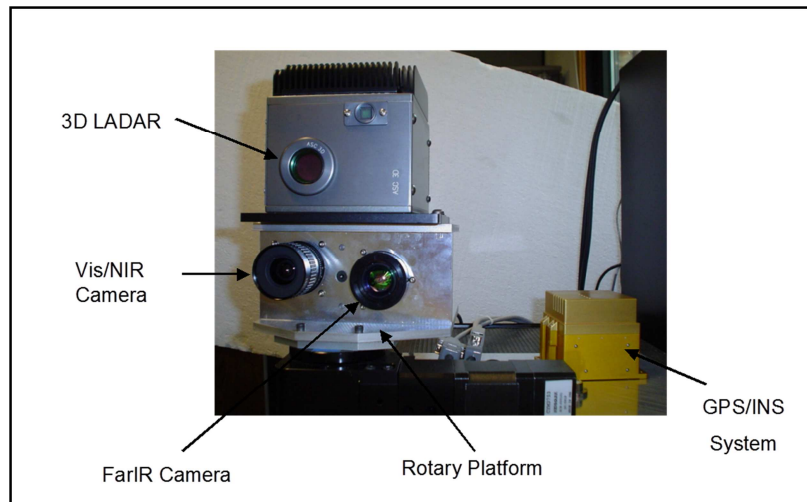


3D Multi-Band LADAR Landing System Demonstration

NAVAIR, 2012

While at OptiMetrics, the three DII founders developed a multi-sensor system to explore alternative helicopter landing methods during brownout conditions. The Multi-Sensor LADAR Landing System concept involves acquiring a 3D scene using a combination of LADAR and high-resolution image sensors, before the helicopter moves into the severe brownout. High-resolution imagery data is registered to the 3D LADAR data, and that 3D image is stored in a geo-referenced 3D scene database. Rescaled “virtual” views of that 3D scene are displayed to the pilots as they descend through degraded visibility conditions. The effective viewing range and angles are recalculated based on input from an integral Inertial Navigation System/Global Positioning System (INS/GPS) system and a corrected geometric view is continuously displayed to the pilot. The Multi-Sensor LADAR System provides high-resolution images with terrain details that are easily understood by aircraft pilots. The imagery is useful for general situational awareness in addition to landing operations. Size and weight of the LADAR system are much smaller and lighter than alternative radar solutions. This demonstration system is shown in below.



3D Multi-Band LADAR Landing Demonstration System