



Aircraft and Defense Systems Present Many Surfaces for Attack

Ensuring Safety, Reliability and Compliance

Cyber threats have moved from cyber attacks to cyber warfare. Full authority digital engine controls (FADECs), aircraft flight control systems, sensors, actuators, controllers, weapons defense systems, radar, and navigation systems may be vulnerable due to a lack of strong embedded cryptographic controls, including: multi-factor authentication, secure boot, secure update, and secure, encrypted communications.

Aerospace, defense and avionics manufacturers must ensure compliance with cybersecurity standards such as NIST 800-53, IEC 62443-3-3, FIPS 140-2, and DO-178. Keeping up with these standards as well as emerging standards from the Industrial Internet Consortium (IIC) and Industrie 4.0 is challenging. Ensuring the security of aircraft control systems is mission critical.

For commercial and military missions, risk can be measured in terms of safety and reliability of the systems. While data privacy is important, ensuring physical human safety, and the success of the mission success is absolutely essential.

Mocana's Proven Cybersecurity Solution

Used by more than 200 OEMs and defense contractors to protect more than 100 million devices, Mocana's IoT Security Platform is a FIPS 140-2 validated embedded cybersecurity software solution that ensures device trustworthiness and secure communications by giving aerospace and avionics manufacturers, OEMs, government agencies and the military an easy way to:

- Harden FADECs, avionics controllers, communications, navigation, and weapon systems with multi-factor authentication using X.509 certificates and trust chaining
- Secure the boot process to validate the firmware, OS and applications
- Enable secure, cryptographically-signed over-the-air (OTA) and over-the-web (OTW) firmware updates
- Integrate hardware or software-based roots of trust such as TPM, SGX, TrustZone, HSMs, SIMs, and MIMs
- Replace open source crypto software such as OpenSSL.

For more information on Mocana's comprehensive IoT Security Platform and how it can help you secure your critical infrastructure, visit our website at mocana.com or send us an email via sales@mocana.com.