Integration Manual -- PWMCdd

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# Dependencies

## SWCs

|  |  |
| --- | --- |
| Module | Required Feature |
| CDD\_Data | Global variables for DC Phs Comp (for using in Nhet/) |

## Configuration Files to be provided by Integration Project (Project Specific)

PWMCdd\_Cfg.h ( Note : Make sure Macro assignments match correct global variable included in PWMCdd\_Cfg.h . File below is a template. Necessary definition changes needs to be made to template before integration).



## Functions provided to Integration Project

CDDPorts\_ClearPhsReasSum(uint16 DataAccessBfr\_Cnt\_T\_u16)

CDD\_ApplyPWMMtrElecMechPol(sint8 MtrElecMechPol\_Cnt\_s8)

# Configuration

## Build Time Config

|  |  |  |
| --- | --- | --- |
| Constant | Notes | SWC |
|  |  |  |

## Generator Config

|  |  |  |
| --- | --- | --- |
| Constant | Notes | SWC |
|  |  |  |

# Integration

## Global Data

The following global symbols must be defined in CDD\_Data.c and .h (populated by PwmCdd):

* uint16: CDD\_DCPhsComp\_Cnt\_G\_u16[3]
* uint16: CDD\_PWMPeriod\_Cnt\_G\_u16

## Component Conflicts

### Project Specific

* **NHET/EPWM** version corresponding PWMCdd component spilt and using global variables CDD\_DCPhsComp\_Cnt\_G\_u16 and CDD\_PWMPeriod\_Cnt\_G\_u16 should be used.

## Include Path

The “include” directory of this SWC needs to be included in the integration project include search path.

# Runnable Scheduling

This section specifies the required runnable scheduling.

|  |  |  |
| --- | --- | --- |
| Runnable | Scheduling Requirements | Trigger |
| PwmCdd\_Init | Place in EcuStartup. Execute along with NHET initialization. | Init |
| PwmCdd\_Per1 | Must be placed in the motor control ISR, before Nhet (or whichever function populates the global variables used byNhet). | Cyclic (ISR) \* |

\*Note: don’t forget include header file from PWMCDD where PwmCdd\_Per1 is called

# Memory Mapping

## Mapping

|  |  |  |
| --- | --- | --- |
| Memory Section | Contents | Notes |
| PWMCDD\_START\_SEC\_VAR\_CLEARED\_16 | Variable Definitions |  |

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

## Usage

|  |  |  |
| --- | --- | --- |
| Feature | RAM | ROM |
| Full driver |  |  |

Table 1: ARM Cortex R4 Memory Usage

# Revision Control Log

|  |  |  |  |
| --- | --- | --- | --- |
| **Rev #** | **Change Description** | **Date** | **Author** |
| 1 | Initial version | 14-Feb-13 | Selva |