

Lockheed Martin Unveils New Advanced Pilotage FLIR - Pathfinder - For Cargo And Utility Aircraft

Lockheed Martin unveiled its new, state-of-the-art pilotage sensor for cargo and utility aircraft during recent flight demonstrations on a UH-1H helicopter at Fort Belvoir, VA. The pilotage sensor, called Pathfinder, leverages existing proven technology from the Lockheed Martin Modernized Target Acquisition Designation Sight/Pilot Night Vision Sensor (M-TADS/PNVs) system deployed on the AH-64D Apache.

Pathfinder is a low-risk, best-value pilotage system for safe flight operations. It significantly increases situational awareness and reduces pilot workload through a head-up, eyes-out helmet-mounted display (HMD).

"The Pathfinder system offers an immediate, positive impact to aircraft safety and provides an outstanding pilotage solution that works even when night vision goggles cannot," said Bob Gunning, director of Apache Programs at Lockheed Martin Missiles and Fire Control. "Our passion for the safety of the Warfighter and drive for mission success motivated us to develop Pathfinder as the ideal integrated system solution for current challenges."

Pathfinder is the only forward-looking infrared (FLIR) system designed and developed specifically to support terrain-following flight and terminal operations in unimproved landing areas. Lockheed Martin is also evaluating alternate sensor and image processing techniques that would allow Pathfinder to show visible and near IR features such as cultural lighting, rockets, gunfire, spotters/pointers and missiles.

The advanced pilotage FLIR used in Pathfinder is the next generation in thermal imaging. Its long-wave, high-definition FLIR has 52-degree, wide field-of-view optics (an exceptionally wide field-of-view). The FLIR technology is based on a Standard Advanced Dewar Assembly I (SADA I) integrated detector cooler assembly and electronics modules common with the M-TADS targeting FLIR. Pathfinder's high definition 1728 by 960 resolution allows pilots to fly at safer altitudes and airspeeds while providing necessary information to complete complex missions. Pathfinder is provisioned for image blending, and its advanced processing algorithms give pilots the best resolution possible to avoid obstacles such as wires and trees.

The Pathfinder turret is easily mounted on the helicopter's chin using a kit consisting of three line replaceable modules. Eleven of the 14 line replaceable modules are 100 percent common with the AH-64D Apache's M-PNVs system, creating a unique synergism with the already established M-TADS/PNVs production line.

Current aircraft systems do not enable safe operations across the range of expected mission conditions. However, the advanced pilotage Pathfinder FLIR can be adapted for use on rotary- and fixed-wing aircraft and is immediately available for Warfighters to complete their air assault/movement, search and rescue, and medical evacuation missions.

Headquartered in Bethesda, Md., Lockheed Martin employs about 140,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.

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