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## **SUBSTATION-HARDENED MAGNUM 6K SWITCHES AND DX ROUTERS CONFIRMED IEC 61850 COMPLIANT**

### **KEMA Testing Confirms GarrettCom Magnum 6K Switches Meet GOOSE Messaging Standard**

**October 28, 2008 – Fremont, Calif.** -- GarrettCom™, Inc.'s, Magnum™ 6K Switches were confirmed compliant with IEC 61850 GOOSE messaging standards based on IEC 61850 functional testing recently completed by KEMA. The testing was performed on Magnum 6K switches running MNS-6K and MNS-6K-SECURE software, which includes support for the IEEE 802.1D-2004 standard for Rapid Spanning Tree Protocol (RSTP). KEMA is a well-respected consulting company that provides consulting, testing and certification services for the power industry worldwide. GOOSE (Generic Object Oriented Substation Events), a part of the IEC 61850 standard for substation automation, is a control model mechanism in which any substation data format can be grouped into a data set and transmitted. It is typically used for high-priority protection-related messages.

The test groups included VLAN handling and priority tagging, where GarrettCom received a “Passed” rating, and Rapid Spanning Tree for network fault recovery. The Rapid Spanning Tree tests verified recovery of a single communication failure and measured recovery time and packet drops under a variety of packet sizes, network loads, and forced disconnections in the network ring structure. The fault recovery time of 4-6 ms., with no packet loss, is the fastest recovery time available on a hardened switch or router in the industry. The superior performance was achieved without the use of proprietary code; the Magnum RSTP implementation used in the company's 6K Switches and DX Routers is compliant with industry standards and interoperable with most other vendor's RSTP software. For information on GarrettCom's implementation of IEEE 802.1D-2004 RSTP in Magnum MNS-6K, MNS-6K SECURE and MNS-DX software, see [www.garrettcom.com/pr/enhanced\\_network\\_redundancy.pdf](http://www.garrettcom.com/pr/enhanced_network_redundancy.pdf)

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GarrettCom, a leading provider of hardened switches and routers for power utility substations and other environmentally harsh environments, utilizes third-party testing to confirm the company's in-house compliance testing. Customers are invited to see [www.garrettcom.com/kema\\_gci\\_testing.htm](http://www.garrettcom.com/kema_gci_testing.htm) or contact a GarrettCom sales representative for more information on the IEC 61850 tests.

### **About GarrettCom**

GarrettCom, Inc., Fremont, Calif., USA, is the exclusive North American distributor for the CrossBow™ NERC CIP solution that includes Bow Network's CrossBow™ Secure Access Manager, GarrettCom's Magnum DX and DynaStar substation router/firewalls, Magnum 6K Switches, and other supported substation gateways. GarrettCom is an industry leader in providing networking solutions for challenging industrial environments, including manufacturing, power utility substations, telecommunications, oil and gas facilities, traffic control and video surveillance. The company's products provide a comprehensive industrial network architecture encompassing a switched Ethernet core, distributed edge devices for both Ethernet and Serial protocols, and secured connections to various WAN services. For more information on GarrettCom and its products, visit [www.garrettcom.com](http://www.garrettcom.com).

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