

# 3rdParty MCAL Integration

## Release Notes

Renesas RH850/P1x

Version 1.4.0

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## Document Information

### History

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Roland Suess	2015-10-05	1.0.0	Integration of Renesas package AUTOSAR_RH850_P1x_MCAL_E4.03
Andrej Gazvoda	2015-10-21	1.0.1	Integration of Renesas package AUTOSAR_RH850_P1x_MCAL_Ver4.00.04
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Andrej Gazvoda	2016-07-21	1.1.0	Integration of Renesas package AUTOSAR_RH850_P1x_MCAL_Ver4.01.00
Andrej Gazvoda	2016-08-19	1.1.80	Integration of Renesas package AUTOSAR_RH850_P1x_MCAL_Ver4.01.01_Pre_ Release_CW32 Special Release for Nexteer
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Roland Suess	2017-01-20	1.3.0	Integration of Renesas package AUTOSAR_RH850_P1x_MCAL_Ver4.02.00.D
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### Reference Documents

No.	Source	Title	Version
[1]	Vector	TechnicalReference_3rdParty-MCAL-Integration.pdf	see delivery

### Scope of the Document

This document contains information about the integration of 3<sup>rd</sup> Party MCAL into Vector software stack.

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# 1 MCAL Integration

## 1.1 Type of Integration

### *Comfort Integration*

Vector tool DaVinci Configurator 5 is used for configuration

- > as comfort editor for Mcu component
- > as generic editor for other MCAL modules

### *Recommended workflow:*

Generation and changes in configuration are done in DaVinci Configurator.

## 1.2 MCAL Location within SIP

The 3<sup>rd</sup> Party MCAL can be found in `.\ThirdParty\Mcal_Rh850P1x\Supply`. Please refer to chapter 'First Steps' in document `TechnicalReference_3rdParty-MCAL-Integration.pdf` [1].

## 1.3 Supported $\mu$ Controller

This integration supports the Renesas RH850P1M target with the following devices:

R7F701310  
R7F701311  
R7F701314  
R7F701315  
R7F701318  
R7F701319  
R7F701322  
R7F701323  
R7F701362 (configured as R7F701318)  
R7F701363 (configured as R7F701319)  
R7F701366 (configured as R7F701322)  
R7F701367 (configured as R7F701323).

## 1.4 Used MCAL Packages

- > AUTOSAR\_RH850\_P1x\_MCAL\_Ver4.02.01.D (incl. Spi fix  
AUTOSAR\_RH850\_P1x\_MCAL\_Ver4.02.01.001.D\_SPI) - mandatory
- > AUTOSAR\_RH850\_P1x\_MCAL\_Ver4.02.02.D - optional

## **1.5 Configuration Tools**

DaVinci Configurator 5

## **1.6 Supported Compilers**

GreenHills (MULTI 6.1.6) and Compiler 2015.1.7

## 2 Vector Comment

Please consider the attached `TechnicalReference_3rdParty-MCAL-Integration.pdf` [1] for further information regarding Vector integration and setup of a project.

### 2.1 Known Issues

#### 2.1.1 McuDemEventParameterRefs

For the case parameters `MCU_E_WRITE_TIMEOUT_FAILURE` and `MCU_E_CLOCK_FAILURE` are configured with the same `DemEventParameter`, the following error message appears:

```
ERR101042: The value for the parameters 'MCU_E_WRITE_TIMEOUT_FAILURE' and
<MCU_E_CLOCK_FAILURE> present in the container
'McuDemEventParameterRefs' should be unique.
Path: /ActiveEcuC/Mcu/McuModuleConfiguration/McuDemEventParameterRefs
```

In fact, the values *should not be* unique.

#### 2.1.2 SpiDemEventParameterRefs

For the case parameters `SPI_E_HARDWARE_ERROR` and `SPI_E_DATA_TX_TIMEOUT_FAILURE` are configured with the same `DemEventParameter`, the following error message appears:

```
ERR083093: The reference path
</ActiveEcuC/Dem/DemConfigSet/DemEventParameter>
configured for the parameters 'SPI_E_HARDWARE_ERROR' and
'SPI_E_DATA_TX_TIMEOUT_FAILURE' in the container
'SpiDemEventParameterRefs' should be unique.
Path: /ActiveEcuC/Spi/SpiDriver/SpiDemEventParameterRefs
```

In fact, the values *should not be* unique.

#### 2.1.3 Mapping of FIs Code into RAM

If you face problems during `FIs_Init()` that the function `FIs_FcuClearCache()` is not working correctly the following hints have to be considered:

- > Further information is available with the FIs Manual R20UT3710EJ0100-AUTOSAR.pdf provided with the MCAL
- > An example how to adapt `MemMap.h` and `Makefile` mapping FIs private functions into RAM (via the memory sections `FLS_START_SEC_PRIVATE_CODE` and `FLS_START_SEC_PUBLIC_CODE` plus the related STOP sections) can be found in the SIP folder `\ThirdParty\Mcal_Rh850P1x\VectorIntegration\Patches`.

## 3 Glossary and Abbreviations

### 3.1 Glossary

Term	Description
3 <sup>rd</sup> party components / MCAL	BSW modules not provided by Vector. Vector may have integrated the software within the SIP but does not take over any responsibility regarding functionality of these modules.
DaVinci Configurator	Configuration and generation tool for Vector MICROSAR components

Table 3-1 Glossary

### 3.2 Abbreviations

Abbreviation	Description
MCAL	Microcontroller Abstraction Layer
AUTOSAR	Automotive Open System Architecture
SIP	Software Integration Package (as provided by Vector)

Table 3-2 Abbreviations

## 4 Contact

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