Integration Manual TrqOvlSta

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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 referred. 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

Ap\_TrqOvlSta\_Cfg.h generated by Ap\_TrqOvlSta\_Cfg.h.tt

### Da Vinci Parameter Configuration Changes

|  |  |  |
| --- | --- | --- |
| Parameter | Notes | SWC |
| TrqOvlStaGeneral/TrqOvlStaCPEnable | To enable checkpoints | TrqOvlSta |

### DaVinci Interrupt Configuration Changes

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

### Manual Configuration Changes

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

# Integration

## Required Global Data Inputs

APANonRecoverableFaults\_Cnt\_lgc

APARecoverableFaults\_Cnt\_lgc

APARequest\_Cnt\_lgc

CCWPosition\_HwDeg\_f32

CWPosition\_HwDeg\_f32

ESCFault\_Cnt\_lgc

ESCIsLimited\_Cnt\_lgc

ESCRequest\_Cnt\_lgc

GMOSH\_APAMfgEnable\_Cnt\_lgc

GMOSH\_ESCMfgEnable\_Cnt\_lgc

GMOSH\_LKAMfgEnable\_Cnt\_lgc

HapticRequest\_Cnt\_lgc

HwTorque\_HwNm\_f32

LKAFault\_Cnt\_lgc

LKAInhibit\_Cnt\_lgc

LKARequest\_Cnt\_lgc

MaxSecureVehicleSpeed\_Kph\_f32

MinSecureVehicleSpeed\_Kph\_f32

PosTrajEnable\_Cnt\_lgc

PosTrajHwAngle\_HwDeg\_f32

SWARTrgtAngRequest\_HwDeg\_f32

ShiftLeverIsInReverse\_Cnt\_lgc

## Required Global Data Outputs

APADrvrInterventionDetected\_Cnt\_lgc

APAState\_State\_enum

ESCState\_State\_enum

GMOSHOscillateState\_State\_enum

LKAState\_State\_enum

PosServEnable\_Cnt\_lgc

PosSrvoHwAngle\_HwDeg\_f32

TrqOscAmp\_MtrNm\_f32

TrqOscEnable\_Cnt\_lgc

## TrqOscFreq\_Hz\_f32Specific Include Path present

Yes

# Runnable Scheduling

This section specifies the required runnable scheduling.

|  |  |  |
| --- | --- | --- |
| Init | Scheduling Requirements | Trigger |
| TrqOvlSta\_Init | Called from RTE before any call to the periodic functions | RTE init |

|  |  |  |
| --- | --- | --- |
| Runnable | Scheduling Requirements | Trigger |
| TrqOvlSta\_Per1 | It should run before torque oscillation calculation | RTE 2ms |

**.**

# Memory Mapping

## Mapping

|  |  |  |
| --- | --- | --- |
| Memory Section | Contents | Notes |
| TRQOVLSTA\_START\_SEC\_VAR\_CLEARED\_32 |  |  |
| TRQOVLSTA\_START\_SEC\_VAR\_CLEARED\_16 |  |  |
| TRQOVLSTA\_START\_SEC\_VAR\_CLEARED\_8 |  |  |
| TRQOVLSTA\_START\_SEC\_VAR\_CLEARED\_BOOLEAN |  |  |
| TRQOVLSTA\_START\_SEC\_VAR\_CLEARED\_UNSPECIFIED |  |  |
| RTE\_START\_SEC\_AP\_ TRQOVLSTA \_APPL\_CODE |  |  |

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

## Usage

|  |  |  |
| --- | --- | --- |
| Feature | RAM | ROM |
| <Memmap usuage info> |  |  |

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

# Revision Control Log

|  |  |  |  |
| --- | --- | --- | --- |
| **Rev #** | **Change Description** | **Date** | **Author** |
| 1 | Initial version | 21-Jan-14 | nzt9hv |
| 2 | Updated per CF-09 GM Torque Overlay State Handler v002 – 12181 | 24-Jul-14 | SB |
| 3 | Removed 'CWFound\_Cnt\_lgc' and 'CCWFound\_Cnt\_lgc' inputs ( Ref: CR EA3#448) | 20-Mar-15 | SV |