**Integration Manual**

**For**

**CURRENT MEASUREMENT**

**VERSION: 4.0**

**DATE: 30-Mar-2016**

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**Location:** The official version of this document is stored in the Nexteer Configuration Management System.

**Revision History**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Description** | **Author** | **Version** | **Date** |
| 1 | Initial version | Selva Sengottaiyan | 1.0 | 4-May-2015 |
| 2 | Added fault injection | Nick Saxton | 2.0 | 10-Aug-2015 |
| 3 | Updated to v 3.1.0 of FDD | Selva Sengottaiyan | 3.0 | 29-Sep-2015 |
| 4 | Updated per design rev. 4.2.0 | Rijvi Ahmed | 4.0 | 30-Mar-2016 |

**Table of Contents**

[1 Abbrevations And Acronyms 4](#_Toc418747830)

[2 References 5](#_Toc418747831)

[3 Dependencies 6](#_Toc418747832)

[3.1 SWCs 6](#_Toc418747833)

[3.2 Global Functions(Non RTE) to be provided to Integration Project 6](#_Toc418747834)

[4 Configuration REQUIREMeNTS 7](#_Toc418747835)

[4.1 Build Time Config 7](#_Toc418747836)

[4.2 Configuration Files to be provided by Integration Project 7](#_Toc418747837)

[4.3 Da Vinci Parameter Configuration Changes 7](#_Toc418747838)

[4.4 DaVinci Interrupt Configuration Changes 7](#_Toc418747839)

[4.5 Manual Configuration Changes 7](#_Toc418747840)

[5 Integration DATAFLOW REQUIREMENTS 8](#_Toc418747841)

[5.1 Required Global Data Inputs 8](#_Toc418747842)

[5.2 Required Global Data Outputs 8](#_Toc418747843)

[5.3 Specific Include Path present 8](#_Toc418747844)

[6 Runnable Scheduling 9](#_Toc418747845)

[7 Memory Map REQUIREMENTS 10](#_Toc418747846)

[7.1 Mapping 10](#_Toc418747847)

[7.2 Usage 10](#_Toc418747848)

[7.3 Non RTE NvM Blocks 10](#_Toc418747849)

[7.4 RTE NvM Blocks 10](#_Toc418747850)

[8 Compiler Settings 11](#_Toc418747851)

[8.1 Preprocessor MACRO 11](#_Toc418747852)

[8.2 Optimization Settings 11](#_Toc418747853)

[9 Appendix 12](#_Toc418747854)

# Abbrevations And Acronyms

|  |  |
| --- | --- |
| **Abbreviation** | **Description** |
| DFD | Design functional diagram |
| MDD | Module design Document |
|  | <ADD more to the table if applicable> |
|  |  |
|  |  |

# References

This section lists the title & version of all the documents that are referred for development of this document

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Title** | **Version** |
| <1> | FDD – ES200A Current Measurement | See synergy subversion |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# Dependencies

## SWCs

|  |  |
| --- | --- |
| **Module** | **Required Feature** |
| **None** | N/A |

Note : Referencing the external components should be avoided in most cases. Only in unavoidable circumstance external components should be referred. Developer should track the references.

## Global Functions(Non RTE) to be provided to Integration Project

CurrMeasPer2()

# Configuration REQUIREMeNTS

## Build Time Config

|  |  |  |
| --- | --- | --- |
| **Modules** | **Notes** |  |
| **FLTINJENA** | Set to STD\_ON for Fault Injection |  |

## Configuration Files to be provided by Integration Project

None

## Da Vinci Parameter Configuration Changes

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Notes** | **SWC** |
| **N/A** |  |  |

## DaVinci Interrupt Configuration Changes

|  |  |  |  |
| --- | --- | --- | --- |
| **ISR Name** | **VIM #** | **Priority Dependency** | **Notes** |
| **N/A** |  |  |  |

## Manual Configuration Changes

|  |  |  |
| --- | --- | --- |
| **Constant** | **Notes** | **SWC** |
| **N/A** |  |  |

# Integration DATAFLOW REQUIREMENTS

## Required Global Data Inputs

Refer DataDict.m file

## Required Global Data Outputs

Refer DataDict.m file

## Specific Include Path present

Yes

# Runnable Scheduling

This section specifies the required runnable scheduling.

|  |  |  |
| --- | --- | --- |
| **Init** | **Scheduling Requirements** | **Trigger** |
| **CurrMeasInit1** | None | RTE |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Runnable** | **Scheduling Requirements** | **Trigger** |
| **CurrMeasPer1** | None | 2ms(RTE) |
| **CurrMeasPer2** | None | MOTCTRL ISR\*2 |
| **CurrMeasPer3** | None | 2ms(RTE) |
| **CurrMeasEolGainReq** | None | On Event |
| **CurrMeasEolGainStsReq** | None | On Event |
| **CurrMeasEolOffsReq** | None | On Event |
| **CurrMeasEolOffsStsReq** | None | On Event |
| **CurrMeasGainWrReq** | None | On Event |
| **CurrMeasGainReadReq** | None | On Event |
| **CurrMeasOffsWrReq** | None | On Event |
| **CurrMeasOffsReadReq** | None | On Event |

**.**

# Memory Map REQUIREMENTS

## Mapping

|  |  |  |
| --- | --- | --- |
| **Memory Section** | **Contents** | **Notes** |
| **MotCtrl\_START\_SEC\_CODE** | Code section for Motor Control scheduled functions |  |
|  |  |  |

\* Each …START\_SEC… constant is terminated by a …STOP\_SEC… constant as specified in the AUTOSAR Memory Mapping requirements.

## Usage

|  |  |  |
| --- | --- | --- |
| **Feature** | **RAM** | **ROM** |
| **None** |  |  |

Table : ARM Cortex R4 Memory Usage

## Non RTE NvM Blocks

|  |
| --- |
| **Block Name** |
| **None** |

Note : Size of the NVM block if configured in developer

## RTE NvM Blocks

|  |
| --- |
| **Block Name** |
| **CurrMeasEolGainCalSet**  **CurrMeasEolOffsCalSet** |

Note : Size of the NVM block if configured in developer

The NVM block needs not used.

# Compiler Settings

## Preprocessor MACRO

None

## Optimization Settings

None

# Appendix

*None*