ASAP2Toolkit

ASAP2Toolkit Contact
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1 Known Defects and Restrictions of this Version

The following provides a list of known defects and restrictions. Productive use is anyhow possible.

1.1 Overall system

Defect Tracking Number	Title	Comment / Explanation

1.2 ASAP2 Editor

Defect Tracking Number	Title	Comment / Explanation

1.3 ASAP2 Import

Defect Tracking Number	Title	Comment / Explanation
	Import of IF_DATA blocks and AML sections	There are some restrictions when importing IF_DATA blocks and AML sections: It is not possible to semantically import the values of a CCP IF_DATA definition into the ASAP2Toolkit internal 'ccp' object. When importing a CCP IF_DATA definition, the values are stored in the normal ifData definitions but not in the specific 'ccp' definition.
	For FLOAT definitions COEFF conversion imported but not supported in ASAP2Toolkit	In ASAP2 the COMPU_METHOD is a mandatory attribute, also for definitions of type float. Typically COEFF (Rat_Func) – Compu_Method is used with float definitions in ASAP2 and is also imported to ASAP2Toolkit. This is incompatible with the semantic check which currently does not allow any conversion in conjunction with 'float' data type.

1.4 Address Import (I3E-695, ELF)

Defect Tracking Number	Title	Comment / Explanation

1.5 ASAP2 Export

Defect Tracking Number	Title	Comment / Explanation
	Automatic generation of AML sections	The automatic generation of AML sections does **not** work: - when the ifDataTemplate has no 'global' block - when the 'global' block is not the first block within the ifDataTemplate - when the AML description contains the same sub-Block at multiple locations (e.g. partly done in XCP protocol)
	ASCII / VAL_BLK parameter array only supported for one array dimension.	The ASAP2 Export has been extended to support parameter arrays of representation model "ASCII" and "Value Block", which are exported as one ASAP2 object of type ASCII / VAL_BLK. For more than one array dimension, ASAP2Toolkit Editor and Source Export interprete the last array dimension as "string length" and the previous array dimension(s) as "number of strings". The ASAP2 Export does NOT support this interpretation but multiplies the dimensions (event logged with an error message).
	Map with three axis (cuboid) is not supported.	ASAP2Toolkit Editor, data model and source export support CUBOIDs, but not the Export filters.

2 What's new?

The following sections describe the new features of each ASAP2Toolkit version.

Please see the document ASAP2Toolkit_WhatsNew.pdf

3 Supported Compilers (Address-Import)

In general, ASAP2Toolkit supports any compiler which generates ELF or I3E-695 files. However due to the different compiler dialects it might be that the ASAP2Toolkit import filters must be slightly adapted to some compiler specifics. The following compilers are already evaluated and fully supported.

3.1 IEEE-695

Compiler	Description	Version
Tasking C166	16 bit compiler for Infineon C166 processor	v50r0 v60r4, v60r5 v75r0
Tasking TriCore	32 bit compiler for Infineon TriCore processor Limited support: ASAP2Toolkit supports the ANSI-C data types plus the TriCore specific '_bit' data type. ASAP2Toolkit does not support additional TriCore specific extensions like the data types '_fract', '_sfract' and '_accum', the packed data types, the modifier '_sat' and circular buffers. ASAP2Toolkit doesn't fully support bitfields. Only simple bitfields where all members have the same data type and which do not exceed the overall amount of 32 bits are supported. ASAP2Toolkit does not support enum types with a size different to the size of the data type *int*. (See pragma *intenum*).	v1.4r1

3.2 ELF - DWARF 1.0

Compiler	Description	Version
Hitachi	Hitachi tool chain compiler for Hitachi SH7050, SH7055 microcontroller.	S32HEWMCSSH version 5.1
DiabData	DiabData Compiler Suite C for Motorola black oak	4.3f 4.4a 5.2.1

3.3 ELF - DWARF 2.0

Compiler	Description	Version
Hitachi	Hitachi tool chain compiler for Hitachi SH7050, SH7055 microcontroller.	S32HEWMCSSH version 7.0
Renesas	Renesas compiler for Hitachi SH2 (SH7055) microcontroller.	V9.01
Greenhills	Compiler for PowerPC microcontroller	V2.1
Greenhills	Compiler for NEC V800 microcontroller	GHS C 2013.5.5 [dual]

Compiler	Description	Version
Tasking TriCoreVX	32 bit compiler for Infineon TriCore processor Limited support: ASAP2Toolkit supports the ANSI-C data types according to C90. ASAP2Toolkit does not support new data types defined in C99 and additional TriCore specific extensions like the data types '__bit', '__fract', '__sfract' and '__laccum', the packed data types and circular buffers. ASAP2Toolkit doesn't fully support bitfields. Only simple bitfields where all members have the same data type and which do not exceed the overall amount of 32 bits are supported. ASAP2Toolkit does not support enum types with a size different to the size of the data type *int*. (See switch *--integer-enumeration*).	v2.0r1 v2.1 v2.2r3 v2.2r3p1 v3.2.R3 v3.3.R1 v3.4 v3.5 v4.0 (AURIX) v4.1.r2(AURIX)
METROWERKS HC12	Notes on the support for the METROWERKS compiler V1.2 for HC12: The alignment attributes within the MEMORYLAYOUT entity (usually located in the file @ecu.grl) should be set to 1 for all types. Pointer data types are not verified yet; they should not be used within structures to avoid problems with offset calculation within such data types. Attention: When a variable is not used within your project, the variable will nevertheless be present within the ELF file but with the address 0; as the address 0 is also a valid address, such situations will not be detected by the address import or ASAP2 export.	V1.2
GNUSH	GNUSH v0603 from KPIT Cummins Infosystems Limited, a cross compiler toolchain for Renesas (formerly Hitachi and Mitsubishi) SH series of micro controllers.	V0603
Softune FUJITSU MB91F469G	Compiler for FUJITSU MB91F469G (MB91460 family) processor	V60L06
HighTec V3.4.5	HighTec GNU development tool for Infineon's TriCore family	V3.4.5.1
DiabData	DiabData Compiler Suite C for Motorola black oak	5.3.1 5.4.0 5.6.1 5.8.0

3.4 ELF - DWARF 3.0

Compiler	Description	Version
Tasking VX for C166	TASKING VX-Toolset for C166 Limited support: • ASAP2Toolkit doesn't fully support bitfields. Only simple bitfields where all members have the same data type and which do not exceed the overall amount of 32 bits are supported. • ASAP2Toolkit does not support enum types with a size different to the size of the data type *int*. (See switch *--integer-enumeration*). • Additional base types for C (as revised for 1999) are not supported • Java is not supported • No namespace support for C++ • An optional section for global type names (similar to the global section for objects and functions) is not supported • Adopt UTF-8 as the preferred representation of program name strings not supported	v2.3

3.5 COFF

Compiler	Description	Version
MPLAB C18		