KVH Patents Breakthrough Digital Signal Processing Technology for Fiber Optic Gyros

October 9, 2002

KVH to Use High-performance, Low-cost DSP-based Gyros to Enter Significant New Markets

MIDDLETOWN, R.I., Oct 9, 2002 /PRNewswire-FirstCall via COMTEX/ -- KVH Industries (Nasdaq: KVHI) has been awarded a patent for a technological breakthrough that enables the company to produce highly accurate, attitude, heading, and reference (AHRS)-grade fiber optic gyros (FOGs) at a fraction of the cost of competing products. U.S. Patent #6,429,939, "DSP Signal Processing for Open Loop Fiber Optic Sensors," addresses KVH's method of using the power of modern digital electronics to improve the performance of the company's FOGs and make them suitable for a wide range of new applications ranging from precision-guided munitions to tactical navigation systems.

"Our DSP gyro and patents have clearly established KVH Industries as a technology leader and, potentially, a market leader in years to come," remarked Kalyan Ganesan, vice president of engineering. "Digital signal processing enables us to achieve new levels of performance at costs significantly lower than competing ring laser and closed-loop gyros. By incorporating DSP technology into our FOGs, we can offer affordable, high- performance gyros to a wide variety of industries."

DSP-based gyros, such as the DSP-5000, which was introduced by KVH in April 2002, combine KVH's proprietary polarization-maintaining optical fiber and fiber components with integrated digital signal processing. The result is a low-cost rate gyro with outstanding bias stability, low noise, high bandwidth, and scale factor accuracy of 0.05 percent. Like KVH's existing line of E-Core FOGs, the DSP-5000 is a highly reliable system with no moving parts to wear out or require maintenance. However, its integrated DSP capabilities allow it to accept data input as fast as 500 degrees per second, offer consistent accuracy over time and temperature, and provide extremely precise rotational rate information. This rate information is then output in a digital data stream to a variety of external systems.

In addition to offering the DSP-5000 FOG, KVH is also pursing a variety of other applications for its DSP technology. In July 2002, KVH announced that its DSP-based FOGs would be the foundation for a low-cost, high-performance Inertial Measurement Unit (IMU) for defense-related applications, including drone and unmanned aerial vehicle navigation as well as missile and smart munitions guidance. Such systems are playing a critical role in the U.S. military's ongoing counter-terrorism operations. As illustrated by the Pentagon's proposed defense budget, significant resources have been devoted to developing and funding these systems.

"DSP gyros will become the foundation for all of KVH's gyro-based products in the future," Ganesan added. "The blend of accuracy, value, and versatility that our DSP technology offers make our FOGs an attractive, affordable, and dependable solution for the most demanding defense-related and commercial applications."

Complete information regarding KVH's DSP-based FOGs and defense-related systems can be found on the company's web site, www.kvh.com/FiberOpt/index.asp. In addition, a high-resolution, press-ready image of the DSP-5000 is available to download from the News section of the KVH web site.

KVH Industries, Inc., designs and manufactures products that enable mobile communication, navigation, and precision pointing through the use of its proprietary mobile satellite antenna and fiber optic technologies. The company is developing next-generation systems with greater precision, durability, and versatility for communications, navigation, and industrial applications. An ISO 9001-registered company, KVH has headquarters in Middletown, Rhode Island, with a fiber optic manufacturing facility in Tinley Park, Illinois, and a European sales, marketing, and support office in Hoersholm, Denmark.

SOURCE KVH Industries

CONTACT: Chris Watson, Communications Coordinator of KVH Industries, +1- 401-847-3327, cwatson@kvh.com; or Phil Davidson or Jolinda Taylor both of FD Morgen-Walke, +1-617-747-3600