NAVAL AIR SYSTEMS COMMAND, PATUXENT RIVER, MD - The KC-130J team has designed a system that will assist airspace management authorities in locating the aircraft.

“The KC-130J Team has been given final approval for a federated ADS-B (Out) and IFF Mode 5 interim solution that can be delivered ahead of schedule and on budget,” said Doug Dawson, PMA-207 program manager. “It is also important to note is that the program office became the Lead System Integrator to complete this project.”

The Tactical Airlift Program Office (PMA-207,) last month, received frequency approval, paving the way for all KC-130J aircraft to meet the Federal Aviation Administration (FAA) and European Organization for the Safety of Air Navigation (Eurocontrol) Communications, Navigation, Surveillance/ Air Traffic Management (CNS/ATM) mandates as well as Department of Defense IFF Mode 5 2020 deadlines.

Regulatory authorities responsible for airspace management around the world are mandating that specific avionics must be installed on all aircraft flying within controlled airspace to address the increasing air traffic and in an effort to develop a safer CNS/ATM
Anticipating the requirement and the impact on KC-130J operations, PMA-207, had begun implementing a Block Upgrade for the KC-130J. When final mandates were imposed that require a Mode S transponder equipped with Automatic Dependent Surveillance-Broadcast ADS-B (Out) in all aircraft by January 1, 2020, and IFF Mode 5 by the end of 2020, it became apparent that the Block Upgrade schedule would not be complete by that time.

“The KC-130J Block Upgrade schedule would only give us a single aircraft that is ADS-B (Out) / Mode 5 compliant by the 2020 mandate,” said Larry Pratt, PMA-207 C-130 Deputy Assistant Program Manager Systems Engineering. “This resulted in a requirement for the team to develop an interim solution to have all KC-130J aircraft be compliant by the deadline.”

PMA-207 ADS-B (Out) team worked alongside Aircraft Prototype Systems Division, AIRWorks, Naval Air Traffic Management Systems Program Office (PMA-213), Air Combat Electronics Program Office (PMA-209), Fleet Readiness Center East, Integrated Systems Evaluation, Experimentation and Test (AIR-5.1) and DoD International AIMS Program Office to provide a solution.

Together, they successfully worked a way forward, developing an interim cost-effective solution that would meet deadline and serve as a building block to the final Block Upgrade.

Pratt said PMA-207 accepted the role as Lead System Integrator and will use equipment that will also be used in the permanent solution Block Upgrade, thereby saving the government money by reusing parts and leveraging organic cost savings.

The final solution is a stand-alone system that uses both an off-the-shelf civil global positioning system and a KC-130J military transponder system. As a self-contained system it will not require a change in mission software, which in the end avoids additional cost.