The RIEGL BathyCopter is the world's first Small-UAV-based surveying system capable of measuring through the water surface, ideally suited for generating profiles of waterbodies.

The robust and reliable platform design of RIEGL's remotely piloted RiCOPTER integrates the topo-bathymetric RIEGL LiDAR sensor, an IMU/GNSS unit with antenna, a control unit, and a digital camera. The BathyCopter marks the first complete Small-UAV LiDAR solution for hydrographic data acquisition!

NEW RIEGL BathyCopter

World's first Small-UAV-Based Surveying System for Hydrographic Applications

Typical Applications

- Generation of river profiles
- Repeated survey of water reservoirs
- Canal surveying
- Landscaping
- Support of construction works
- Surveys for planning and carrying out hydraulic engineering work
RIEGL BathyCopter at a glance

- UAV-based surveying system capable of measuring through the water surface
- Ideally suited for generating profiles of water bodies
- Fully integrated solution, comprising a newly developed RIEGL green laser rangefinder, IMU/INS unit, camera, and a high performance data storage unit
- Essential performance improvement at adverse conditions based on predetection averaging
- Highly accurate, reliable and informative bathymetric data resulting from RIEGL’s proprietary know-how in echo digitization and online waveform processing

RIEGL BathyCopter Key Features

- Laser Class according to IEC60825-1:2007 2M
- Flight Altitude: up to 2,500 ft AMSL (Above Mean Sea Level)
- Operating Flight Altitude: up to 30 min
- MTOM (Maximum Take-Off Mass): < 25 kg
- Measurement Rate: 4 kHz
- Water Penetration: > 1 Secchi depth
- Camera Interfaces: 2x trigger and event marker
- Camera integrated: Sony Alpha 6000
- Power Supply: 24 V DC
- Power Consumption: 62.4 W (laser on), 57 W (laser off)
- IMU/GNSS unit: APX 15
- Operation Temperature: +10°C up to +40°C
- Main Dimensions:
  - arms folded (for transportation & storage): 624mm x 986mm x 470mm
  - arms unfolded (ready to fly): 1,920mm x 1,820mm x 470mm
- Transportation Case (dimensions): 1,220mm x 810mm x 540mm

RIEGL BathyCopter Specifications

RIEGL BathyCopter Measuring Principle

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