**Integration Manual**

**For**

**Torque Loss of Assist Function**

**VERSION: 2.0**

**DATE: 27-FEB-2015**

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**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Rev #** | **Change Description** | **Date** | **Author** |
| 1 | Initial version | 27-Feb-15 | SB |
| 2 | Updated to SF048A v003 | 22-Nov-15 | SB |

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# 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 SF48A Torque Loss of Assist Function | 3.0.0 |

# Dependencies

## SWCs

|  |  |
| --- | --- |
| **Module** | **Required Feature** |
| **None** | <Addition of global data, function>\*. |

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

None

# Configuration REQUIREMeNTS

## Build Time Config

|  |  |  |
| --- | --- | --- |
| **Modules** | **Notes** |  |
| **None** |  |  |

## Configuration Files to be provided by Integration Project

None

## Da Vinci Parameter Configuration Changes

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Notes** | **SWC** |
| **None** |  |  |

## DaVinci Interrupt Configuration Changes

|  |  |  |  |
| --- | --- | --- | --- |
| **ISR Name** | **VIM #** | **Priority Dependency** | **Notes** |
| **None** |  |  |  |

## Manual Configuration Changes

|  |  |  |
| --- | --- | --- |
| **Constant** | **Notes** | **SWC** |
| **None** |  |  |

# Integration DATAFLOW REQUIREMENTS

## Required Global Data Inputs

MotAgLoaMtgtnEn\_Cnt\_lgc

MtrVelCRF\_MtrRadpS\_f32

VehicleSpeedValid\_Cnt\_lgc

VehicleSpeed\_Kph\_f32

VehicleLatAccel\_MpSecSq\_f32

VehicleLatAccelValid\_Cnt\_lgc

HandwheelPosition\_HwDeg\_f32

TrqLoaDi\_Cnt\_lgc

VehWhlBasVld\_Cnt\_lgc

VehWhlBas\_mm\_f32

## Required Global Data Outputs

TrqLOAAvail\_Cnt\_lgc

TrqLOACmd\_MtrNm\_f32

## Specific Include Path present

No

# Runnable Scheduling

This section specifies the required runnable scheduling.

|  |  |  |
| --- | --- | --- |
| **Init** | **Scheduling Requirements** | **Trigger** |
| **TrqLOA\_Init1** | Called from RTE before first call of periodic function | RTE at init |

|  |  |  |
| --- | --- | --- |
| **Runnable** | **Scheduling Requirements** | **Trigger** |
| **TrqLOA\_Per1** | triggered on TimingEvent  Disabled in WARMINIT and OFF | 2ms |

**.**

# Memory Map REQUIREMENTS

## Mapping

|  |  |  |
| --- | --- | --- |
| **Memory Section** | **Contents** | **Notes** |
| TRQLOA\_START\_SEC\_VAR\_CLEARED\_32 |  |  |
| TRQLOA\_START\_SEC\_VAR\_CLEARED\_UNSPECIFIED |  |  |
| TRQLOA\_STOP\_SEC\_VAR\_CLEARED\_BOOLEAN |  |  |

\* 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 1: 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** |
| **None** |

Note : Size of the NVM block if configured in developer

# Compiler Settings

## Preprocessor MACRO

None

## Optimization Settings

None

# Appendix

*<This section is for appendix>*