

REFLEXX ROBOTICS

ARCHER-V HYBRID PLATFORM AND APPLICATIONS



ARCHER SPECIFICATIONS:

- **Series Hybrid Power**
 - Automatic battery recharge system
 - Up to 50A of available power at 24V
- **Electric Propulsion, 2WD**
 - Regenerative braking
 - Bi-directional drive mode
 - Control through external serial connection
- **Energy Reserves**
 - 100 AH battery capacity
 - 4.5 gallon fuel capacity
- **Payload Capabilities**
 - 200lbs max payload
 - 6 sq. ft. mounting area
 - Many universal mounting systems
- **Custom Steel Chassis**
 - Square tube frame
 - Modular component design
 - ATV-based off-road suspension system
- **Dimensions**
 - 26" Tall x 44" Long
 - 29.5" Wide to fit through 30" door
- **Options**
 - Roll cage (short Or tall)
 - Pan/Tilt/Zoom camera
 - Cellular or WiFi control system
 - Laptop/Gamepad control interface

ARCHER APPLICATIONS:

- **Research Vehicle**
 - Test-bed for systems development
 - Vision, Cameras, LIDAR, RADAR
 - Navigation equipment (GPS)
 - Ground search radar
 - Tele-operation
 - Autonomous vehicle test-bed
 - Mobile research platform
 - Extraterrestrial rover surrogate
 - Hazardous waste research and cleanup
 - Disaster support
 - Mobile disaster sensory research platforms
 - Volcanoes, earthquakes, tornados, hurricanes
 - Logistics Platform
 - Mobile generator
 - IED/EOD/Mine detection
 - Perimeter/Security vehicle
 - Camera rig
 - Reconnaissance vehicle

For more information go to:

<http://reflexxrobotics.com/products/platforms/archer>

For pricing and delivery, please call:

REFLEXX ROBOTICS

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The **ARCHER** platforms compared to other common robotic vehicle platforms

(military platforms not included based on cost and availability)

PARAMETER	RC CAR BASED	ARCHER V2.5	FULL SIZE VEHICLE
Basic Platform Cost	\$100 to \$5,000	\$15,000 to \$20,000 (electric version) \$25,000 to \$30,000 (hybrid version)	\$35,000 to \$80,000 (Plus cost of conversion to UGV use)
Modification necessary for UGV use?	Yes (low cost)	NO	Yes (high cost)
Designed for UGV use?	No	YES	No
Vehicle weight	Up to 20 lbs	240 - 280 lbs*	3,000 lbs+
Vehicle dimensions	6" wide x 6" tall x 12" long	29.5" wide x 26" tall x 44" long*	72" wide x 72" tall x 108" long
Payload capacity	Up to 10 lbs	Up to 200 lbs*	Up to 1,000 lbs
Payload mounting surface area	1 sq ft	6 sq ft+ (Many options)	?? sq ft (requires fabrication)
Speed range	0-5 mph	0-20 mph*	0-100 mph
Power source	Electric batteries only	Gas/electric hybrid or electric only	Gas or diesel only
Ground clearance & suspension system	.1 to 2" of clearance. Plastic toy suspension	6" of ground clearance. True off-road suspension	4 to 12" of clearance. Automotive suspension
Portability	Any vehicle	Standard truck bed, trailer, van, or trailer hitch carrier	Large Trailer & large tow vehicle
Terrain capability	Paved / smooth only	Almost any urban or rural terrain	Almost any terrain
Operating temp range	40 to 120 degrees	40 to 120 degrees*	-30 to 110 degrees
Usable indoors	Yes	Yes (fits thru 30" doorway)*	No
BI-directional drive modes	No	Yes	No
Open-source electronics	???	Yes, VEX based, open source.	No, proprietary electronics
Water fording limit	2"	10" on Hybrid version*	12"+
On-board power generation	No	Yes, up to 50 amps*	Possible (\$\$\$ to implement)
Untended operation - Hybrid version	No	Days. (on 4.5 gal. of gasoline) & 100 amp hour batteries*	Days
Untended operation - Electric version	Minutes	6-10 hours (100 amp hour batteries)*	No
Stealth / silent mode	Yes	Yes (during electric only operation)*	Not during movement.
Electric start for on-board generator	No	Yes (auto-start as necessary to charge on-board batteries)*	No
* specifications subject to change			



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