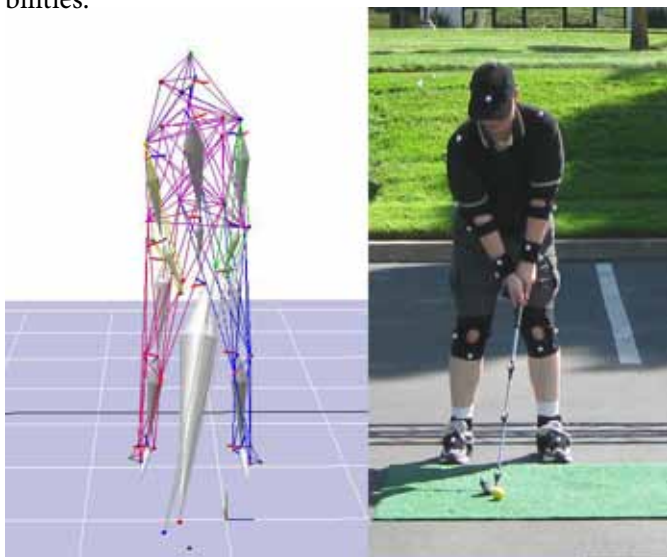


Raptor-4 Digital RealTime System

The Raptor series of motion capture systems allow our customers to use the system *outdoors as well as indoors* without changing any of the hardware or software on the system. Motion Analysis has developed an exclusive new proprietary image processing software which is embedded in the Raptor cameras. The Raptor cameras have twenty times the processing power of our previous generations of cameras to accomplish all of the required image processing computations. This new, exclusive software addresses the various challenges of working outdoors in direct sunlight as well as indoor environments where reflections and lighting conditions can also affect a capture, while maintaining extreme accuracy and real-time capabilities.



Raptor-4 Digital RealTime System

The Raptor-4 Digital RealTime System consists of Raptor-4 digital cameras and Cortex software, which captures complex motion with extreme accuracy. Real-time capabilities allow our customers to see capture results at the same instant as the subject is performing a specific task. With Calcium software, our customers can solve directly to a character skeleton - a feature that is unmatched by any other motion capture company. Real-time previzualization is a reality with our systems. Post processing data this clean is minimal, if at all, and Sky Scripting can be used to quickly process results and do batch processing.

Raptor-4 Digital Camera

The Raptor-4 Digital Camera has a larger sensor area than standard video cameras. The corresponding use of a high



quality 35mm lens allows for the sweet spot of the lens to map over this larger image sensor area, resulting in greater lens and system accuracy. The Raptor-4 automatically measures focus and adjusts brightness for optimal performance. As with other MAC digital cameras, the Raptor-4 is field upgradeable via email, compatible with other MAC digital cameras and supported with Cortex software.

The Raptor-4 operates up to 200 fps at a full resolution of 2352 x 1728 pixels, and up to 10,000 fps at reduced resolutions. The Raptor-4 Digital Cameras provide today's motion capture technicians with a tool that assures reliable and accurate data. With digital technology there is no degradation of the signal over distance, less noise, and no resampling of data on another piece of electronics.

Excellence Does Not Equal Number of Pixels

Savvy consumers understand that the excellence of any camera is not measured by the number of pixels alone. Other factors such as sensor size, pixel size, optics, depth of focus, quality of the ring light and other mechanics all contribute to a motion capture camera's effectiveness. The Raptor series of cameras have consistently out-performed other motion capture cameras in accuracy and latency tests, and are the only motion capture cameras to perform flawlessly outdoors at high frame rates. Broadcast tracking applications require precision to 1/100th of a degree - only the Motion Analysis Raptor systems can meet this requirement.

With superior on-board processing, better lens distortion modeling and more powerful ringlights, the Raptor-4 has a greater depth of field than our competitor's cameras. A smaller f-stop can be used and have a wider field of view, allowing for a greater depth of field - this translates to fewer cameras needed in the capture volume. Our cameras are also in focus throughout the entire volume and can equally see markers close and far away. The Raptor-4 can see 12mm markers 85 feet away and 10 feet away - both in full focus. This translates to fewer cameras needed to cover the capture area.

Insight Focusing

Having precisely focused cameras is a critical requirement to collecting accurate motion data. Motion Analysis introduces Insight Focusing, which allows a single user to precisely focus an entire system of cameras in a matter of minutes. The camera's LED board serves as a real-time visual indicator providing instant feedback.

High Power Ringlight

New for the Raptor-4 is a high-power ringlight for greater light coverage. The new shape is in proportion to the sensor, in a way that round or square ringlights are not. The LED's are more powerful, brighter, deliver more even coverage, a wider field of coverage and the ability to see a marker from a further distance than our previous ringlights. Each LED is individually oriented for optimized coverage.

Raptor-4 Includes

- Raptor-4 cameras, zoom lens, HPRL
- Camera carrying cases
- Power hub(s)
- Gigabit switch(s)
- Choice of tripods or wall mounts
- Marker kit
- Calibration frame and wand set
- Cortex software

Raptor-4 Features

- Indoor and outdoor capture without changing any of the hardware or software
- Grayscale centroid or grayscale edge (user selectable) for every marker at all frame rates
- 1-200 Hz selectable frame rates at full resolution
- Up to 10,000 Hz at partial resolution
- Portable - up to 8 cameras in two suitcases
- Built-in zoom provides more visual options for ease of set-up
- Separate zoom, iris and focus settings independent of ringlight
- High power, near IR ringlights (HPRL)
- LED display panel for camera identification and status
- 323 LED's for brighter and better light uniformity
- Strobed ringlight with camera body heat sink
- Four body mount points on camera
- Software controlled adjustable light output
- SDK provided at customer's request

