

# MICROSAR Diag A2I Gen

## Technical Reference

A2I fragment file generator for DEM, DCM and FIM

Version 1.02.00

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Status	Released

## Document Information

### History

Author	Date	Version	Remarks
Alexander Ditte	2012-04-13	01.00.00	initial version
Alexander Ditte	2013-06-12	01.01.00	added support for AR4 DCM
Alexander Ditte	2013-09-25	01.01.01	update of chapter 3.1
Alexander Ditte	2017-03-03	01.02.00	added chapter 4 Limitations

### Reference Documents

No.	Source	Title	Version
-	-	-	-

### Scope of the Document

This technical reference describes the specific use of the diagnostic A2I fragment file generator for the DEM, DCM and FIM modules.



#### Caution

We have configured the programs in accordance with your specifications in the questionnaire. Whereas the programs do support other configurations than the one specified in your questionnaire, Vector's release of the programs delivered to your company is expressly restricted to the configuration you have specified in the questionnaire.

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## 1 Component History

The component history gives an overview over the important milestones that are supported in the different versions of the component.

Component Version	New Features
01.00.00	> Initial version
01.01.00	> Added support for selective generation of measurement or calibration fragment content only
01.02.00	> Added support for AUTOSAR 4 DCM > Type definition template is generated in an own file

Table 1-1 Component history

## 2 Introduction

This document describes the functionality, API and configuration of the diagnostic A2I fragment generator module.

This generator shall support the customer to calibrate pre-defined symbols of the following modules:

Specification		
Component	MICROSAR 3	MICROSAR 4
DEM		■
DCM	■	■
FIM		■

Table 2-1 Supported components and specifications

### 3 Functional Description

#### 3.1 Features

The generator can be controlled via command line options. It scans the given source code folders for configuration files of the supported modules. If a known symbol is available and also the correct size could be resolved an entry in the A2I fragment file will be generated.

For a list of the supported calibratable and measurable symbols refer to the technical reference of the respective module.

For this tool to work correctly all paths for the configuration files (header and source) and the static files must be passed.

The following command line options are supported:

Argument	Optional	Description	Default
[-c Component]	Yes	Only the specified component is taken into account Dem: Diagnostic Event Manager only Dcm: Diagnostic Communication Manager only FiM: Function Inhibition Manager only	All components are taken into account
[-f]	Yes	Overwrite an existing output a2i fragment file without confirmation	A confirmation from the user is required
[-h]	Yes	Shows a help message	-
[input ...]	No	Source code folder(s) to scan Please add the folders for the static and generated files	-
[-l]	Yes	Write a log file	no file is generated
[-mc MeasurementCalibration]	Yes	Set the content of the output file. 0: Measurement and Calibration 1: Measurement only 2: Calibration only	Measurement and Calibration symbols
[-nr]	Yes	If set the given folders are not recursively scanned	-
[-o Out]	Yes	Output directory for the generated file	Current working directory
[-v]	Yes	Print additional information during program execution	-

Table 3-1 Command line arguments

## 4 Limitations

### 4.1 DEM

Measurement symbol generation only supported if no Satellites are configured.



## 5 Glossary and Abbreviations

### 5.1 Glossary

Term	Description
EAD	Embedded Architecture Designer; generation tool for MICROSAR components
GENy	Generation tool for CANbedded and MICROSAR components

Table 5-1 Glossary

### 5.2 Abbreviations

Abbreviation	Description
API	Application Programming Interface
AUTOSAR	Automotive Open System Architecture
BSW	Basis Software
DEM	Diagnostic Event Manager
DET	Development Error Tracer
EAD	Embedded Architecture Designer
ECU	Electronic Control Unit
HIS	Hersteller Initiative Software
ISR	Interrupt Service Routine
MICROSAR	Microcontroller Open System Architecture (the Vector AUTOSAR solution)
PPort	Provide Port
RPort	Require Port
RTE	Runtime Environment
SRS	Software Requirement Specification
SWC	Software Component
SWS	Software Specification

Table 5-2 Abbreviations

## 6 Contact

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