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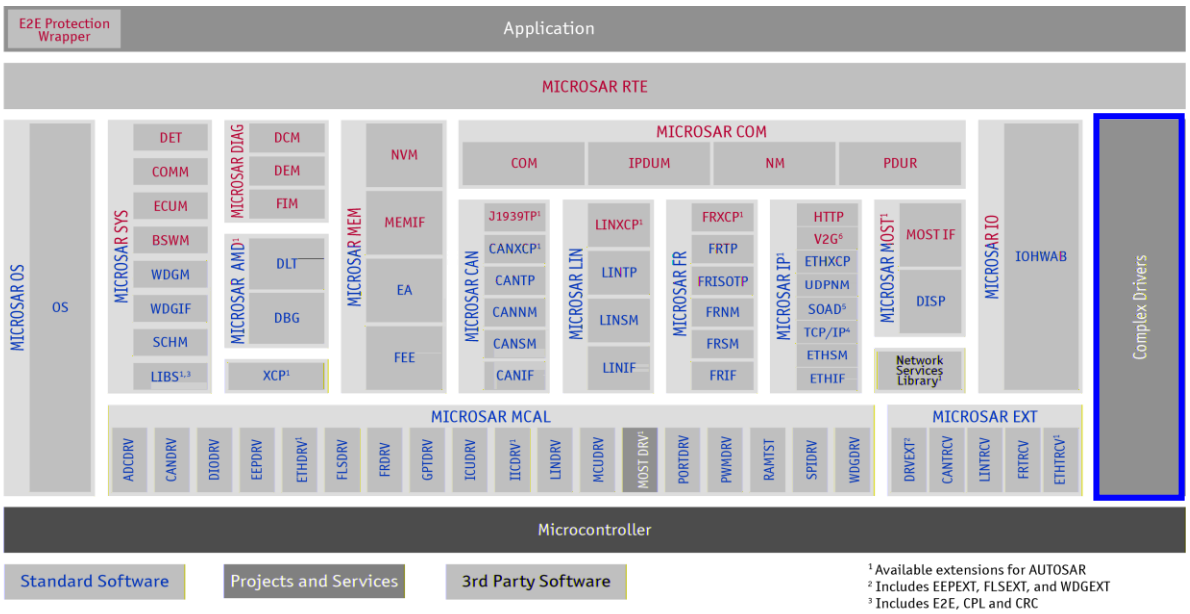
2.1 Architecture Overview



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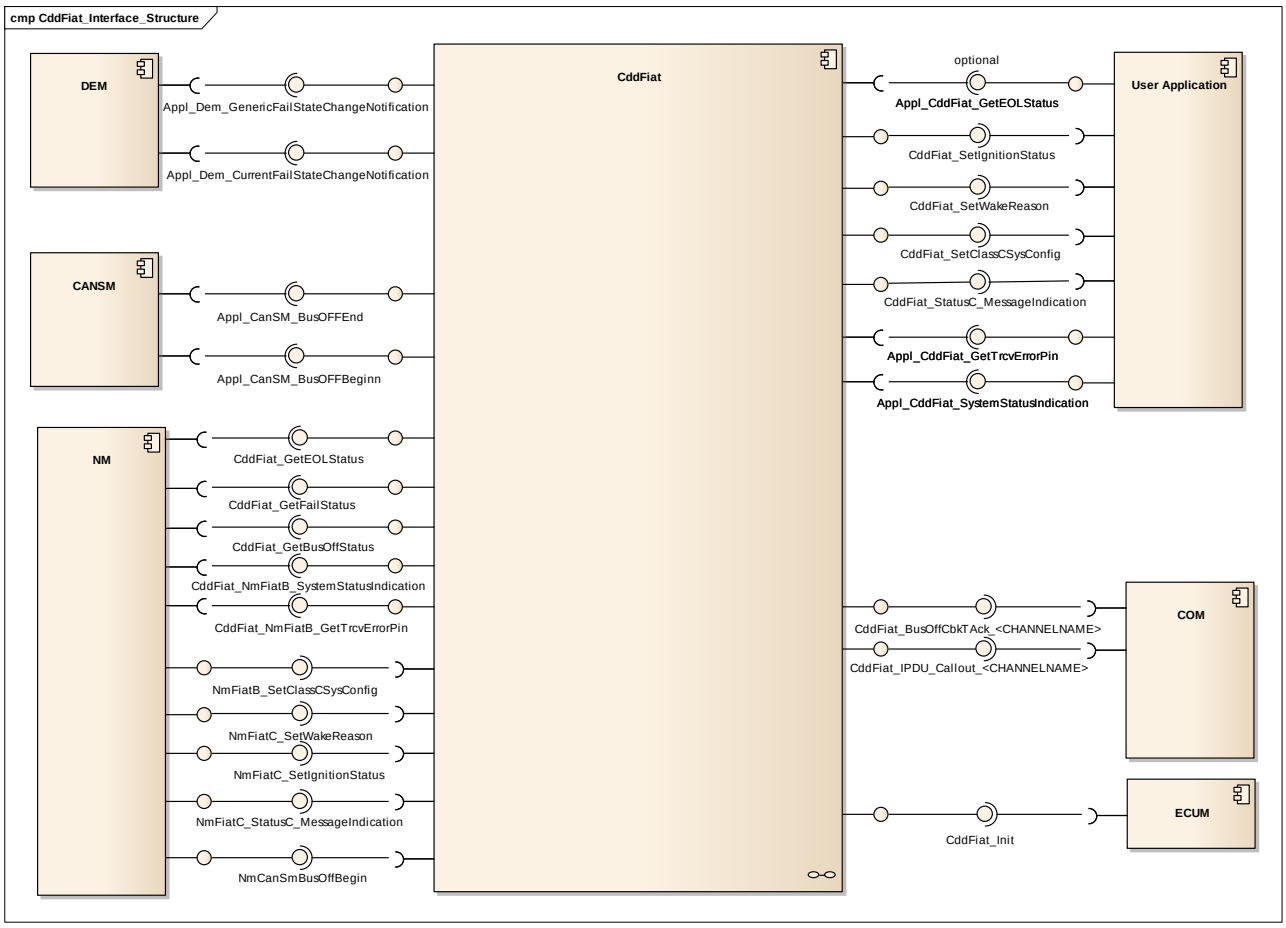
cmp CddFiat_Interface_Structure
DEM
Appl_Dem_GenericFailStateChangeNotification
Appl_Dem_CurrentFailStateChangeNotification
CANSM
Appl_CanSM_BusOFFEnd
Appl_CanSM_BusOFFBeginn
NM
CddFiat_GetEOLStatus
CddFiat_GetFailStatus
CddFiat_GetBusOffStatus
CddFiat_NmFiatB_SystemStatusIndication
CddFiat_NmFiatB_GetTrcvErrorPin
NmFiatB_SetClassCSysConfig
NmFiatC_SetWakeReason
NmFiatC_SetIgnitionStatus
NmFiatC_StatusC_MessageIndication
NmCanSmBusOffBegin
CddFiat
optional
Appl_CddFiat_GetEOLStatus
CddFiat_SetIgnitionStatus
CddFiat_SetWakeReason
CddFiat_SetClassCSysConfig
CddFiat_StatusC_MessageIndication
Appl_CddFiat_GetTrcvErrorPin
Appl_CddFiat_SystemStatusIndication
User Application
CddFiat_BusOffCbkTAck_<CHANNELNAME>
CddFiat_IPDU_Callout_<CHANNELNAME>
COM
CddFiat_Init
ECUM

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3

3.1 Features

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3.2 System Status Indication

```
void                                    ()
```

	-	
SystemConfig		arraySize
SystemEolConfig		arraySize
SystemFailConfig		arraySize
SystemCurFailConfig		arraySize
SystemPhysStatus		arraySize
SystemActiveLoads		■ ■

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3.3 Error Handling

3.3.1 Development Error Reporting

Det_ReportError()
-

CDDFIAT_DEV_ERROR_DETECT == STD_ON .

If another module is used for development error reporting, the function prototype for reporting the error can be configured by the integrator, but must have the same signature as the service Det_ReportError()

CDDFIAT_SID_INIT = 0x01	
CDDFIAT_SID_BUSOFF_CBK_T_ACK = 0x02	
CDDFIAT_SID_IPDU_CALLOUT = 0x03	
CDDFIAT_SID_BUSOFF_BEGINN = 0x04	

CDDFIAT_SID_BUSOFF_END = 0x05	
CDDFIAT_SID_GENERIC_DEM_FAIL_STATE_NOTIFICATION = 0x06	
CDDFIAT_SID_CURRENT_DEM_FAIL_STATE_NOTIFICATION = 0x07	
CDDFIAT_SID_GET_BUS_OFF_STATUS = 0x08	
CDDFIAT_SID_GET_EOL_STATUS = 0x09	
CDDFIAT_SID_GET_FAIL_STATUS = 0x0A	

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	CDDFIAT_E_UNINIT	
	CDDFIAT_E_PARAM	
	CDDFIAT_E_INVALID_CHANNEL	

-

3.3.1.1 Parameter Checking

	CDDFIAT_E_PARAM	CDDFIAT_E_UNINIT	CDDFIAT_E_INVALID_CHANNEL
	■		
		■	
	■	■	
		■	
		■	
	■	■	

	CDDFIAT_E_PARAM	CDDFIAT_E_UNINIT	CDDFIAT_E_INVALID_CHANNEL
Appl_Dem_CurrentFailStateChangeNotification	■	■	
CddFiat_GetBusOffStatus	■	■	■
CddFiat_GetEOLStatus	■	■	
CddFiat_GetFailStatus	■	■	

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CDDFIAT_DEV_ERROR_DETECT

4

4.1 Scope of Delivery

4.1.1 Static Files

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	■		

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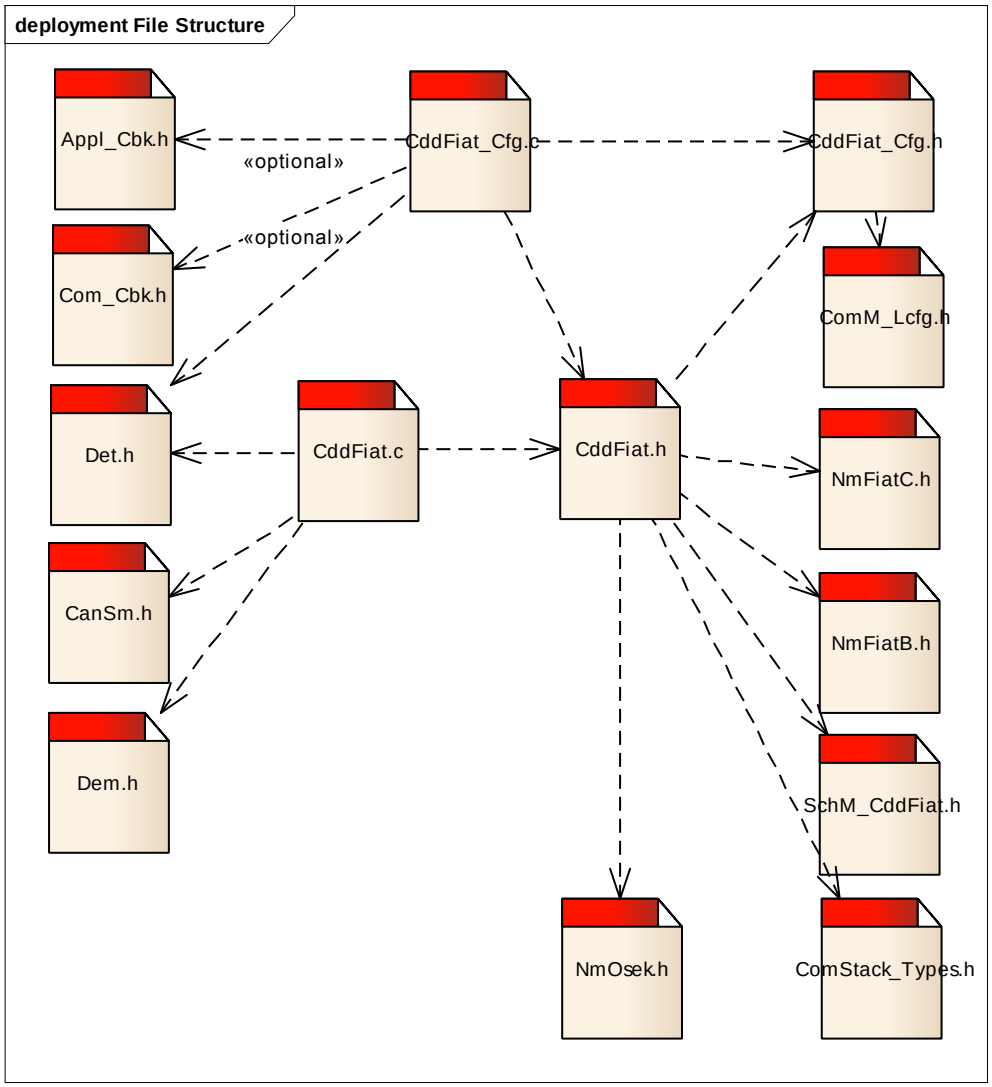
4.1.2 Dynamic Files

	■		
	■		

4.2 Include Structure



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4.3 Compiler Abstraction and Memory Mapping

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			■		
	■	■			
			■		
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4.4 Critical Sections

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4.5 Initialization

`void CddFiat_Init(void).`

4.6 Dependencies on SW modules

4.6.1 Det

4.6.2 Dem

Appl_Dem_GenericFailStateChangeNotification
Appl_Dem_CurrentFailStateChangeNotification

4.6.3 CanSM

Appl_CanSM_BusOffBegin Appl_CanSM_BusOffEnd

4.6.4 Com

CddFiat_IPDU_Callout_<CHANNELNAME>

CddFiat_BusOffCbkTAck_<CHANNELNAME>

4.6.5 SchM

5

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5.1 Services provided by CddFiat

5.1.1 CddFiat_Init

void (void)

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5.1.2 CddFiat_InitMemory

void (void)
– -
– -
- - -
■ ■ -
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5.1.3 CddFiat_GetBusOffStatus

Std_ReturnType (NetworkHandleType nmChannelHandle, boolean *statePtr)
nmChannelHandle
statePtr
E_OK
E_NOT_OK
■ ■ - ■ ■ -
■

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5.1.4 CddFiat_GetEOLStatus

Std_ReturnType (boolean *statePtr)
statePtr
E_OK
E_NOT_OK
-

-

5.1.5 CddFiat_GetFailStatus

Std_ReturnType (boolean *genericFailStatePtr, boolean *currentFailStatePtr)

genericFailStatePtr	
currentFailStatePtr	

E_OK	
E_NOT_OK	

-

-

5.1.6 CddFiat_SetWakeReason

Nm_ReturnType (NetworkHandleType nmChannelHandle, uint8 WakeReason)	
nmChannelHandle	-
WakeReason	

5.1.7 CddFiat_SetIgnitionStatus

Nm_ReturnType (NetworkHandleType nmChannelHandle, uint8 IgnitionStatus)
nmChannelHandle -
WakeReason
NM_E_OK
NM_E_NOT_OK
-
-

-

5.1.8 CddFiat_SetClassCSysConfig

`Nm_ReturnType CddFiat_SetClassCSysConfig( NetworkHandleType nmChannelHandle, const uint8* const nmCSysConfPtr, const uint8 nmArraySize )`

`nmChannelHandle`
`nmCSysConfPtr`
`nmArraySize`
	-

`NM_E_OK` `NM_E_NOK`	

`nmArraySize`

`nmArraySize` -

-
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5.1.9 CddFiat_StatusC_MessageIndication

void CddFiat_StatusC_MessageIndication(NetworkHandleType nmChannelHandle)

nmChannelHandle	

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5.2 Callback Functions

5.2.1

5.2.3 Appl_Dem_GenericFailStateChangeNotification

void	(boolean failState)
failState	
–	-
■ ■ -	
■	

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5.2.4 Appl_Dem_CurrentFailStateChangeNotification

void	(boolean failState)
failState	
–	-
■ ■ -	
■	

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5.3 Callout Functions

5.3.1 Appl_CddFiat_GetEOLStatus

boolean (void)	
–	-
boolean	
■	
■	

-

5.3.2 Appl_CddFiat_SystemStatusIndication

void (NetworkHandleType nmChannelHandle, NmFiatB_SystemConfigType currentSysConfig, uint8 arraySize)	
nmChannelHandle	-
currentSysConfig	
arraySize	
–	-
■ ■ -	
■	

-

5.3.3 Appl_CddFiat_GetTrcvErrorPin

boolean	(NetworkHandleType nmChannelHandle)
nmChannelHandle	-
boolean	
-	

-

5.4 Services used by CddFiat

	Det_ReportError

-

5.5 Configurable Interfaces

5.5.1 Callback Functions

5.5.1.1 CddFiat_BusOffCbkTAck_<CHANNELNAME>

void (void)	
–	-
–	-
■ ■ ■ -	
■	

-

5.5.2 Callout Functions

5.5.2.1 CddFiat_IPDU_Callout_<CHANNELNAME>

void (PduIdType ID, const PduInfoType * PduInfoPtr)

ID	
PduInfoPtr	

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6

6.1 Signal Description AUTOSAR ECU

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6.2 Signal Description Class C ECU

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6.3 Signal Description Class B ECU

6.4 Signals not handled by the CddFiat component

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7.1 Configuration with GENy

7.1.1 Activation of the module CddFiat in GENy

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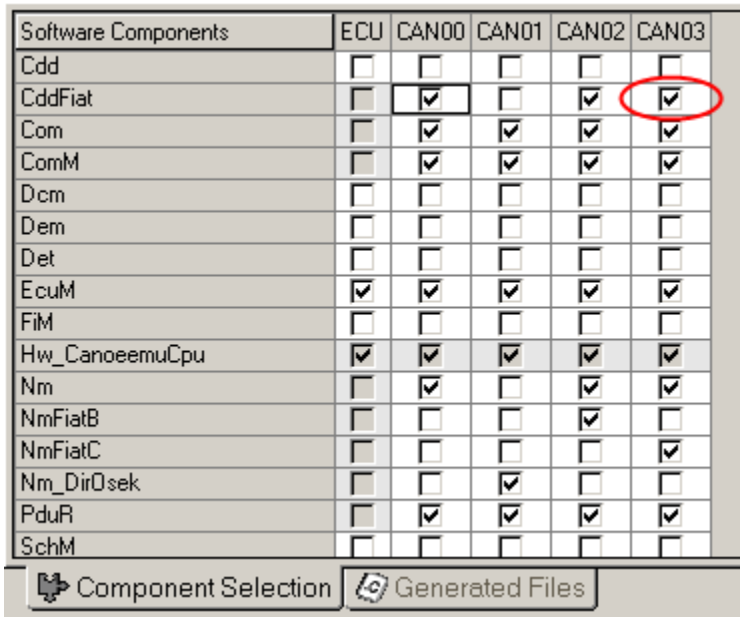

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7.1.2 General Configuration

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7.1.3.1 Configuration of the IPdu Callout

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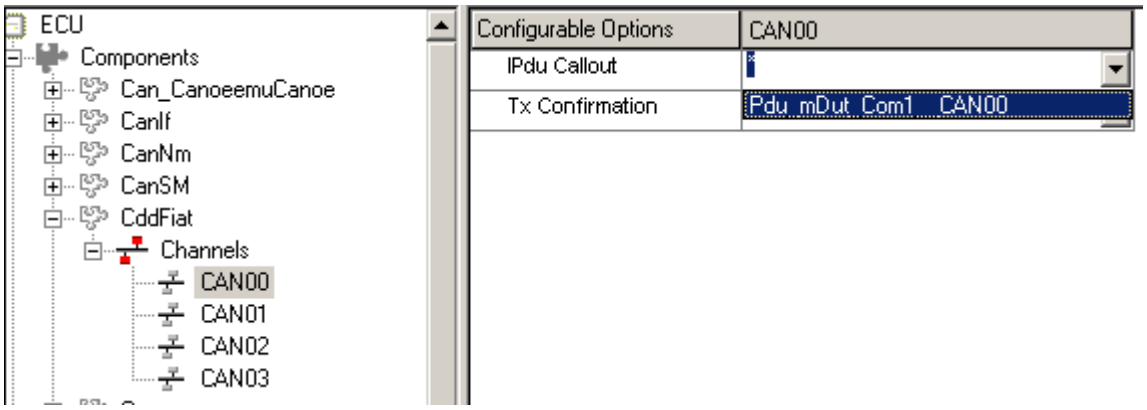

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7.1.3.2 Configuration of the Tx Transmit Callback

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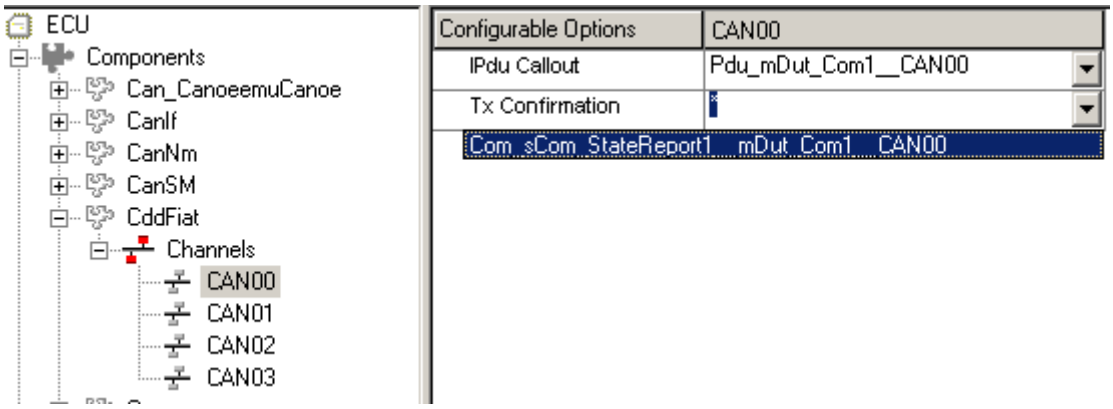

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8.1 Abbreviations

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