

## **Movea Sees Success with Miniaturised 9-axis Inertial Measurement Unit**



Movea has created a wireless, miniaturised, Inertial Measurement Unit (IMU) that uses MEMS sensors to accurately measure 9 Degree-of-Freedom (DOF) motion with a PCB module that is about the size of a small wristwatch. The MotionPod is a patented hardware solution for motion sensing that incorporates a 3-axis accelerometer, a 3-axis gyroscope and a 3-axis magnetometer in fully integrated package complete with software and wireless interface. The miniaturized MotionPod is now an off-the-shelf component, ready to be used in a wide range of applications including fitness, gaming, and sports. It is also successfully being used by RM Ingénierie, a subsidiary of the CEGEDIM Group, to enable a new generation of groundbreaking joint assessment and rehabilitation applications.

“The MotionPod is a perfect solution for the health and fitness market,” explained Sam Guilaumé, Movea’s CEO. “This nine-axis sensing device provides precise, real-time angular information with a dynamic accuracy of 1 degree, enabling very accurate measurement of rehabilitation and fitness activities. We’re very excited that RM Ingénierie has selected Movea’s MotionPod for their innovative rehabilitation solution.”

RM Ingénierie, which specializes in medical and paramedical management software, uses Movea MotionPods in their Physical Rehabilitation solution. The MotionPods capture limb movement and provide precise information on limb orientation and mobility. MotionPods provide a fast and accurate record of a patient’s progress to be used for biofeedback into evaluation and exercises, making limb rehabilitation interesting and fun by engaging the patient.

## Movea Sees Success with Miniaturised 9-axis Inertial Measurement Unit

Published on Electronic Component News (<http://www.ecnmag.com>)

---

Pierre Foucault, CEO at RMI, explained, "Our speciality is in creating software for medical applications. MotionPods provide us with exactly the data we need from the sensors without us having to invest time and effort in the details of how it is obtained. This is a perfect plug and play solution that helps us get to market quickly secure in the knowledge that we can rely on the Movea's expertise in motion technology."

A single MotionPod can provide information like range of motion, rotation, speed, and acceleration. Multiple MotionPods can also be networked to gather information simultaneously from different parts of the body for applications such as performance analysis and full body motion capture. The MotionPod measures 33x22x15mm (1.3"x0.8"x0.6") and weighs 14g (0.5 oz). It is designed to clip onto a strap for easy attachment to the body or even to be patched directly onto the body.

Each MotionPod has a built-in, 2.4GHz wireless transmitter that uses Movea's proprietary wireless technology to deliver a range of up to 30m (100 ft) with very low power consumption to maximise battery life, providing up to 8 hours of usage. Data from the MotionPod is transmitted wireless to a receiver that's connected to a computer via a standard USB connection. Up to 32 MotionPods can be connected to a single MotionController.

The MotionPod comes with Movea's SmartMotion™ Development Kit (SMDK) which provides a Windows-based API allowing application developers, systems integrators and OEMs to rapidly integrate and customize the use of wireless multi-sensors in their applications. It also includes a companion application, the MotionDevTool™ that has an intuitive graphical user interface for real-time visualization and integration.

"The MotionPod and SMDK leverage 20 years of experience in motion technology to transform the raw data from the sensors into easy to use information for solution providers," added Sam Guilaumé. "Our SmartMotion technology takes care of all of the sensor configuring and data fusion, enabling the equipment maker to concentrate on their area of expertise. Application developers across the board from physical rehabilitation and sport medicine to biomechanics and medical research centres now have access to an off-the-shelf, complete motion sensing solution that is ready to deploy into final products."

Pricing for MotionPod and SmartMotion Development Kit are available upon request, please contact [sales@movea.com](mailto:sales@movea.com) [1] for more information.

### **Source URL (retrieved on 07/01/2015 - 11:35pm):**

<http://www.ecnmag.com/products/2011/04/movea-sees-success-miniaturised-9-axis-inertial-measurement-unit>

### **Links:**

[1] <mailto:sales@movea.com>