Unattended Ground Sensors Protect Personnel and Assist In Border Surveillance

Oct. 21, 2013, 12:00 p.m. EDT

Lockheed Martin Links Ground Sensor Network With Unmanned Aerial Vehicles For Enhanced Threat Protection

WASHINGTON, Oct. 21, 2013 /PRNewswire via COMTEX/ -- A wireless ground sensor network developed by Lockheed Martin LMT http://www.marketwatch.com/investing/stock/LMT +1.36% will soon have the option of being fully integrated with Unmanned Aerial Vehicles. Lockheed Martin's Self-Powered Ad-hoc Network (SPAN), a wireless ground sensor system will be able to connect with unmanned vehicles to provide ubiquitous coverage and persistent surveillance of designated areas.

"SPAN is essentially a network of unobtrusive sensor nodes small enough to fit into the palm of your hand," said Macy W. Summers, vice president with Lockheed Martin Information Systems & Global Solutions. "Linking SPAN sensors with UAVs provides a cost-effective solution that can support many types of missions including force protection, border surveillance and regulatory and treaty compliance."

Incorporated with small devices that employ energy-harvesting technology, SPAN is a multi-purpose wireless sensor platform that never needs a battery replacement. Using readily available energy sources in its surrounding environment, SPAN re-charges itself and its nodes do not transmit unless there is a sensor reading of concern.

Fusing SPAN with UAVs lowers the total cost of monitoring a specific area, since the SPAN networks automatically prompt UAV sensors without the need to depend on a separate operator alerting system. Each node, once placed on or in the ground in a mesh arrangement, transmits relevant data to the next node, and so on, until the information is ultimately forwarded to a wide area communications link. During a UAV mission, the ground network automatically prompts the UAV's high precision sensors to further characterize the alert without the need for a remote analyst. This linked solution enables UAV operators to focus on identified threats instead of loitering or flying pre-set mission profiles waiting for potential threats. Additionally, this enhanced processing of timely intelligence enables responsive situational awareness for ground commanders in full spectrum and counter insurgency operations.