VECTOR

MICROSAR Communication Manager

VECTOR

Document Information

History

Author	Date	Version	Remarks
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Reference Documents

No.	Source	Title	Version
[1]			
[2]			
[3]			
[4]			
[5]			
[6]			

Caution

VECTOR

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1 Component History

Component Version	New Features
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2 Introduction

Supported AUTOSAR Release:		
Supported Configuration Variants:	- - -	
Vendor ID:		-
Module ID:		

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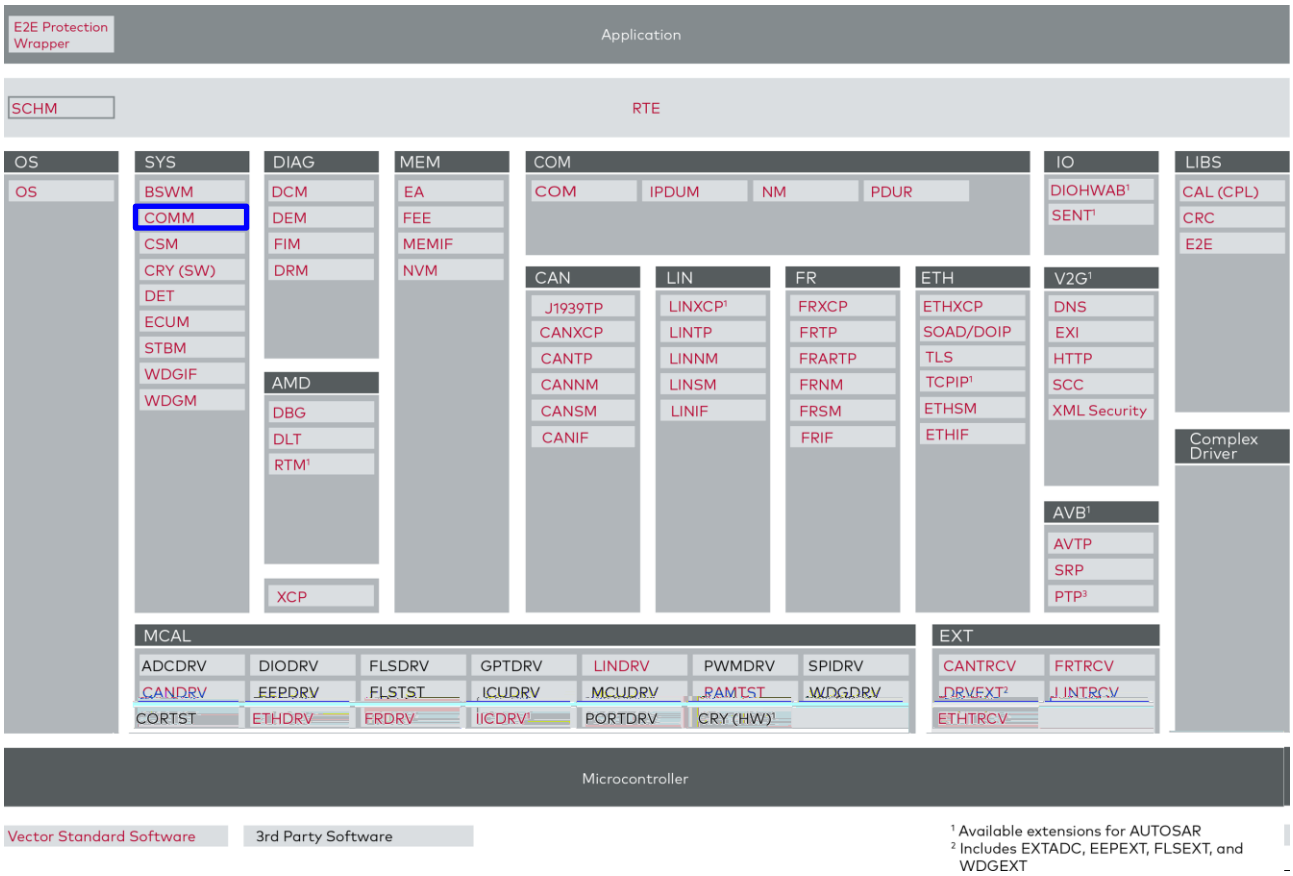
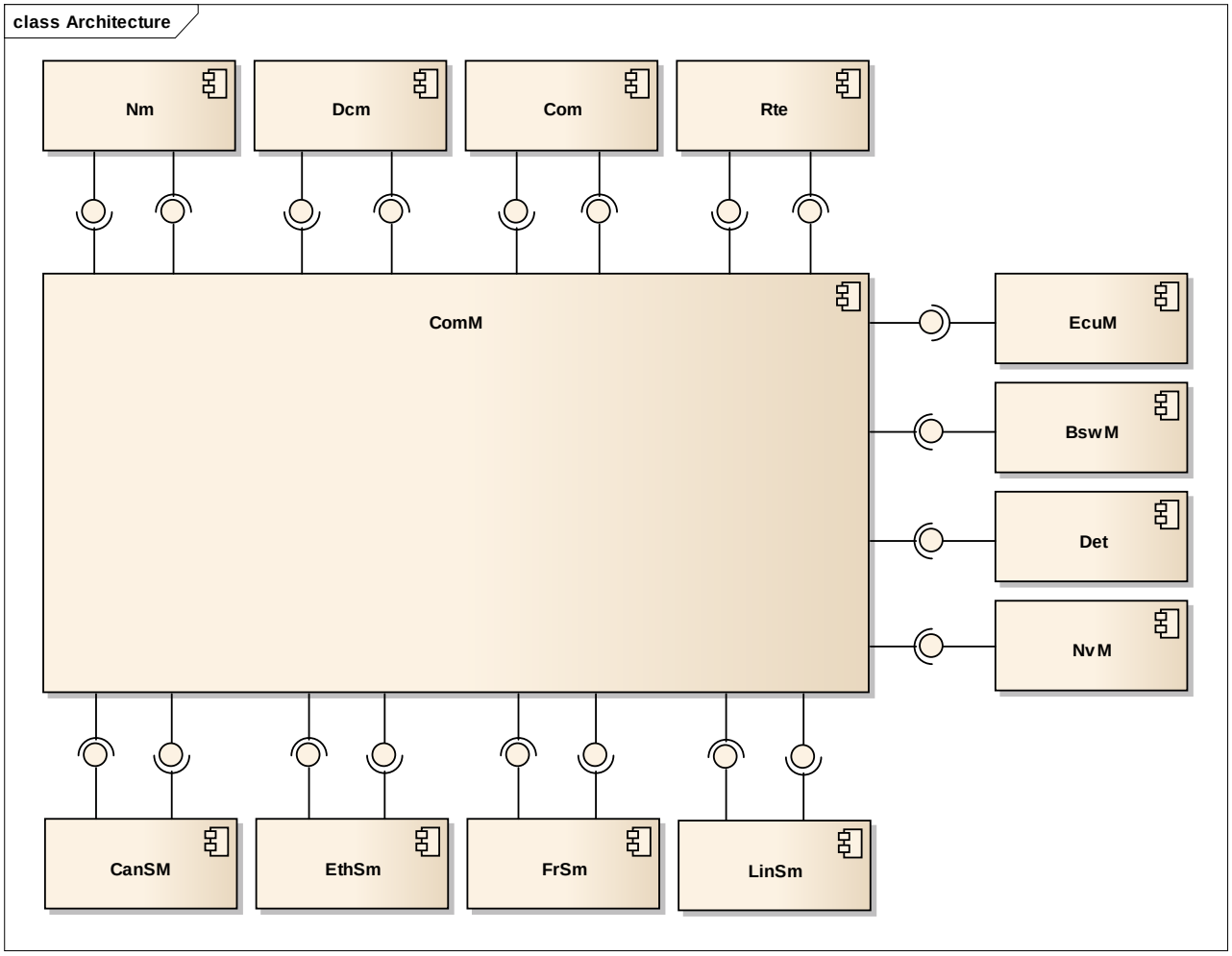
2.1 Architecture Overview




class Architecture
Nm
Dcm
Com
Rte
ComM
EcuM
BswM
Det
NvM
CanSM
EthSm
FrSm
LinSm

-

3 Functional Description

3.1 Features

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Supported AUTOSAR Standard Conform Features
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3.1.1 Deviations

Category	Description	ASR Version

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3.1.1.1 Variant Post-Build

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3.1.2 Additions/ Extensions

Features Provided Beyond The AUTOSAR Standard
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3.1.2.1 Memory Initialization

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3.1.2.2 Post-Build Loadable

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3.1.2.3 Timer-based Shutdown Synchronization via Silent State

3.1.2.4 Channel-specific Minimum Full Com Mode Timer

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3.1.2.5 Pnc to Channel Routing Limitation

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State of Partial Network Routing Limitation on the channel	GW routes PNC requests to the channel	GW keeps the channel awake
Disabled > > > **not**	■	■
Partly disabled > >	■	
Enabled		

-

- disabled
- partly disabled
- enabled

disabled partly disabled
enabled

- enabled
- disabled partly disabled
- disabled
- disabled partly disabled
- enabled
- enabled

Caution

Caution

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3.1.2.6 Extended RAM Check

3.1.3 Limitations

3.1.3.1 Non-volatile Data Handling

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3.1.3.2 Assignment of Users to Channels and PNCs

3.2 Initialization

- -

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3.3 States

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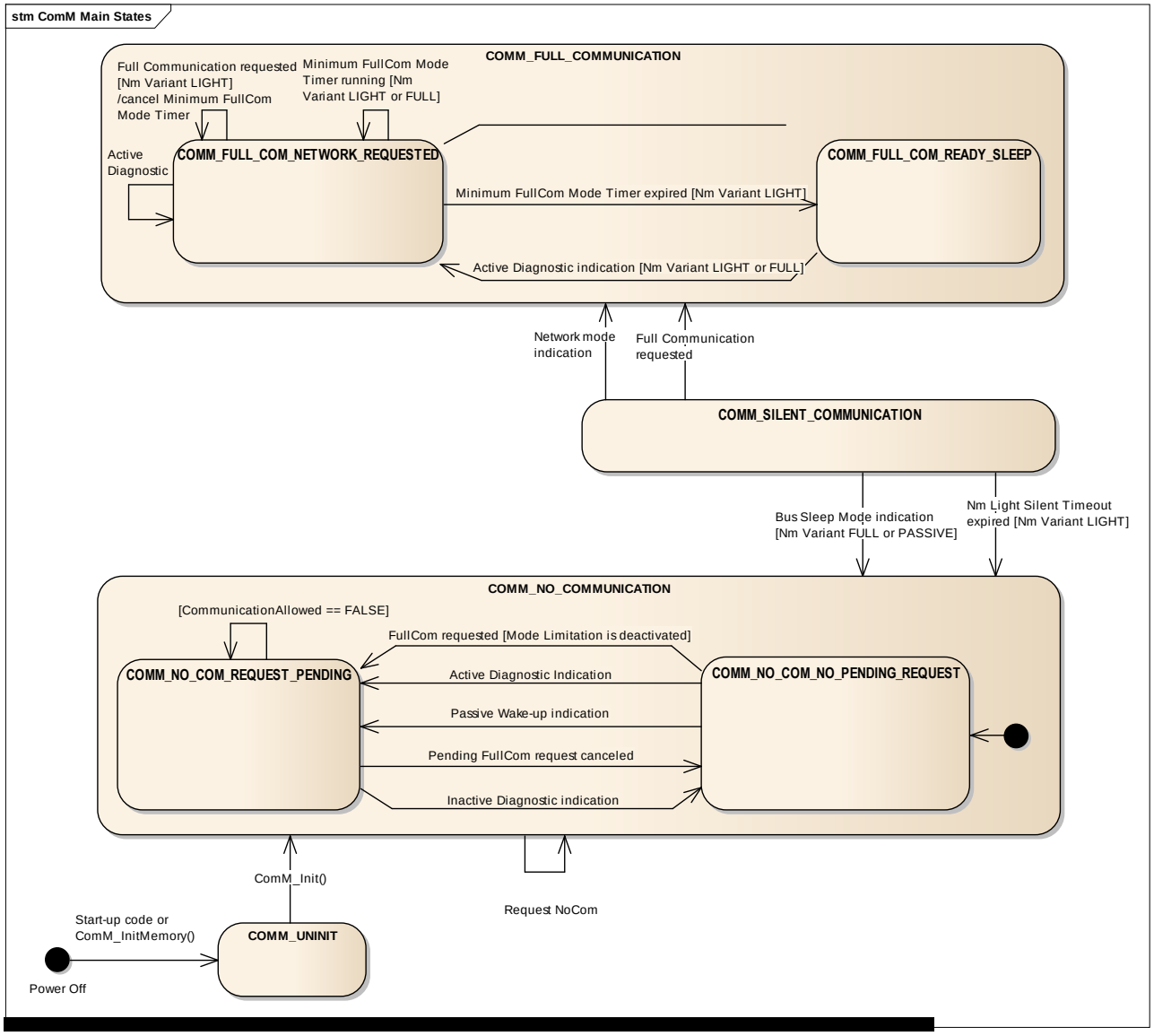

-

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COMM_UNINIT

COMM_NO_COMMUNICATION

-

COMM_NO_COM_NO_PENDING_REQUEST

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>
> - -

COMM_NO_COM_REQUEST_PENDING

COMM_SILENT_COMMUNICATION

Note

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VECTOR

COMM_FULL_COMMUNICATION

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COMM_FULL_COM_NETWORK_REQUESTED

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COMM_FULL_COM_READY_SLEEP

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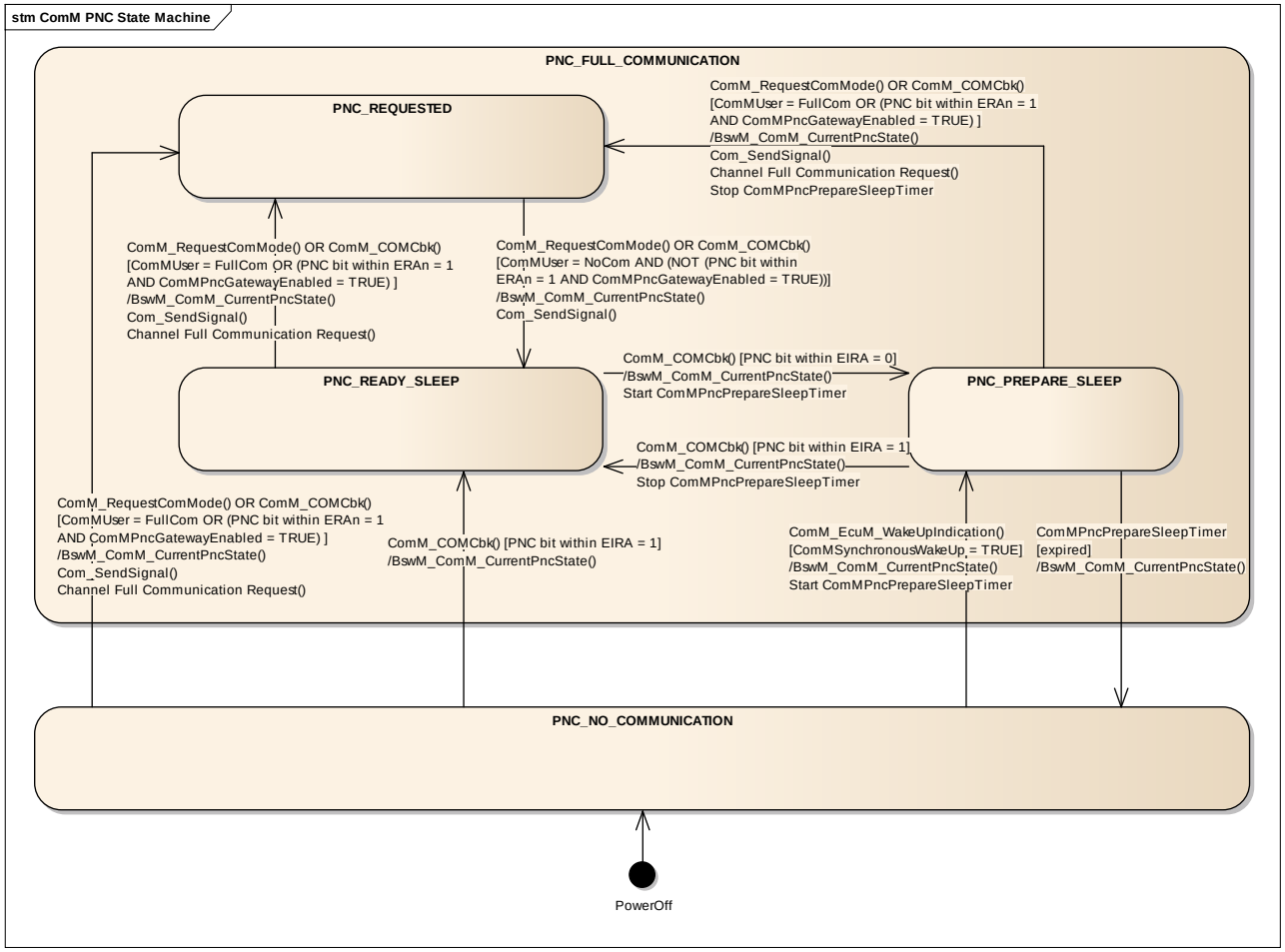
3.4 Partial Network States



-

-

- **active**
- **inactive**

PNC_NO_COMMUNICATION

-

-

PNC_FULL_COMMUNICATION

-

PNC_REQUESTED

PNC_READY_SLEEP

>

PNC_PREPARE_SLEEP

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> - -

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Caution

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Caution

3.5 Main Functions

3.5.1 Communication Control Handling

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> -

> **FULL**
> **PASSIVE**

- **LIGHT**
- **NONE**

Caution

Caution

3.5.2 Mode Limitation

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3.5.2.1 Mode Limitation to NO_COM

Reset after Forcing NO_COM functionality

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2.
3. -

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3.5.2.2 Prevent Wake-Up

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3.5.3 Synchronous Wake-Up

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3.6 Error Handling

3.6.1 Development Error Reporting

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Service ID	Service

Service ID	Service

-

Error Code		Description

-

3.6.1.1 Parameter Checking

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Service \ Check					
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Service \ Check					
	■	■			
	■	■			
			■		
			■		
			■		

-

3.6.2 Production Code Error Reporting

4 Integration

4.1 Scope of Delivery

4.1.1 Static Files

File Name	Source Code Delivery	Object Code Delivery	Description
	■		
	■		
	■		
	■		
	■		
	■		
	■		

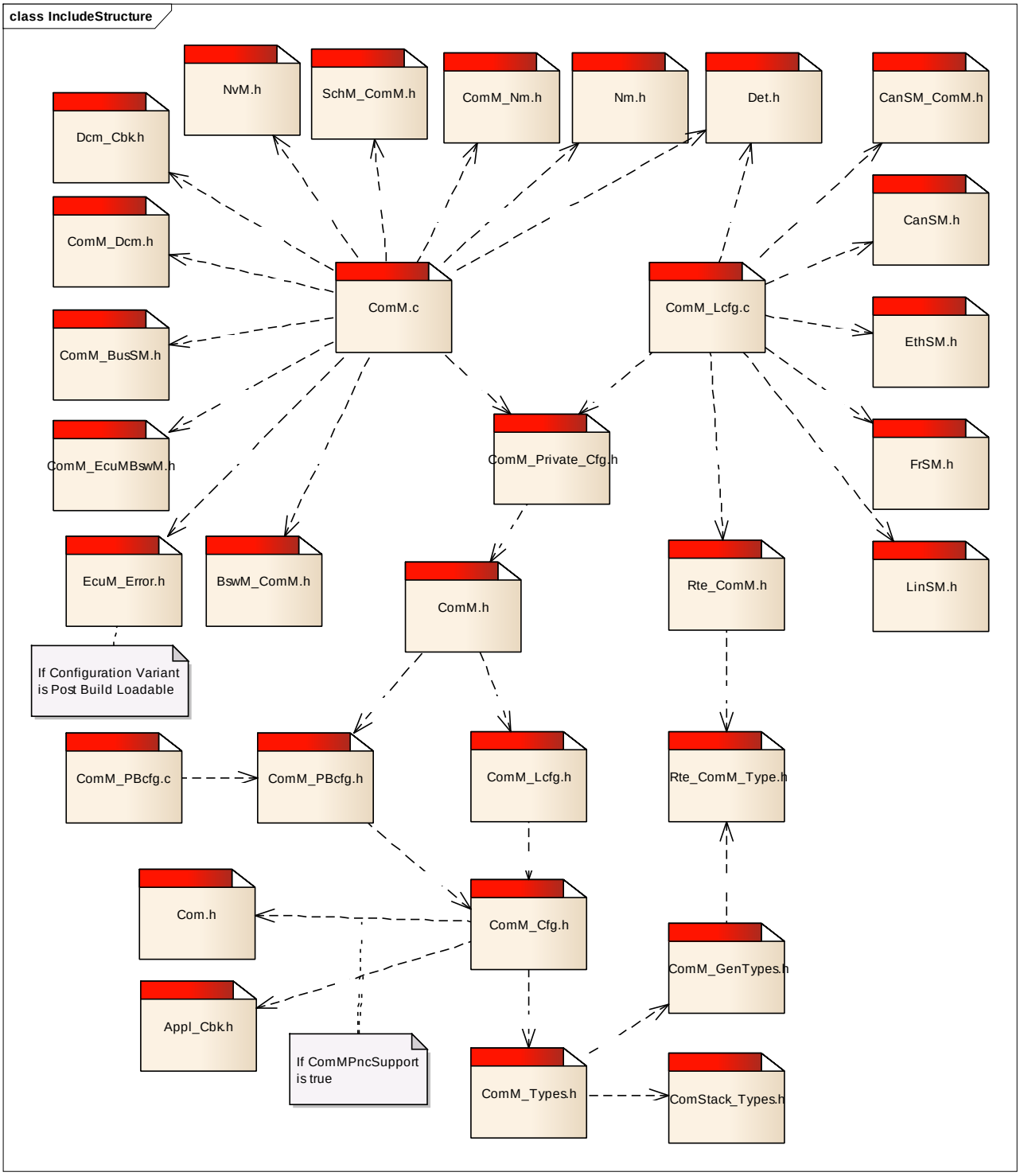
-

4.1.2 Dynamic Files

File Name	Description
	-
	-

-

4.2 Include Structure



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4.3 Critical Sections

COMM_EXCLUSIVE_AREA_0

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> - -

COMM_EXCLUSIVE_AREA_1

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Note

4.4 Handling of non-volatile Data

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Caution

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5 API Description

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5.1 Type Definitions

Type Name	C-Type	Description	Value Range
			- - - -
			- -
			COMM_BUS_TYPE_CAN
			COMM_BUS_TYPE_FR
			COMM_BUS_TYPE_LIN
			COMM_BUS_TYPE_ETH
			COMM_BUS_TYPE_INTERNAL

Type Name	C-Type	Description	Value Range
		-	
		-	

-

ComM_InhibitionType

-

Struct Element Name	C-Type	Description	Value Range
			-

-

ComM_UserHandleArrayType

Struct Element Name	C-Type	Description	Value Range

Struct Element Name	C-Type	Description	Value Range

-

5.2 Services provided by COMM

5.2.1 ComM_InitMemory

Prototype	
Parameter	
	-
Return code	
	-
Functional Description	
- -	
Particularities and Limitations	
>	
>	
> -	
>	
> -	

-

5.2.2 ComM_Init

Prototype	
Parameter	
	- -

Return code	
	-
Functional Description	
Particularities and Limitations	
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>	
> -	
> - -	
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> -	

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5.2.3 ComM_DeInit

Prototype	
Parameter	
	-
Return code	
	-
Functional Description	
- -	
-	
Particularities and Limitations	
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>	

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5.2.4 ComM_GetStatus

Prototype

Parameter	
Return code	
Functional Description	
Particularities and Limitations	
>	
>	
> -	
>	

-

5.2.5 ComM_GetInhibitionStatus

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
>	
>	
> -	
>	

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5.2.6 ComM_RequestComMode

Prototype

Parameter	

Return code	

Functional Description

Particularities and Limitations
>
>
> -
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5.2.7 ComM_GetMaxComMode

Prototype

Parameter	

Return code	

Functional Description
Particularities and Limitations
>
>
>
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5.2.8 ComM_GetRequestedComMode

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
>	
>	
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5.2.9 ComM_GetCurrentComMode

Prototype

Parameter	
Return code	
Functional Description	
Particularities and Limitations	
>	
>	
>	
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5.2.10 ComM_PreventWakeUp

Prototype	
Parameter	
Return code	
	> > - - > -
Functional Description	

Particularities and Limitations
>
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> -
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5.2.11 ComM_LimitChannelToNoComMode

Prototype	
Parameter	
Return code	
	> > - > > >
Functional Description	
Particularities and Limitations	
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> -	
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5.2.12 ComM_LimitECUToNoComMode

Prototype	
Parameter	
Return code	
	> - > >
Functional Description	
Particularities and Limitations	
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5.2.13 ComM_ReadInhibitCounter

Prototype	
Parameter	
Return code	
Functional Description	

Particularities and Limitations
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5.2.14 ComM_ResetInhibitCounter

Prototype	
Parameter	
	-
Return code	
Functional Description	
Particularities and Limitations	
>	
>	
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5.2.15 ComM_SetECUGroupClassification

Prototype	
Parameter	
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	-
Return code	

Functional Description	
-	
Particularities and Limitations	
>	
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> -	
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5.2.16 ComM_GetVersionInfo

Prototype	
Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
>	
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5.2.17 ComM_MainFunction

Prototype	
Parameter	
	-

Return code	
	-
Functional Description	
Particularities and Limitations	
>	
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> -	
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5.2.18 ComM_GetState

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
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5.2.19 ComM_LimitPncToChannelRouting

Prototype	
Parameter	
	-
Return code	
	> > >
Functional Description	
Particularities and Limitations	
>	
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5.2.20 ComM_GetDcmRequestStatus

Prototype	
Parameter	

Return code	
Functional Description	
Particularities and Limitations	
>	
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>	
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5.2.21 ComM_GetMinFullComModeTimerStatus

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
>	
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5.3 Services used by COMM

Component	API

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5.4 Callback Functions

5.4.1 ComM_CommunicationAllowed

Prototype

Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
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>	
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>	
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>	

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5.4.2 ComM_EcuM_WakeUpIndication

Prototype	
Parameter	
Return code	
	-
Functional Description	
	-
Particularities and Limitations	
>	
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>	
>	
>	

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5.4.3 ComM_BusSM_ModeIndication

Prototype	
Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
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5.4.4 ComM_DCM_ActiveDiagnostic

Prototype	
Parameter	
Return code	
	-
Functional Description	
>	
>	

Particularities and Limitations
>
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5.4.5 ComM_DCM_InactiveDiagnostic

Prototype	
Parameter	
Return code	
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Functional Description	
>	
>	
Particularities and Limitations	
>	
>	
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5.4.6 ComM_Nm_NetworkStartIndication

Prototype	
Parameter	
	-

Return code	
	-
Functional Description	
-	
Particularities and Limitations	
>	
>	
>	
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5.4.7 ComM_Nm_NetworkMode

Prototype	
Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
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>	

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5.4.8 ComM_Nm_PrepareBusSleep

Prototype	
Parameter	

Return code	
	-

Functional Description
-

Particularities and Limitations
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5.4.9 ComM_Nm_BusSleepMode

Prototype

Parameter	

Return code	
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Functional Description
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Particularities and Limitations
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5.4.10 ComM_Nm_RestartIndication

Prototype	
Parameter	
	-
Return code	
	-
Functional Description	
-	
Particularities and Limitations	
>	
>	
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>	
>	

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5.4.11 ComM_Nm_StateChangeNotification

Prototype	
Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
>	
>	
>	
>	

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5.4.12 ComM_ComCbk_<SignalName>

Prototype	
Parameter	
	-
Return code	
	-
Functional Description	
Particularities and Limitations	
>	
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5.5 Configurable Interfaces

5.5.1 Notifications

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5.5.1.1 Dcm_ComM_FullComModeEntered

Prototype	
Parameter	
Return code	
	-
Functional Description	

Particularities and Limitations
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5.5.1.2 Dcm_ComM_SilentComModeEntered

Prototype	
Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
>	
>	

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5.5.1.3 Dcm_ComM_NoComModeEntered

Prototype	
Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
>	
>	

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5.5.1.4 BswM_ComM_CurrentMode

Prototype	
Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
> -	
>	

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5.5.1.5 BswM_ComM_CurrentPNCMode

Prototype	
Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
>	
>	

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5.5.1.6 BswM_ComM_InitiateReset

Prototype	
Parameter	
	-
Return code	
	-
Functional Description	
Particularities and Limitations	
>	
>	

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5.5.1.7 Rte_Switch_ComM_<UserName>_currentMode

Prototype	
Parameter	
	> > >
Return code	
	> - > -
Functional Description	
-	
Particularities and Limitations	
>	
>	

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6 Service Ports

6.1.1 Client Server Interface

6.1.1.1 Provide Ports on COMM Side

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6.1.1.1.1 ComM_UserRequest

Operation	API Function	Port Defined Argument Values

-

6.1.1.1.2 ComM_ECUModeLimitation

Operation	API Function

-

6.1.1.1.3 ComM_ChannelWakeUp

Operation	API Function	Port Defined Argument Values

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6.1.1.1.4 ComM_ChannelLimitation

Operation	API Function	Port Defined Argument Values

-

6.1.1.2 Require Ports on COMM Side

6.1.2 Mode Switch Interface

6.1.2.1 ComM_CurrentMode

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Operation	Rte Interface	Mode Declaration Group

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6.1.3 Sender Receiver Interface

6.1.3.1 ComM_CurrentChannelRequest

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Rte Interface	Data element

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Example

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7 Abbreviations

7.1 Abbreviations

Abbreviation	Description

8 Contact

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