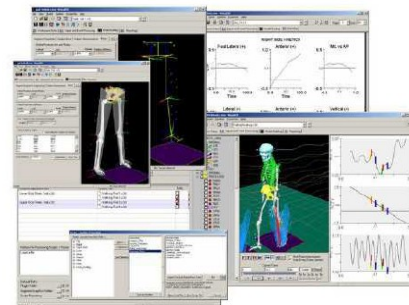# Max1500 Series 3D Motion Capture System

With more than 35 years of experience in the motion capture industry, Innovision Systems, Inc. has added the Max1500 Series 3D Cameras to their motion capture product lines. Max1500 series cameras are dual camera sensor systems featuring ultra-compact and low-cost. It offers the best price performance in the industry. With its powerful CPU and hardware image processor, Max1500 series cameras can handle very high frame rates with great precision. Together with motion analysis software, the Max1500 Series 3D Cameras are an ideal solution for the most demanding dual camera 3D and 6DOF position tracking tasks.

Key Features

Max1500	Max1520
Supported by MaxREAL for Real-Time Motion Capture	
Calibrated and 3D Ready	
Frame rates from 10 to 5500 FPS	
Highest Genlocking precision (within 4×10^{-5} ms among the cameras)	
Number of image sensors can be expanded	
USB interface, USB 5V powered. 3.5w	
1 to 250 Passive Markers or LED's	
Low latency marker detection, extraction and streaming. Camera latency < 3.5ms at 300 FPS	
Spatial accuracy 0.02mm x 0.02mm x 0.1mm (assuming 70^0 H-FOV and 0.5m range)	
Marker information including centroid, size, average intensity and orientation	
Software controllable gain, exposure, frame rate and threshold	
In addition to marker information, digital image can also be streamed	
True global shutter to eliminate image blurring and distortion	
Very small footprint 5.8" x 1.3" x 1" 147 x 33 x 25 mm	Small footprint 22.88" x 2.5" x 2.1" 581 x 64 x 53 mm
Ultra-light, suitable for desktop or wearable	Portable, suitable for desktop
Outdoor version is available upon request	
Optional HDMI display output	

Software Integration

Max1500 series cameras are supported by both MaxREAL and MaxPRO. MaxREAL is a 3D software which can stream 6DOF position data of tracked object(s) in real time. MaxPRO is a motion analysis software which supports all the high end features, including: dynamic 3D view, video overlay, quick ID for fast marker identification, marker templates w/name, size and color + stick figure definition, C3D compatible file format, integrated AD/D, wand calibration. The system also supports other features such as interpolation, deleting or filtering out short trajectories, ASCII file exporting, etc.
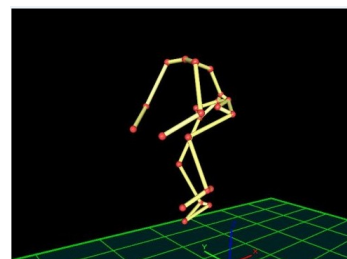
Applications

Max1500 series 3D cameras are suitable for extensive areas of applications. Following are some examples:
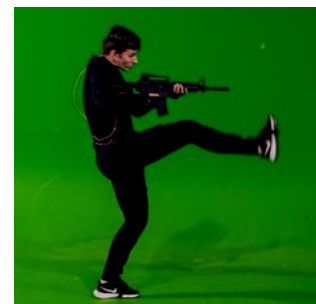
Biomechanical Analysis

We offer MaxA and Visual3D for biomechanical analysis. Our advanced modeling and research software support kinematics, inverse dynamics and inverse kinematics, reporting automation, sophisticated data management and graphing. The system supports flexible modeling with global optimization, 6DOF, conventional gait hybrids, virtual markers, workflow automation, analog data integration, force plates, EMG and more.

Animation

Powerful built-in CPU, real time data processing and real time data streaming can speed up animation process.

Sports, Virtual Reality, Immersive Training and Simulation

Max1500 is very light weight and wearable, it is suitable for training and simulations such as swimming, boating, shooting, baseball, biking, etc.

Fly Object Tracking

The powerful blob detection and positioning capabilities of the system make it ideal for applications such as projectile tracking