



CUSTOMIZED AVIONICS TEST SOLUTIONS

Providing dedicated test solutions for a variety of aircraft, helicopters and missile programs is a challenge because project requirements, timescales and delivery requirements are moving at such a fast pace. A solution is to use industry standards to formulate test system solutions with highly flexible, scalable and modular designs.

Inherent in such designs is the need to handle a range of industry-standard data buses and interfaces to be simulated, monitored and correlated data from the avionics sub-systems undergoing integration, test and verification. It is commonplace to see the combined use of avionics interfaces, civil and military applications on a single platform like MIL-STD-1553B, STANAG3910/EFEX, MIL-STD-1760, ARINC429, AFDX/ARINC664P7, ARINC825 (CAN Bus) and other serial interfaces with upper layer protocols.

PC-based hardware from laptops with smart cables, portables to desktops and 19in rack mount solutions can offer a good approach and take full advantage to integrate avionics interface modules into PCIe or PXIe based solutions (see Figure 1).

Some test systems may even require complex procedures to engage and interact with the avionic system under test. Such solutions are being built and delivered to support the most advanced aircraft and missile systems using the combination of AIM's avionics interface technology plus third-party interfaces and industry-standard software solutions known as PBA.pro for Windows or Linux. The AIM PBA.pro Test and Analysis software can integrate a wide range of third-party interfaces and supports automated post-processing like offline filtering with data export handled via scripting.

Finally, a powerful capability of the AIM PBA.pro software is to have all common avionics buses and networks time correlated within one single framework application, solving monitoring, capturing and automated or interactive post-processing as described above. \\

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