Integration Manual – Torque Steer Mitigation

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# Dependencies

## SWCs

|  |  |
| --- | --- |
| Module | Required Feature |
| None |  |

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

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

None

# Configuration

## 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

## Required Global Data Inputs

* HandwheelAuthority\_Uls\_f32
* HandwheelPosition\_HwDeg\_f32
* HandwheelVelocity\_HwRadpS\_f32
* HwTorque\_HwNm\_f32
* PreLimitMtrTrqCmd\_MtrNm\_f32
* SrlComABSActive\_Cnt\_lgc
* SrlComESCActive\_Cnt\_lgc
* SrlComTCSActive\_Cnt\_lgc
* SrlComTransmissionTrq\_TransNm\_f32
* SrlComYawRate\_DegpS\_f32
* TSMitDefeat\_Cnt\_lgc
* VehicleSpeed\_Kph\_f32

## Required Global Data Outputs

* TSMitCommand\_MtrNm\_f32
* TSMitLearningEnabled\_Cnt\_lgc

## Specific Include Path present

No

# Runnable Scheduling

This section specifies the required runnable scheduling.

|  |  |  |
| --- | --- | --- |
| Init | Scheduling Requirements | Trigger |
| TSMit\_Init1 | None | On Init |

|  |  |  |
| --- | --- | --- |
| Runnable | Scheduling Requirements | Trigger |
| TSMit\_Per1 | None | RTE (10ms) |

# Memory Mapping

## Mapping

|  |  |  |
| --- | --- | --- |
| Memory Section | Contents | Notes |
| TSMIT\_START\_SEC\_VAR\_CLEARED\_32 | float32, uint32 |  |
| TSMIT\_START\_SEC\_VAR\_CLEARED\_UNSPECIFIED | LPF32KSV\_Str |  |

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

## Usage

|  |  |  |
| --- | --- | --- |
| Feature | RAM | ROM |
| N/A |  |  |

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 |
| Rte\_Pim\_TSMitGainLrn |
| Rte\_Pim\_TSMitDisableEOL |

Note : Size of the NVM block if configured in developer

# Compiler Settings

## Preprocessor MACRO

None

## Optimization Settings

N/A

# Revision Control Log

|  |  |  |  |
| --- | --- | --- | --- |
| **Rev #** | **Change Description** | **Date** | **Author** |
| 1 | Initial version | 24-Jul-14 | JWJ |
| 2 | Added new defeat input as part of SF-47 actual release | 3-Sept-14 | JWJ |