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Ministero
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Italiadomani
PIANO NAZIONALE
DI RIPRESA E RESILIENZA

RAISE

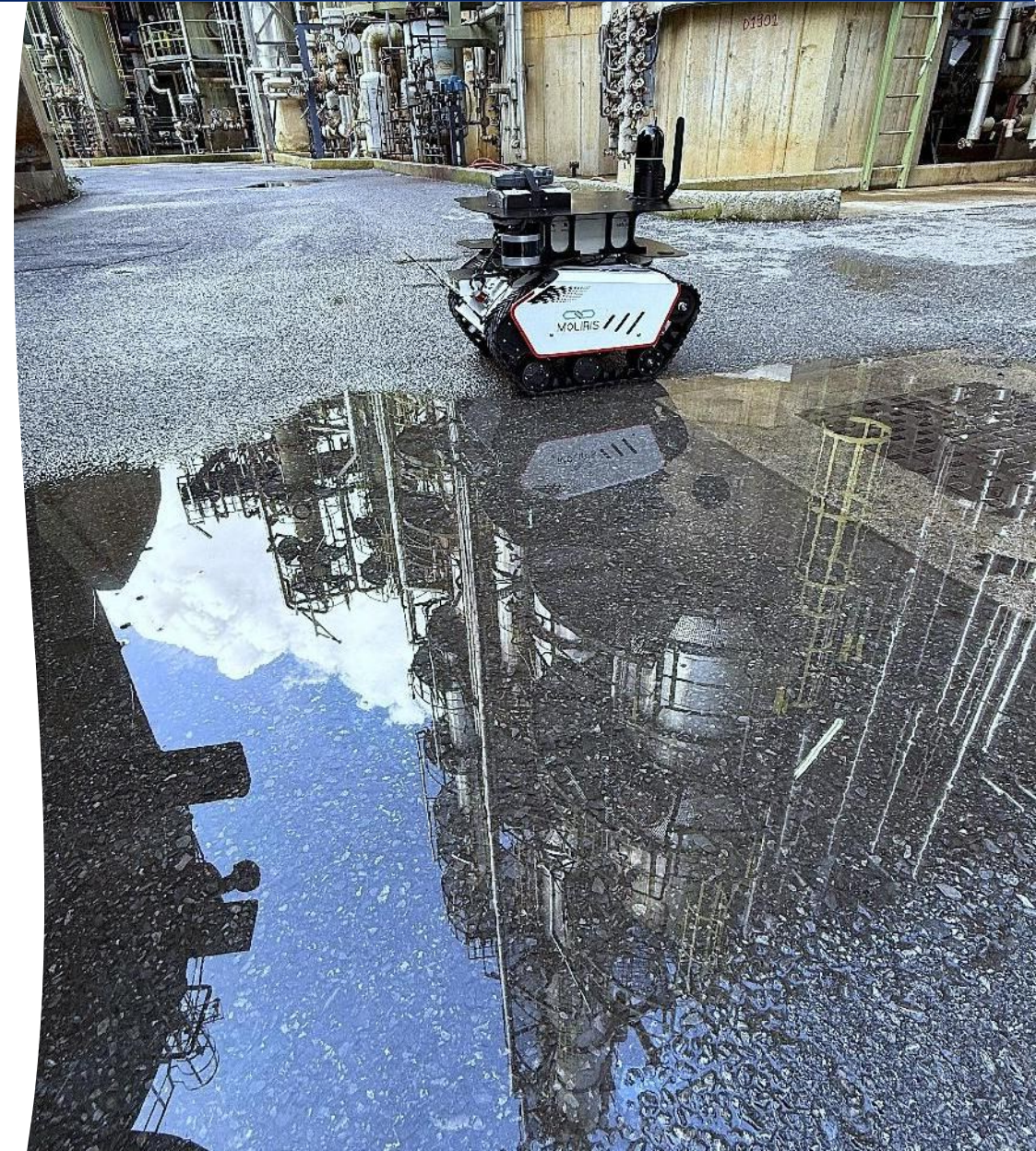


Robotics and AI for socio-economic empowerment

L'ecosistema ligure dell'innovazione, basato sui domini scientifici e tecnologici dell'AI e della Robotica.

RAISE Spoke 3 – Progetto MESSAPI

Studio di innovativi strumenti di monitoraggio ambientale di sostanze aerodisperse con l'impiego di droni in un sito industriale ligure Iplom



INNOVATIVE SENSING & CONTROL SYSTEMS



UAV SENSOR & CONTROL UNIT

- VOC, TEMPERATURA
- ALIMENTAZIONE INTERNA E PER TLC



UGV SENSOR & CONTROL UNIT

- VOC, % LEL, H2S, HC, TEMPERATURA
- ACQUISIZIONE E INOLTRO DATI DA TERMOCAMERA
- ALIMENTAZIONE INTERNA E PER TLC, GIMBAL E TERMOCAMERA

COMMUNICATION & MISSION SYSTEM



TLC - MODULO DI COMUNICAZIONE



MISSION CONTROL SOFTWARE

UGV NAVIGATION SYSTEM



NAVIGATION CONTROL UNIT



LUCI DI ILLUMINAZIONE



LUCI DI INGOMBRO



SIRENA LAMPEGGIANTE DI SEGNALAZIONE

FURTHER DEVICES



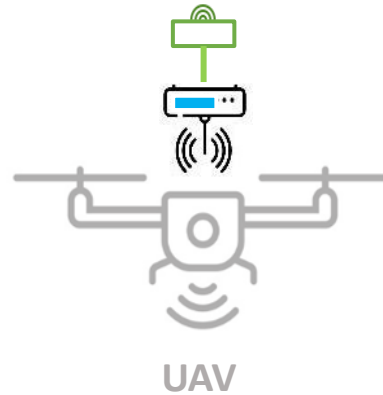
RECINTO PER PROTEZIONE DEVICE DA CADUTA



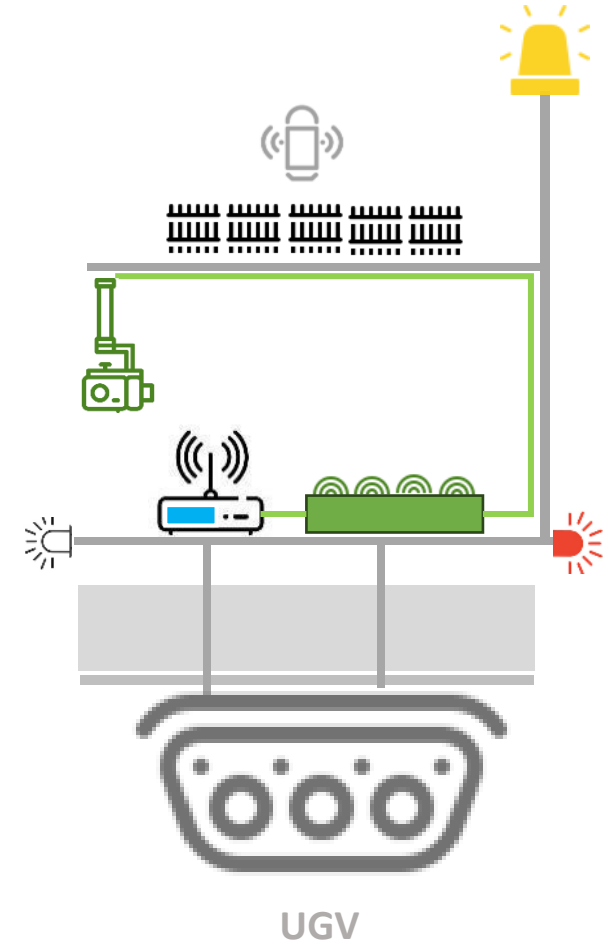
LIDAR BIM



TELECAMERA PER FOTOGRAMMETRIA

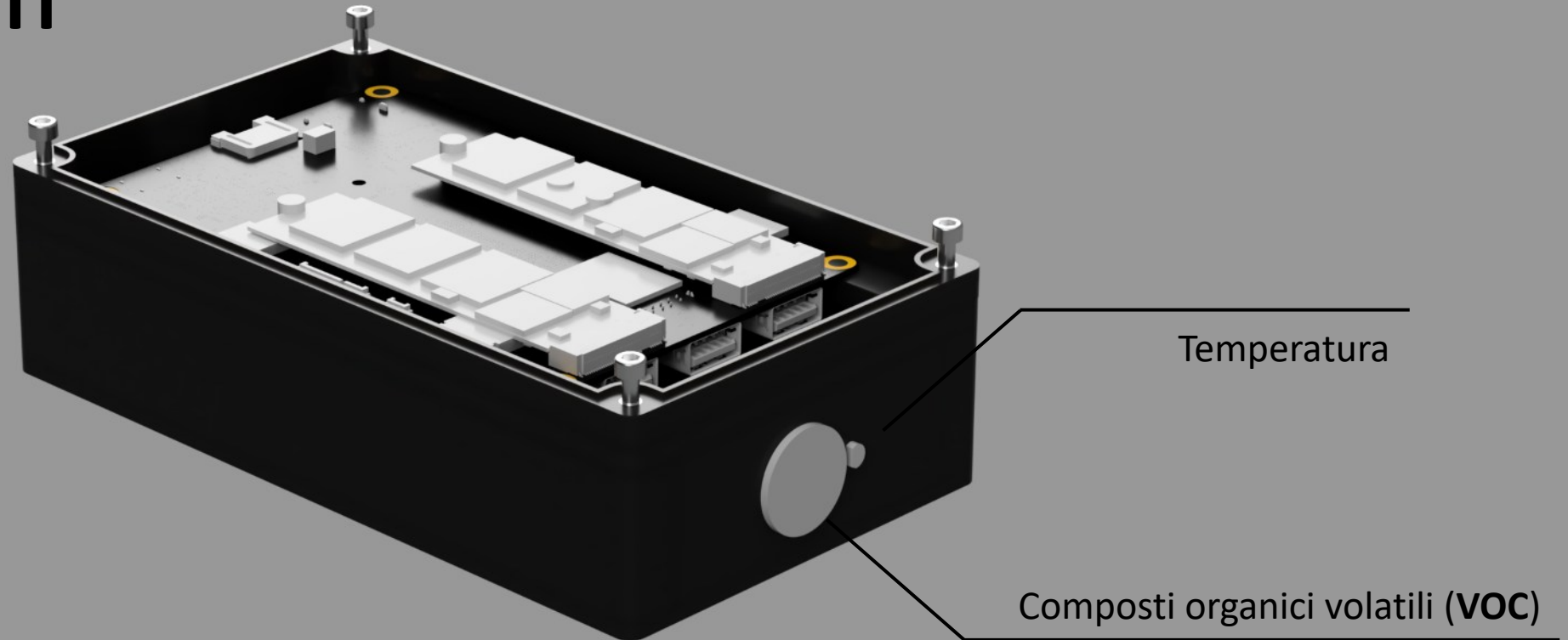


CONTROL ROOM



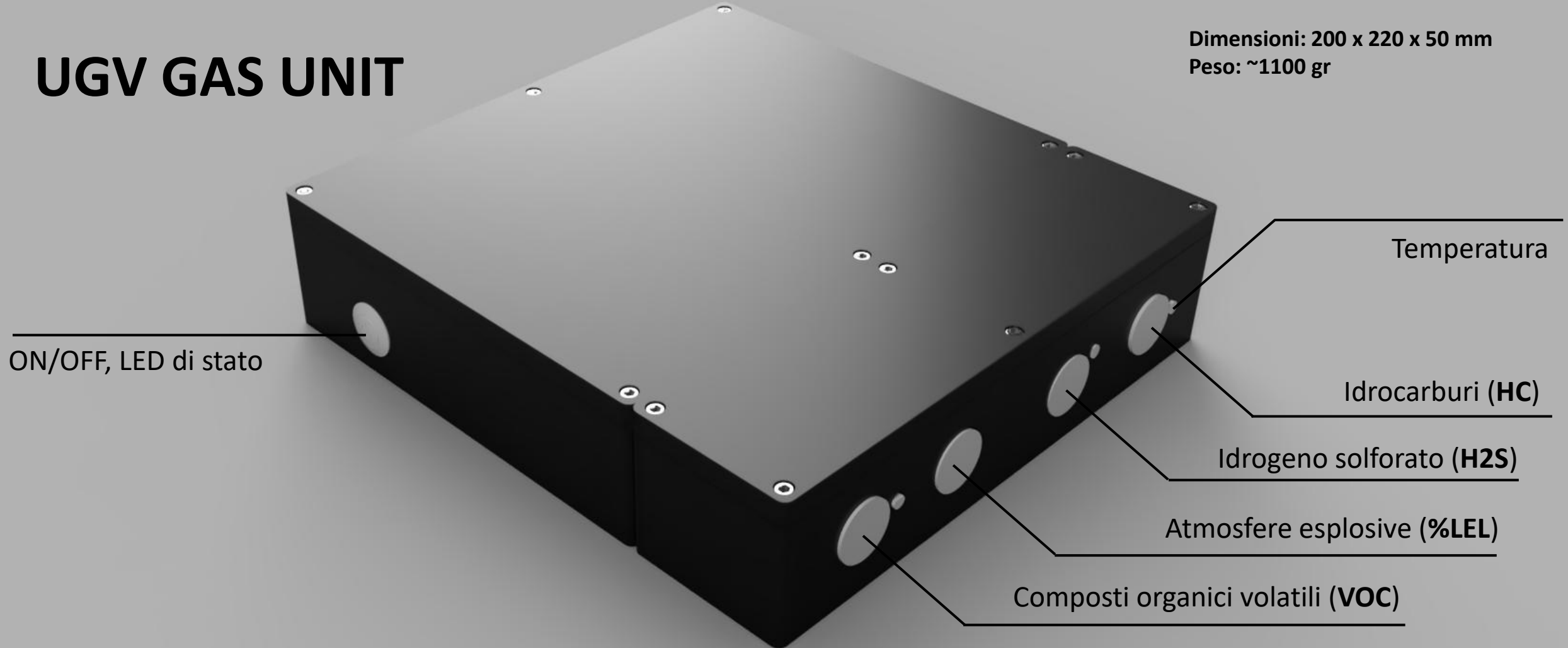
Dimensioni: 90 x 160 x 50 mm
Peso: ~550 gr

UAV GAS UNIT



UGV GAS UNIT

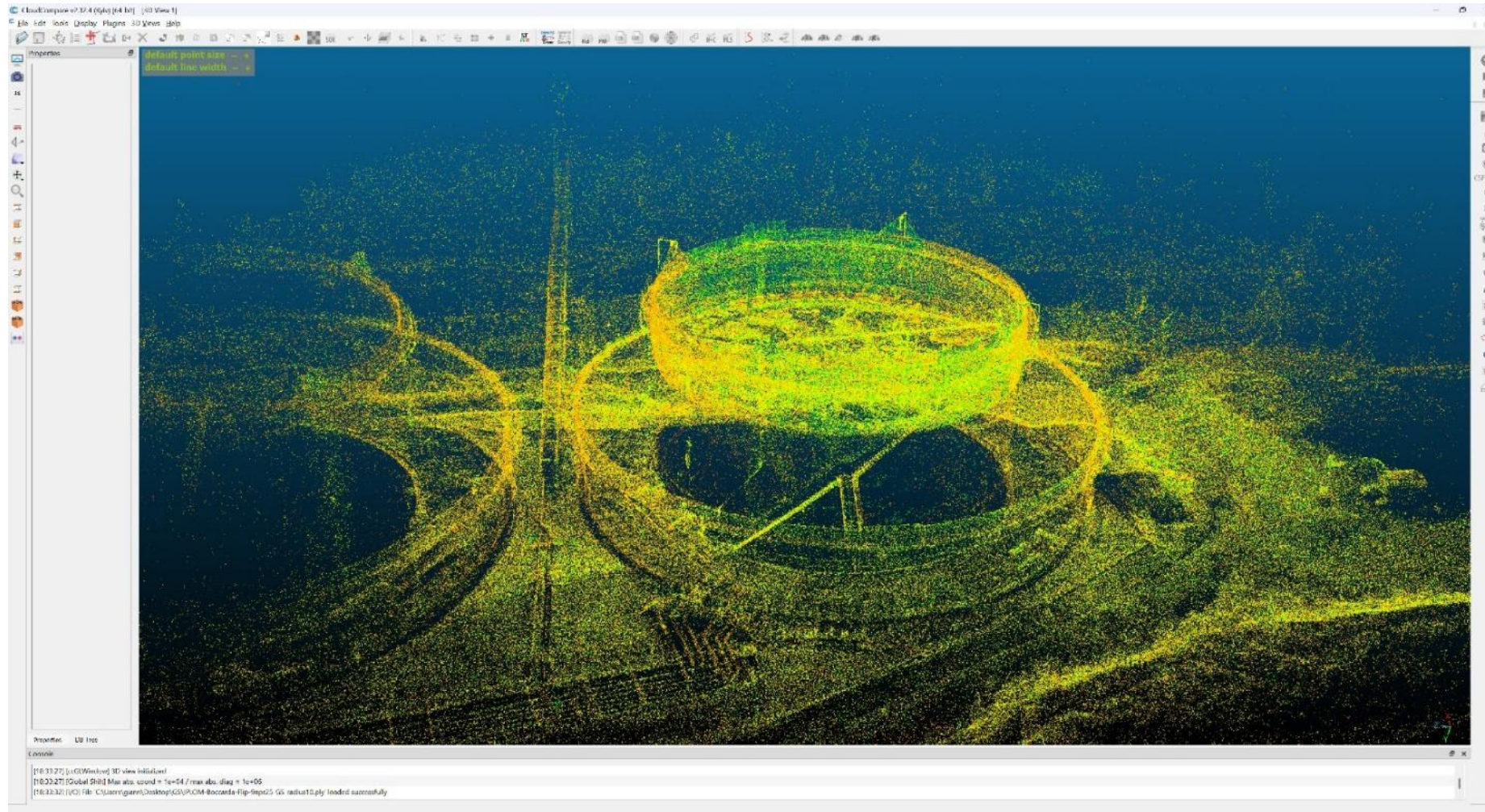
Dimensioni: 200 x 220 x 50 mm
Peso: ~1100 gr







RAISE ECS00000035 CUP J33C22001220001 | raise_2023_004_MESSAPI



IPLOM-Boccarda-Flip-9apr25_GS-viewer.html



BusallaDataset2000img_AllVideos9ott25.html



Fegino2168_croppedBox.html

RAISE ECS00000035 CUP J33C22001220001 | raise_2023_004_MESSAPI

QGroundControl

Selected Waypoint
Alt diff: 0.0 m
Gradient: --

Azimuth: 0
Heading: nan

Dist prev WP: 0.0 m

Total Mission
Distance: 0 m
Time: 00:00:00

Max telem dist: 0 m

Upload Required

Plan

Fly

File

Take

Waypoint

ROI

Pattern

Return

Center

via

Launch

25 m

Powered by QGroundControl and QGroundControl

Mission

Fence

Rally

Mission Start

All Altitudes

Relative To Launch

Initial Waypoint Alt

50.0 m

Flight speed 5.0 m/s

Camera

Vehicle Info

Launch Position

/home/manudelu/Colosseum/ros/src/mqtt_bridge/launch/fleet_management.launch http://localhost:11311

manudelu@DESKTOP-BP33DFH: ~/UAV-fleet-management/bui

manudelu@DESKTOP-BP33DFH: ~/UAV-fleet-management/gro

[2025-02-26 11:34:45.406] [companion] [info] Exter

nal thread communication started

[2025-02-26 11:34:45.406] [companion] [info] Exter

nal communication: socket listening

[2025-02-26 11:37:12.761] [companion] [info] Actio

n Takeoff

ERRORLOG/1 @ writeNMEA, L181:

ERRORLOG/1 @ writeNMEA, L181:

[2025-02-26 11:38:00.584] [companion] [error] Acti

on Takeoff error

/home/manudelu/Colosseum/ros/src/mavros/mavros/launch/f

/home/manudelu/Colosseum/ros/src/mqtt_bridge/launch/fleet

[INFO] [1740566402.589098268]: WP: item #93 F:6

C: 16 p: 15 0 0 nan x: 445797592 y: 89420052 z: 10

[INFO] [1740566402.589376045]: WP: item #94 F:6

C: 16 p: 15 0 0 nan x: 445797532 y: 89419013 z: 10

[INFO] [1740566402.589685876]: WP: item #95 F:6

C: 16 p: 15 0 0 nan x: 445797495 y: 89418895 z: 10

[INFO] [1740566402.589928816]: WP: item #96 F:6

C: 16 p: 15 0 0 nan x: 445797230 y: 89418938 z: 10

[INFO] [1740566402.590011501]: WP: mission receiv

ed

r successfully.

[INFO] [1740566405.820690]: Created UDP socket for

drone 1 on port 5001

[INFO] [1740566405.822274]: Subscribed to telemetry

data for drone 1.

[INFO] [1740566405.858200]: Received Drone ID: 1

[INFO] [1740566405.864054]: Mission uploaded for Dr

one 1. Waiting for user to start.

[INFO] [1740566406.022445]: Action server for drone

1 is ready.

RaiseUAV Anteprima [NetMode: Standalone 0] (64-bit/PC D3D SM6)

Collision Count:0

Registrazione in corso

PREMERE CTRL + SHIFT + E

PER INTERRUPERE E SALVARE

Drone Mission Control

Drone Mission Control

Drone 1

Refresh List

Start Mission

Start All Missions

REC

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