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## **Ultra Communications Wins Phase I SBIR Contract to Develop VCSEL-based RF Photonic Components**

**Vista, California, March 26, 2008** - Ultra Communications, Inc today announce that it has been awarded a Phase I Small Business Innovation Research (SBIR) contract by U.S. Air Force to develop compact VCSEL-based RF photonic components.

Multimode VCSELs provide the most cost effective solution to digital links of 1 to 10 Gbps at distances less than a few hundred meters. Modern multimode fiber (MMF) reduce modal dispersion to achieve 2000 MHz\*km, which is a 200 GHz channel over ten meters free of EMI and cross-talk. Furthermore, there is no electrical conduction along the path. In contrast to expensive single-mode telecom components, researchers are now examining the use of multimode VCSELs for high-frequency RF analog transmission over MMF3-5. The VCSEL and MMF combination decreases the power consumption, physical package size and link cost with improved manufacturability and robustness. Optical networks can route high speed signals, such as GPS RF antenna and synchronization signals, without the weight, dielectric loss, and EMI issues present in copper PCB. Distributed GPS receiver subsystems with optical interconnects promises to improve GPS guidance in jamming and operational environments.

### **About Ultra Communications**

Ultra Communications (UltraComm) supplies highly compact and robust photonic components for harsh environment applications, such as satellites, military airframes, UAV, missiles and cell phone base station applications. We have developed a hybrid IC and optoelectronic integration approach that features: Standard planar manufacturing of photonic packages, Single chip integration of multiple functions—transmitters, receivers and built-in-test, high speed digital (10 Gbps) or RF photonic components, ability to optically monitor Vertical Cavity Surface Emitter Lasers (VCSEL) on a per-channel basis, and operation over a wide temperature range and in radiation environments. Ultra Communications is headquartered in Vista, California (in the greater San Diego area). Additional information is available on the web at [www.ultracomm-inc.com](http://www.ultracomm-inc.com).

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