CURTISS-WRIGHT

Light Attack Aircraft Saves Time with Off-the-shelf Flight Recorder Solution

Challenge

Required an off-the-shelf solution

Recorder needed data encryption capability

Lacked in-house flight recorder experts

Solution

Selected a proven FDR solution that met technical requirements

Modular recorder system that can accommodate encryption

Partnered with experts with comprehensive installation, software, and training package

Result

Recorder delivered without development time or funding required

Path to encryption solution that meets end-user needs

Time and cost savings by smoothing flight recorder implementation

Challenge

A tandem-seat, single-turboprop, light attack aircraft operator wanted a modern flight recorder for their fleet. They were looking for an off-the-shelf solution that wouldn't require funding for any required modifications to meet their aircraft's specific mechanical or electrical design.

The end user also recognized the importance of data security and thus wanted a solution that would ensure operational data would be encrypted. This would protect any collected data in the event that the aircraft's flight recorder was lost to an adversary.

The end-user was also interested in a solution that was easy to use and well-supported. They were aware that without onsite experts, the installation, setup and day-to-day operational use could be difficult and time-consuming. A flight recorder's hardware was only one part of the puzzle, the supporting download and analysis software and flight data recorder (FDR) parameter database was key to extracting the best value from the system.

Solution

After investigating the available options in the market, Curtiss-Wright was chosen to provide an ED-112A compliant Fortress recorder. This was in part because Curtiss-Wright has been a leading designer of proven cockpit voice and flight data recorders for over 60 years and so could be trusted. As it is almost impossible to find a flight recorder that requires no modifications to meet a new aircraft's requirements, some changes would be needed to the Fortress flight recorder. But in this case, there were only a small number of minor modifications and these were accommodated without additional customer funding.

Curtiss-Wright has a lot of experience providing secure systems, with several products that feature encryption solutions up to the most rigorous military levels. While the selected Fortress model didn't have an encryption feature at the time of selection, such was on the roadmap and would be a simple addition thanks to Fortress's expandability. Fortress uses a modular architecture that allows for system capability expansion. Thus once such a solution was developed in line with the end user's requirements, it could be installed.

Gaining a partnership approach with industry experts was important to ensure a pain-free experience with defining, installing, and operating the flight recorder solution.

Curtiss-Wright worked with the user to improve their installation process, including assistance with parameter database set-up to help the user get familiar with the product quicker. On-site and web-based training and the provided PGS software helped the user's workflow and increased the ease of use of the solution. A long-term support package was also provided to ensure rapid assistance was available if so needed.

Results

The end-user was able to quickly obtain a recorder certified to the latest ED-112A standard with all the required interfaces to connect to their aircraft with minimal modifications required. They also could trust that the recorder's data would be secure in the field thanks to Curtiss-Wright's reputation and proven experience providing the highest level of encryption solutions to military organizations.

Curtiss-Wright's approach to meeting customers' needs throughout the product specification, installation, and training and after-sales support yielded time and cost savings by smoothing the flight recorder implementation.