Embedded Software Support
Expert Algorithm Development and Programming for MAT/101 Users

Custom embedded software solutions are available for Acra KAM-500 users who seek to host signal processing applications on the KAD/MAT/101 embedded processing module.

Curtiss-Wright is an international leader in airborne data acquisition hardware and turn-key solutions. The Acra KAM-500 platform has been providing data to aircraft flight test and health monitoring programs for 20+ years and continues to adapt to ever evolving requirements. The KAD/MAT/101 allows for embedded signal processing locally within the airborne data acquisition system.

Development is supported by open source development tools from Texas Instruments and a dedicated user guide for the KAD/MAT/101. Curtiss-Wright have partnered with Critical Materials to provide expert algorithm and embedded programming support for users of the KAD/MAT/101.

Critical Materials are experts in the field of structural health analysis for the aerospace industry. They are expert users of the KAD/MAT/101, which forms part of their complete airborne SHM/HUMS/iVHM solution.

Features

- Algorithm specification and development
- Embedded programming support enabling advanced time, statistical and frequency analysis including:
  - RMS value, DC value, noise removal
  - Mean, standard deviation, variance and high order statistics
  - FFT, PSD, CSD, signal coherence
- Functions for real-time analysis including feature extraction, exceedance indicators, threshold violations, sensor fault diagnosis
- Guidance on tools and steps of design flow
- Support during aircraft deployment
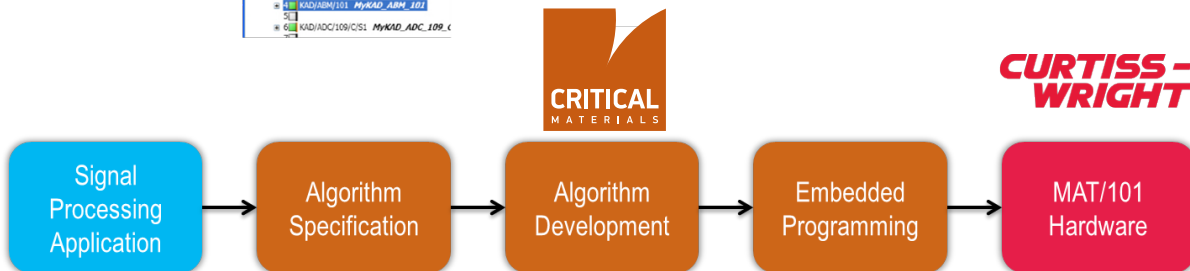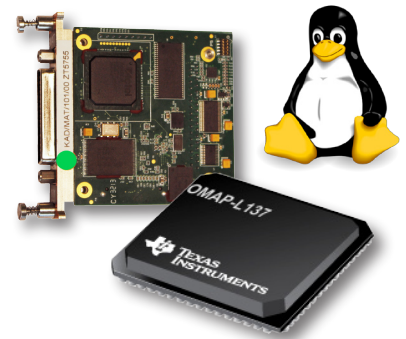
Real-time signal processing with MAT/101