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SPECTRA AEROSPACE & DEFENSE

Complex Surveillance System Recording



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 Galleon Embedded Computing

Executive Summary

Complex surveillance systems require recording systems for a mixture of signals for long durations. Flexibility of the recording system is critical to success, so as to satisfy the requirements of the military operational use cases.

When the system has multiple operators, playback is also required, in flight and simultaneously to each operator.

Challenges

Combining video processing, along with video, RADAR, and other data recording into a single recording sub-system is challenging, especially when there is also a requirement for small size and low weight.

Rugged equipment with high reliability is also essential for mission success.

End user modes of operation add complexity:

- Data security (encryption and secure erase)
- Snapshot recording – still images taken from the video
- Operator desktop (computer screen) recording
- Uncompressed video recording for short duration (triggered)
- Compressed video recording for the entire mission
- Pre-trigger recording (allowing for human reaction times)
- Playback to multiple operators



Flexibility of the recording system is critical to success to satisfy the military operational use cases.

How Product Helped



Galleon's recorders can be used for data processing, not just for recording.

The Galleon solution was a combination of two LRUs – one is a video processor and recorder. The other is an Ethernet recorder. Together, these 2 units are capable of supporting all of the use cases required for the system.

Galleon provided recording products with all of the additional functionality required. This included Galleon's innovative solution for operator screen recording which optimises disk space while maintaining clarity of the image for post mission reviews.

Galleon's recorders can be used for data processing, not just for recording. This allowed the system to do some processing of the data before recording, which optimises the recorded data set, and simplifies post-mission analysis and debriefing.

Results and Future Plans

This surveillance system is operational in several Countries around the World, with operators benefitting from the ease of operation and fast offload provided by Galleon's recording solutions.

Several similar surveillance systems also use Galleon products (recorders, NAS, and processing systems). Each system has a unique architecture, and Galleon has been able to assist with various aspects of based on the systems engineering requirements of each system.



By using Galleon equipment, the customer met their overall project goals.

