

# The only UGV with variable geometry

aunav.NEO HD is the only Unmanned Ground Vehicle (UGV) with explosives disposal capabilities (EOD/IEDD), HazMat CBRN(e) handling, as well as logistics (mule), medical support (MEDEVAC) and reconnaissance (Recce) with a variable geometry system. It can automatically increase or decrease its width in mere seconds.



## ONE ROBOT FITS ALL

- **Variable geometry system<sup>1</sup>:** the UGV automatically increases or decreases its width to optimize its mobility and stability depending on whether it's in narrow or wide spaces.
- **Platform self-stabilization:** the self-stabilization system always keeps the UGV platform in a horizontal position on stairs, ramps, slopes or uneven debris-filled terrain.
- **Plug & play payload technology:** self-detection and real-time configuration of any accessory, without the need for operator intervention.
- **Demountable:** its main arm, flippers and batteries can easily be uncoupled from the UGV without using special tools, making it easy to transport in any vehicle.
- **Strength and power:** allows the operator to manipulate and move objects of up to 80 kg easily and skillfully.
- **Autonomous capacities:** autonomous indoor and outdoor navigation systems that generate 3D maps of the environment.

<sup>1</sup>Patented.

## MAIN FEATURES

Stowed length	815 mm (32")
Stowed width	564 mm (22.2")
Stowed height	848 mm (33.4")
Traction system	4 flippers with independent or coordinated movement
Maximum speed	5 km/h (3.1 mph)
Slopes & stairs	45° (depending on surface)
Horizontal platform & stable centre of gravity	Automatically keeps the platform as horizontal as possible or maintains the centre of gravity within the area of the base of the platform
Variable geometry	The robot can dynamically change its width from 400 mm (15.7") to 680 mm (26.8") to adapt to the required situation
Platform roll and pitch "doggy" movement	Yes
Anti-overturn system	Yes
Obstacle collision avoidance system	Yes
Directional two-way audio system	Yes
Materials	Structure of aeronautical aluminium alloy and high resistance steel alloy Plastic and UV technical composites
Typical operating time	Aprox. 5 h (depending on task)
Power system	Military / Standard rechargeable lithium-ion batteries (BB-2590/U)

## ARM FEATURES

Type of arm	Electric arm
Degrees of Freedom (DoF)	7°
Base turret rotation	360°
Gripper rotation	360° endless
Maximum vertical reach (from ground level)	2,750 mm (108.3")
Maximum horizontal reach (from platform front side)	1,800 mm (70.9")
Maximum reach below ground level	- 1,300 mm (51.2")
Maximum lift capacity	80 kg
Load weighing sensor	Yes
Arm to platform and ground collision avoidance system	Yes
Gripper based "snake" movement	Yes
Turret based "snake" movement	Yes
Self-calibration	Yes

## VISION AND LIGHTING SYSTEM

Standard	Front and rear driving vision kit with EO/IR camera, dimmable LED/IR lighting system and 2 distance sensors each PTZ mast vision kit with EO/IR camera and dimmable IR lighting system End-effector vision kit with EO/IR camera, dimmable LED/IR/UV lighting system and 1 distance sensor
Options	Maximum 20 cameras (incl. Standard configuration): Platform side vision kit with 1 left and 1 right driving vision module with EO/IR camera, dimmable LED/IR/UV lighting system and 2 distance sensors each Accessory and additional views vision kit with EO/IR camera, dimmable LED/IR/UV lighting system and adjustable support Vision module with zoom camera with EO/IR camera and dimmable IR lighting system Thermal cameras 360° cameras UV cameras High-speed cameras

## DEFUSING EQUIPMENT

Disruptors	Double disruptor mounting plate with fail-safe firing circuit, disruptor vision module with EO/IR camera, dimming LED/IR/UV lighting system, 2 distance sensors, and laser pointer
Firing cable reel	Yes, with fail-safe firing, 100m
Shotgun	Shotgun mounting plate with fail-safe firing circuit, shotgun vision module with EO/IR camera, dimming IR/LED/UV lighting system, 1 distance sensor, and laser pointer

## MANIPULATORS

Parallel gripper with pressure sensor	Yes
Gripper fitted tools (BATS)	Yes

## AUTOMATIC TOOLS

Number of simultaneous tools	Two
Recoilless disruptor mount tool	Yes
Drill tool	Yes
Angular grinder	Yes
MN-MIMO Relay radio	Yes

## NAVIGATION

Out of range	When the UGV loses comms link with the OCU, it automatically returns to the point where it recovers it
Go back 15 m	The UGV autonomously goes in reverse for 15 m to get out of a narrow space
Follow-me	The UGV follows an object or person in front of it
Reverse mode	UGV in reverse with the controls as if it were in forward driving
Indoor / Outdoor navigation	Yes / Yes
GPS / Galileo / Glonass / Beidou	Yes

## OPERATOR CONTROL UNIT (OCU) aunav.ROCS

Operation	Integrated joysticks navigation and switches Gamepad
Typical operating time	Aprox. 5 h (depending on task)
Videofeeds	Up to 8 video feed simultaneously in HD
Videorecording	Yes
Screenshots	Yes
Blackout mode	Yes
3D Avatar	Yes
Power system	Rechargeable lithium-ion batteries
Communications system	MN-MIMO COFDM radio, Fibre Optic, Ethernet

## DETECTION SYSTEMS

X-Ray system	Several X-ray systems integrated
CBRN	Any under demand

The technical characteristics and equipment depend on the configuration and version of the robot. Equipment includes options. All the data is accurate, with the exception of possible typographical errors. All photos are the propriety of aunav or their use has been authorised by their respective owners.