

R-Gator

UNMANNED
GROUND VEHICLE



JOHN DEERE



R-Gator UGV.

High-tech. Supportable. Ready now.

Specifications

Operational Description

- A COTS system, R-Gator can be operated in either manned or unmanned mode in day or night missions
- Example missions: 8-hour stationary silent RECON mode, point man reconnaissance, roving patrols, transportation of ammo/ supplies, casualty evacuation, remote deployment of smaller UGVs and UAVs, large scale IED disposition

Video System (Standard - Other options are configurable)

- Fixed drive cameras
 - Front & rear cameras
 - Color
 - Resolution 520 TV lines
 - Light sensitivity 0.2 Lux F 2.0
 - 92.5-degrees field of view
- Pan/Tilt/Zoom camera
 - Color
 - 25X optical/12X digital zoom
 - Pan angle range 440 degree
 - Tile angle range 240 degree
 - Auto focus
 - Image stabilization
 - Resolution 470 TV lines
 - Light sensitivity 0.2 Lux F 2.0
- Optional - Daylight/Nighttime EOIR/Thermal PTZ
 - 25X optical/12X digital zoom
 - Solid cast-aluminum housing
 - Image stabilization

Communication (Standard - Other options are configurable)

- 900 MHz, 2.4 GHz, 4.9 GHz frequency options, compatible with other frequencies
 - Optional user provided communication equipment
- Modular design, accommodating swappable radios
- Has a 300 meter (984.25 ft.) range (other communications packages available)

Operator Control Unit

- Rugged laptop
 - Windows based
 - Game technology control system
 - Displays four video streams
 - Optional video recording with embedded date & time stamp[†]
 - Position and path playback displayed on user interface
 - Records multiple paths; ability to pause path, reverse path, repeat path
 - Optional wearable OCU
 - OCU uses gaming technology minimizing training requirements
- [†] Paths can also be recorded from vehicle-mounted Dashboard Control Unit (DCU)

Positioning

- NavCom Technology, (a John Deere Company), GPS maintains accurate vehicle location
- Advanced Inertial Navigation System for increased position accuracy
- RTK available for enhanced positioning

Obstacle Detection/ obstacle avoidance

- Two forward laser range sensors detect obstacles up to 20 meters (65.62 ft.) away in both tele-operation and autonomous mode
- Ability to detect negative obstacles
- Rear-looking laser range sensor detects obstacles

Expandability/Payload Integration

- Customer specific payloads
- Front & rear payload mounts support Ethernet and CAN for a wide array of mission payloads
- Voltage: 12 VDC & 24 VDC dual electrical bus system
- CAN and ethernet interfaces
- Current: 180 amp 12 VDC alternator
- Batteries (12 volt dual)

Engine and Electrical

Diesel, 25hp^{**}, overhead valve, 3-cylinder, liquid-cooled, 4-cycle diesel
 Alternator 180-amp
 Headlights Two 37.5-watt halogen
 Fuel System Capacity 20 L (5.3 U.S. gal.)
 Fuel No. 1 or 2 diesel or JP8 fuel
 Range approximately 300 miles (based on conditions)

Transmission

Type	Continuously Variable (CVT)
4WD Switch	Selectable
Differential Lock	Standard
Ground Speed	51.5 km/h (32 mph) with high/low range 0-29 km/h (0-18 mph) in manual mode 0-8 km/h (0-5 mph) in tele-operation mode 0-8 km/h (0-5 mph) in autonomous mode

Gear Selection	Forward, Neutral, Reverse
Steering	Rack and Pinion

Dimensions

Length	3086 mm (121.5 inches)
Width	1651 mm (65 inches)
Height	2134 mm (84 inches)
Weight (curb)	Dependent upon configuration
Seating	Two professional high-back seats
Ground Clearance	279 mm (11 inches)

Cargo Capacity

Cargo Box:	
Width	1511 mm (59.5 in.)
Length	1148 mm (45.2 in.)
Height	234 mm (9.2 in.)
Capacity:	
Volume	1.40m ³ (14.4 cu. ft.)
Towing	680 kg (1,500 lbs.) pintle hitch
Payload	Dependent upon configuration

*Optional remotely deployable payload platform

Service and Support/ Logistics

- World class John Deere customer support
- Exceeding customer requirements since 1837

For more information:
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^{*}Includes 200-lb. (91 kg) operator and 200-lb. (91 kg) passenger and maximum box capacity.

^{**}The engine horsepower information is provided by the engine manufacturer to be used for comparison purposes only.



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