

## **Kratos Introduces quantumCMD(TM), the First Command and Control System Designed for Small Satellites and Fleets of Small Satellites**

### **Tyvak Nano-Satellite Systems LLC Will Use quantumCMD for High-Precision Flight Maneuvering as Part of NASA's CPOD Mission**

SAN DIEGO, Feb. 18, 2014 (GLOBE NEWSWIRE) -- Kratos Defense & Security Solutions, Inc. (Nasdaq:KTOS), a leading National Security Solutions provider, announced today the release of quantumCMD™, a lightweight, portable command and control (C2) system designed specifically for small satellite missions. quantumCMD consolidates Telemetry, Tracking and Command functions in a single off-the-shelf product.

As the industry seeks ways to reduce the cost of satellite missions, commercial and government operators are looking increasingly toward solutions such as small satellites, also known by names such as microsats, CubeSats and nanosats, which are compact alternatives that can be built and deployed at lower costs and with less risk. While traditional satellite missions can cost between \$300 million to \$1 billion or more, small satellite missions can cost between \$1 million and \$2 million or even far less. Their many recent successes have made the growth of the smallsat community one of the most exciting and impactful trends in the industry.

quantumCMD brings the C2 aspects of the mission in line with the economics and scale required for small satellites. The industry's first commercial-off-the-shelf (COTS), pre-integrated, turnkey smallsat C2 appliance, quantumCMD includes all needed hardware and software for small satellite operations. Among its advanced features are complete automation capabilities that support a dynamic Concept of Operations (CONOPs) or even fully automated "lights-out" operations if desired. Additionally, the built-in HTML5-based Web Server and browser-based interface enable anywhere access and operations whether from a Satellite Operations Center (SOC), a laboratory, field installation or other environment. Operators can use the built in, drag-and-drop interface to quickly and easily create dashboards and a Common Operational Picture (COP) across multiple satellites, including a wide variety of alarms, charts, graphs and other visual tools, even video feeds.

Because it uses accepted industry standards for functions such as data ingest, equipment control, and data export, right out of the box quantumCMD supports most satellites and ground equipment used by the smallsat community today. This standards-based architecture also means that quantumCMD requires minimal customization, making it well suited to the shortened schedules, focused capabilities and reduced budgets that characterize small satellite missions. "quantumCMD's use of standards-based interfaces such as XML Telemetry and Command Exchange (XTCE) means that it not only keeps initial mission costs down, it also dramatically lowers total cost of ownership across mission and multi-mission lifecycles," said Victor Gardner, Product Manager for quantumCMD. "In addition, quantumCMD helps lower risk and meets the demanding price and schedule constraints of smallsat mission by providing an integrated, operationally ready C2 system."

Kratos also announced that Tyvak Nano-Satellite Systems LLC (Tyvak) of Irvine, California, has purchased quantumCMD to perform C2 functions for its two Endeavor product line nano-satellites that will be launched as part of NASA's CubeSat Proximity Operations Demonstration (CPOD) mission. Tyvak's Endeavor nano-satellites represent a new generation of three-unit (3U) and 6U CubeSats that deliver precision attitude knowledge and control, higher power generation, distribution and storage, and higher performance on-board processing capabilities to address the growing need for nano-satellites that support operational and scientifically relevant missions. The CPOD mission will demonstrate the ability of two small nano-satellites to remain at determined points relative to each other (called station-keeping), as well as precision circumnavigation and docking using imaging sensors and a multi-thruster cold gas propulsion system. The ability of nano-satellites to operate in close proximity to each other is an important capability to enable on-orbit inspection and servicing and to allow multiple satellites to operate in a coordinated manner in space. This precision maneuvering capability makes a robust and reliable C2 system critical.

"quantumCMD showed us that it has the comprehensive capabilities and powerful features we were seeking for this important NASA mission," said Charles S. "Scott" MacGillivray, President and CEO of Tyvak. "We were also extremely impressed with its flexibility, in particular the ability for us to easily create custom operational dashboards. At the end of the day, quantumCMD became the obvious choice with its ability to control multiple satellites as the CPOD mission demands."

Kratos is also the maker of Epoch IPS, the industry's leading solution for large satellite fleet C2, used by more than 75% of commercial satellite operators as well as governments around the world. quantumCMD incorporates Kratos' more than 30 years of satellite operations experience and best practices, applying them to the unique demands of the growing small satellite market. quantumCMD is available in several packages and pricing schedules ranging from discounts for educational institutions

to single-satellite operations to a full fleet implementation. For more information about quantum CMD, visit <http://www.KratosDefense.com/quantumCMD>.

## About Kratos Defense & Security Solutions

Kratos Defense & Security Solutions, Inc. (Nasdaq:KTOS) is a specialized National Security technology Company providing mission critical products, services and solutions for United States National Security. Kratos' core capabilities are sophisticated engineering, manufacturing and system integration offerings for National Security platforms and programs. Kratos' areas of expertise include Command, Control, Communications, Computing, Combat Systems, Intelligence, Surveillance and Reconnaissance (C5ISR), satellite communication systems, electronic warfare, unmanned systems, missile defense, cyber warfare, cybersecurity, information assurance, and critical infrastructure security. Kratos has primarily an engineering and technically oriented work force of approximately 3,850. The vast majority of Kratos' work is performed on a military base, in a secure facility or at a critical infrastructure location. Kratos' primary end customers are National Security related agencies. News and information are available at [www.KratosDefense.com](http://www.KratosDefense.com).

## Notice Regarding Forward-Looking Statements

Certain statements in this press release may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are made on the basis of the current beliefs, expectations and assumptions of the management of Kratos and are subject to significant risks and uncertainty, including risks related to product failure, general economic conditions and cutbacks in spending. Investors are cautioned not to place undue reliance on any such forward-looking statements. All such forward-looking statements speak only as of the date they are made, and Kratos undertakes no obligation to update or revise these statements, whether as a result of new information, future events or otherwise. For a further discussion of risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of Kratos in general, see the risk disclosures in the Annual Report on Form 10-K of Kratos for the year ended December 30, 2012, and in subsequent reports on Forms 10-Q and 8-K and other filings made with the SEC by Kratos.

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