Integration Manual – Park assist with Torque Overlay(PAwTO)

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

### 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

HwTorque\_HwNm\_f32

DiagStsNonRecRmpToZeroFltPres\_Cnt\_lgc

DiagStsRecRmpToZeroFltPres\_Cnt\_lgc

LimitPercentFiltered\_Uls\_f32

PAEnableRqst\_Cnt\_lgc

PAErrInterfaceActive\_Cnt\_lgc

PAExtSystemFltActive\_Cnt\_lgc

PAIntSystemFltActive\_Cnt\_lgc

PAWheelCriteriaMet\_Cnt\_lgc

PrkAsstFuncPresent\_Cnt\_lgc

PrkAsstSlewComplete\_Cnt\_lgc

TOEOLDisable\_Cnt\_lgc

TrqOvReverseGearEngage\_Cnt\_lgc

IWSSCalcVspd\_Kph\_f32

PAManoeuvrePhase\_Cnt\_u08

PATrqOvCmdRqst\_HwNm\_f32

PAWhlDirRLStat\_Cnt\_u08

PAWhlDirRRStat\_Cnt\_u08

PAWhlPlsCntRLValid\_Cnt\_lgc

PAWhlPlsCntRRValid\_Cnt\_lgc

VehicleSpeed\_Kph\_f32

## Required Global Data Outputs

HandsOnDetect\_Cnt\_lgc

PABoostCurveSwitch\_Cnt\_lgc

PrkAssistActive\_Cnt\_lgc

PrkAssistState\_Cnt\_u08

PrkAssistSuspend\_Cnt\_lgc

## Specific Include Path present

No

# Runnable Scheduling

This section specifies the required runnable scheduling.

|  |  |  |
| --- | --- | --- |
| Init | Scheduling Requirements | Trigger |
| PAwTO\_Init1 | Called from RTE before any call to the periodic functions | RTE init |

|  |  |  |
| --- | --- | --- |
| Runnable | Scheduling Requirements | Trigger |
| PAwTO\_Per1 | None | RTE 2ms |
| PAwTO\_Per2 | None | RTE 10ms |

**.**

# Memory Mapping

## Mapping

|  |  |  |
| --- | --- | --- |
| Memory Section | Contents | Notes |
| PAWTO\_START\_SEC\_CONST\_8 |  |  |
| PAWTO\_START\_SEC\_VAR\_CLEARED\_BOOLEAN |  |  |
| PAWTO\_START\_SEC\_VAR\_CLEARED\_8 |  |  |
| PAWTO\_START\_SEC\_VAR\_NOINIT\_32 |  |  |

\* 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 |
| <NVM block used Non RTE functions > |

Note : Size of the NVM block if configured in developer

## RTE NvM Blocks

|  |
| --- |
| Block Name |
| <NVM block used in RTE functions > |

Note : Size of the NVM block if configured in developer

# Compiler Settings

## Preprocessor MACRO

<Define all the preprocessor Macros needed and conditions when needed>.

## Optimization Settings

<Define Optimization levels that are needed and conditions when needed>.

# Revision Control Log

|  |  |  |  |
| --- | --- | --- | --- |
| **Rev #** | **Change Description** | **Date** | **Author** |
| 1 | Initial version | 2-Oct-13 | MR |