COTS and AI Transforming Space Operations

Ralph Grundler
Aitech
rgrundler@us.aitechsystems.com

For more than 30 years, engineers have been leveraged COTS products for space, military and rugged industrial environments. By using COTS reliably in architectures that have flown successfully has helped space-rated systems incorporate more advanced technologies, like Artificial Intelligence (AI). AI's high-performance data processing, coupled with the experience of making COTS products rugged, is fostering an increasing number of space missions across many industry sectors.

This session will provide a look at the growing reliance on using COTS products to enable space applications, specifically examining command & data handling systems, earth observation satellites, and inter-constellation networking. It also explores next steps for using AI in future deep space and lunar missions for commercial and military applications.

What attendees will learn:

How a Space Digital Backbone is implemented using Systems-based Approach with COTS hardware and how to add AI to the system.

Explanation of Next-gen COTS Hardware and AI enablement in Space. Explanation of how AI is enabled in Space.

Space Implementation Examples that use COTs and AI hardware and the real-world applications where AI is being used.