

ROBOTICS & UAV

**Proven and
precise object
tracking.**



Mocap for ground truth data.

Quadcopter drones and other autonomous vehicles are undergoing fast development, and the algorithms that govern their decision-making abilities and actions are becoming exponentially more complex.

To make the best design and development decisions, determining the exact position and orientation of the vehicle in six degrees of freedom in real-time, is crucial. For this purpose, Qualisys tracking systems provide high-precision 3D and 6DOF ground truth data for control and development of unmanned aerial vehicles and other autonomous machines.

ACCURATE REAL-TIME POSITIONING DATA

Basic drone autonomy is already here, but the next generation of autonomous quadcopters and AUVs requires a higher degree of situational awareness and decision-making skills. This is why using Qualisys motion capture systems for UAV development is, and continues to be, critical for success.

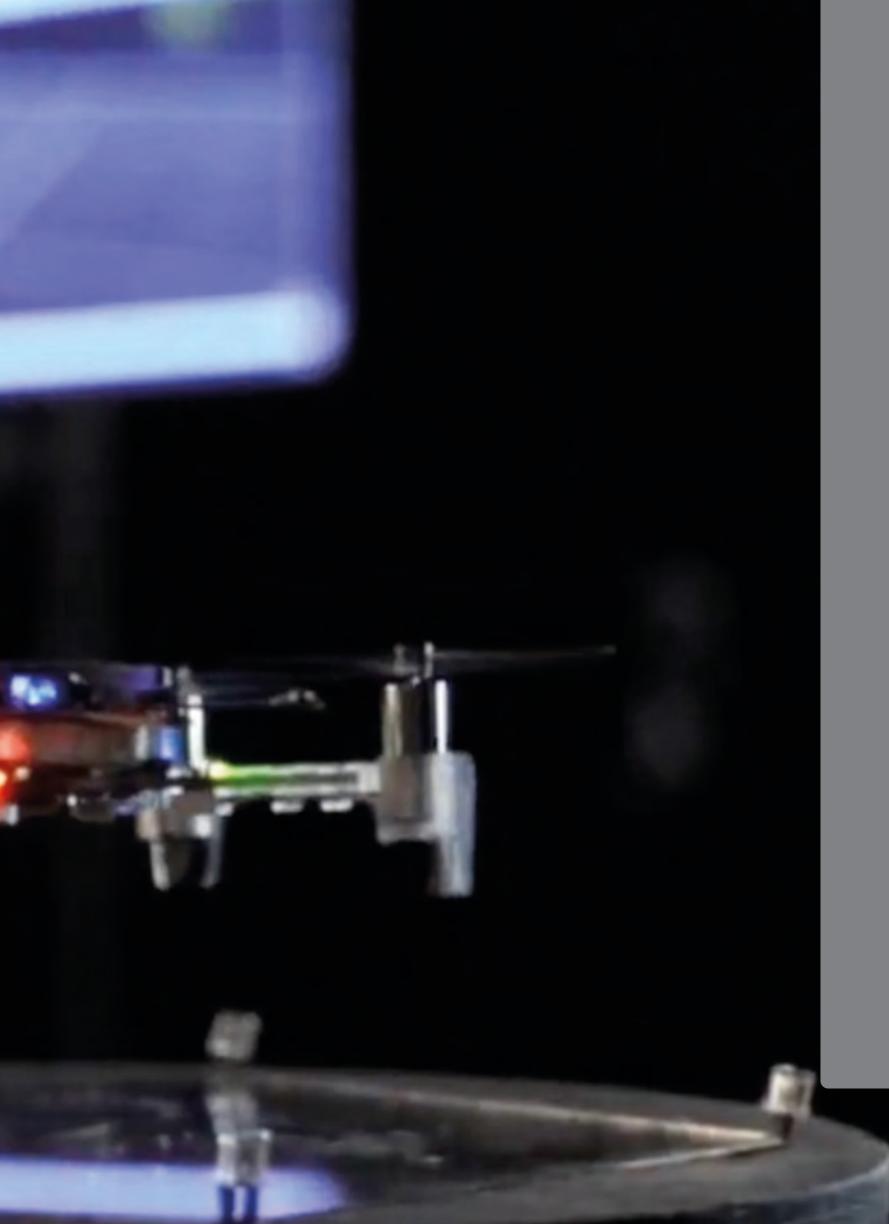
FOR DEMANDING APPLICATIONS

Our motion capture systems are scalable, portable, weather resistant and equally at home outdoors as in a controlled environment. Active marker technology allows for long-distance tracking within large volumes. Latency is low and accuracy high.

Qualisys systems also come backed with decades of experience of close co-operation with engineers and researchers in highly demanding applications.

DEVELOPING HUMANOID ROBOTS

Human biomechanics research is in our DNA, which is why Qualisys optical motion capture systems excel within the field of humanoid robotics. Our proven technology track movements of humans and objects with high resolution, in real-time and in perfect sync.



Replicate human motion by tracking human movement to develop motion algorithms for robots. Scalable, rugged systems adapt to your needs and will go wherever your robot goes.

THE ONLY UNDERWATER OPTION

Qualisys underwater systems are the only commercial option when it comes to underwater optical motion tracking. With the capability of tracking both objects and humans down to depths of 40 meters, more and more companies and institutions realize the power of using optical underwater tracking for their projects.

For research and development of UAVs and ROVs, having access to high precision 3D and 6DOF ground truth data is invaluable and key in the development of autonomy.



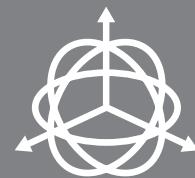
Real-time SDK

Stream motion data, such as position and orientation (6DOF) over UDP/IP to your application



Outdoor mocap

Get superior results even in harsh outdoor conditions



6DOF rigid bodies

Define, edit and stream rigid body data (6DOF)

FEATURES

- **High accuracy and high-speed ground-truth data**
- **Real-time 6DOF tracking & streaming**
- **Large volume coverage**
- **Resolution up to 26 MP**
- **Real-time latency down to 3ms**
- **Indoor, outdoor & underwater tracking**
- **Daisy-chained camera connection**
- **Passive & active marker support**

Tried. Tested. **Trusted.**

“The motion capture system delivered by Qualisys has become a cornerstone for accurate and reliable measurements which are crucial to meet the needs of our customers and go beyond the state-of-the-art solutions.”

*Glen Haggin, Aerospace Engineering Student
University of Michigan*

“The quality and reliability are outstanding. Qualisys has the longest proven outdoor option.”
*Witold Pawlus, Technical Manager Motion-Lab
The Norwegian Motion Laboratory*

For more information visit
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