QinetiQ North America is the world leader in unmanned ground vehicles and their controllers. Ranging in size from 10 to 12,500 pounds, QinetiQ’s unmanned platforms perform a myriad of customer missions to separate good people from the dangers they face.

QinetiQ provides a wide range of defense and security products and solutions to the defense, civilian government and commercial markets.

We focus on high technology research and development, and the rapid development of concepts into proven products and solutions that support survivability, unmanned systems, maritime and transportation programs. QinetiQ is a world leader in robotic technology solutions that save lives in defense, security and first responder environments.
Dragon Runner™ 10

Highlights

• Specifically designed for dismounted, small units to enhance reconnaissance missions, early warning and overall situational awareness
• Small enough to fit inside a rucksack
• Tough enough to be thrown, survive rough handling and perform in adverse weather
• Accepts modular payloads such as a manipulator arm and sensors

www.QinetiQ-NA.com/dragonrunner
DR10 Summary

The DR10 Micro Unmanned Ground Vehicle (MUGV) is a lightweight, compact, multi-mission remote platform developed for supporting small unit dismounted operations. While using a wearable controller, the warfighter sends the DR10 ahead of his small unit to gain situational awareness and take action.

DR10’s day and night sensors allow it to serve as the forward eyes of the team, while also delivering remote sensors, emplacing counter-IED charges and more.

Specifications

- Weight: Starting at 5 - 8 lbs
- Dimensions: 16.8 in L x 14.0 in W x 6.5 in H (no payload)
- Ground Clearance: 2.3 in
- Throwable Range: 6 ft - 12 ft
- Invertibility: automatically flips video image, antennae and controls
- Cameras: IR sensitive with IR and white light illumination front and rear cameras
- Payload: 8 lb lift capacity
- Navigational Features: compass and GPS for heading and precise location
- Speed: 4 mph
- RF Range: 300 m, 600 m (internal/external antennae)
- Environmental: IP65
- Controller: handheld, 6.5 in or 3.5 in daylight readable display
- Mobility: tracked, stair climbing kit available
- Endurance: 2 hours (profile-dependent)
Dragon Runner™ 20

Highlights

Dragon Runner 20 (DR20) small unmanned ground vehicle (SUGV) provides support across a wide range of mission scenarios:

• Reconnaissance - buildings, sewers, drainpipes access tunnels, caves
• Perimeter/checkpoint security
• Under-vehicle inspection
• Interior inspection - bus, train, plane
• Hostage barricade reconnaissance
• Explosive device detection, clearance and defeat
• Highly mobile in deep sand, snow, standing water, loose gravel, tall grass, curbs, stairs, tunnels, etc.

www.QinetiQ-NA.com/dragonrunner
DR20 Summary

Small and lightweight, yet rugged and feature-packed, QinetiQ North America’s innovative DR20 SUGV is a highly specialized unmanned system uniquely suited to give users the ability to literally see around corners and into tight spaces. Modular and reconfigurable, the mission dictates exactly how DR20 will be used – making it the perfect choice for a wide range of military applications. The DR20 SUGV provides a flexible solution for ordnance disposal, reconnaissance, inspection and security missions in military and first responder applications.

Specifications

- Weight: Starting at 20 lbs
- Dimensions: 18.5 in L x 15.0 in W x 6.5 in H (no payload)
- Lift Capacity: 10 lbs (max) manipulator arm lift capacity
- Cameras: IR sensitive with IR and white light Illumination front and rear
- Accepts Payloads: sensors, manipulator arms, cameras, etc
- Speed: 4.4 mph
- Environmental: IP65
- RF Range: 650m (LOS)
- Controller: handheld, 6.5 in daylight readable display
- Endurance: 2-3 hours, mission dependent

Available upgrades and modular attachments:
- Extended tracks
- RSTA: thermal, zoom, additional IR and white light illumination
- Multi-axis manipulator arms
- Compatible with DR10 payloads
TALON®

Highlights

• Most widely used medium-sized robot in the world with U.S. military, law enforcement and first responders globally
• Equipped to serve in highly radio frequency-congested inner cities
• Long distance remote operation
• Disruptor-ready manipulator arm, wrist and gripper for exceptional combined lifting, dragging, towing and grabbing capabilities
• Long-range and agile wireless digital and analog communications
• Drags heavy weights

www.QinetiQ-NA.com/talon
TALON Summary

Since its introduction more than a decade ago, QinetiQ North America’s TALON family of robots has earned a reputation for durability, flexibility, modularity and performance in keeping personnel, assets and civilians out of harm’s way. TALON robots are powerful, lightweight tracked vehicles that are widely used for explosive ordnance disposal, reconnaissance, communications, sensing, security, defense and rescue. They have all-weather, day/night and amphibious capabilities and can navigate virtually any terrain. TALON robots continue to evolve to meet the changing needs of their users.

Specifications

- Easily transported starting at 115 lbs (52kg)
- Rugged and mobile
- Four infrared-illuminated color cameras, including a pan/tilt mast with 300:1 zoom camera
- High payload capacity supports a broad range of sensor packages
- One of the fastest robots on the market
- Easy to operate, maintain and sustain
- Attachments include two-way hailer, various disrupter mounts, thermal camera upgrade packages, magnetic antenna mounts, CBRNE (chemical, biological, radiological and nuclear) sensors and more
TALON® Hazmat

Highlights

- Tray-mounted detection capabilities on standard TALON (2 DOF)
- TALON with heavy lift arm (3 DOF) can accommodate many sensors on the arm
- JCAD (joint chemical agent detector) for CWAs (chemical warfare agents) and TICs (toxic industrial chemicals)
- RAE MultiRAE Plus for volatile gases
- Canberra AN/UDR-14 for gamma and neutron radiation
- Raytek temperature probe for temperature sensing
- Thermo scientific FirstDefender® RMX

www.QinetiQ-NA.com/talon
TALON Hazmat Summary

Modular CBRNE kits are now available as additions to new or existing models of the GEN IV TALON robot. Any existing TALON IV can be upgraded to support the CBRNE/Hazmat module. It can come with an easy on/easy off mounting tray with attachment brackets for the JCAD, MultiRAE, AN/UDR14 and Raytek sensors. The Fido and RMX detectors can be used interchangeably on the gripper via another easy on/easy off attachment.

Specifications

Integrated Sensors
- Smith’s Detection LCD3.2E - detects CWAs and TICs
- Canberra AN/UDR - 14 - detects radiation (neutron and gamma dose)
- RAE Systems MultiRAE Plus - confined space gas monitor
- Raytek® temperature probe
- ICX™ Fido® XT - detects trace explosives
- ThermoFisher Scientific FirstDefender® RMX - identifies chemicals
- Golden Engineering, Inc. X-ray systems

TALON (select either)
- Standard TALON IV with 2DOF arm
- Talon with 3DOF heavy lift arm

Controllers (select either)
- Operator control unit (OCU)
- Laptop control unit (LCU)
MAARS®

Highlights

• Advanced tele-operated remote weapons platform, providing reconnaissance, surveillance and target acquisition (RSTA)
• Provides remote options to commanders for reconnaissance, assaults, ambushes, hostage rescue, forced entry, booby-trapped areas, detainee riots, site security and improvised explosive device detection
• Easy-to-learn, wearable control system
• Turret-mounted sensors and optional weapons
• Man-in-the-loop at all times

www.QinetiQ-NA.com/maars
MAARS Summary
Armed reconnaissance robot with non-lethal, less-than lethal and lethal capabilities operated by the new Tactical Robotic Controller (TRC). Increased situation awareness from cameras, sensors and icons showing position of weapon in relation to operator and to multiple camera views.

Specifications
- Operating Weight: up to 350 lbs when all sensors, weapons, and ammunition are carried
- Operating range over 800 m LOS from the operator
- Turret-mounted sensors and optional weapons
- Unibody frame with easy battery and electronics accessibility
- Large payload bay for additional capabilities
- High torque motors for fast cross country ground speeds and improved braking
- Batteries last 3-12 hours based upon mission activities, with integrated sleep mode to save battery power lasting up to a week
- Redundant safety features and diagnostics
- All actions commanded by the operator
RAIDER™ II

Highlights

• Three modes of operation: manned, tele-op, semi-autonomous
• Autonomy behaviors include: obstacle detection, obstacle avoidance, follow-me, waypoint navigation and return to origin
• Autonomous security with 360 degree personnel approach sensor
• Autonomous behavior can be utilized for a multitude of military missions: resupply, MedEvac, reconnaissance and carrying supplies for reduced combat load
• Optionally driveable by users

www.QinetiQ-NA.com/raider
RAIDER II Summary

Raider II is a multi-mission, diesel powered, semi-autonomous vehicle designed to lighten the load for the warfighter. In manned mode, an operator can drive and maneuver the vehicle at speeds up to 35mph. In tele-op mode, the Raider II is operated with the man-portable TRC to a distance of over 1 km. In semi-autonomous mode, the Raider II can be maneuvered utilizing a number of different methods including: follow me, waypoint following and return to origin at 0-5 mph.

Specifications

- Daylight and thermal pan/tilt/zoom camera
- 640 x 480 optical zoom thermal camera
- Four camera pods providing 360 degree situational awareness
- Side mounts for 10 rucksacks
- Bed mounts to secure 2 x litters
- Self-recovery via multi-mount winch
- Robotic control of lift gate
- Powered by a 904 cc, 24HP, commercial-rated Yanmar Diesel Engine
- 1,750 lb payload capacity (cargo and personnel) and the ability to tow 2,000 lbs

Additional accessory features include:
- 24V NATO slave start outlet
- Tow bars front and aft, cargo box roll bar extension
- Nine gallon fuel tank permits operations up to 300 miles on a single tank of diesel fuel
- Chassis has a ground clearance of 11.5 in
Robotic Appliqué Kit™ (RAK)

Highlights

• Supports up to eight cameras for non-line of sight operation
• Microphone enables the remote operator to hear ambient sound
• Battlefield approved radio options
• GPS, two control options (laptop, Tactical Robotic Controller)
• Green and yellow warning lights to signal robotic engagement
• Anti-rollover warning system
• Remote feedback from the loader

www.QinetiQ-NA.com/rak
Robotic Appliqué Kit Summary

RAK can be installed in about 15 minutes on any of 17 models of Bobcat skid-steer, all-wheel steer or compact track loaders that are equipped with selectable joystick control (SJC). The kit temporarily turns the loader into a remotely operated “robot” capable of using most of the 68 Bobcat-approved attachments. The loader can be sent downrange to handle large, deep-buried IEDs, vehicle-borne IEDs, land mines and unexploded ordnance. Upon completion of a mission, the operator can return the loader to manual operation by turning a key on the rear of the vehicle.

Specifications

- Robotic Appliqué Kit installs in less than 15 minutes
- Can be operated in unmanned or manned modes
- Panasonic Toughbook laptop computer with Game Pad 360 controller
- Cameras: 6 fixed daylight/IR (FLIR camera compatible), PTZ 25:1 zoom camera MOOG PTZ/Thermal camera (optional)
- Quad screen, single camera with picture in picture or single screen viewing
- Military grade CONUS or OCONUS radio options
- RF Range: over 900 m line of sight
- User Interface: intuitive graphical user interface with real time system feedback
Spartacus

Highlights

• High capacity robotic platform for multiple unmanned and manned missions
• Route and path clearance
• Accepts a wide variety of Bobcat attachments
• Enables robotic excavation and preparation of fighting positions
• Accepts advanced sensors for threat detection and defeat
• Reduces the combat load
• Permits manned operation at any time without any modifications

http://www.QinetiQ-NA.com/spartacus
Spartacus Summary

QinetiQ North America developed Spartacus in partnership with the Bobcat Company. The smallest robot in the robotic line is the Bobcat T-110 diesel powered skid steer loader equipped with mine rollers and command wire rakes designed to seek out buried munitions and command wires. All Bobcat loaders with SJC, from the T-110 to the largest T-870, can be equipped with the Robotic Appliqué Kit. Flexible radio options give operators an array of CONUS, OCONUS and NATO frequency solutions.

Specifications

- Robotic Appliqué Kit installs in less than 15 minutes
- Front mine rollers/command wire rake payload system (designed for the T-110) can be installed in minutes
- Cameras: 6 fixed daylight/IR (FLIR camera compatible), PTZ 25:1 zoom camera MOOG PTZ/Thermal camera (optional)
- Speed: robotic maximum 5.2 MPH (8.4km/hr)
- Operating Height with Appliqué Kit: 96 inches (2438.4 mm)
- Operating Height without Appliqué Kit: 74 inches (1879.6mm) in this configuration, it is able to be loaded into a CH-47
- RF Range: over 900 m line of sight
- Spartacus specific:
  - Vehicle mounted fuel/water and storage capacity
  - 9500 Lbs. recovery winch
- Vehicle mounted battery charger
Tactical Robotic Controller™ (TRC)

Highlights

- Specifically designed for tactical and dismounted operations
- Simple and lightweight design for command and control of multiple unmanned systems
- Multi-mission capabilities with the ability to control multiple unmanned systems, unmanned aerial vehicles, unmanned ground vehicles and unattended ground sensors
- Advanced computing capable of running any computing system

www.QinetiQ-NA.com/trc
Remote Video Reception

In addition to controlling many types of unmanned systems produced by multiple companies, TRC serves as a Wearable Remote Video Terminal (WRVT) using AAI Corporation’s One-System Software and associated radios. Dismounted forces can now easily receive streaming video from overhead manned and unmanned aircraft, greatly increasing small unit situational awareness and protection.

TRC Summary

The TRC is a lightweight, rugged, modular system, capable of controlling a vast variety of UAVs, UGVs and UGSs. It is a hardware solution that uses a state of the art computer capable of running various operating systems. The TRC is a force multiplier that can be quickly transformed from a body-worn to a vehicle-mounted system.

Specifications

- **Endurance**: 3+ hours continuous
- **Radio Communications Modules**:
  - UAV - Raven, Wasp, Switchblade, Shrike, T-Hawk
  - UGV - TALON, Dragon Runner, Bobcat, MAARS, Raider
  - UGS WRVT
- **Processor Core**:
  - 2.2, 1.8 Ghz options
  - 256 GB SSD
  - Dual Core Architecture
  - USB/Ethernet
  - 4GB RAM
  - Bluetooth/Wi-Fi/GPS
  - Passive Cooled
- **Common Radio Port**:
  - 100GB Ethernet
  - NTSC Video Capture
  - +12/+24V
  - Audio In/Out
  - USB, RS-232
- **Packaging / Wearability**:
  - Single Pocket System
  - MOLLE system to attach to “Assault Pack”
  - Hot Swappable Batteries
- **Total weight (with hand controller)**:
  - 8lb + radios