

MISSION PROFILE

HOME LOCATION

Baden-Württemberg,
GERMANY

DISTANCE TRAVELED

6,802 km (Est. to
Venue)

MATE HISTORY

Returning - 3rd
Year Participating

MEMBER LEVEL

Undergraduate Years
1-4

VEHICLE TELEMETRY

ROV NAME

LOUIS

MASS IN AIR

12.51 kg

MFG COST

\$ 13.646,70 USD
(11.565,00 €)

DIMENSIONS (LXWXH)

36 cm x 36 cm x 48
cm

STUDENT-HOURS

3,000+ Hours

MAIN COMPUTING

Raspberry Pi 5 /
RPi Pico / ESP32

SPECIALIZED SYSTEMS

Reuleaux Chassis:

Symmetric triangular geometry for precise 6-DOF movement and optimal structural efficiency.

Modular 2-Box System:

Physical decoupling of Navigation and Tool modules via a 3-pin/2-connector quick-release interface.

Common Interface (CI):

Proprietary dovetail mounting allows reconfiguration of tool elements (cameras/grippers) in under 60 seconds.

TCU Backplane:

Tool Control Unit with 4 standardized hotswap slots for sensor/actuator daughter-boards.

Autonomous Profiler:

Deployable 62 cm x 16.5 cm PMMA float utilizing a stepper-driven syringe buoyancy engine and Wi-Fi interface.

SAFETY ARCHITECTURE

Power Isolation:

Custom PDU utilizing integrated conductive standoffs with individual branch circuit protection and 5A automotive fusing.

Sealing Integrity:

5083 maritime-alloy hulls with dual 2mm O-ring interfaces; rotating shafts utilize dual-seal O-ring gaskets.

Operational Protocols:

Mandatory JSEA checklists and verbal "System Arming" warnings; two-person verification for all deployments.

Fail-Safe Systems:

Shrouded BlueRobotics T200 thrusters; physical limit switches integrated into the syringe buoyancy assembly.



LEADERSHIP & MENTORS

Jakob Kerber (CEO / Capt.)
Prof. Dr. O. Dürr, T. Hoover

ORGANISATION

Laurin Layh (Lead Finance)
Luka Sokol, Bijan Ko

SOFTWARE

Johann Spielvogel (Lead)
Francesco Torres Vila
Cross-Sup: Iheb

PILOTS

Jacob Hagmann (Lead Pilot)
Cross-Sup: J. Kerber, Iheb, Levi

MECHANICS

Jan Vorsprach (Lead)
Lena Maier, Katharina D., Kevin
Cross-Sup: Jacob H., Jacob K.

ELECTRONICS

Iheb Elleuch (Lead)
Cross-Sup: Jan, Katha, Kevin, J.H., J.K.

FLOAT

Kevin (Lead)
Berke Hakki Ari

STUDY PROJECTS

MECPRO (External)
Digital Projekt (Rotating)