VECTOR

3rdParty MCAL Integration

Release Notes

Renesas RH850/P1x

Version 1.4.0

Authors	Roland Suess
Status	Released

Document Information

History

Author	Date	Version	Remarks
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
Andrej Gazvoda	2015-10-21	1.0.2	Mantis_0026358_HotFix_20150226
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
Andrej Gazvoda	2016-11-22	1.1.81	Integration of Renesas package AUTOSAR_RH850_P1x_MCAL_Ver4.01.01.D
Roland Suess	2017-01-20	1.3.0	Integration of Renesas package AUTOSAR_RH850_P1x_MCAL_Ver4.02.00.D
Roland Suess	2017-02-24	1.3.1	Added chapter 2.1.3 (Mapping of Fls Code into RAM)
Roland Suess	2017-07-19	1.4.0	Integration of Renesas packages AUTOSAR_RH850_P1x_MCAL_Ver4.02.01.D and AUTOSAR_RH850_P1x_MCAL_Ver4.02.02.D (optional)

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 3rd Party MCAL into Vector software stack.

Contents

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 3rd 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 µController

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 Fls Code into RAM

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

- Further information is available with the Fls Manual R20UT3710EJ0100-AUTOSAR.pdf provided with the MCAL
- An example how to adapt MemMap.h and Makefile mapping Fls 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
3rd 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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