

# The only robot with variable geometry

aunav.NEO is the only Remoted Operated Vehicle (ROV) 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 robot 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 robot 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 robot without using special tools, facilitating its adaptation to different missions as well as the transport in any vehicle.
- **Strength and power:** allows the operator to manipulate and move objects of up to 75 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 and 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<br>Plastic and UV technical composites. 3D printed caps         |
| 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)            | NEO: 2,600 mm (102.3")<br>NEO HD: 2,700 mm (106.3") |
| 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                                 | 75 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   |
| Pre-set positions (factory & user-defined)            | Yes / Yes   |

## VISION AND LIGHTING SYSTEM

|                 |   |
|-----------------|---|
| Standard        | 2 front and rear driving cameras (daylight / IR / UV LED and distance sensors)<br>1 integrated arm gripper camera (daylight / IR / UV LED and distance sensor)  |
| Options         | Maximum 20 cameras (incl. standard configuration):<br>Platform cameras (daylight / IR / UV LED and distance sensors)<br>Simple camera (daylight / IR / UL LED)<br>Thermal cameras<br>PTZ cameras<br>360° cameras<br>High-speed cameras<br>See Defusing equipment to defusing tool cameras |
| Lighting system | 4 LED (2 x front, 2 x rear)   |

## DEFUSING EQUIPMENT

|                           |  |
|---------------------------|--|
| Disruptors                | 2 disruptors with telemeter, camera (daylight / IR / UV LED and distance sensor), and laser pointer<br>1 disruptor as automatic tool with telemeter, camera, and laser pointer |
| Firing cable reel Shotgun | Yes (with 2.5 kg charge drop)<br>1 with laser telemeter and camera (daylight / IR / UV LED and distance sensor)  |

## DETECTION SYSTEMS

|              |                  |
|--------------|------------------|
| X-Ray system | Yes              |
| CBRN         | Any under demand |

## MANIPULATORS

|                                       |     |
|---------------------------------------|-----|
| Parallel gripper with pressure sensor | Yes |
| Gripper fitted tools (BATS)           | Yes |
| Elevation shovel                      | Yes |

## AUTOMATIC TOOLS

|                              |     |
|------------------------------|-----|
| Number of simultaneous tools | Two |
| Disruptor                    | Yes |
| Drill tool                   | Yes |
| Angular grinder              | Yes |
| MN-MIMO Relay radio          | Yes |

## NAVIGATION

|                                  |  |
|----------------------------------|--|
| Out of range                     | When the robot loses comms link with the OCU, it automatically returns to the point where it recovers it |
| Go back 15 m                     | The robot autonomously goes in reverse for 15 m to get out of a narrow space                             |
| Follow-me                        | The robot follows an object or person in front of it   |
| Reverse mode                     | Robot 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)

|                        |  |
|------------------------|--|
| Operation              | Integrated joysticks, navigation and switches<br>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, WiFi, Fibre Optic, Ethernet         |

## OTHERS

|             |  |
|-------------|--|
| Mast        | Yes (fixed or 2 DoF automatic)           |
| Handles     | Yes (arm and flippers can be dismounted) |
| Towing bolt | Yes (1 front and 1 rear)                 |

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 everis ADS or their use has been authorised by their respective owners.