**Module Design Document**

**For**

**‘MotVel’**

**VERSION: 2.0**

**DATE: 18-Nov-2016**

**Prepared For:**

**Software Engineering**

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**Revision History**

|  |  |  |  |  |
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| **Sl. No.** | **Description** | **Author** | **Version** | **Date** |
| 1 | Initial Version | Rijvi Ahmed | 1.0 | 12-April-2016 |
| 2 | Updated per design rev. 2.0.0 | TATA | 2.0 | 18-Nov-2016 |

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# Abbrevations And Acronyms

|  |  |
| --- | --- |
| Abbreviation | Description |
| DFD | Design functional diagram |
| MDD | Module design Document |
| FDD | Functional Design Document |

# References

This section lists the title & version of all the documents that are referred for development of this document

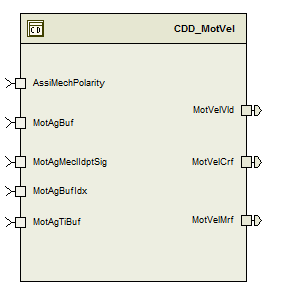
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| --- | --- | --- |
| Sr. No. | Title | Version |
| 1 | MDD Guidelines | Process 04.02.01 |
| 2 | Software Naming Conventions | Process 04.02.01 |
| 3 | Software Design and Coding standards | Process 04.02.01 |
| 4 | FDD : SF40A\_MotVel\_Design | See Synergy sub project version |

# MotVel & High-Level Description

Please refer FDD.

# Design details of software module

## Graphical representation OF MotVel



## Data Flow Diagram

*Refer FDD*

## Module level DFD

*Refer FDD*

## Sub-Module level DFD

*Refer FDD*

## COMPONENT FLOW DIAGRAM

*Refer FDD*

# Variable Data Dictionary

## User defined typedef definition/declaration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Typedef Name | Element Name | User Defined Type | Legal Range  (min) | Legal Range  (max) |
| None | N/A | N/A | N/A | N/A |

## Variable definition for enumerated types

|  |  |  |
| --- | --- | --- |
| Enum Name | Element Name | Value |
| None | N/A | N/A |

# Constant Data Dictionary

## Program(fixed) Constants

## Embedded Constants

## Local

|  |  |  |  |
| --- | --- | --- | --- |
| Constant Name | Resolution | Units | Value |
| Refer the m files | | | |

**6.1.1.2 Global**

|  |
| --- |
| Constant Name |
| N/A |

## Module specific Lookup Tables Constants

|  |  |  |  |
| --- | --- | --- | --- |
| Constant Name | Resolution | Value | Software Segment |
| None | N/A | N/A | N/A |

# Software Module Implementation

## Sub-Module Functions

## Initialization Functions

*None*

## PERIODIC FUNCTIONS

## INIT: MotVelPER1

## Design Rationale

*None*

## Store Module Inputs to Local copies

*Refer to FDD*

## (Processing of function)………

*Refer to FDD*

## Store Local copy of outputs into Module Outputs

*Refer to FDD*

## PERIODIC FUNCTIONS

## INIT: MotVelPER2

## Design Rationale

*None*

## Store Module Inputs to Local copies

*Refer to FDD*

## (Processing of function)………

*Refer to FDD*

## Store Local copy of outputs into Module Outputs

*Refer to FDD*

## Interrupt Functions

*None*

## Server runnables

*None*

## Store Local copy of outputs into Module Outputs

*None*

## Local Function/Macro Definitions

*None*

## GLObAL Function/Macro Definitions

None

## Tranisition FUNCTIONS

None

# Known Limitations With Design

1. In SF040A datadictionary (Ver 2.0.0), MotAgBufIdx input signal is removed. But it is used in the SF040A implementation(ver 2.0.0)’MotVelPer2’. This leads mismatch between DD and Design.
2. MotCtrlMotAgBuf and MotCtrlMotAgTiBuf are removed in data dictionary but used in the model in MotVelPer1. This leads mismatch between DD and Design.

# UNIT TEST CONSIDERATION

None

# Appendix

*None*