**Module Design Document**

**For**

**SysPrfmncSts**

**Jan 19, 2017**

**Prepared For:**

**Software Engineering**

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|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **Author** | **Version** | **Date** |
| Initial Version | Krishna Anne | 1.0 | 20-Jan-2017 |

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# Introduction

Please refer the Design Subproject.

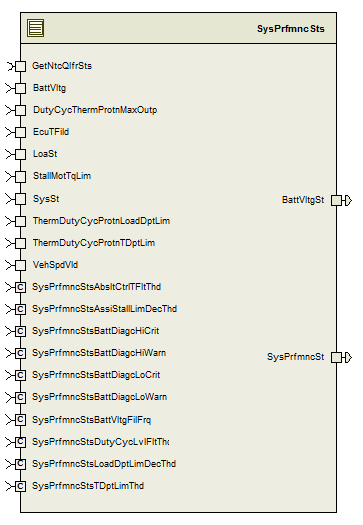
# SysPrfmncSts & High-Level Description

Please refer the Design Subproject.

# Design details of software module

Please refer the Design Subproject.

## Graphical representation of SysPrfmncSts

**

## Data Flow Diagram

Please refer the Design Subproject.

# Constant Data Dictionary

## Program (fixed) Constants

### Embedded Constants

#### Local Constants

|  |  |  |  |
| --- | --- | --- | --- |
| Constant Name | Resolution | Units | Value |
| Please refer the .m file in the design Subproject. | NA | NA | NA |

# Software Component Implementation

## Sub-Module Functions

None

## Init: SysPrfmncStsInit1

## Design Rationale

None

## Module Outputs

None

## Per: SysPrfmncStsPer1

## Design Rationale

None

## Store Module Inputs to Local copies

None

## Server Runables

None

## Interrupt Functions

None

## Module Internal (Local) Functions

## Local Function #1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function Name** | PrfmncSysSt1 | Type | Min | Max |
| **Arguments Passed** | SysSt\_Val\_Cnt\_T\_enum | SysSt1 | 0U | 3U |
|  | ThermDutyCycProtnTDptLim\_MotNwtMtr\_T\_f32 | float32 | 0.0F | 8.8F |
|  | ThermDutyCycProtnLoadDptLim\_MotNwtMtr\_T\_f32 | float32 | 0.0F | 8.8F |
|  | StallMotTqLim\_MotNwtMtr\_T\_f32 | float32 | 0.0F | 8.8F |
|  | \*SysPrfmncSt\_Cnt\_T\_u16 | uint16 | 0U | 36702U |
| **Return Value** | NA | NA | NA | NA |

## Design Rationale

None

## Processing

Please refer below path in FDD.

*SF059A\_SysPrfmncSts/SysPrfmncSts/SysPrfmncStsPer1/PrfmncSysSt*

## Local Function #2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function Name** | PrfmncSysSt2 | Type | Min | Max |
| **Arguments Passed** | DutyCycThermProtnMaxOutp\_Uls\_T\_u16 | uint16 | 0U | 200U |
|  | EcuTFild\_DegCgrd\_T\_f32 | float32 | -50.0F | 50.0F |
|  | LoaSt\_Val\_Cnt\_T\_enum | LoaSt1 | 0U | 5U |
|  | VehSpdVld\_Cnt\_T\_logl | Boolean | FALSE | TRUE |
|  | \*SysPrfmncSt\_Cnt\_T\_u16 | uint16 | 0U | 36702U |
| **Return Value** | NA | NA | NA | NA |

## Design Rationale

None

## Processing

Please refer below path in FDD.

*SF059A\_SysPrfmncSts/SysPrfmncSts/SysPrfmncStsPer1/PrfmncSysSt*

# Known Limitations with Design

NTC definitions are missed in the .m file of the design. FDD owner agreed to include them in the next revision.

Anomaly EA4#9446 is raised.

# UNIT TEST CONSIDERATION

None.

Abbreviations and Acronyms

| **Abbreviation or Acronym** | **Description** |
| --- | --- |
|  |  |
|  |  |

Glossary

**Note**: Terms and definitions from the source “Nexteer Automotive” take precedence over all other definitions of the same term. Terms and definitions from the source “Nexteer Automotive” are formulated from multiple sources, including the following:

* ISO 9000
* ISO/IEC 12207
* ISO/IEC 15504
* Automotive SPICE® Process Reference Model (PRM)
* Automotive SPICE® Process Assessment Model (PAM)
* ISO/IEC 15288
* ISO 26262
* IEEE Standards
* SWEBOK
* PMBOK
* Existing Nexteer Automotive documentation

| **Term** | **Definition** | **Source** |
| --- | --- | --- |
| MDD | Module Design Document |  |
| DFD | Data Flow Diagram |  |

References

| **Ref. #** | **Title** | **Version** |
| --- | --- | --- |
| 1 | AUTOSAR Specification of Memory Mapping (Link:[AUTOSAR\_SWS\_MemoryMapping.pdf](http://www.autosar.org/download/R4.0/AUTOSAR_SWS_MemoryMapping.pdf)) | v1.3.0 R4.0 Rev 2 |
| 2 | MDD Guideline | EA4 01.00.00 |
| 3 | [Software Naming Conventions.doc](http://misagweb01.nexteer.com/eRoomReq/Files/erooms8/NextGeneration/0_fc55f/Software%20Naming%20Conventions%2003x(In%20Work).doc) | 1.0 |
| 4 | [Software Design and Coding Standards.doc](http://eroom1.nexteer.com/eRoomReq/Files/erooms8/NextGeneration/0_1a67a9/Software%20Design%20and%20Coding%20Standards.doc) | 2.1 |
| 5 | FDD : SF059A\_SysPrfmncSts\_Design | See synergy sub-project version |