- 3DMA -
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A Wealth of Data

True 3D: a Full 360° view

Full-Body Analysis

Precision & Accuracy

100-1000 FPS
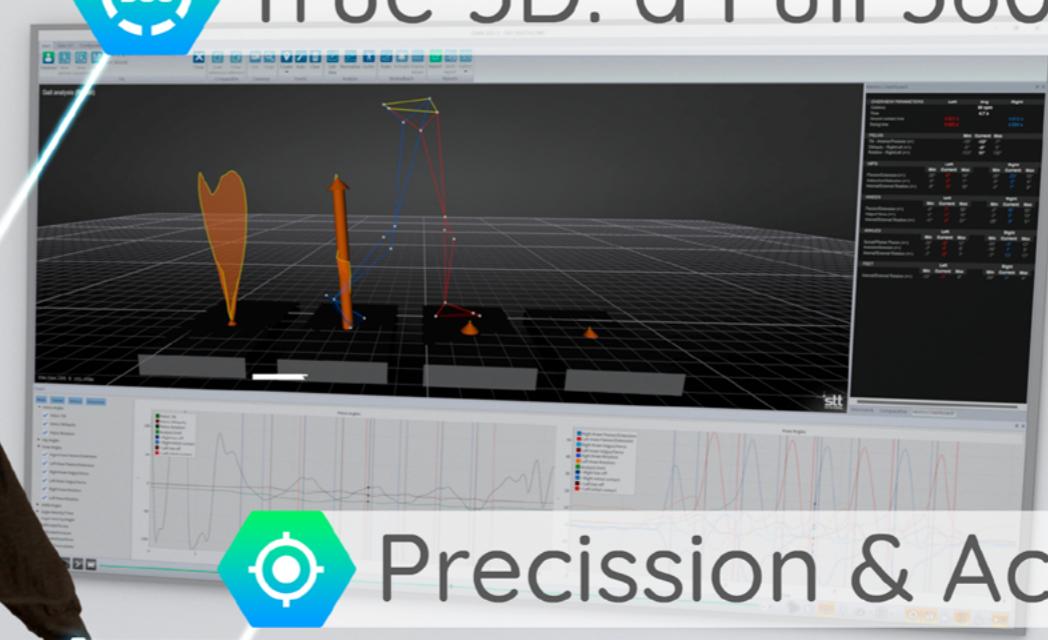
Real-Time Analysis

3DMA

stt SYSTEMS

THE ULTIMATE 3D MOTION ANALYZER

3DMA belongs to a family of products built upon '3DMA', a powerful 3D motion capture engine used by biomechanists, sport scientists, PT and doctors all over the world.

Interested in research? This package also offers data export functionalities (biomechanical parameters in CSV files, marker trajectories, C3D files...) and hardware integration. Ask us about it!

Cycling
Bike fitting (fullbody). Bike measurements (Road, MTB and TT-Tri bikes)

Running
Full-body running. Lower-body running

Golf
Golf swing

Rowing
Rowing and Kayak

Jump
Vertical **Jump** (Squat Jump & CMJ)

Tennis
Tennis racket. Tennis racket & body

Physio
Star Excursion Balance Test (**SEBT**). Jump Landing (**LESS** Score)

Gait
Full-body. Lower-body. Lower-body for children. Helen Hayes & Rizzoli makersets

Joints
Shoulders. Arms. Wrists. Cervicals. Lumbar spine. Hips. Knees. Ankles

Full-body
19, 21 and 25 markersets. 19 + tool.

Baseball
Baseball and baseball bat

Custom
Includes a fully **custom**ized model to fit your analysis needs. Visualization, biomechanical curves, metrics and automatic report completely personalized for you.

MAIN FEATURES

A WEALTH OF DATA
The amount of information provided by a 3D motion capture system is huge, sometimes overwhelming. A great deal of effort has been put into offering simple tools to easily manage, visualize and ultimately use that information.

FULL-BODY ANALYSIS
After a few seconds, 3DMA provides tracking data and automatic analysis of the entire body: yes, on every joint.

REAL-TIME ANALYSIS
Data sets are presented live and automatically: Parameters, graphs and 3D views. Get immediate feedback for any dynamic adjustment of the bike.

TRUE 3D: A FULL 360° VIEW
Motion capture cameras track markers in 3D space which are used to reconstruct the actual body motion. Use pan, tilt and zoom tools to move around at will.

PRECISION & ACCURACY
A well-calibrated system boasts millimetric precision and accuracy in marker tracking. Seamlessly detect 1-2 mm marker shifts anywhere in the 'capture volume'!

100-1000FPS
The data is acquired, processed and displayed to the fitter at a frame rate of 100-1000* Hz/FPS (Frames Per Second). For instance a cyclist pedalling at 120 rpm would register 50 'takes' per crank cycle, resulting in a smooth interpolation.

*up to 1000FPS depending on the camera.

ANALIZED METRICS
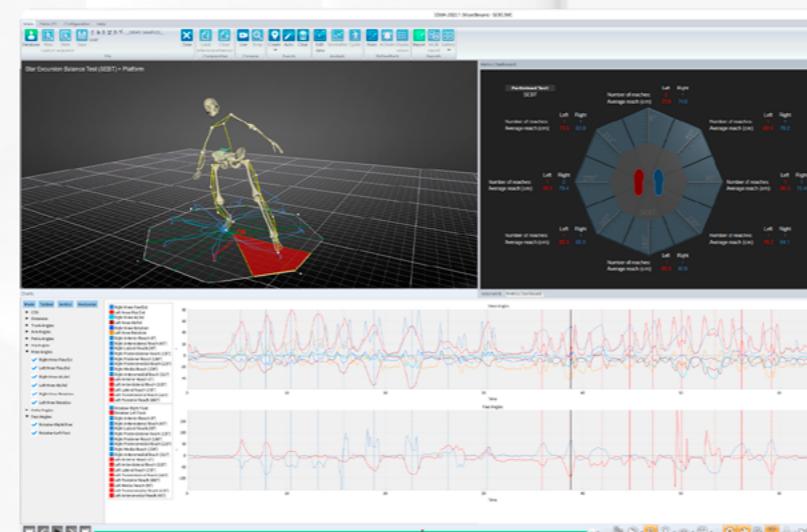


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OTHER DEVICES

The software allows you to connect **webcams** or **high-speed video cameras** so you can keep a visual record synched with the 3D recording.

But not only cameras, in addition, it is common to integrate other equipment, such as **pressure saddles, force pedals or surface electromyography**. Furthermore, 3DMA is capable of reading devices with the **ANT+** communication protocol such as **pulsemeter, smart watches or trainers**.
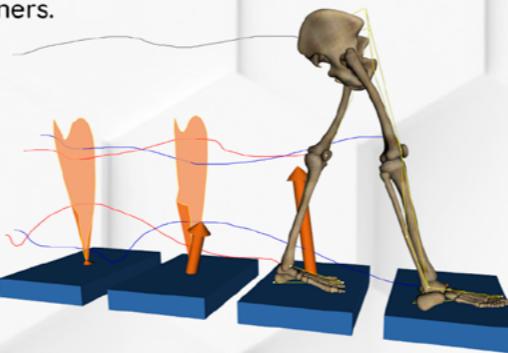
ANALYSIS PROTOCOLS

3DMA includes a set of user-ready 'analysis protocols'. What exactly are these? Protocols are a combination of software tools taylored to analyze a specific gesture or sport.

Each protocol involves a marker configuration, a list of graphs, relevant biomechanical parameters, certain events calculated automatically, a dashboard and a report template. All of these are carefully designed and work together to facilitate the user's job. The goal: to move from data collection on to data processing and result display as fast as possible.

WHAT'S IN THE BOX?

The standard package includes everything you need to set up your new 3D system:

• Mocap cameras, cabling and sync devices
• Calibration tool
• Marker set and tracking accessories
• Software security dongle
• Software installation files
• Camera wall mounts or tripods
• Optionally, the computer
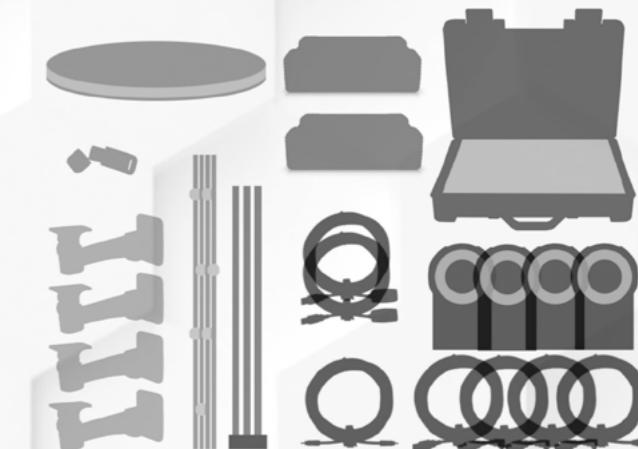
IMMEDIATE ASSISTANCE

By purchasing **3DMA** you get free, unlimited remote support for the installation and first trials. We want you to feel confident quickly. With the instructions and tutorials provided and our supervision, it will be up and running in no time.

REQUIREMENTS

3DMA requires a few minimum computerspecifications to ensure a smooth operation:

• Laptop or desktop computer
• Windows 10/11
• Intel i5 or i7 processor (Intel i7 preferred)
• 8GB RAM (16GB welcome, not strictly required)
• 2 or 3 available USB ports
• Mid-range NVIDIA graphic card recommended
• Large screen recommended (24" on)