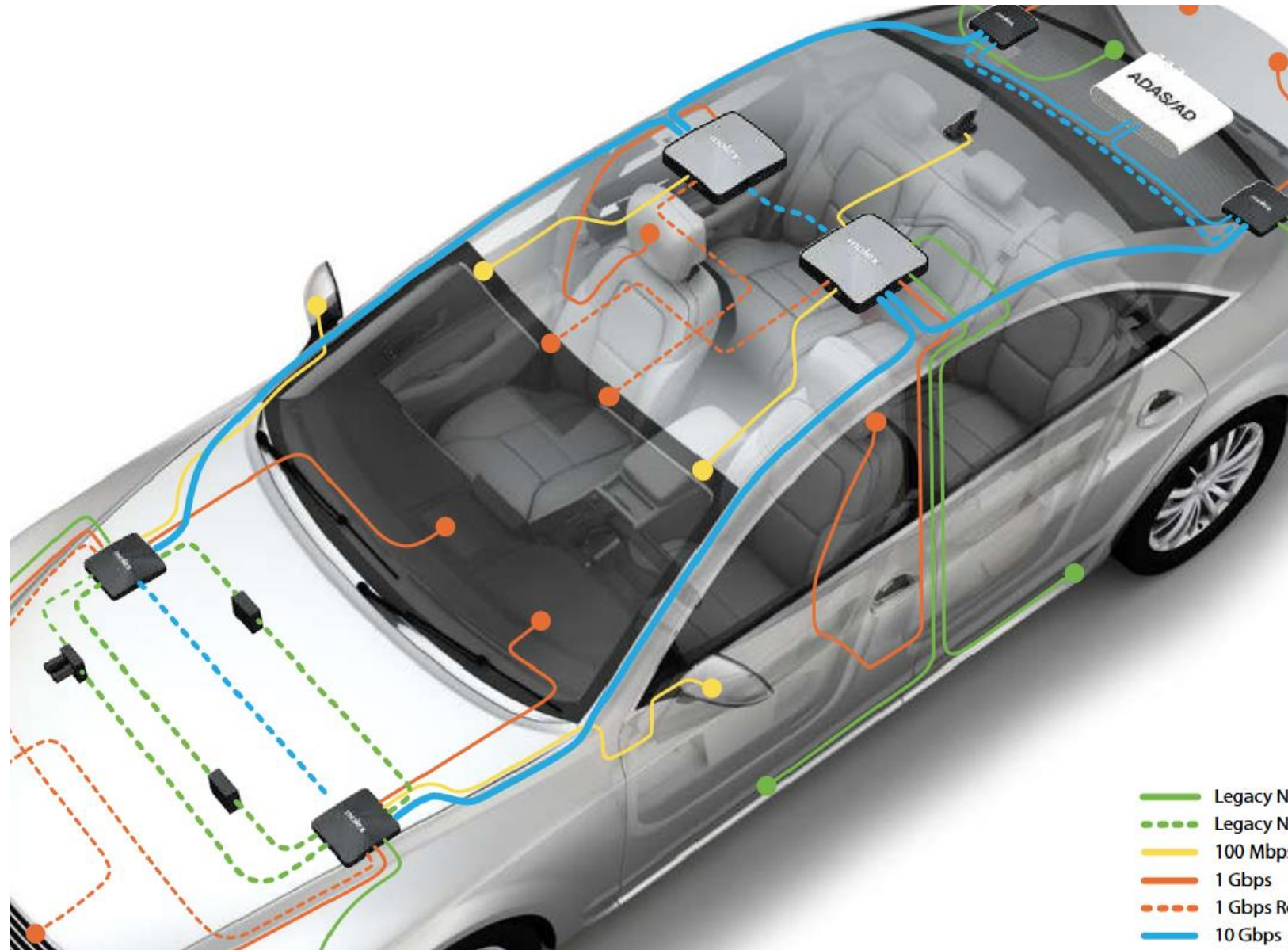
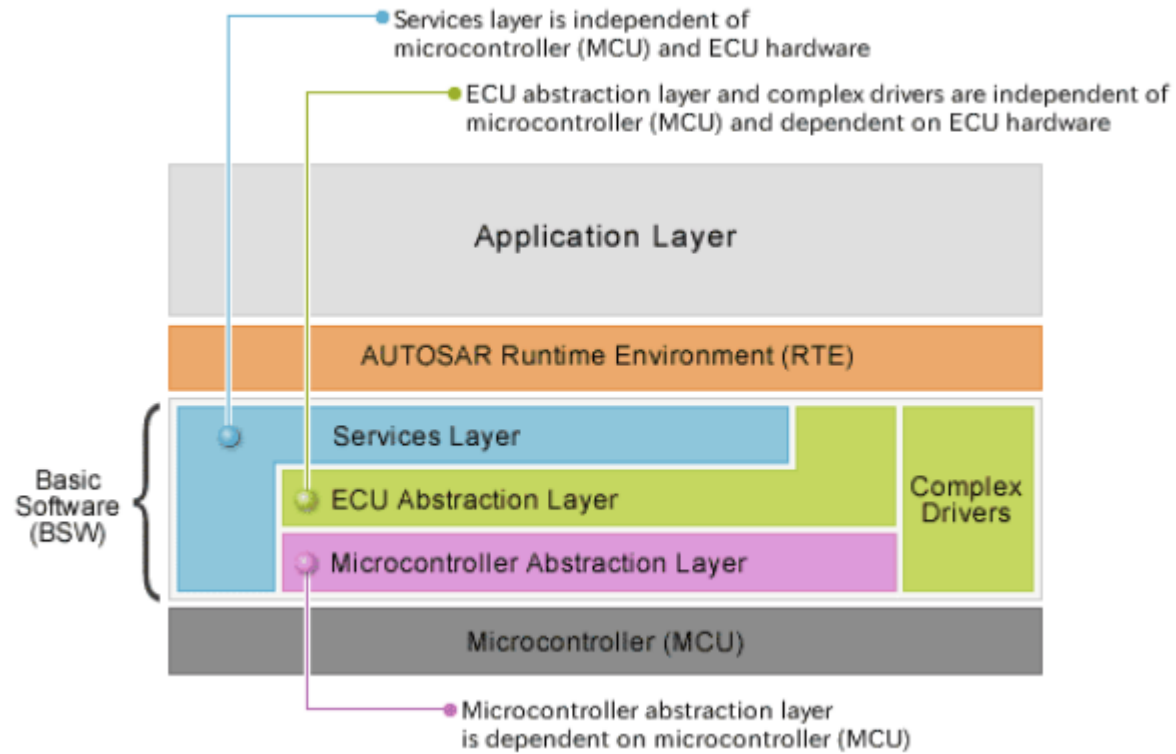


# Overview



# Overview



<https://www.renesas.com/us/en/application/automotive/common-automotive-technologies/autosar/autosar-layered-architecture>

# Overview

## AUTOSAR\_TPS\_ManifestSpecification

[https://www.autosar.org/fileadmin/user\\_upload/standards/adaptive/19-11/AUTOSAR\\_TPS\\_ManifestSpecification.pdf](https://www.autosar.org/fileadmin/user_upload/standards/adaptive/19-11/AUTOSAR_TPS_ManifestSpecification.pdf)

- ▶ 1 Introduction
- ▶ 2 Big Picture of Manifest Definition
- ▶ 3 Application Design
- ▶ 4 Diagnostic Design
- ▶ 5 System Design
- ▶ 6 Sub-System Design
- ▶ 7 Machine Manifest
- ▶ 8 Execution Manifest
- ▶ 9 Platform Module Development
- ▶ 10 Service Instance Manifest
- ▶ 11 Signal-based communication
- ▶ 12 REST
- ▶ 13 Software Distribution
- ▶ A Examples
- ▶ B Custom Model Extension
- ▶ C General Modeling
- ▶ D Mentioned Class Tables
- ▶ E History of Constraints and Specification Items
- ▶ F Splittable Elements in the Scope of this Document
- ▶ G Variation Points in the Scope of this Document
- ▶ H Used classes in Manifest files



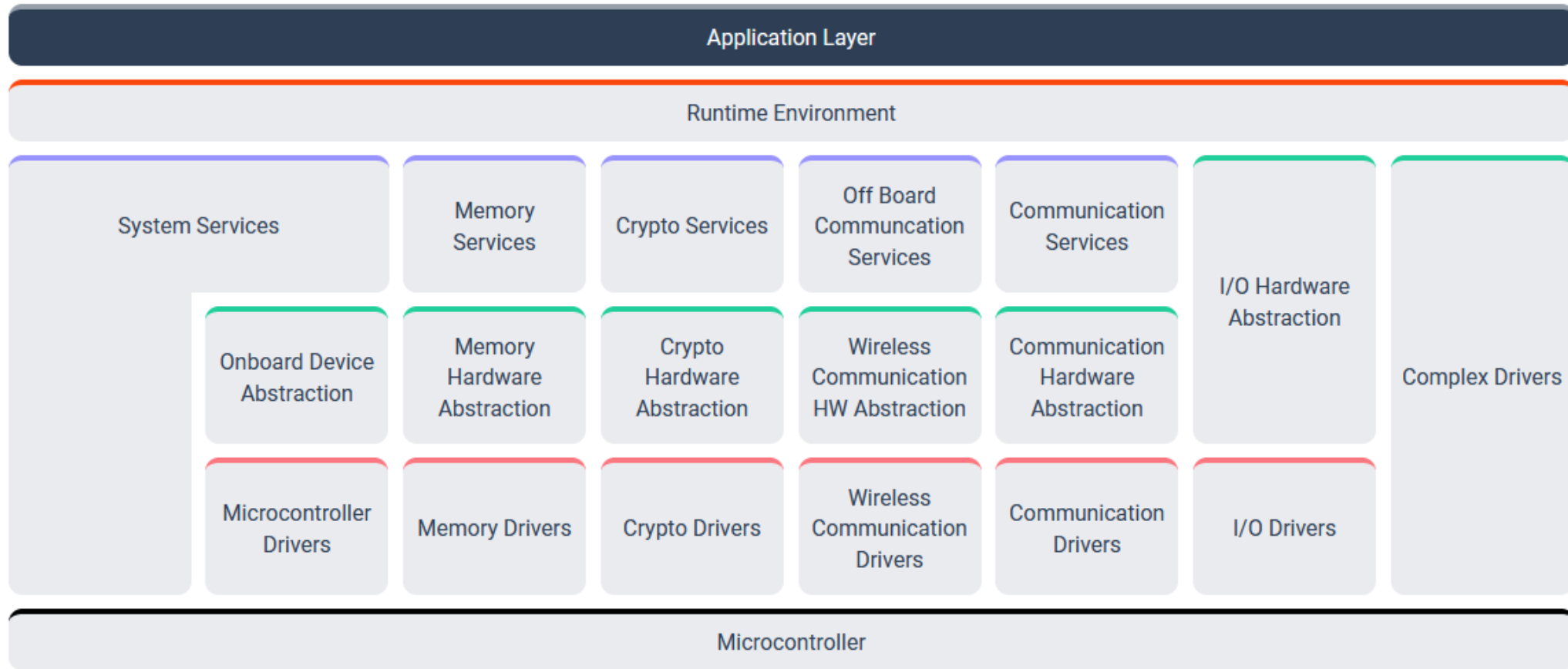
Specification of Manifest  
AUTOSAR AP R19-11

<b>Document Title</b>	Specification of Manifest
<b>Document Owner</b>	AUTOSAR
<b>Document Responsibility</b>	AUTOSAR
<b>Document Identification No</b>	713

<b>Document Status</b>	published
<b>Part of AUTOSAR Standard</b>	Adaptive Platform
<b>Part of Standard Release</b>	R19-11

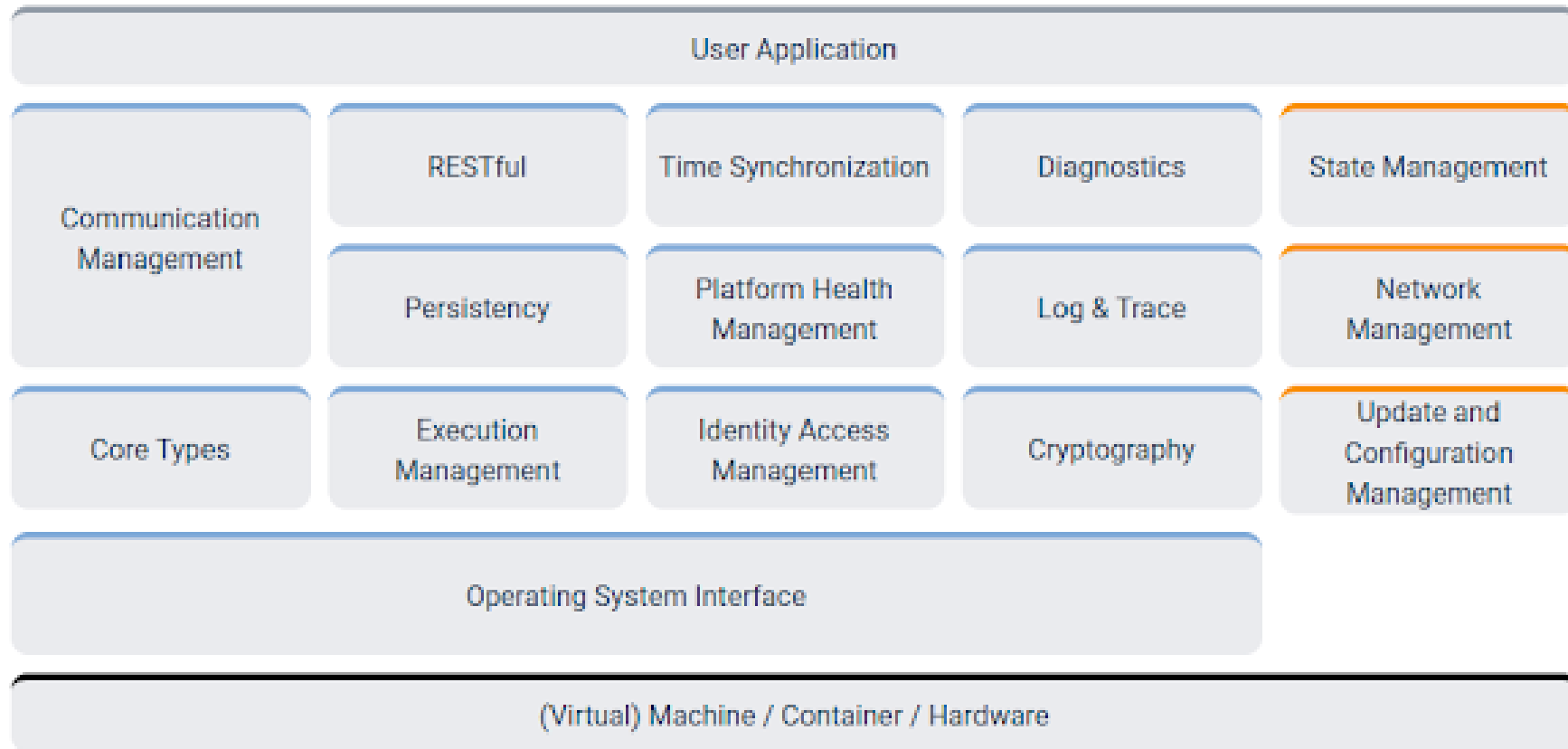
Document Change History			
Date	Release	Changed by	Description
		AUTOSAR	<ul style="list-style-type: none"><li>• Overhaul of Signal-to-Service Translation</li><li>• Support for Raw Data Streams</li></ul>

# 1. Classic Platform



<https://www.autosar.org/standards/classic-platform/>

## 2. Adaptive Platform



<https://www.autosar.org/standards/adaptive-platform/>

### 3. Basic software

### 3. Basic software

#### AUTOSAR XML files

<https://www.ibm.com/docs/en/rhapsody/9.0.1?topic=modeling-importing-exporting-autosar-xml-files>

## 5. Diagnostic over Internet Protocol (DoIP)

[https://www.autosar.org/fileadmin/user\\_upload/standards/classic/4-](https://www.autosar.org/fileadmin/user_upload/standards/classic/4-3/AUTOSAR_SWS_DiagnosticEventManager.pdf)

[3/AUTOSAR\\_SWS\\_DiagnosticEventManager.pdf](https://www.autosar.org/fileadmin/user_upload/standards/classic/4-3/AUTOSAR_SWS_DiagnosticEventManager.pdf)

<https://distek.com/2019/06/28/autosar-2/>

<https://www.embeddedtutor.com/2019/09/autosar-dem-module.html>

<https://www.embeddedtutor.com/2019/09/autosar-dem-module.html>

[https://www.autosar.org/fileadmin/user\\_upload/standards/classic/4-3/AUTOSAR\\_SWS\\_DiagnosticOverIP.pdf](https://www.autosar.org/fileadmin/user_upload/standards/classic/4-3/AUTOSAR_SWS_DiagnosticOverIP.pdf)



## 5. Diagnostic over Internet Protocol (DoIP)

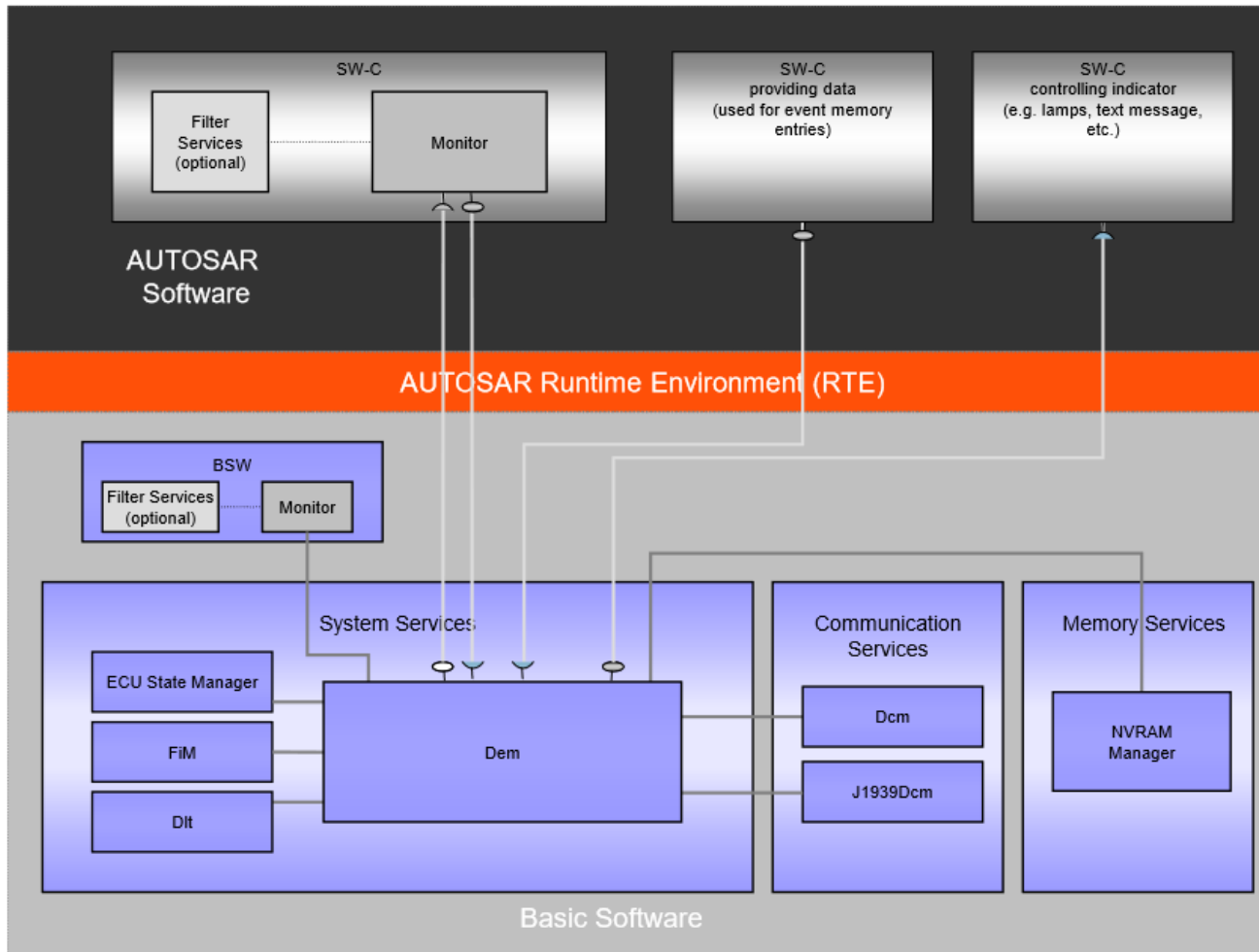


Figure 5.1: Dependencies of the Dem to other software modules

- The AUTOSAR basic software (BSW)
- Diagnostic event manager (DEM)
- Diagnostic communication manager (DCM)
- Function inhibition manager (FIM)
- Software components (SWCs)
- Diagnostic trouble codes (DTC)

## 5. Diagnostic over Internet Protocol (DoIP)

### 9.1 ControlDTCSetting

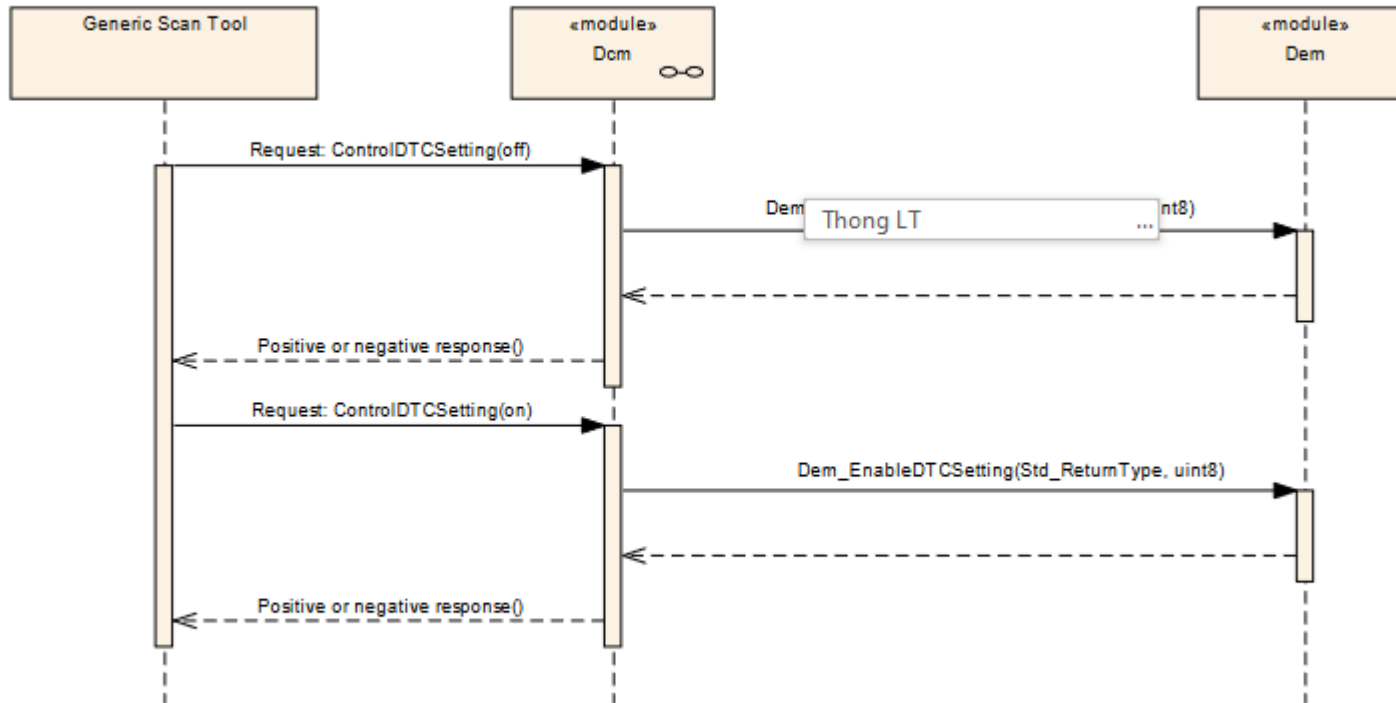


Figure 9.1: Sequence diagram of ControlDTCSetting

## 5. Diagnostic over Internet Protocol (DoIP)

### 9.2 Dem\_ClearDTC

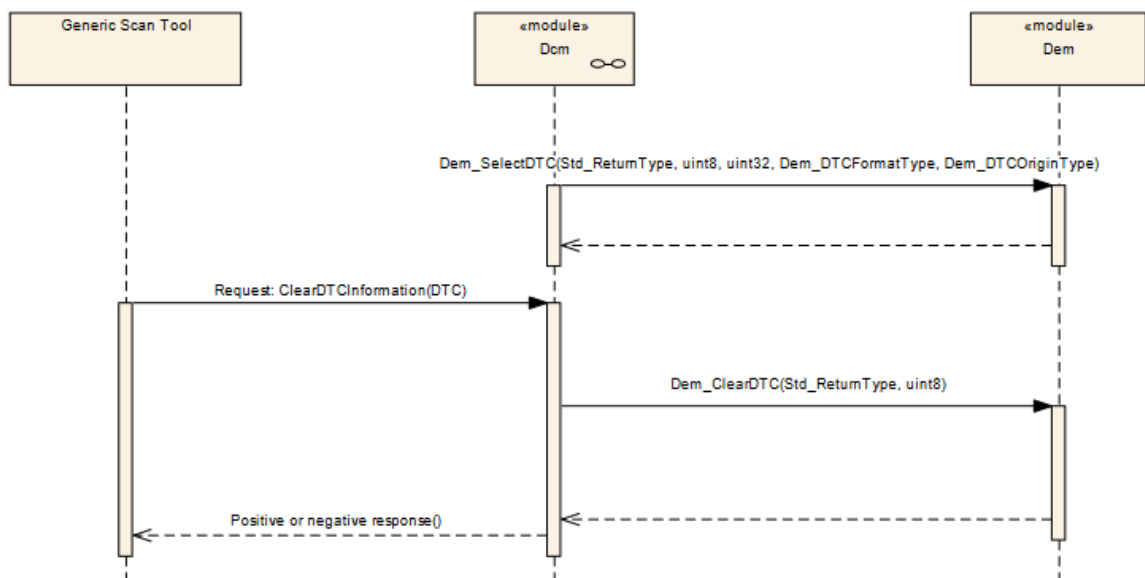


Figure 9.2: Sequence diagram of Dem\_ClearDTC

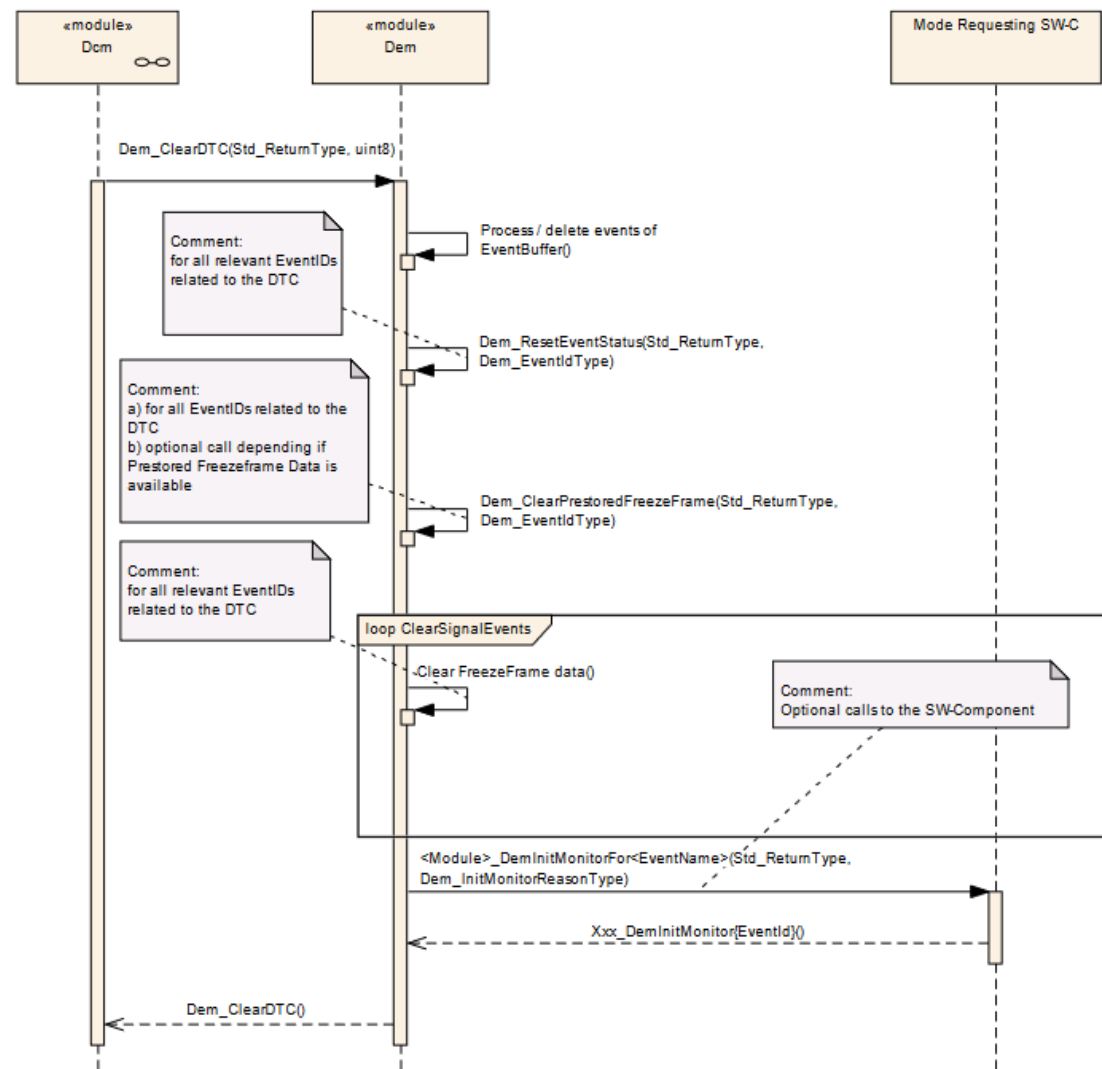


Figure 9.3: Sequence diagram of Dem\_ClearDTC clearing a single DTC Dem-internally

## 5. Diagnostic over Internet Protocol (DoIP)

### 9.10 ProcessEvent (Example)

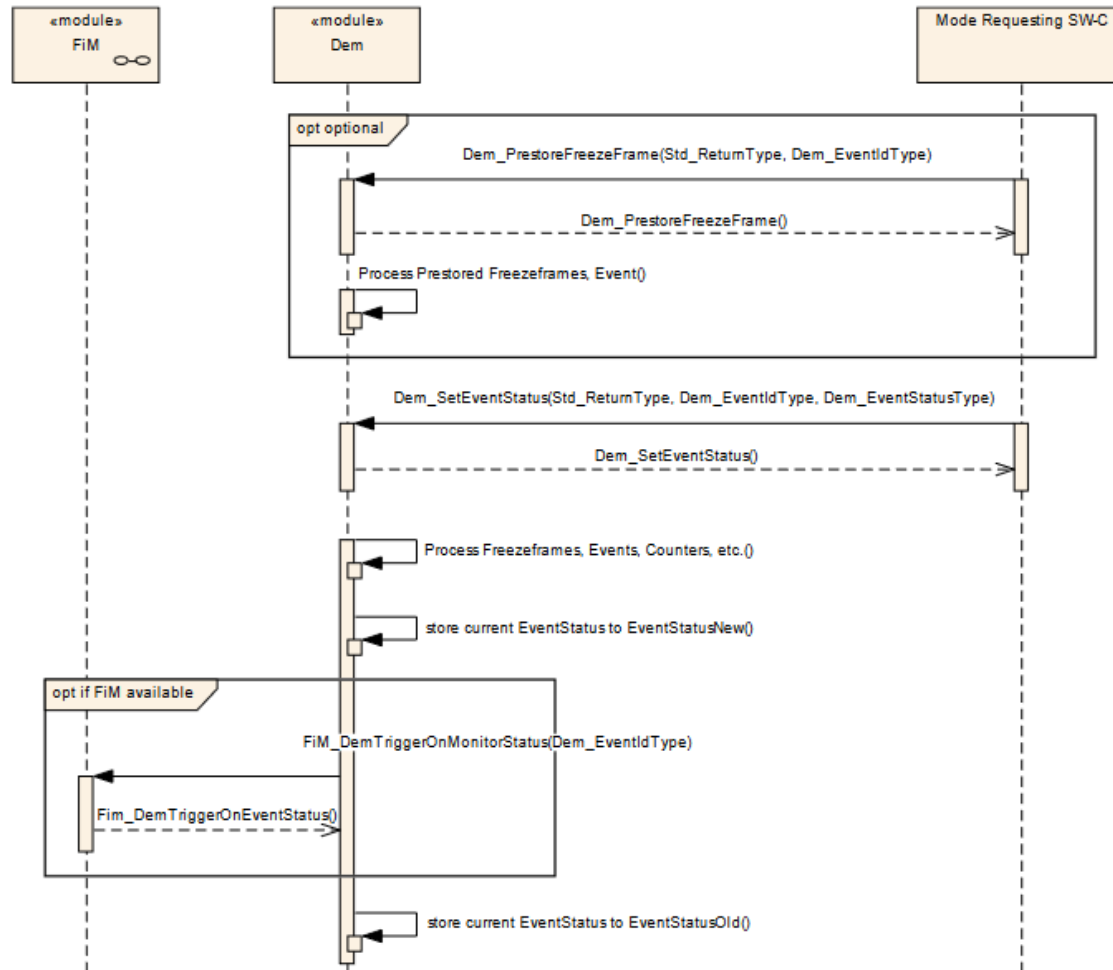
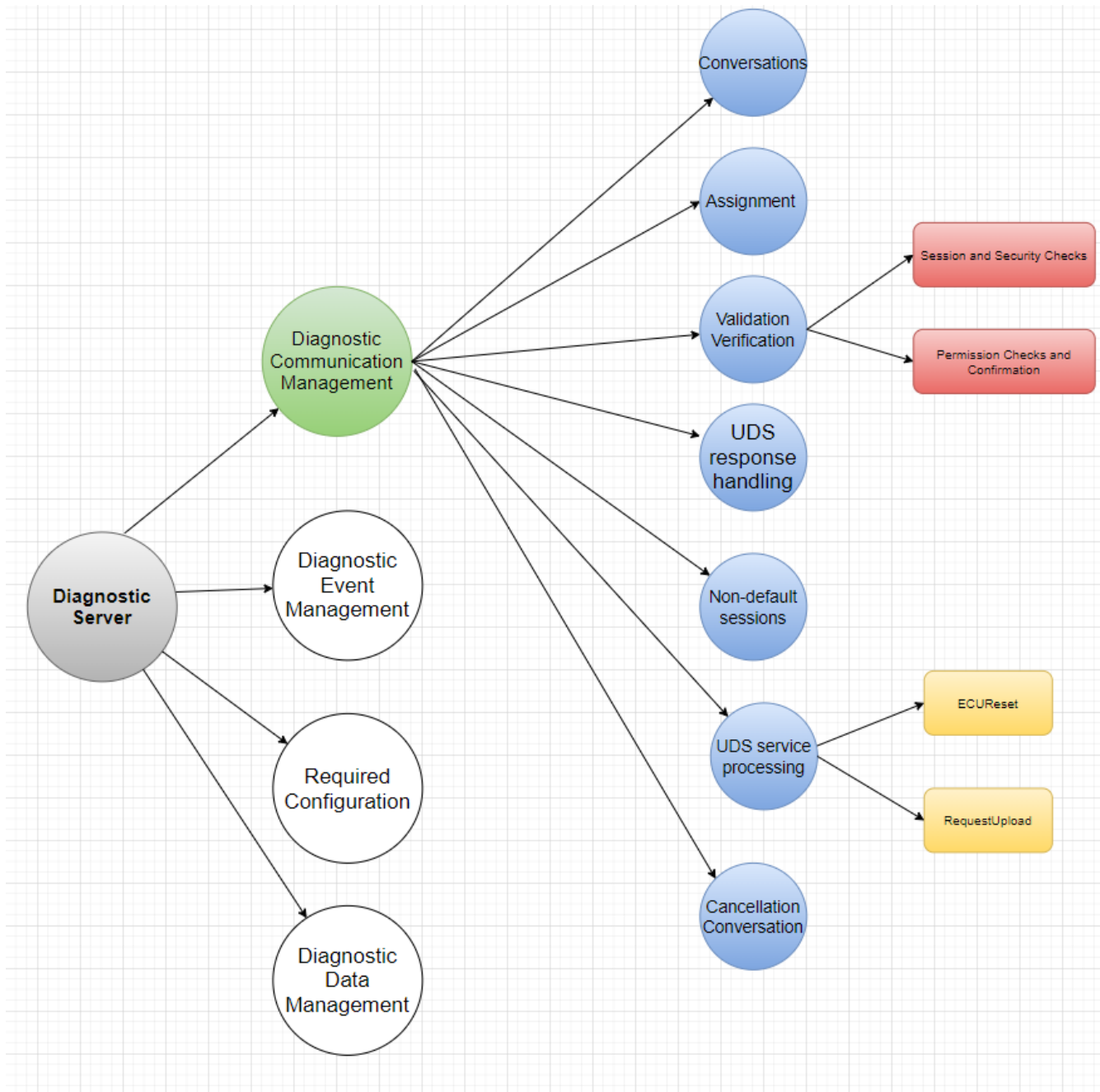


Figure 9.11: Sequence diagram for an example of ProcessEvent Dem-internally

## 5. Diagnostic over Internet Protocol (DoIP)



## 5. Diagnostic over Internet Protocol (DoIP)

### Diagnostic Event Manager

[https://www.autosar.org/fileadmin/user\\_upload/standards/classic/4-3/AUTOSAR\\_SWS\\_DiagnosticEventManager.pdf](https://www.autosar.org/fileadmin/user_upload/standards/classic/4-3/AUTOSAR_SWS_DiagnosticEventManager.pdf)

## 5. Diagnostic over Internet Protocol (DoIP)

- Function inhibition manager (FIM)

[https://www.autosar.org/fileadmin/user\\_upload/standards/classic/4-3/AUTOSAR\\_SWS\\_FunctionInhibitionManager.pdf](https://www.autosar.org/fileadmin/user_upload/standards/classic/4-3/AUTOSAR_SWS_FunctionInhibitionManager.pdf)

## 5. Diagnostic over Internet Protocol (DoIP)

- ▶ 1 Introduction
- ▶ 2 Big Picture of Manifest Definition
- ▶ 3 Application Design
- ▶ 4 Diagnostic Design
- ▶ 5 System Design
- ▶ 6 Sub-System Design
- ▶ 7 Machine Manifest
- ▶ 8 Execution Manifest
- ▶ 9 Platform Module Development
- ▶ 10 Service Instance Manifest
- ▶ 11 Signal-based communication
- ▶ 12 REST
- ▶ 13 Software Distribution
- ▶ A Examples
- ▶ B Custom Model Extension
- ▶ C General Modeling
- ▶ D Mentioned Class Tables
- ▶ E History of Constraints and Specification Items
- ▶ F Splittable Elements in the Scope of this Document
- ▶ G Variation Points in the Scope of this Document
- ▶ H Used classes in Manifest files



Specification of Manifest  
AUTOSAR AP R19-11

<b>Document Title</b>	Specification of Manifest
<b>Document Owner</b>	AUTOSAR
<b>Document Responsibility</b>	AUTOSAR
<b>Document Identification No</b>	713

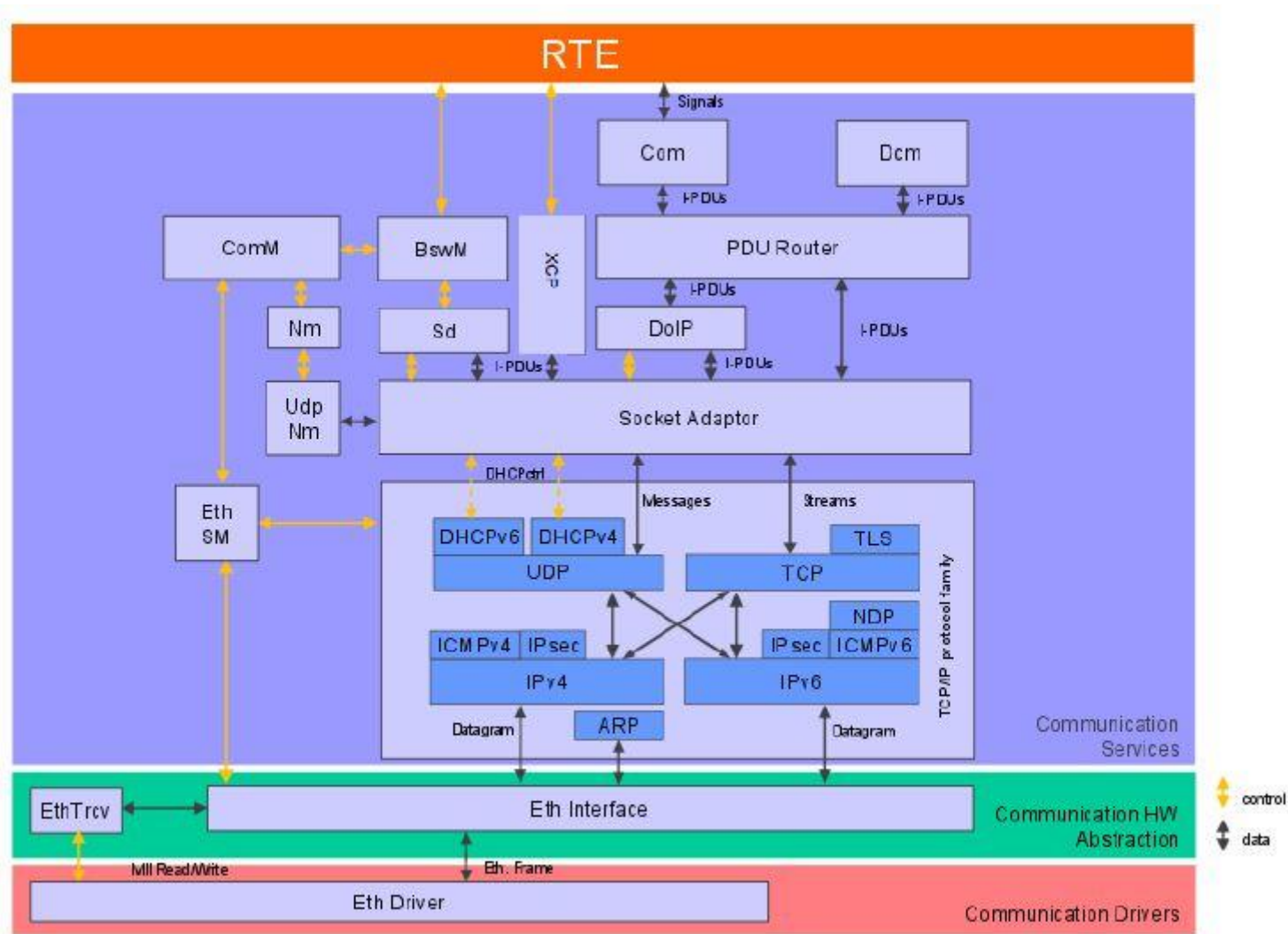
<b>Document Status</b>	published
<b>Part of AUTOSAR Standard</b>	Adaptive Platform
<b>Part of Standard Release</b>	R19-11

Document Change History			
Date	Release	Changed by	Description
		AUTOSAR	<ul style="list-style-type: none"><li>• Overhaul of Signal-to-Service Translation</li><li>• Support for Raw Data Streams</li></ul>

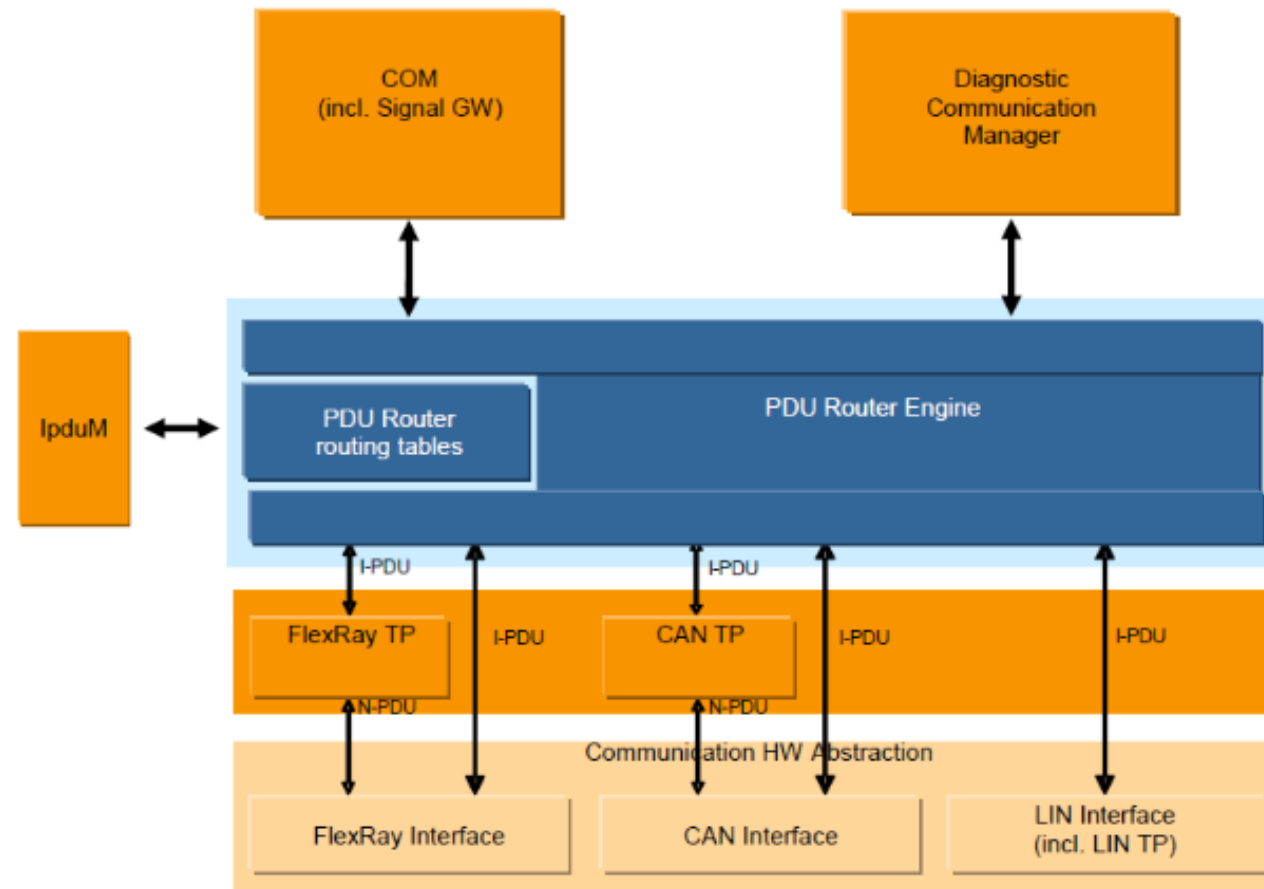
[https://www.autosar.org/fileadmin/user\\_upload/standards/classic/4-3/AUTOSAR\\_TPS\\_DiagnosticExtractTemplate.pdf](https://www.autosar.org/fileadmin/user_upload/standards/classic/4-3/AUTOSAR_TPS_DiagnosticExtractTemplate.pdf)



## 5. Diagnostic over Internet Protocol (DoIP)



## 5. DoIP- PDU Router



**Figure 1.2: Detailed PDU Router Structure showing FlexRay, CAN and LIN**

[https://www.autosar.org/fileadmin/user\\_upload/standards/classic/20-11/AUTOSAR\\_SWS\\_PDURouter.pdf](https://www.autosar.org/fileadmin/user_upload/standards/classic/20-11/AUTOSAR_SWS_PDURouter.pdf)

## 6. Advanced driver-assistance system (ADAS)

## 7. CAN protocol