Acam

Automated A2L Creation and Management
Acam is a comprehensive toolsuite that automates every step of generating and managing A2L files. By eliminating manual efforts, Acam maximizes efficiency and quality throughout the embedded software build process.

All-in-One A2L Automation
The Acam suite consists of four powerful yet easy-to-use tools:
Creator - Generates initial A2L files directly from your C/C++ code using a unique algorithm
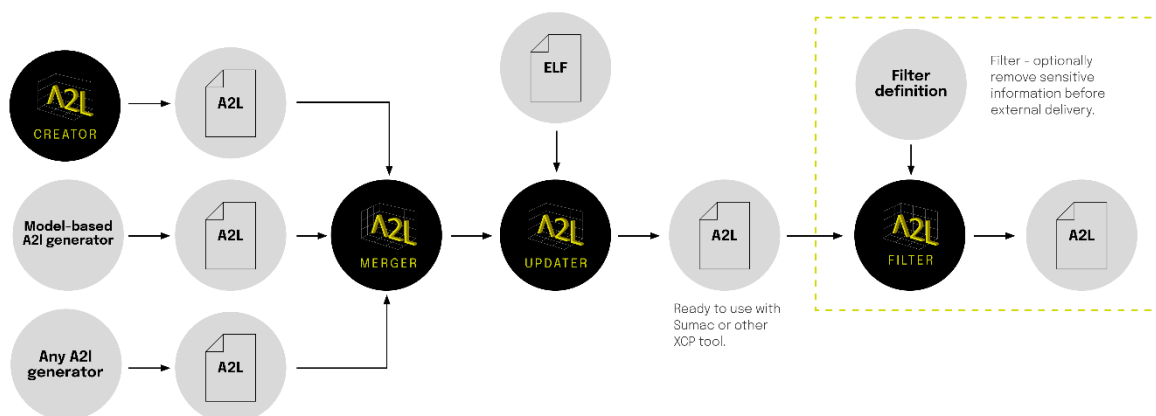**Merger** - Combines multiple A2L files into one a consolidated file
Updater - Updates memory addresses and calibration values in existing A2Ls
Filter - Extracts subsets of parameters from large A2L files

Together, these tools fully automate A2L creation, merging, updating, and filtering- streamlining development workflows.

The figure below illustrates a typical workflow

Creator is truly unique
Creator uses a unique algorithm to automatically generate A2L files directly from your C/C++ source code and ELF build products. By analysing the structure and content of your codebase, Creator derives the required A2L information with minimal input from developers.

How it Works
Creator seamlessly integrates into the build process just like a compiler. It reads in the source files, object files, and ELF output, applying its advanced analysis to extract all relevant A2L metadata.

Developers simply annotate variables they want to expose in the A2L using special comment tags in the code. Creator then automatically generates the corresponding A2L characteristic definitions, data types, layouts, etc.

Key Features
- Handles C/C++ structs, classes, arrays, enums, inheritance, etc.
- A2L metadata specified via compact comment tags

- The A2L tags follows your source – every project the source is used in will automatically have correct A2L information
- Per-instance and per-type A2L property configuration
- Seamless integration with documentation tools like Doxygen
- Required info not derived from build products provided via tags

Example

```
/** @a2l on */
typedef struct
{
  StateType enumArray[3];
  uint8 scalarArray[4];
  uint32 plainScalar;
} StructType;


StructType aStruct;
```

From just this minimal annotated code, Creator will automatically generate the full corresponding A2L entries including all needed computing methods, record layouts etc.

By automating A2L generation directly from source, Creator eliminates tedious manual steps and reduces errors - saving time while boosting quality and traceability.

Acam Key Advantages
- Competitive and flexible licensing models
- Simplified migration from other A2L tools
- Available for both Windows and Linux
- Proven in production software development

Acam is Designed for CI/CD
- Seamless integration into CI/CD pipelines
- Plug into build environments like Make, Ant, Maven
- Extensive documentation and help resources

By automating A2L file generation and management, Acam eliminates costly manual steps and errors - helping deliver functional and compliant embedded software faster.

http://www.udokaelectronics.com/acam