Integration Manual –AvgFricLrn

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# Dependencies

## SWCs

|  |  |
| --- | --- |
| Module | Required Feature |
| <Name of SWC> | <Addition of global data, function\*. |

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

Ap\_AvgFricLrn\_Cfg.h for checkpoint enable

### 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

CRFMtrTrq\_MtrNm\_f32

DefeatFricLearning\_Cnt\_lgc

HwAng\_HwDeg\_f32

HwPosAuthority\_Uls\_f32

HwTrq\_HwNm\_f32

HwVel\_HwRadpS\_f32

LatAcc\_MpSecSq\_f32

Temperature\_DegC\_f32

VehSpd\_Kph\_f32

VehicleSpeedValid\_Cnt\_lgc

FricLrnEna\_Cnt\_lgc

## Required Global Data Outputs

EstFric\_HwNm\_f32

FricOffset\_HwNm\_f32

SatEstFric\_HwNm\_f32

## Specific Include Path present

No

# Runnable Scheduling

This section specifies the required runnable scheduling.

|  |  |  |
| --- | --- | --- |
| Init | Scheduling Requirements | Trigger |
| AvgFricLrn\_Init1() | None | Init |

|  |  |  |
| --- | --- | --- |
| Runnable | Scheduling Requirements | Trigger |
| AvgFricLrn\_Per1 | triggered on TimingEvent | 10ms |
| AvgFricLrn\_SCom\_GetEOLFric | triggered by server invocation for OperationPrototype <GetEOLFric> of PortPrototype <AvgFricLrn\_SCom> |  |
| AvgFricLrn\_SCom\_GetOffsetOutputDefeat | triggered by server invocation for OperationPrototype <GetOffsetOutputDefeat> of PortPrototype <AvgFricLrn\_SCom> |  |
| AvgFricLrn\_SCom\_GetSelect | triggered by server invocation for OperationPrototype <GetSelect> of PortPrototype <AvgFricLrn\_SCom> |  |
| AvgFricLrn\_SCom\_InitLearnedTables | triggered by server invocation for OperationPrototype <InitLearnedTables> of PortPrototype <AvgFricLrn\_SCom> |  |
| AvgFricLrn\_SCom\_ResetToZero | triggered by server invocation for OperationPrototype <ResetToZero> of PortPrototype <AvgFricLrn\_SCom> |  |
| AvgFricLrn\_SCom\_SetEOLFric | triggered by server invocation for OperationPrototype <SetEOLFric> of PortPrototype <AvgFricLrn\_SCom> |  |
| AvgFricLrn\_SCom\_SetOffsetOutputDefeat | triggered by server invocation for OperationPrototype <SetOffsetOutputDefeat> of PortPrototype <AvgFricLrn\_SCom> |  |
| AvgFricLrn\_SCom\_SetSelect | triggered by server invocation for OperationPrototype <SetSelect> of PortPrototype <AvgFricLrn\_SCom> |  |
| AvgFricLrn\_Trns1 | triggered on entering of Mode <OFF> of ModeDeclarationGroupPrototype <Mode> of PortPrototype <SystemState> |  |

# Memory Mapping

## Mapping

|  |  |  |
| --- | --- | --- |
| Memory Section | Contents | Notes |
| AVGFRICLRN\_START\_SEC\_VAR\_CLEARED\_32 |  |  |
| AVGFRICLRN\_START\_SEC\_VAR\_CLEARED\_BOOLEAN |  |  |
| AVGFRICLRN\_START\_SEC\_VAR\_CLEARED\_UNSPECIFIED |  |  |

\* 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 | 12-May-14 | SB |
| 2 | Anomaly Fix EA3#4980 – changed unit of LatAcc input from g to MpSecSq | 02-Feb-16 | JK |
| 3 | Updated to SF-07 v008 | 25-Feb-16 | JK |