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Ultra Communications Demonstrates Industries First Built-in-Test Transceiver Designed for Harsh Environments

Vista, California, October 2, 2007 - Ultra Communications, Inc., a leading designer of optical transceiver components for harsh environment applications, today demonstrated the built-in-test capability in a parallel VCSEL based transceiver over a – 40 C to 100 C temperature range.

Military avionic platforms are increasingly relying on fiber optic data transmission for data rates above 1 gigabit-per-second (Gbps). These fiber components (transceiver, cables and connectors) must withstand the extreme vibration and temperature of the aerospace environment during operation. These components are also exposed to a potentially harsh environment and rough treatment during aircraft maintenance and/or reconfiguration.
A likely failure point is in the fiber optic data link. Types of failures include:

1. Contamination at the fiber connector interface.
2. Fiber connectors left un-connected or partially connected during maintenance.
3. Fibers mechanically damaged
4. Fibers exposed to a radiation environment (satellite links or high altitude airships)

These failures may not be readily noticeable. A slightly open fiber connector or contaminated connector will introduce loss in the link that may not cause a data failure until the system is stressed (by high temperature or vibration for example).
Currently, there is no built-in test coverage of fiber optic components or fiber optic links. A method of detecting and isolating faults within a fiber optic cable harness, fiber optic cable segments or within a Weapon Replaceable Assembly (WRA) would increase aircraft availability and reduce maintenance costs.

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, receiverss 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.