CabinT_DD

[COMP]

I [CabinT_DD]

1 Function Definition

1.1 Purpose

Cabin Temperature Sensor Device Driver

1.2 Introduction

Evaporator Temperature Sensor Device Driver

2 Function Description

2.1 Behavior in normal mode
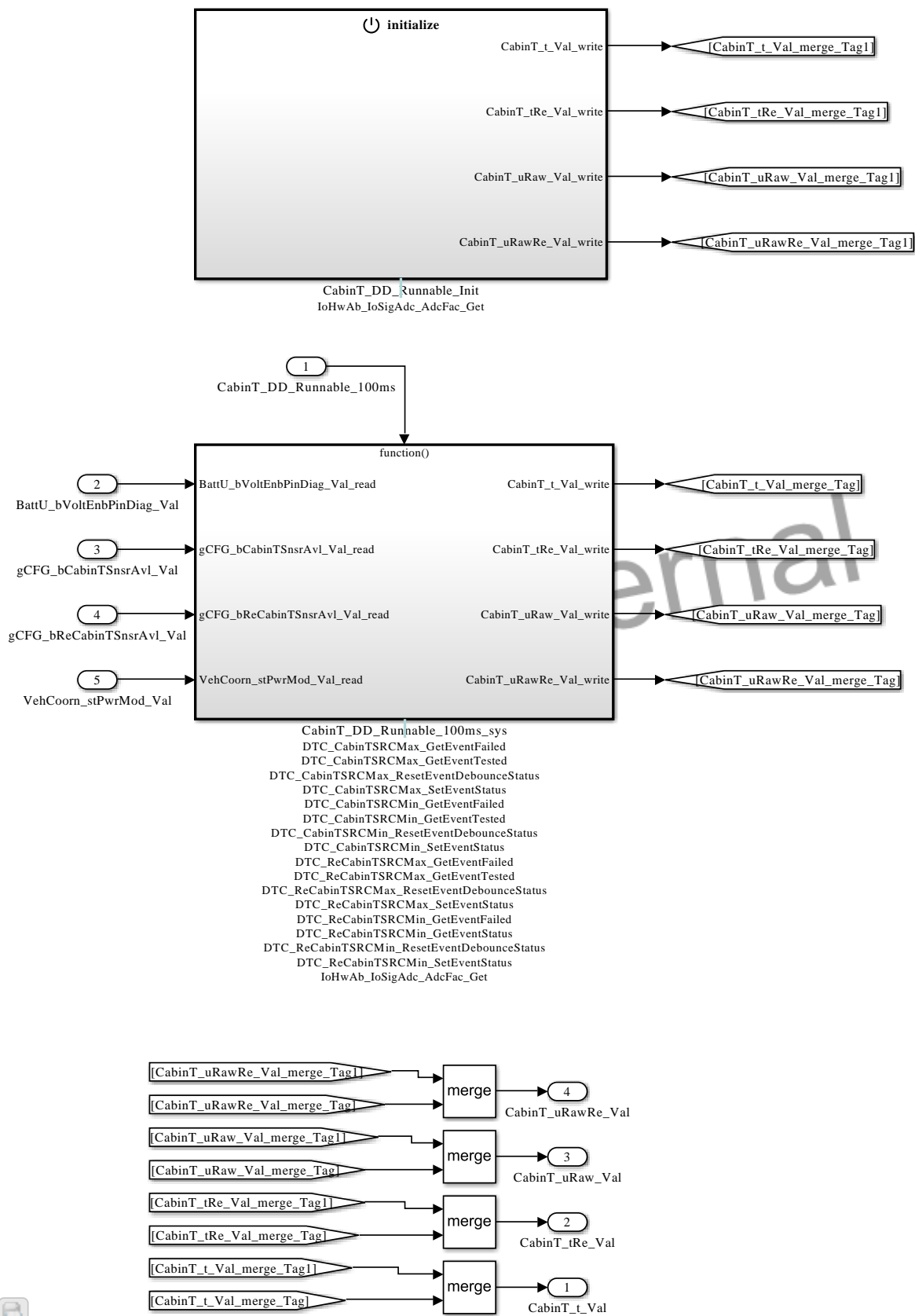
Figure 1 CabinT_DD [CabinT_DD]

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Figure 2 CabinT_DD_CabinT_DD_Runnable_100ms_sys [CabinT_DD_CabinT_DD_Runnable_100ms_sys]
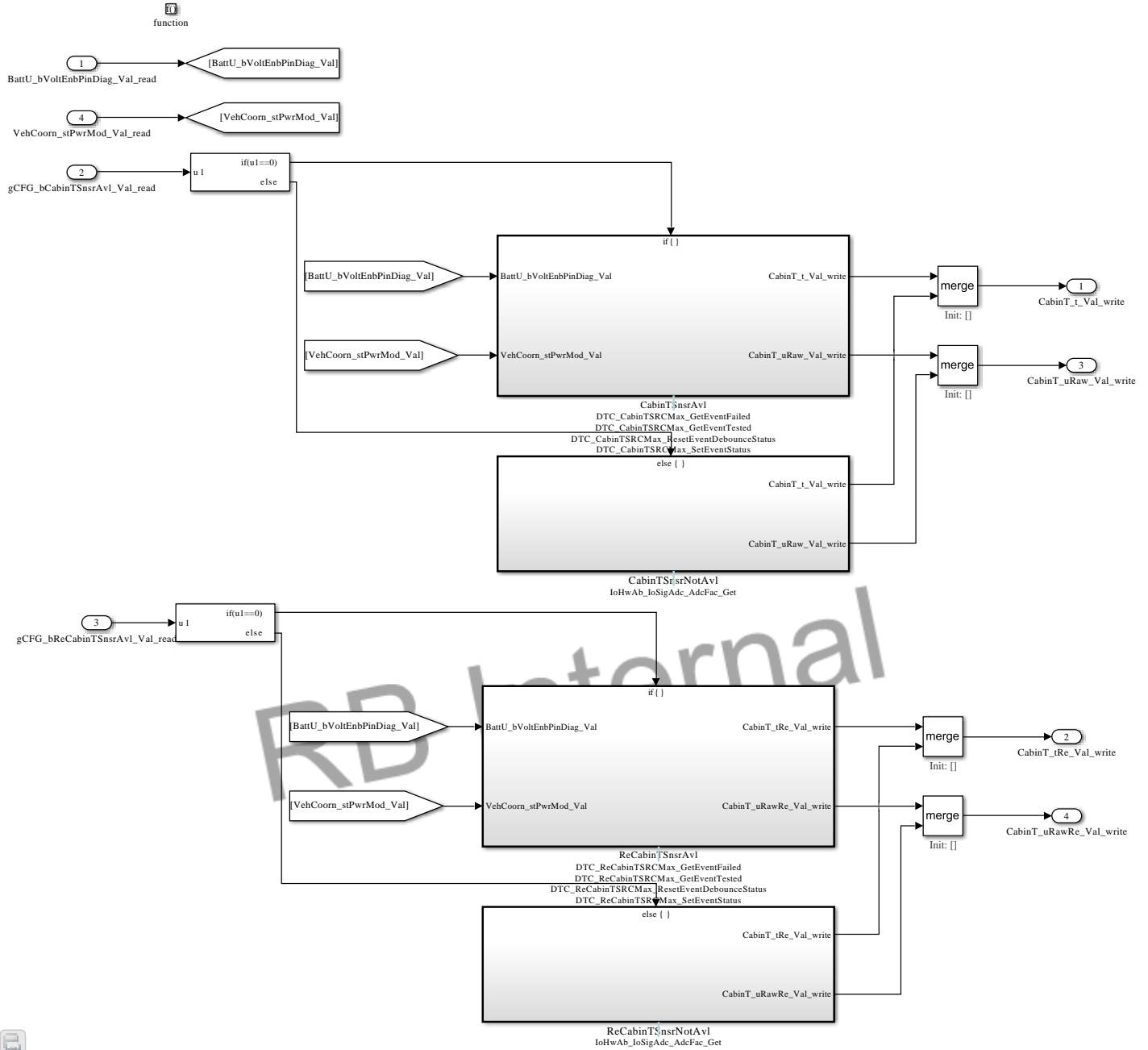
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Figure 3 CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrAvl [CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrAvl]
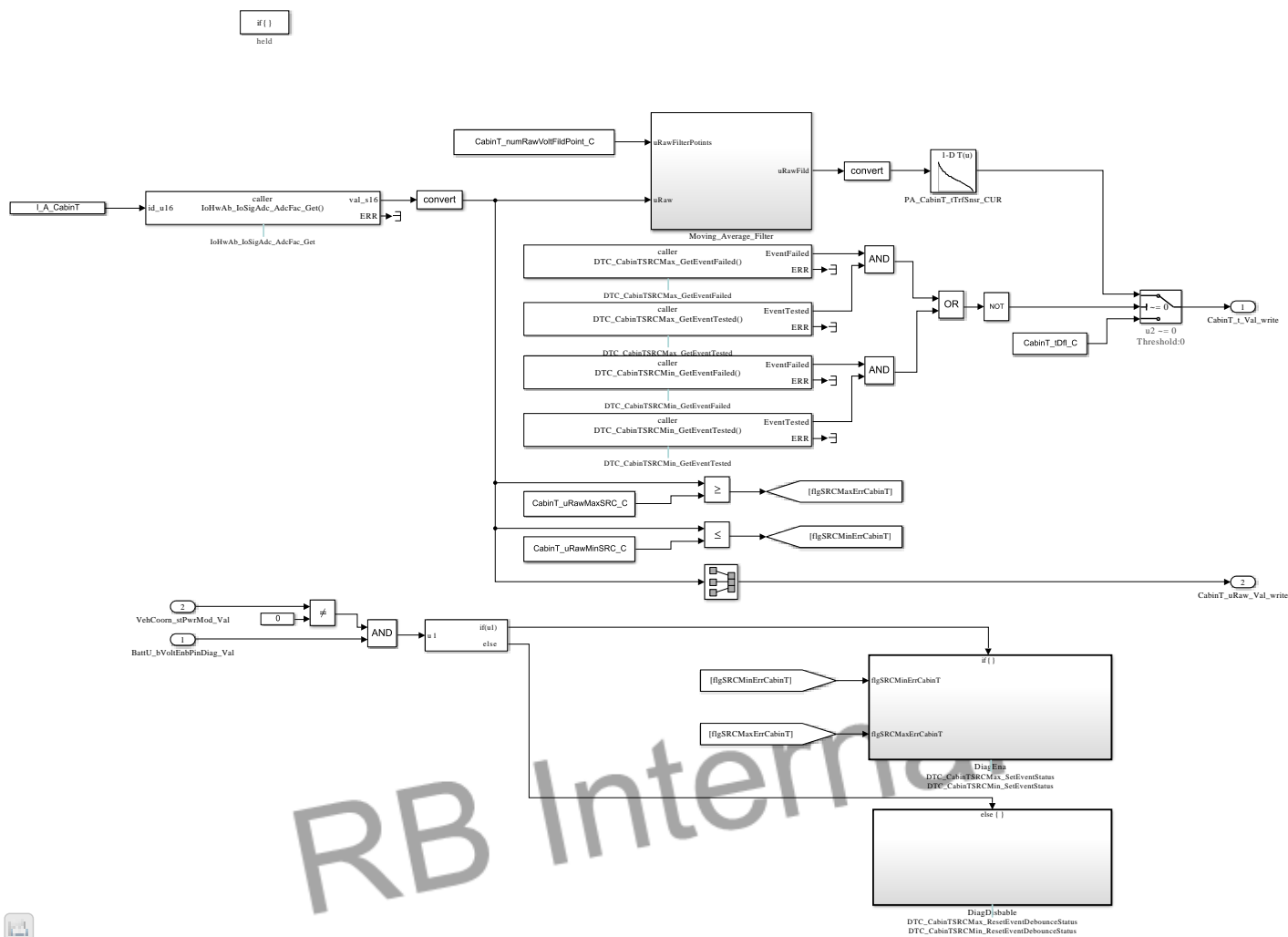

Figure 4 CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrAvl_DiagDisbable [CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSn-srAvl_DiagDisbable]
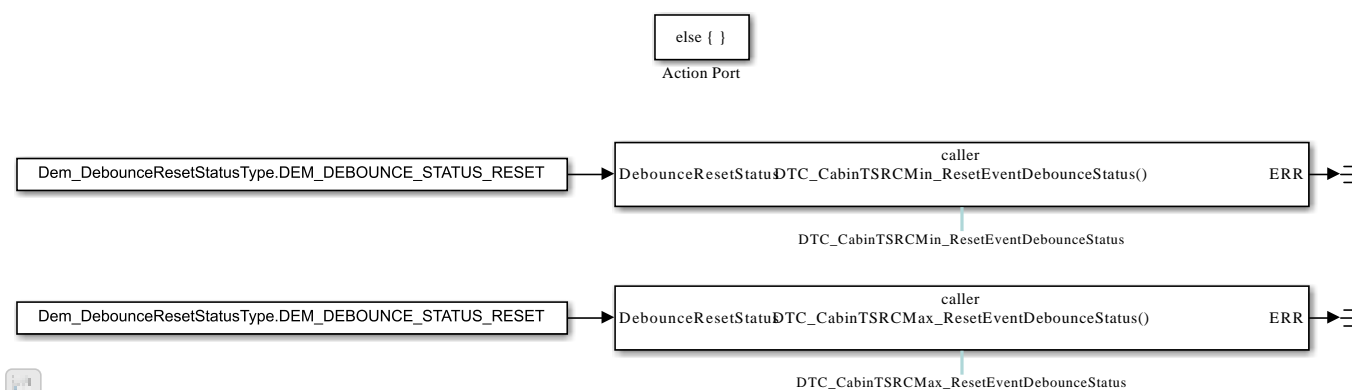
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Figure 5 CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrAvl_DiagEna [CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrAvl_DiagEna]
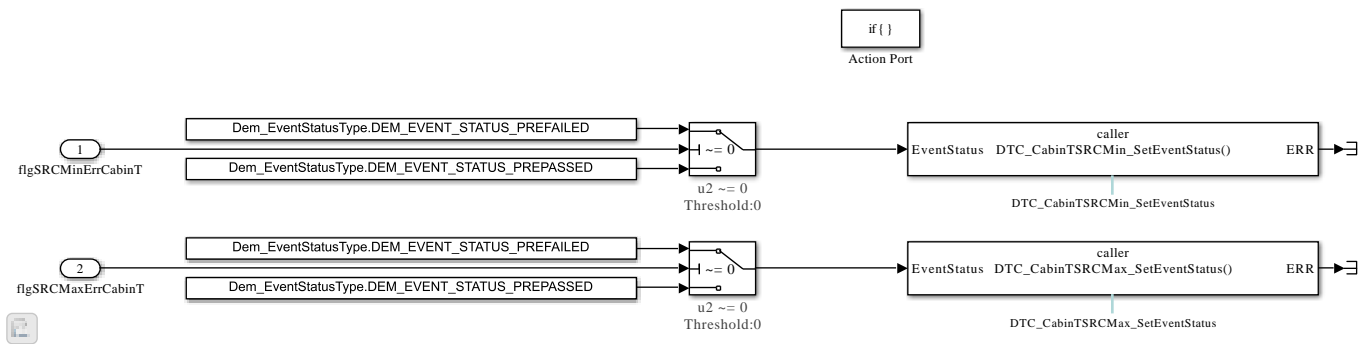

Figure 6 CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrAvl_Moving_Average_Filter [CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrAvl_Moving_Average_Filter]
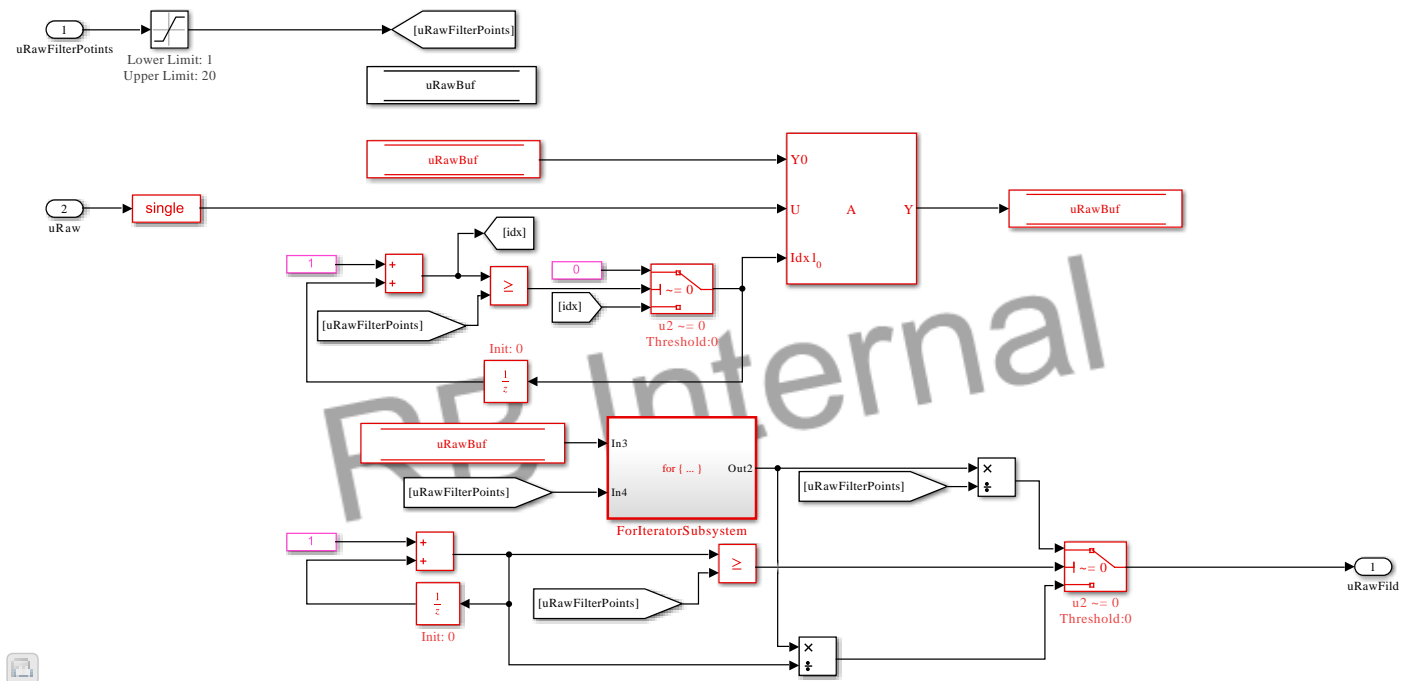

Figure 7 CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrAvl_Moving_Average_Filter_ForIteratorSubsystem [CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrAvl_Moving_Average_Filter_ForIteratorSubsystem]
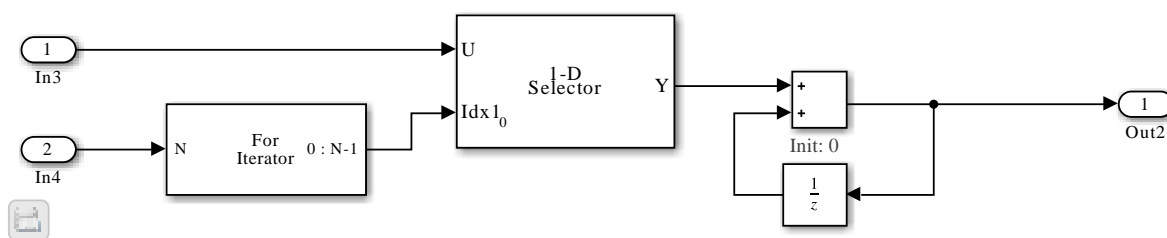
Figure 8 CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrNotAvl [CabinT_DD_CabinT_DD_Runnable_100ms_sys_CabinTSnsrNotAvl]
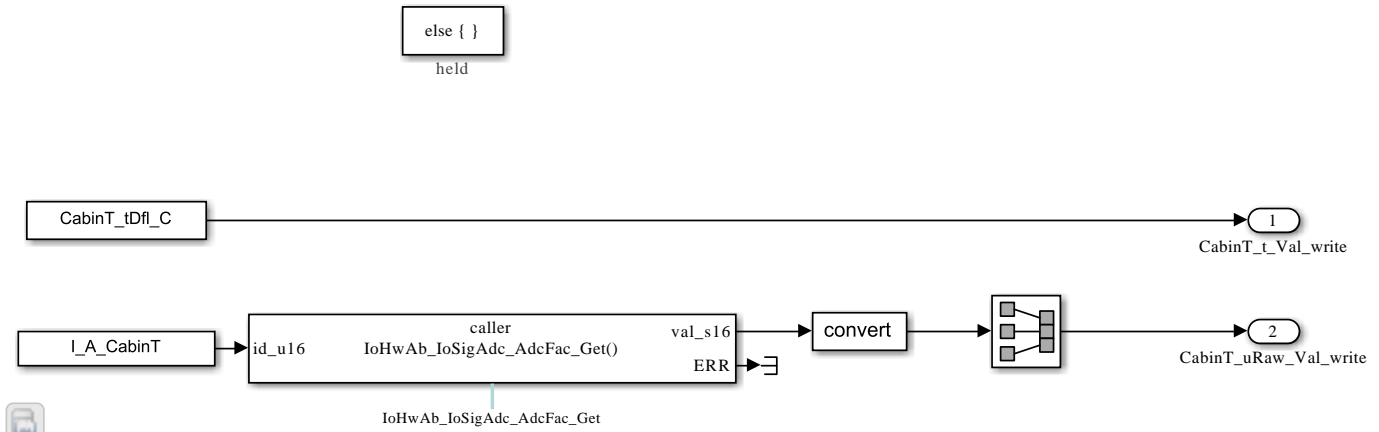

Figure 9 CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSnsrAvl [CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSnsrAvl]

Figure 10 CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSnsrAvl_DiagDisbable [CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSn-srAvl_DiagDisbable]

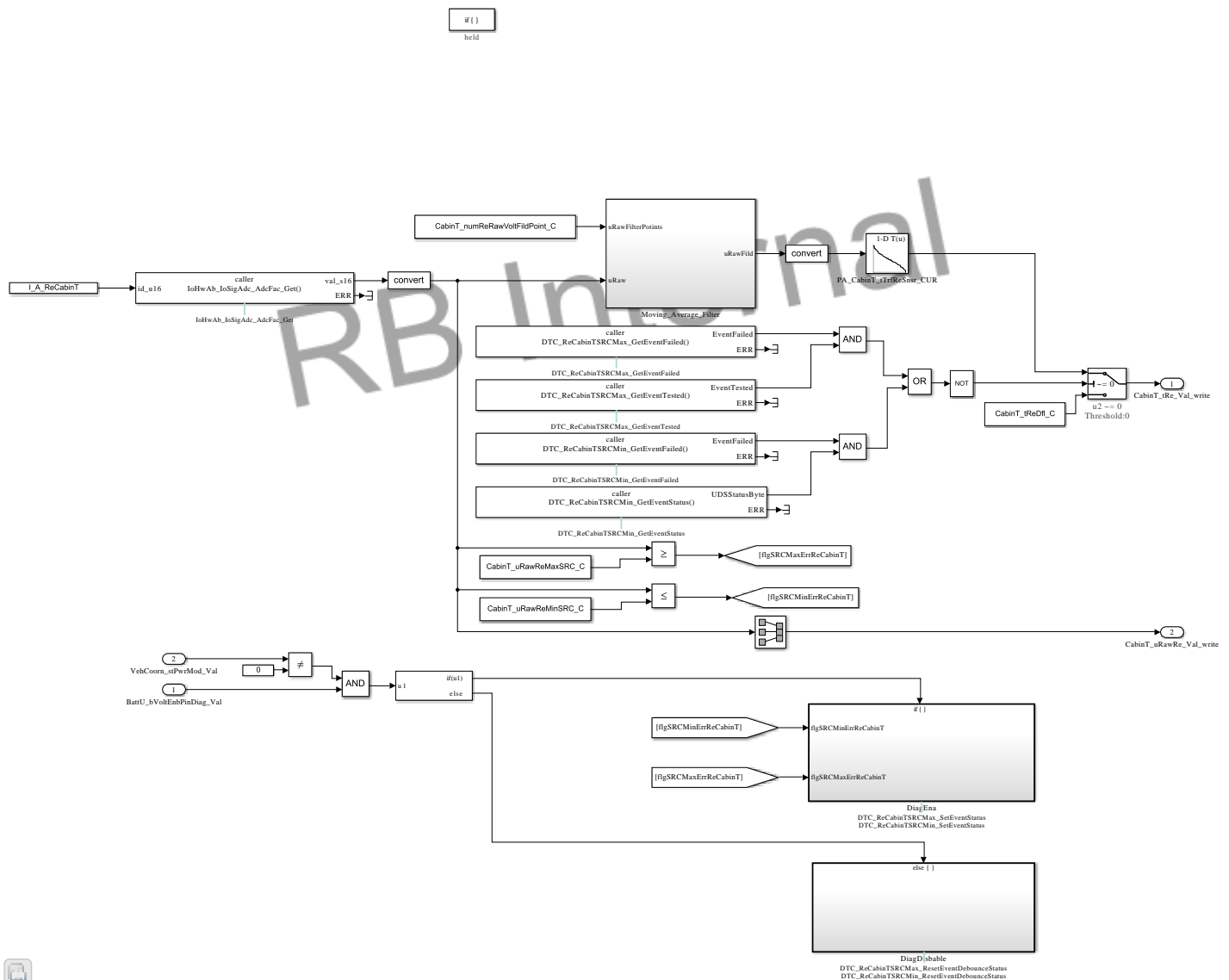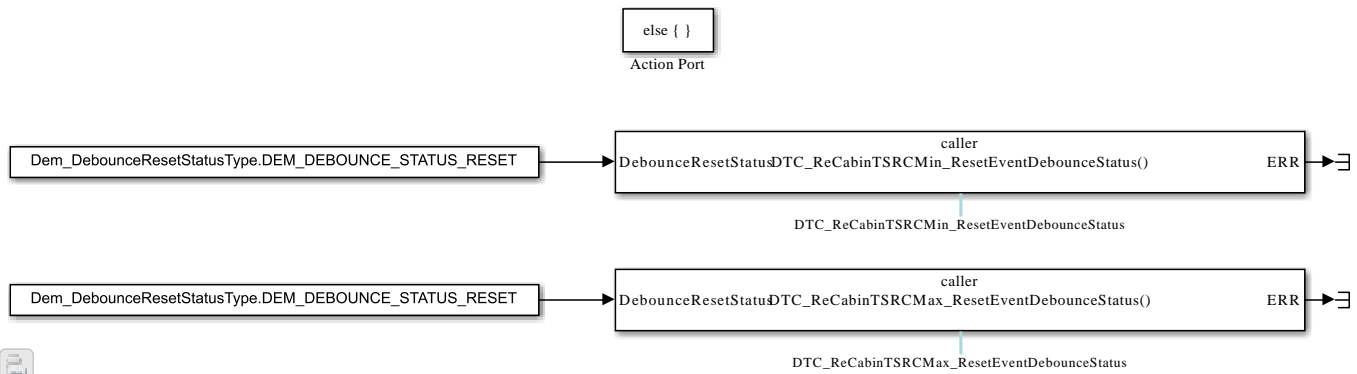Figure 11 CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSnsrAvl_DiagEna [CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSn-srAvl_DiagEna]
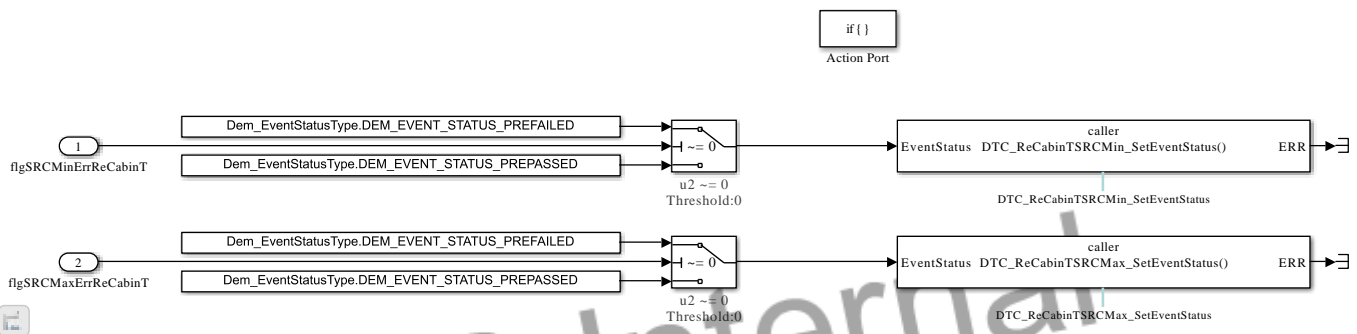

Figure 12 CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSnsrAvl_Moving_Average_Filter [CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCa-binTSnsrAvl_Moving_Average_Filter]
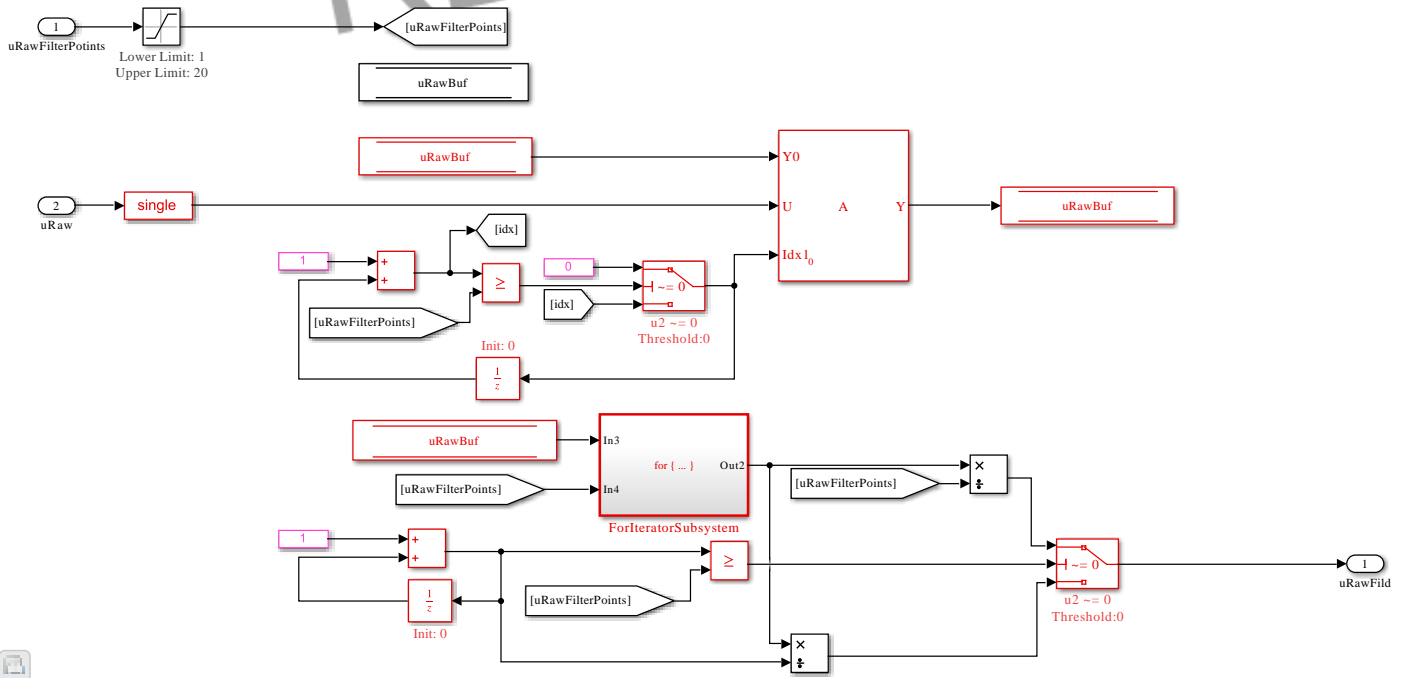
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Figure 13 CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSnsrAvl_Moving_Average_Filter_ForIteratorSubsystem [CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSnsrAvl_Moving_Average_Filter_ForIteratorSubsystem]
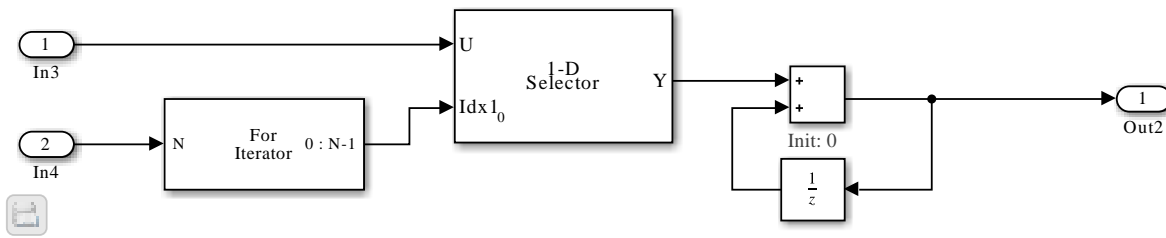

Figure 14 CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSnsrNotAvl [CabinT_DD_CabinT_DD_Runnable_100ms_sys_ReCabinTSnsrNotAvl]
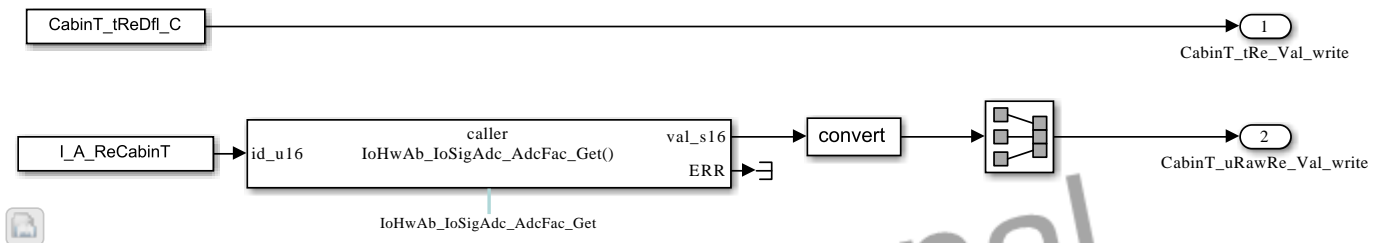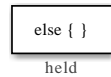
Figure 15 CabinT_DD_CabinT_DD_Runnable_Init [CabinT_DD_CabinT_DD_Runnable_Init]
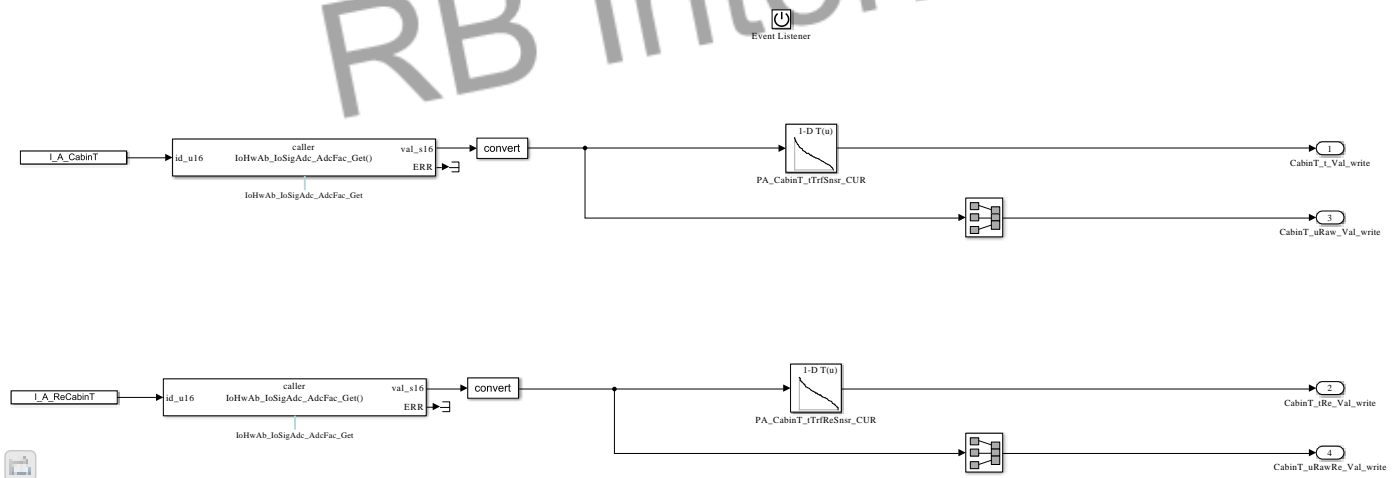
Table 1 Data Types for port interfaces [PortInterfaceDataTypes]

Port	AccessMode	Interface	DE	Datatype
BattU_bVoltEnbPinDiag	ExplicitReceive	BattU_bVoltEnbPinDiag	Val	boolean
gCFG_bCabinTSnsrAvl	ExplicitReceive	gCFG_bCabinTSnsrAvl	Val	boolean
gCFG_bReCabinTSnsrAvl	ExplicitReceive	gCFG_bReCabinTSnsrAvl	Val	boolean
VehCoorn_stPwrMod	ExplicitReceive	VehCoorn_stPwrMod	Val	uint8
CabinT_t	ExplicitSend	CabinT_t	Val	T_q0p1_o273p14_DegC_s16
CabinT_tRe	ExplicitSend	CabinT_tRe	Val	T_q0p1_o273p14_DegC_s16
CabinT_uRaw	ExplicitSend	CabinT_uRaw	Val	U_q1_mV_u16
CabinT_uRawRe	ExplicitSend	CabinT_uRawRe	Val	U_q1_mV_u16

Table 2 Data Types for ADT [ApplicationDataTypes]

Name	Length	IsSigned	CompuMethod
T_q0p1_o273p14_DegC_s16	16	true	CM_T_q0p1_o273p14_DegC
U_q1_mV_u16	16	false	CM_U_q1_mV

3 Conversion forms

Table 3 Conversion forms

Name	Category	Unit	Contents int
CM_Fac_q0p001	LINEAR		f(phys) := 1000phys
CM_Frq_q0p1_Hz	LINEAR	Hz	f(phys) := 10phys
CM_I_q0p25_mA	LINEAR	mA	f(phys) := 4phys
CM_N_q1_rpm	LINEAR		f(phys) := 1phys
CM_P_q2_hPa	LINEAR	hPa	f(phys) := 1phys / 2
CM_Perc_q0p0122_Perc	LINEAR	%	f(phys) := 81.92phys
CM_T_q0p1_o273p14_DegC	LINEAR	DegC	f(phys) := (10phys--2731.3999999999996)
CM_Ti_q0p001_s	LINEAR		f(phys) := 1000phys
CM_Ti_q1_us	LINEAR	us	f(phys) := 1phys
CM_U_q1_mV	LINEAR	mV	f(phys) := 1phys
CM_boolean	TEXTTABLE		(FALSE, 0), (TRUE, 1)
Dem_DTCFormatType	TEXTTABLE		(DEM_DTC_FORMAT_OBD, 0), (DEM_DTC_FORMAT_UDS, 1), (DEM_DTC_FOR-MAT_J1939, 2)
Dem_DebounceResetStatusTy-pe	TEXTTABLE		(DEM_DEBOUNCE_STATUS_FREEZE, 0), (DEM_DEBOUNCE_STATUS_RESET, 1)
Dem_EventStatusType	TEXTTABLE		(DEM_EVENT_STATUS_PASSED, 0), (DEM_EVENT_STATUS_FAILED, 1), (DEM_EVENT_STATUS_PREPASSED, 2), (DEM_EVENT_STATUS_PREFAILED, 3), (DEM_EVENT_STATUS_FDC_THRESHOLD_REACHED, 4), (DEM_EVENT_STA-TUS_PASSED_CONDITIONS_NOT_FULFILLED, 5), (DEM_EVENT_STATUS_FAI-LED_CONDITIONS_NOT_FULFILLED, 6), (DEM_EVENT_STATUS_PREPASSED_CON-DITIONS_NOT_FULFILLED, 7), (DEM_EVENT_STATUS_PREFAILED_CONDITIO-NS_NOT_FULFILLED, 8)
Dem_UdsStatusByteType	SCALE_LINE-AR_AND_TEXT-TABLE		
Identcl	IDENTICAL		
boolean_CompuMethod	TEXTTABLE		(FALSE, 0), (TRUE, 1)

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II Production Note

Table 4 Configuration chosen for DocuNG

Parameter	Value
User	
Project Name	GAC_ZCUT_FRM_C0Sample
Generator Mode	Continue on non-fatal error
Ascet graphic generator engine	UnifiedGraphicGenerator
Matlab graphic generator engine	UnifiedGraphicGenerator
DocType	CDGBookAllDetailed
Condition Evaluation	true
Title Page Logo	
Print Algorithms To Review	true
Support Fallback Language	true
Print List Of Converted System Constants	true
Create Label Alias Mapping	true
HTML	false
PDF	true
PDF: Language	EN - English
PDF: Links in Graphics	true
PDF: Line Numbers	false
PDF: Confidential Level 2	true
PDF: Docu Security Option	false

Table 5 Version Information

Program Module	Version
Product	AEEE-Pro 2020.2.0