

ROOM-SCALE FULL-BODY MOTION TRACKING



PrioVR™ DEV KIT full-body motion tracking

PrioVR Dev Kit provides ultra low latency room-scale full-body motion tracking. Huge capture space without the need for cameras or optical markers. Up to fifteen tracked subjects in the same real-world space on a single computer—many more with multiple computers. Easy to integrate into virtual worlds, including those developed with Unity® software and Unreal® Engine. Suit up. Game on!



Bloomberg

“For gamers looking for a more ‘active’ lifestyle, this could be the trick. Just be sure to move the Mountain Dew before you knock it over.”



“The idea of being able to put this system on and run/duck/dodge in a huge open (real) environment is extremely exciting.

Popular Mechanics

“The 5 Most Interesting Things at CES”

GIZMODO

“PrioVR is the Virtual Reality Gaming Suit of Your Dreams”

THE VERGE

“Accuracy is of prime importance in shooting games, and PrioVR offered some of the most accurate gesture-based gameplay I’ve seen to date.”

Room-scale full-body tracking

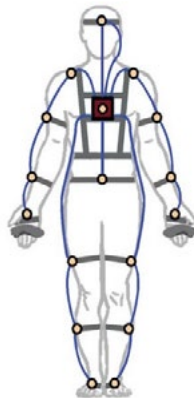
is a holy grail of virtual reality immersion. Yost Lab's PrioVR Dev Kit has broken through price/performance barriers while achieving ultra-fast latency of under 10ms (under 5 ms in wired mode) while tracking a full nineteen node skeleton.



PrioVR Dev Kit uses Yost Lab's ultra low latency 3-Space™ inertial sensors to provide 360° real-time motion tracking indoors or outside without the need for cameras, optical markers, line-of-sight.

PrioVR Dev Kit's sensors are placed on key points of your body to capture movements and translate them on-screen in real-time. The system includes two motion tracking hand controllers with action buttons, triggers, and joysticks. Each of the nineteen sensors in the PrioVR Dev Kit performs the complex task of fusing the raw sensor outputs into a highly accurate orientation estimate. The sensors themselves are true 9DOF (nine degrees of freedom) motion sensors and therefore exhibit no orientation drift as do systems that are based only upon gyros. Thus, the sensors can always report an accurate orientation no matter the duration of use.

PrioVR Dev Kit allows low latency wireless connection using Yost Labs proprietary high speed data transfer protocols and allows for multiple simultaneous users on a single computer. It works indoors or out, in capture spaces significantly larger than is possible with optical tracking systems. The effective range of the wireless system is generally 100 meters. Additionally, multiple communication base stations can be used to achieve a virtually unlimited capture space.



PrioVR Dev Kit is changing the game by bringing you and your movements into virtual environments where you can see your body move as you move and interact as naturally as you do in the real world. The system also comes with our MoCap Studio™ software, several VR demo games with source code provided, and plug-ins to Unity® and Unreal®. Our goal is to make it ridiculously easy to use the PrioVR Dev Kit.



PrioVR Dev Kit uses Yost Labs' 3-Space™ sensors with QGRAD™ fusion firmware. QGRAD has established a new benchmark for low latency and high accuracy—providing the necessary responsiveness needed for virtual reality, biomechanics, drone

and real-time robotics applications. For calibrated IMU data, 3-Space sensors clock in at **1,350Hz**. These impressive stats are the result of a decade of sensor fusion R&D. Yost Labs' innovation has been recognized with several patent awards with numerous additional patents pending.

PrioVR DEV KIT SPECIFICATIONS

Each Sensor	3axis gyroscope, 3axis accelerometer, 3axis magnetometer, and Microcontroller w/ QGRAD™ firmware
Sensor Quantity	19 total sensors: 17 on suit + 2 on hand controllers
OS compatibility	Windows 7, Windows 10, Android
Wireless range	100 meters
Latency	7 msec typical (5 msec in wired mode)
Update Rate	200 Hz
Battery Life	10+ hrs continuous use
Game engine support	Unity and Unreal plug-ins
Supported Platforms	Any that can import .dll, with native support for Python (2.5x and 3.x) and C/C++
Easy Integration	Export in .bvh format. Includes sample source code in Unity and Unreal. Blender Plugin available.
Developer Support	Yes! And we provide free, open-source API.

Value-added (VAR) pricing available to qualified developers: email: PrioVR@yostlabs.com

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About Yost Labs, Inc.: We are a fast growing private company based in historic Portsmouth, Ohio. With over a decade of experience in low-latency inertial sensor innovation, we enable motion tracking in many of today's and tomorrow's most exciting products. We make virtual reality interactive. We stabilize drones and navigate autonomous cars. We measure human motion for athletic performance and rehabilitation. We provide real-time low-latency tracking and reduce power consumption at lower prices than previously available. Yost Labs' innovation has been recognized with numerous patents with additional patents pending. Our customers and value-added resellers include the US Navy, US Air Force, NASA, US Army Corps of Engineers and over 1,000 leading technology firms and academic institutions around the world.