMANNED GROUND VEHICLE SYSTEM

The Andros™ Spartan was designed based on the success, reliability, and versatility of the Andros™ 6 series platform—our flagship platform.

The Andros Spartan incorporates the same proven chassis design of the Andros™ F6 and adds the highly dexterous manipulation capabilities of the Andros FX.

Preserving the legacy of the 6 series, the Andros Spartan integrates new technologies, optimizes the user experience, and reduces time on target. These updates make the Andros Spartan an industry leader.

Vehicle and Chassis

- Dual articulation tracks with quick release wheels provide modular mobility for both indoor and outdoor use
- Spartan is powered by nine BB2590 batteries; vehicle speed is 3.3 mph (5.3 kph) with a runtime of more than six hours

Eight Degree of Freedom Manipulator

- The addition of a roll joint between the elbow and the wrist provides the ability to access areas with limited space as well as maneuver around vehicles that have traditionally required a large working area

- Spartan has a significantly increased lift capacity of objects and a greater dexterity for handling more challenging missions
- The addition of a gripper palm camera with lights and range estimator allow for faster, more accurate grasping

Operator Control Unit

- Consists of a ruggedized laptop with game-style controller and optional, large, external touchscreen
- 3-D vehicle avatar helps operators view and visualize the configuration of the arm and articulators
- Up to four cameras can be viewed at the same time and single camera mode offers three picture-in-picture camera windows that can be moved and resized
- Diagnostic and maintenance information is provided via touch screen graphics

Collision avoidance: this technology prevents the manipulator from hitting itself, articulators or chassis, vertical surveillance camera extender, pan/tilt camera, communication link, etc.

Two additional roll joints increases the standard seven degrees of freedom arm to nine degrees of freedom

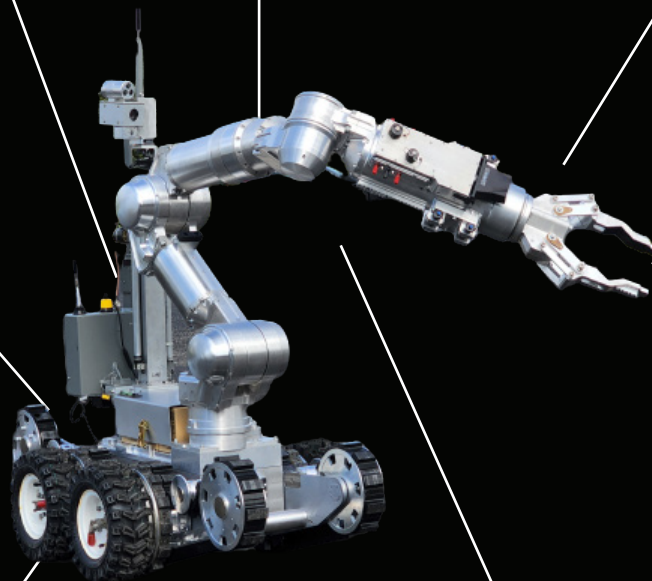
Fixed color arm camera that automatically switches to black and white in low light conditions with 360x zoom capability, night vision capability, and lighting with auto switching IR

Front drive camera, rear drive camera, and LED lighting and IR emitters. Both are color cameras that switch to black and white during low light conditions

Palm camera and IR proximity sensor

9 BB2590 batteries for an extended runtime of 6+ hours

Retro-traverse (rewind) of the manipulator allows the operator to play back motions or tasks



ANDROS SPARTAN

TECHNICAL SPECIFICATIONS

Dimensions

- Height: 55" (1397 mm)
- Width: 29" (737 mm); 17.5" (445 mm) w/out wheels
- Length: 42" (1066 mm) tracks up

Weight

- 600 lbs (272 kg)

Mobility

- Articulated tracks with position feedback and quick release wheels
- Slope: 45° incline and 37° stairs
- Speed: 0-3.4 mph (0-5.3 kph)
- Traverse: gap opening up to 21" (533 mm) and obstacles up to 18" (635 mm)
- Turning: 55" (1397 mm)

Manipulator

- Variable speed control for precision
- Dual-sided quick change accessory mounting system
- Torso Rotate: +/-150° with position feedback
- Shoulder: 221° w/position feedback
- Elbow: 223° w/position feedback
- Upper Arm Roll: +/-170° w/ position feedback
- Wrist Pitch: 215° w/position feedback
- Wrist Extend: 6" (152.4 mm)
- Grip rotate: 360° continuous w/feedback
- Gripper: 0-8" (0-203 mm) open/close
- Gripper Force: 0-125 psi (0-609 kPa)
- Gripper Range Estimator: 3.9 to 31.5" (10-80 cm)
- Lifting: 275 lbs at 18" (125 kg at 457 mm); 80 lbs (36 kg) at full extension
- Vertical Reach: 126 in (3.2 m) with tracks down and arm fully extended
- Horizontal Reach: 73 in (1.9 m) from front of vehicle chassis

Cameras

- Surveillance
 - Extra low light color pan/tilt/zoom with full 360° continuous pan, 180° tilt

- Auto/manual focus and iris
- LED lights with remote switching from white to IR
- Vertical Surveillance Camera Extend: 24" (609 mm)
- Arm
 - Color camera that switches to B&W in low light conditions
 - Optional surveillance pan/tilt camera with optional thermal camera
- Front and Rear Drive:
 - Color camera that switches to B&W in low light conditions with fixed focus and auto iris
 - Sensitive to IR illumination
- Palm Camera
 - Color camera that switches to B&W in low light conditions with fixed focus and auto iris
 - Sensitive to IR illumination
- Optional Thermal Camera
 - Mounted in surveillance pan/tilt
- Optional Tool Camera
 - B&W low light with fixed focus and auto iris
- Optional laser enhancing lens
 - Sensitive to IR illumination

Operator Control Unit

- Ruggedized COTS (commercial off the shelf) laptop w/touchscreen
- Game-style controller
- BB2590 battery with 110VAC/220VAC charger
- Optional legacy style switchbox controller

Audio

- Two-way audio system with weatherproof speaker and microphone

Communication

- 1200 ft (366 m) fiber optic cable reel
- 5W, license required
 - 1000 m+ line of sight
 - 500 m non line of sight

Electrical

- 7 Isolated firing circuits: 24VDC
- Power supply: 32VDC
 - 9 BB2590 Batteries, 92aH
 - 110VAC/220VAC charger, 2 six-bay BB250

Environmental

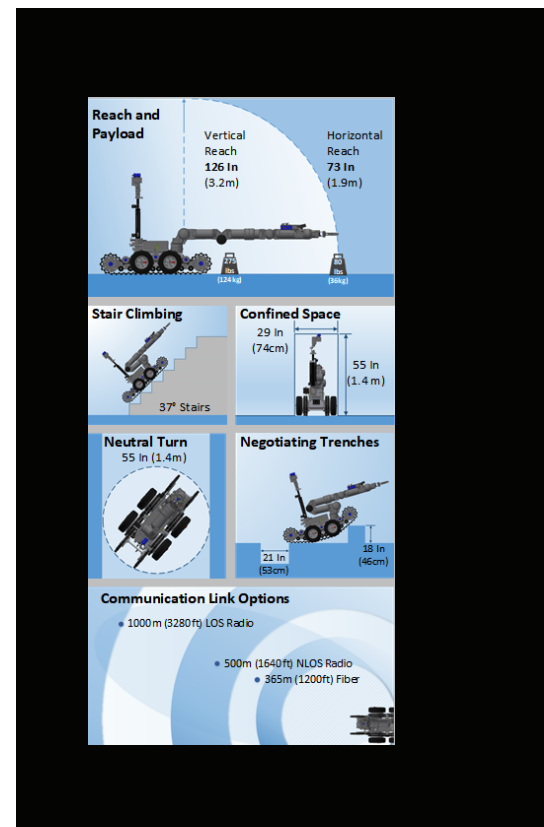
- Designed to meet IP65
- Sealed, weather resistant enclosure
- Wet or dry surfaces
- Operating temperatures -20°C to +50°C

Accessories

- Supports Andros legacy accessories including cutting, breaching, sensing, investigating, and hauling

Other

- 2.5 days of operator/maintenance training in Clinton, TN
- One year limited warranty





ANDROS TITUS

UNMANNED GROUND VEHICLE SYSTEM

Andros™ Titus provides the performance, ruggedness, and reliability expected of a larger Andros vehicle in a smaller package.

The system design is focused on mobility, manipulator dexterity, the user interface, and life cycle costs. While offering excellent initial operation capabilities, the system is designed for growth to keep your investment current well into the future.

Vehicle and Chassis

- Features unparalleled performance in sand, snow, and other fine particulates
- Modular design approach allows users to reconfigure the base unit to meet a variety of missions
- Superior stair climbing thanks to the proven Andros dual articulator design—the culmination of 30 years of extreme use
- 16.25 in (41 cm) width (w/articulators) for use on airplanes, buses, and trains
- Vehicle speed 7.5+ mph (12+ kph)
- Quick-swap BB 2590 batteries

Manipulator

- “Fly the gripper” control for ease of user operation (join-by-joint control also possible)
- Preset positioning for rapid deployment
- Six degrees of freedom, including torso rotate
- Lifting: 10 lbs (4.5 kg) full extension and 20 lbs (9 kg) close to body. Manipulator can be removed quickly, without tools, to exchange for future specialized manipulators and payload

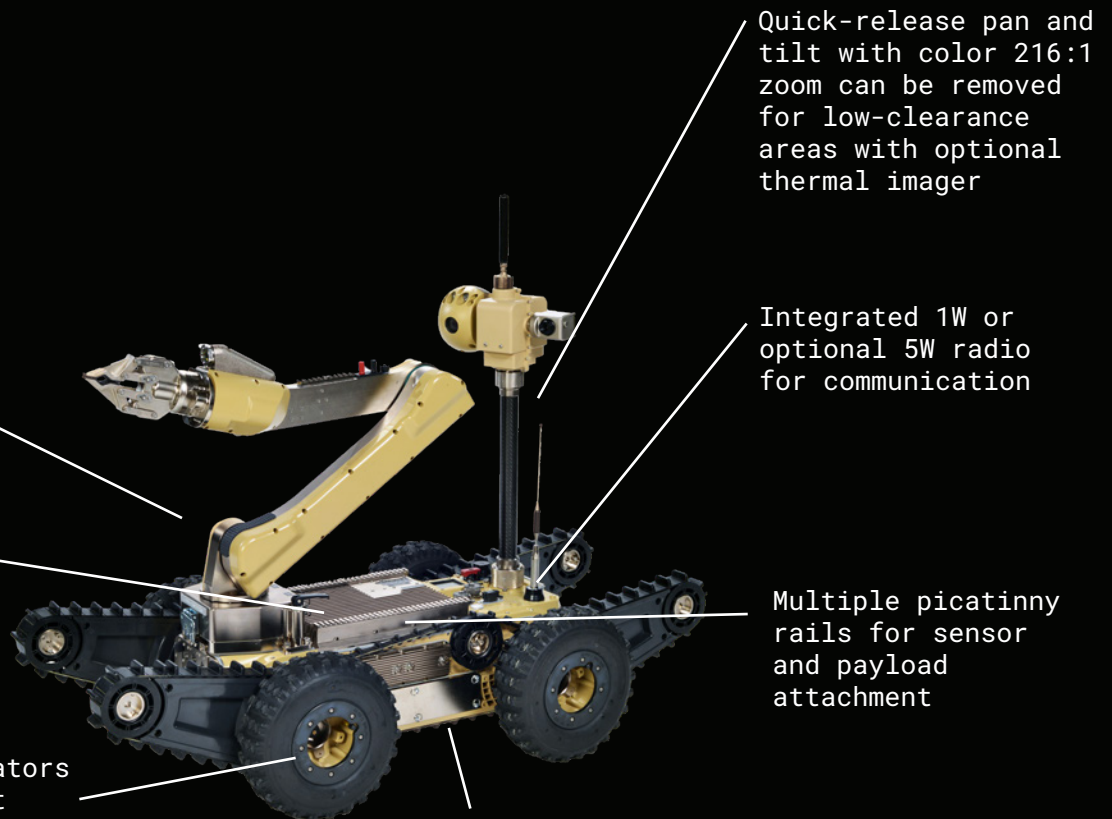
Operator Control Unit

- Innovative touchscreen/game-style controller
- Main, quad-screen, PIP camera view windows, all resizable and movable on the screen by user
- Thoughtful and easy-to-use approach to the user interface makes operation of the OCU simple
- 3-D avatar illustrates position feedback

Innovative manipulator design provides superior capability in a quick-release, versatile package

Vehicle status LCD displays robot health as well as detailed diagnostic information

Quick-release articulators and optional wheel kit provide unmatched stair climbing and mobility or can be removed for narrow spaces such as bus or airplane aisles



Quick-release pan and tilt with color 216:1 zoom can be removed for low-clearance areas with optional thermal imager

Integrated 1W or optional 5W radio for communication

Multiple picatinny rails for sensor and payload attachment

Widely used and commercially available quick-swap BB 2590 batteries

ANDROS TITUS

TECHNICAL SPECIFICATIONS

Dimensions

- Height: 45" (1143 mm) with antenna
- Width: 16.25" (413 mm) base system; 24.25" (616 mm) with optional wheels
- Length: 28.75" (730 mm) articulators folded; 51.5" (1308 mm) articulators extended
- Reach: horizontal 41" (1 m), vertical 70" (1.8 m)

Weight

- 149 lbs (66 kg) base system, including manipulator
- 165 lbs (75 kg) with wheels

Mobility

- All-terrain with four articulated tracks with position feedback
- Slope: 45° including incline and stairs
- Speed: 0 to 5+ mph (8 kph) (tracks only); 7.5+ mph (12 kph) with optional wheels
- Turning: 31" (787 mm)
- Traverse: gap opening up to 24" (61 cm) and obstacles up to 18" (46 cm)

Manipulator

- Quick-release manipulator
- Variable speed control for precision
- Torso Rotate: +/- 180°
- Shoulder: -90° to +135°
- Elbow: +/- 135°
- Wrist: +/- 135°
- Grip Rotate: 360° continuous
- Gripper: 0"- 4" (0-101 mm) open/close
- Gripper Force: 1-45 lbs (283 kPa)
- Lifting: 10 lbs (4.5 kg) at full extension; 20 lbs (9 kg) close to platform

Cameras

- Surveillance
 - Color camera with (IR) switching 216:1 zoom
 - Pan/tilt/with 360° pan; +/-90° tilt
 - Auto/manual focus and iris
 - LED lights with remote switching from white to IR
 - Optional thermal camera
- Arm
 - Color camera with fixed focus and auto iris
 - Integrated white light LED ring
- Front Drive
 - Color camera with fixed focus and auto iris
 - Integrated with light LED with IR emitters
- Rear Drive
 - Color camera with fixed focus and auto iris

Audio

- Two-way audio system with weatherproof speaker and microphone

Communication

- 1W—no license required
 - 500 m+ line of sight (LOS)
 - 350 m non line of sight (NLOS)
- 5W, license required
 - 800 m+ LOS
 - 400 m NLOS

Electrical

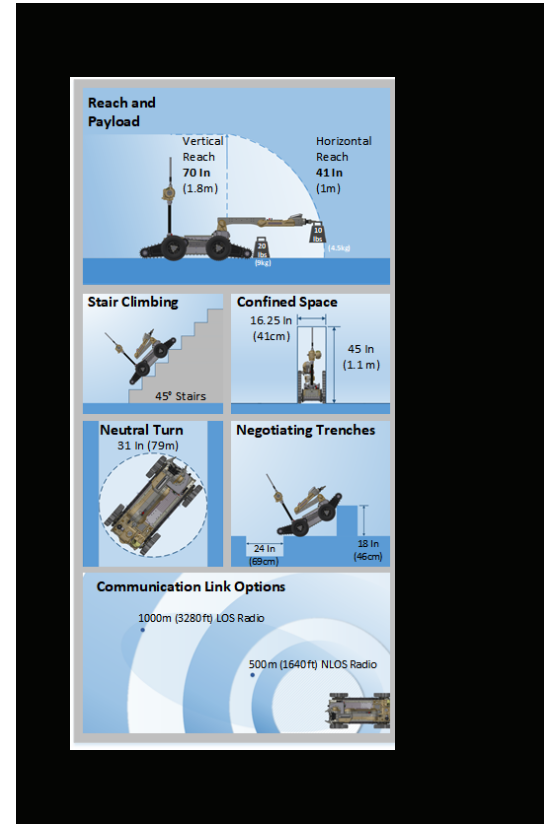
- 2 Isolated Firing Circuits: 24VDC
- Power Supply: 4 BB2590 batteries with four-bay charger
- 110 or 220 VAC operation

Environmental

- Designed to meet IP65

Other

- Toolless, quick-release wheels
- Recoilless disruptor mount
- Supports various sensors
- 1.5 days of operator/maintenance in Clinton, TN





ANDROS WOLVERINE

UNMANNED GROUND VEHICLE SYSTEM

The Andros™ Wolverine is the ultimate all-terrain workhouse, capable of navigating sand, snow, mud, and many other challenging surfaces with confidence.

Six independent drive motors with removable tracks for “free wheel” mobility mean that the Wolverine has the power to go virtually anywhere you need it to perform.

The Andros Wolverine adds the highly dexterous manipulation capabilities of the Andros™ Spartan and Andros™ FX—giving it the ability to access areas in confined spaces that are typically out of reach.

Vehicle and Chassis

- Six-wheel drive provides superior all-terrain performance
- Vehicle batteries offer extended runtime for assured success during long missions

Manipulator

- The addition of a roll joint between the elbow and wrist provides the ability to access areas with limited space as well as maneuver around and interrogate vehicles that traditionally required a large working area

- Wolverine has a significantly increased lift capacity of objects and a greater dexterity for handling more challenging missions
- The addition of a gripper palm camera with lights and range estimator allows for faster, more accurate grasping

Operator Control Unit

- Consists of a ruggedized laptop with game-style controller and optional large, external touchscreen
- 3-D vehicle avatar helps operators view and visualize the configuration of the arm and articulators
- Advanced behaviors including both factory and user-defined presets, manipulator rewind, and “fly-the-gripper” mode
- Diagnostic and maintenance information is provided via touch screen graphics
- DVR capable

ANDROS WOLVERINE

TECHNICAL SPECIFICATIONS

Dimensions

- Height: 69" (1792 mm)
- Width: 29" (445 mm)
- Length: 58" (1474 mm)

Weight

- 870 lbs. (408 kg)

Mobility

- Slope: 45° incline and 45° stairs
- Speed: 0-2 mph (0-3.2 kph)
- Traverse: openings up to 19" (482 mm)
- Turning: within the length of the vehicle

Manipulator

- Variable speed control for precision
- Dual-sided quick change accessory mounting system
- Torso Rotate: +/-150° w/ position feedback
- Shoulder: 221° w/position feedback
- Elbow: 223° w/position feedback
- Upper Arm Roll: +/-170° w/ position feedback
- Wrist Pitch: 215° w/position feedback
- Wrist Extend: 6" (152.4 mm)
- Grip Rotate: 360° continuous w/feedback
- Gripper: 0"- 8" (0-203 mm) open/close
- Gripper Force: 0-125 psi (0-609 kPa)
- Gripper Range Estimator: 3.9"-31.5" (10-80 cm)
- Lifting: 275 lbs. at 18" (125 kg at 457 mm); 80 lbs. (36 kg) at full extension
- Vertical Reach: 126" (3.2 m) w/arm fully extended
- Horizontal Reach: 95" (2.3 m) w/arm fully extended

Cameras

- Surveillance
 - Extra low light color pan/tilt/zoom with full 360° continuous pan, 180° tilt
 - Auto/manual focus and iris

- LED lights with remote switching from white to IR
- Vertical Surveillance Camera Extend: 24" (609 mm)
- Arm
 - Fixed color camera with wide angle lens
 - Optional surveillance pan/tilt camera with optional thermal camera
- Front Drive
 - Color camera that switches to B&W in low light conditions with fixed focus and auto iris
 - Sensitive to IR illumination
- Palm Camera
 - Color camera that switches to B&W in low light conditions with fixed focus and auto iris
 - Sensitive to IR illumination
- Optional Thermal Camera
 - Mounted alongside the surveillance pan/tilt
- Optional Tool Camera
 - B&W low light with fixed focus and auto iris
 - Optional laser enhancing lens
 - Sensitive to IR illumination

Operator Control Unit

- Ruggedized COTS (commercial off the shelf) laptop w/touchscreen
- Game-style controller
- Integrated docking station for power and communication link
- BB2590 battery with 110VAC/220VAC charger
- Optional legacy switchbox controller

Audio

- Two-way audio system with weatherproof speaker and microphone

Communication

- 1200' (366 m) fiber optic cable
- 5W COFDM—license required
 - -1000 m+ line of sight
 - -500 m non line of sight

Electrical

- 7 isolated firing circuits: 24VDC
- Power supply: 24VDC
 - -4 12VDC spiral—cell lead acid batteries
 - -110VAC/220VAC charger

Environmental

- Designed to meet IP65
- Sealed, weather-resistant enclosure
- Wet or dry surfaces
- Operating temperature -20°C to +50°C

Accessories

- Supports Andros legacy accessories including cutting, breaching, sensing, investigating, and hauling

Other

- 2.5 days of operation/maintenance training in Clinton, TN
- One year limited warranty

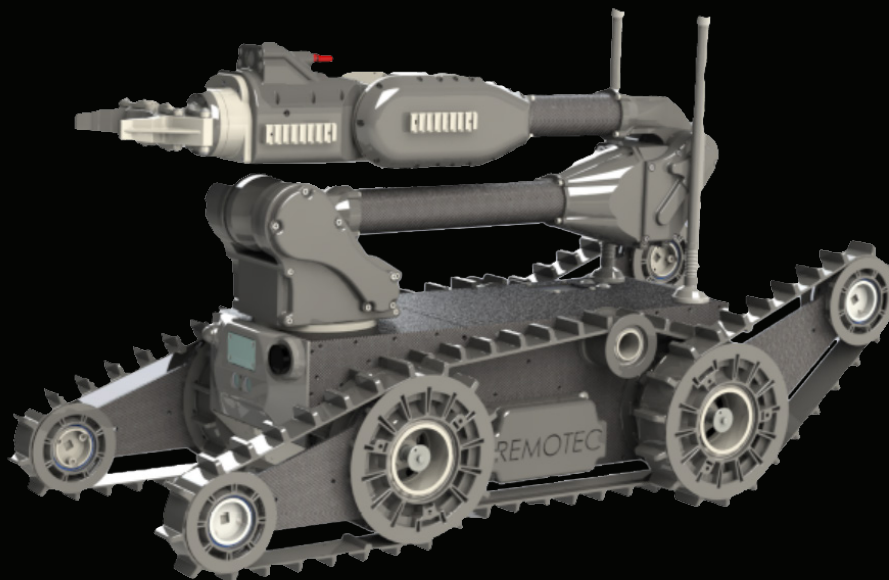


ANDROS SR1

UNMANNED GROUND VEHICLE SYSTEM

The Andros™ SR1 is a lightweight, one-man portable, unmanned ground vehicle system developed for missions requiring first look, fast reconnaissance, tactical response, and render safe for EOD operations.

From reconnaissance and negotiation to forced entry and apprehension, chassis speed and agility coupled with a dexterous and capable manipulator means the Andros SR1 gives a tactical advantage in any mission. Andros SR1 is controlled remotely by an intuitive interface from operating distances that are unmatched in industry and are standard for Remotec platforms.



ANDROS SR1

TECHNICAL SPECIFICATIONS

Dimensions

- Height: 19" (483 mm)
- Width: 16" (406 mm)
- Length: 25" (635 mm)

Weight

- 64 lbs. with 4 articulators

Mobility

- Slope: 45° incline and 45° stairs
- Speed: 5 mph (8 kph)
- Traverse: Openings up to 16.5" wide
- Turning: Within the length of the vehicle (29" diameter)

Manipulator

- Variable speed control for precision
- Quick change accessory mounting system
- Torso Rotate: +/- 175°
- Shoulder: 210°
- Elbow: 210°
- Wrist Pitch: +/- 90°
- Grip Rotate: 360° continuous w/feedback
- Gripper: 0-4"
- Gripper Force: 1-45 lbs. (283 kPa)
- Lifting: 30 lbs. at 6" from robot front; 15 lbs. at full extension
- Vertical Reach: 59" w/ arm fully extended
- Horizontal Reach: 45" w/ arm fully extended

Cameras

- **Surveillance**
 - Extra low light color pan/tilt/zoom with full 360° continuous pan and 180° tilt
 - Auto/manual focus and iris
 - LED lights with remote switching from white to IR
 - Vertical surveillance camera deploy/stow

• Arm

- Fixed-color camera with wide angle lens option

• Front and Rear Drive

- Color camera that switches to B&W in low light conditions with fixed focus and auto iris
- Sensitive to IR illumination

• Optional Thermal Camera

- Mounted alongside the surveillance pan/tilt

• Optional Tool Camera

- B&W low light with fixed focus and auto iris
- Optional laser enhancing lens
- Sensitive to IR illumination

Operator Control Unit

- Ruggedized COTS (commercial off the shelf) laptop w/touchscreen
- Optional tablet-based controller with embedded radio
- Game-style controller
- Integrated docking station for power and communication link
- BB2590 battery with 110VAC/220VAC charger
- Optional legacy switchbox controller

Audio

- Two-way audio system with weatherproof speaker and microphone

Communication

- 330' (100 m) fiber optic cable
- 1W COFDM—no license required
 - 500 m+ line of sight (LOS)
 - 350 m non line of sight (NLOS)
- 5W COFDM—license required
 - 800 m+ LOS
 - 400 m NLOS

Electrical

- 3 isolated firing circuits: 24VDC
- Power supply: 24VDC
 - 2 BB2590 lithium-ion batteries
 - 110VAC/220VAC charger

Environmental

- Designed to meet IP65
- Sealed, weather-resistant enclosure
- Wet or dry surfaces
- Operating temperature -20°C to +50°C

Accessories

- Supports Andros legacy accessories including cutting, breaching, sensing, investigating, and hauling

Other

- 2 days of operation/maintenance training in Clinton, TN
- One year limited warranty

ANDROS PRODUCTS

TRAINING AND SERVICES

PERATON REMOTEC OFFERS SPECIALIZED AND CUSTOM TRAINING CLASSES FOR ALL VEHICLES IN OUR PRODUCT LINE, TAILORED TO YOUR SPECIFIC SYSTEM AND SCHEDULE.

THE STANDARD OPERATION AND MAINTENANCE COURSE

This course covers mechanical maintenance, electrical troubleshooting, and basic operations training. This training course greatly increases users' confidence levels and teaches the importance of preventative maintenance.

Most customers take advantage of this training at the time of purchase to provide a head start incorporating their robot into their existing arsenal of EOD tools. Many customers, especially those in the military due to the reallocation of personnel, repeat the class periodically to maintain operator confidence and train personnel who did not attend the original class.

This course is included in the initial purchase of an Andros system and must be scheduled within one year of purchase.

SERVICE AND TUNE-UP TRAINING COURSE

Peraton Remotec also offers a second, more detailed class for customers whose systems have been fielded longer and experienced more strenuous use. This 30 hour Service/Tune-up course is designed to allow time to get into detailed mechanical tear-down and thorough electrical tune-up. During the class our customer's operators and technical personnel work with us to perform a complete tear down inspection and rebuild of the system.

The training personnel will re-tune all amplifier controllers as necessary and check all other boards for proper adjustment, correct any minor wiring problems, board problems, lubricate, and perform a basic cleaning of the entire system. The cost of the class includes all basic parts and material. Purchase

of additional components to replace those that cannot be repaired may be necessary.

Time is provided for basic operator training/driving tips. An additional training day for advanced driving is also available at additional cost.

This course is a great hands-on opportunity for your technical personnel. They are able to gain experience and build confidence on their hardware while becoming acquainted with new options and accessories that can enhance their current system. It also provides piece of mind—knowing that your older system is in a reliable state.

ON-SITE TRAINING

Peraton Remotec is pleased to offer either of these courses on-site with technicians and instructors that will travel to your location. The cost varies depending on the course and the travel costs associated with the location. Additional costs include airfare, hotel, car rental, training course cost, per diem, and travel labor. We can also accommodate more than six individuals and multiple robots if needed. Contact us to discuss your on-site training needs.



ANDROS PRODUCTS

CONTROL SYSTEM AND DATA LINK



Portable Operator Control Unit (OCU)

Spartan and FX are controlled using a ruggedized laptop with daylight readable touchscreen. The user interface is common between all Andros platforms with intuitive menus and quick access to features that are used to control the system. The OCU displays a 3-D avatar which is movable and resizable to indicate the position of the manipulator and articulators to increase awareness of the robot position down range. Diagnostic and maintenance information is also provided via touchscreen and graphics. The OCU can be powered by 2 BB2590 batteries with a runtime of 4-5 hours. The laptop is powered from its own battery or via AC. The OCU is compatible with Spartan and FX.



Switch Box

Legacy style switchbox controller maintains familiarity and is compatible with FX and Spartan systems.



Controller

We've also developed our own Andros game-style controller which is ruggedized and less susceptible to environmental impacts such as rain and dust. There is also the ability to add controllers for a multi-player experience where each person is operating a different part of the robot at the same time which results in efficiency and reduces time on target.

In addition to our own controller, many commercial off the shelf game-style controllers can be used to control the Spartan, FX, and Titus.



Digital Hybrid Radio

This powerful RF system utilizes a patented, proprietary radio architecture coupled with COFDM technology to provide increased ranges of up to 10x that of competing systems in line-of-site operations, and non-line-of-site ranges that are the best in the industry. It can easily operate in modern urban environments and penetrate deep into large facilities including sports stadiums and convention centers as well as in elevators and tunnels—nearly everywhere long-range operations are desired or required by the mission. This radio requires FCC licenses prior to use.



Fiber Optic Cable Reel

There are advantages over wireless. The Fiber Optic Cable Reel is a tethered link that provides crystal clear communication, features controller-operated respooling, and depending on which Andros platform, has a maximum operating distance of up to 2000 ft (600 m). Unlike radio transmissions, fiber optic communication cannot be “tuned in” by others and is not susceptible to jamming or interference.



Radio Jumper Assembly

This optional 30 ft (9 m) cable allows you to extend the placement of your console-side radio for improved RF operation.



Truck Cable Kit

Install an external data link port on your response vehicle. Various lengths of cable are available and allow you to locate the external port any distance from the operator control unit. Available in lengths of 10', 20', and 40'.

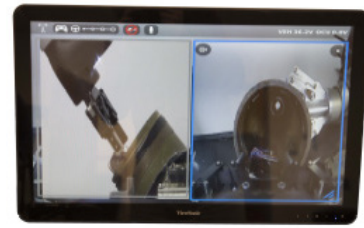
ANDROS PRODUCTS

UPGRADES

Technology development does not stand still and neither does Peraton Remotec. We are in frequent contact with our customers to help identify new and emerging requirements. We also look at capability gaps that make it difficult for robot users to effectively complete their missions.

We use all of this information to help guide our research and development program to ensure we provide products that meet the needs of our customers. As we develop new capabilities for our vehicles, we do our very best to design these capabilities so they can be added to systems already in the field.

We know your robot is a large investment. We want to do everything possible to keep it current, so you have the latest capabilities to employ on your missions.



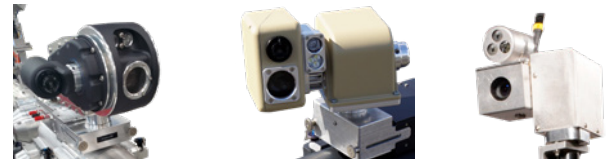
24" Color Display

Features a capacitive touch screen for improved efficiency and faster response. When used in combination with a game-style controller, command and menu navigation is intuitive and straightforward. Available for Spartan, FX, and Titus.



Camera Extender and Battery Upgrade

HDSEL Camera Extender with pan/tilt and BB2590 vehicle battery solution. Converting to the BB2590 battery assembly not only increases runtime but also reliability.



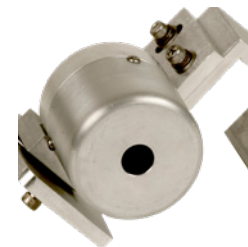
Secondary Pan and Tilt Arm Camera

Assembly can be mounted in place of the fixed arm camera for added capabilities where the platform is not able to access a space or to increase the viewing perspective of objects in relation to the gripper.



Thermal Camera

The Thermal Camera can be used for surveillance to identify persons or objects that generate heat. It mounts inside the standard pan/tilt camera housing or alongside.



Camera Sighting Kit

This camera is designed to be used with the breaching or disruptor mounts. It is a black and white camera with fixed focus and auto iris. It can be used in combination with the optional Laser and Laser Filter Assembly.



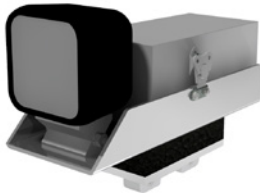
Rear Drive Camera

The Rear Drive Camera is an optional camera that can be mounted to the rear of most Andros platforms. It is a black and white camera with fixed focus and auto iris camera that can be used in low light conditions.



Laser Filter

The Laser Filter is recommended for use with the Laser Assembly. It covers the Camera Sighting Kit and increases the visibility of the laser through the camera video in bright outdoor light.



High Intensity Light Assembly (new design)

The High Intensity Light Assembly provides a penetrating beam of light useful for an operation where additional or extremely bright light is needed. The intensity of the light causes a distraction and can provide a degree of cover. The mount included it's own battery source and can be remotely switched on and off.



Laser Assembly

This 5mW laser removes the guess work from sighting weapons. Disruptors with measured standoff benefit from two laser systems—when properly adjusted, the two laser points will converge into a single point at the exact distance of standoff.



iRecon HD Camera System

iRecon is the most capable, highest quality pan/tilt/zoom, gripper-held camera accessory on the market. The plug and play design of the iRecon takes only seconds to install. From undercarriage vehicle inspection to confined space surveillance, the capabilities of the iRecon are endless. Available for legacy systems only: F6, VA, Wolverine, and HD.



Gripper Camera Mount

Allows the Pan and Tilt Camera (sold separately) to be held in the gripper of the robot for scenarios requiring a lower profile for the robot manipulator such as looking under vehicles and in confined spaces. Available for legacy systems only: F6, VA, Wolverine and HD



Gripper Held Search Camera

This 16 in (41 cm) extended camera is held in the gripper of the robot in either a vertical or horizontal position and aids in looking under vehicles, over obstacles or in tight spaces. Lights illuminate around the camera in low light conditions.



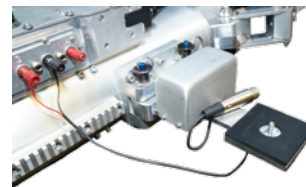
CBRNE Mount (FX Only)

This assembly integrates a combination of up to 4 sensors at one time for a comprehensive scan of an area. It can accept the Canberra, FIDO, First Defender, MultiRae Pro, and JCAD sensors and includes the mounting kits and necessary cables for each.



Contamination Smear Assembly

Place contamination sampling pads (not included) on each of the six, spring-loaded probes, then mount this clever device in the tip of the gripper. Take up to six surface samples from six different locations by swiping a surface, taking note of the number stamped at the base of the probe (visible through the arm camera), and then simply rotate the gripper to sample from another location.



X-Ray Assembly

The X-ray assembly mount allows the user to mount Golden X-Ray Systems XR150, XR200 and XRS-3 units to the manipulator arm for taking a radioscopic image of a suspect package, one of the easiest and safest methods of determining a suspicious device's contents.



Single or Dual Disruptor Mount

The Disruptor Mount is designed to hold either a single or pair of PAN Disruptors, 20 mm or 29 mm disruptors. The mounts are designed for many different models and types of disruptors. Wiring Harnesses are included for use with optional Lasers and Camera Sighting Camera Kit.



Breacher Mount 37 and 40 mm

The mount is used in applications where 37mm projectiles such as gas canisters or other less-lethal munitions are desired. Breacher options include: GL6 40 mm (with or without rifling), GL6 37 mm (smooth bore short or large cartridge), and BR-SL65 37 mm (Sage or Arwen ammo).



Stock Tube Initiator

A shock tube initiator can be mounted to any Andros platform to remotely detonate a disruptor or other device non-electrically. Available in 2 or 4 channels units.



Charge Dropper Assembly

Use your Andros system to place explosive charges remotely and then retreat to a safe distance (330 ft. length) before detonating. Charge dropper assembly mounts behind gripper and includes quick-release pin system.

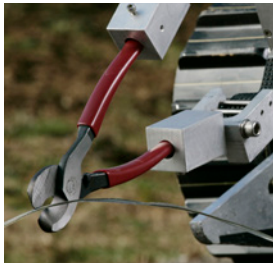
ANDROS PRODUCTS

ACCESSORIES



Gripper Block Assembly

This gripper block, which is held in the gripper, is designed to hold widths of 1 in (2.5 cm) PVC (or other similarly sized mechanisms) as frangible standoff. The operator can place it aside for full use of the platform's gripper, and then pick the tool back up by the Gripper Block for further use or retrieval.



Picatinny Rail Cable Cutter Assembly

Attaches to the end of the gripper fingers and allows operation of cable cutters. Gain access to areas by cutting through various cables, fences, wires, and other obstacles preventing entry.



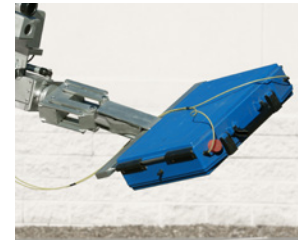
Picatinny Rail Claw Assembly

These stainless steel claws can be mounted with claws inward for gripping object (pipe bombs) or outward for opening cardboard boxes or any other soft material containers.



Circular Saw Assembly

Circular saw assembly (battery included) is held within the gripper of the robot for remote operation. It can be held either vertical or horizontal and accepts various blades for cutting different materials.



Water Disruptor Deployer

Allows placement of a "suitcase" style disruptor under a vehicle or low profile compartment. Once the disruptor is properly placed, simply back the robot away and remotely detonate.



Cordless Drill Assembly

Cordless Drill Assembly (battery included) is held within the gripper of the robot for remote operation. It accepts various drill bits for drilling through different materials and sizes.



Ideal Mini Gander System

Able to pierce walls, windows, peer under cars, into trailers, and crawl spaces using spear point. Operation ready in under one minute and weighing less than 10 lbs (4.5 kg) the system includes two low-light black and white cameras as well as white lights for illumination.



Reciprocating Saw Assembly

Reciprocating Saw Assembly (battery included) is held within the gripper of the robot for remote operation. It accepts various blades for cutting different material.



Power Hawk Assembly

This system allows for the full use of the Power Hawk while maintaining a safe distance through the agility and dependability of the robot, allowing you to perform forcible entry, remote cutting operations, vehicle access, mechanical breaching, open locks, cut through reinforced doors, 3/8" steel plate, and burglar bars. This assembly includes the Power Hawk unit, Power Hawk Integration Kit, and Power Hawk carrying case.



Block Accessory Tool System (B.A.T.S)

B.A.T.S, from Edge Tactical, is for mitigation and speedy recovery from IEDs or potential suicide bombers. Some of the system's capabilities include the ability to disable a vehicle, break a car window, cut a suicide bomber vest away from a suspect, or rescue a person without losing the full use of your Andros gripper. Kit includes: One Andros compatible gripper block, two Picatinny rail gripper blocks, and a rubberized flat hook, cutting hook, rescue hook, large deflator/punch, small deflator/punch, package ripper, window breaker, and custom carrying case.

ANDROS PRODUCTS

MAINTENANCE AND MISCELLANEOUS



Spare Vehicle Battery

Extend the mission time of your Andros platform with a spare vehicle battery. Batteries are easily accessible and easy to change out, ensuring that your operation can continue with minimal disruption. (FX battery shown, available for all models).



Continued Product Support

Continued product support as well as new enhanced features will be released as system software update USB thumb drives. The USB drives will allow the end user to update their Andros system software and firmware quickly and easily.

Spare Tracks or Tires

Tracks or tires worn, chewed, or broken during a mission? Keep the operation going by having a spare on hand for quick and easy replacement.

Emergency Spare Parts Kit

This kit contains every major electrical component found inside your Andros along with hardware to rebuild one side of your machine's chassis. For a complete list of included components, please contact Peraton Remotec sales or service departments.

Andros Overhaul Kit

The Overhaul Kit is designed to provide you with everything necessary to renew the investment you made in purchasing an Andros robot. Including a new battery and all hardware necessary to rebuild/renew all components of the arm and chassis.

Semi-Annual Maintenance Kit

Periodic maintenance is essential in keeping your Andros in top operating condition. Remotec service recommends performing chassis maintenance at least twice yearly. This kit contains all of the hardware necessary to perform one of these maintenance sessions. For a complete list of included components, please contact Peraton Remotec sales or service.

Extended Service Contract

Keep your Andros under a Peraton Remotec service contract plan beyond the included first year. Contact Peraton Remotec sales or service for more information. Under the Extended Service Contract, Peraton Remotec will replace minor hardware (screws, nuts, etc.) as necessary, replace any gaskets, and repair any stripped holes as required to ensure reliable future performance.



CONTACT US

Peraton Remotec

353 JD Yarnell Parkway, Clinton, TN 37716

865.483. 0228

PRODUCT INFORMATION

To learn more about our products and get answers to your questions, please contact our sales department:

remotecsales@peraton.com

SERVICE INFORMATION

To see what Peraton Remotec can do to increase the capabilities of your current system, please contact our service department:

remotecs-service@peraton.com

865.483.1492

ABOUT PERATON

Peraton drives missions of consequence spanning the globe and extending to the farthest reaches of the galaxy. As the world's leading mission capability integrator and transformative enterprise IT provider, we deliver trusted and highly differentiated national security solutions and technologies that keep people safe and secure. Peraton serves as a valued partner to essential government agencies across the intelligence, space, cyber, defense, citizen security, health, and state and local markets. Every day, our employees do the can't be done, solving the most daunting challenges facing our customers.