Document Title	Foundation Release Overview
Document Owner	AUTOSAR
Document Responsibility	AUTOSAR
Document Identification No	781

Document Status	published
Part of AUTOSAR Standard	Foundation
Part of Standard Release	R24-11

Document Change History			
Date	**Release**	**Changed by**	**Description**
2024-11-27	R24-11	AUTOSAR Release Management	• Release Life Cycle Status: R24-11 is in Evolution, R24-11 supersedes R23-11

Disclaimer

Contents

1 Introduction

1.1 Scope of This Document

This document provides an overview of the AUTOSAR standard Foundation Release R24-11.

1.2 Terminology and Licenses

1.2.1 Terminology Statement

AUTOSAR has identified a use of previously common terminology that can be considered oppressive or racist, such as master/slave and black/white list, or in other contexts such as gender or age as harmful connotations. AUTOSAR has started a discussion with all the working groups to replace these terms. AUTOSAR is committed to provide all specification documents without these terminology in the coming and future releases. Nevertheless, it may take several releases before the terms are completely replaced, as AUTOSAR has to continue its operations and thousands of pages of existing specifications have to be reviewed and updated in parallel.

1.2.2 Usage of W3C XML Schema

The AUTOSAR XML Schema requires the XML namespace definition file xml.xsd.

There are several occurrences of the "xml.xsd" file within this release. For all occurrences the W3C license applies which can be found on `https://www.w3.org/Consortium/Legal/2015/copyright-software-and-document`.

License

By obtaining and/or copying this work, you (the licensee) agree that you have read, understood, and will comply with the following terms and conditions.

Permission to copy, modify, and distribute this work, with or without modification, for any purpose and without fee or royalty is hereby granted, provided that you include the following on ALL copies of the work or portions thereof, including modifications:

The full text of this NOTICE in a location viewable to users of the redistributed or derivative work. Any pre-existing intellectual property disclaimers, notices, or terms and conditions. If none exist, the W3C Software and Document Short Notice should be included. Notice of any changes or modifications, through a copyright statement on the new code or document such as “This software or document includes material copied from or derived from [title and URI of the W3C document]. Copyright © [YEAR] W3C® (MIT, ERCIM, Keio, Beihang).”

1.3 AUTOSAR Standards

1.3.1 Introduction

AUTOSAR addresses a wide range of use cases in automotive software development with its standards. These use cases have different requirements and lead to different technical solutions.

Packaging its deliverables into different "standards"

- eases the access to AUTOSAR solutions for users and
- allows AUTOSAR to scale with market needs.

1.3.2 Definition

An AUTOSAR standard is a consistent set of AUTOSAR deliverables, which are released at the same time. AUTOSAR deliverables can, but are not limited to be of the following kinds:

- textual explanations
- textual specifications
- test specifications
- source code
- other formal or semi-formal textual formats (e.g., ARXML, UML models, XML Schemata)

At the time of release, AUTOSAR ensures that dependencies are fulfilled.

1.3.3 Overview of AUTOSAR's Standards

AUTOSAR delivers the following standards:

Standard	Abbreviation
Adaptive Platform	AP
Classic Platform	CP
Foundation	FO

1.3.3.1 Adaptive Platform

The Adaptive Platform is AUTOSAR's solution for high-performance computing ECUs to build safety-related systems for use cases such as highly automated and autonomous driving.

1.3.3.2 Classic Platform

The Classic Platform is AUTOSAR's solution for embedded systems with hard real-time and safety constraints.

1.3.3.3 Foundation

The purpose of the Foundation standard is to enforce interoperability between the AUTOSAR platforms.

Foundation contains the generic artifacts that are common for AP and CP to ensure compatibility between

- Classic- and Adaptive Platform
- Non-AUTOSAR platforms to AUTOSAR platforms.

1.3.4 Dependencies Between Standards

Each release of Classic and Adaptive Platform relies on a dedicated version of Foundation. The specific dependency is documented in chapter 1.4.5.

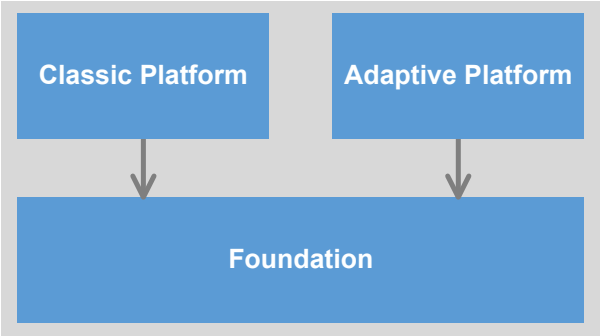

Figure 1.1: Dependencies of AUTOSAR standards

1.4 Release Numbering and Life Cycle

1.4.1 Release Life Cycle of a Major Release

Each major release goes through four consecutive steps within its life cycle (examples based on the internal release numbering scheme):

1. Development: Between start of life cycle and the initial release (e.g., R4.0.1)
2. Evolution: Following the initial release with zero, one or several minor releases and/or revisions (e.g., R4.0.2, R4.1.1)
3. Maintenance: No new content is added to a major release but only maintenance of the existing content with zero, one or several revisions (e.g., R3.2.2) is provided
4. Issue Notice: No more revisions but zero, one or several issue notices, i.e., updates of the list of known issues until end of life cycle.

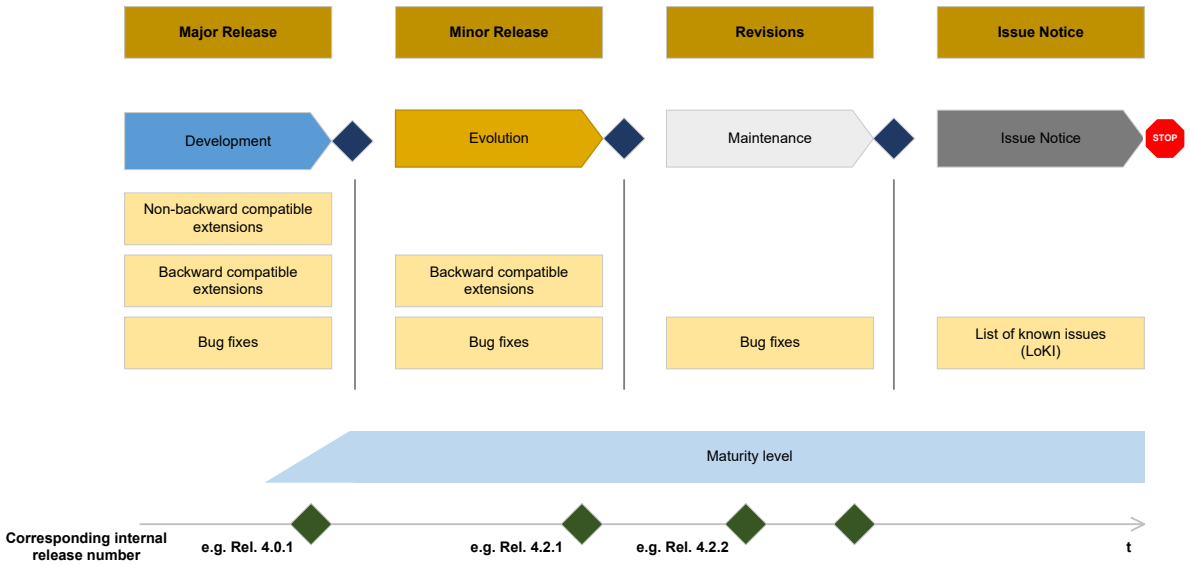

Figure 1.2: Life cycle model of AUTOSAR standards

1.4.2 Life Cycle States of Specification Items and Requirements

The life cycle state of a specification item is found after the specification item ID surrounded by curly brackets. The states are:

VALID This indicates that the related entity is a valid part of the document. This is the default and also applies if no dedicated life cycle status is annotated for the related entity.

DRAFT This indicates that the related entity is newly introduced but still experimental. This information is published but is subject to change without backward compatibility guarantee.

OBSOLETE This indicates that the related entity is subject to be removed in one of the following releases without further notice.

The life cycle state of a requirement is found in the attribute "Status". The states are the same as the specification item states.

1.4.3 Platform Release Number

AUTOSAR applies a four-digit numbering scheme Ryy-mm to identify releases. The identifiers “yy” and “mm” depict the year and month of the release date, e.g., R20-11 for the November 2020 release.

1.4.4 Internal Release Number

AUTOSAR additionally maintains an internal release number for different purposes (e.g., usage in BSW modules in Classic Platform).
The internal release number is used for all platforms and follows up on the Classic Platform release number. In Adaptive Platform this is newly introduced. In Foundation this leads to a discontinuation of the former numbering pattern (e.g., R1.5.0).
A mapping list between Platform Releases and corresponding internal release numbers can be found in chapter 1.4.5. The internal release number uses a three-digit numbering scheme R<major>.<minor>.<revision> to identify releases. Its primary purpose is to identify a release as

- a major release: Valid and draft specification parts may be changed backward incompatibly.
- a minor release: Valid specification parts may only be changed backward compatibly. Draft specification parts may be changed backward incompatibly.
- a revision: Does not contain extensions but only backward compatible bugfixes.

1.4.5 Overview of AUTOSAR Releases and Corresponding AUTOSAR Schema Versions

Until the Releases CP R4.4.0 and AP R19-03, AUTOSAR released the platforms separately where a Foundation release went along with each platform release. Since compatibility between the platforms is essential to be able to have AP and CP ECUs within one vehicle project, an XML schema needs to be available that works with the different releases. The following table gives an overview about the different schema versions and the corresponding platform releases they can be used for.

The AUTOSAR schema does not have an impact on the Foundation. The Foundation releases are mentioned for the sake of completeness.

Schema Version	Classic Platform release	Adaptive Platform release	Foundation release
AUTOSAR_00042	R4.3.0	R17-03	R1.1.0
AUTOSAR_00043	R4.3.0	R17-10	R1.2.0
AUTOSAR_00044	R4.3.1	R17-10	R1.3.0
AUTOSAR_00045	R4.3.1	R18-03	R1.4.0
AUTOSAR_00046	R4.4.0	R18-10	R1.5.0
AUTOSAR_00047	R4.4.0	R19-03	R1.5.1

Starting with release R19-11, all platforms are released as one AUTOSAR release and therefore come along with one schema version.

Schema Version	Platform release	Internal release number
AUTOSAR_00048	R19-11	R4.5.0
AUTOSAR_00049	R20-11	R4.6.0
AUTOSAR_00050	R21-11	R4.7.0
AUTOSAR_00051	R22-11	R4.8.0
AUTOSAR_00052	R23-11	R4.9.0
AUTOSAR_00053	**R24-11**	**R4.10.0**

According to the release life cycle of AUTOSAR the release R24-11 is a minor release.

1.5 Content of Chapters

This document is structured as follows:

- Chapter 1 provides an introduction to AUTOSAR's release strategy and its standardization approach.
- Chapter 2 provides a summary of changes since the previous release of the Foundation.
- Chapter 3 contains the overview of specifications comprising the AUTOSAR Foundation Release R24-11. This chapter is structured according to the clusters being in use in AUTOSAR Foundation Release R24-11.

- Chapter 4 contains remarks about known technical deficiencies.
- Chapter 5 contains the detailed revision history of all released specifications.

2 Summary of Changes in Release R24-11

This chapter contains a summary of changes which have been implemented since the previous release R23-11. The purpose of the Foundation standard is to enforce interoperability between the AUTOSAR platforms and therefore contains common requirements and technical specifications (e.g. protocols) shared between the AUTOSAR platforms.

2.1 Concepts

2.1.1 Introduced Concepts

The following concepts in 2.1.1.1 - 2.1.1.7 have been introduced.

2.1.1.1 Automotive API

Concept introduces new functional cluster Automotive API Gateway. It offers interface that allows standardized data-centric communication with the vehicle using VISS protocol. Such functional cluster requires ARXML representation of the VSS data model described in the released Technical Report.

2.1.1.2 Safe API for Hardware Accelerators

The generic API for Safe Hardware Accelerators utilization has been introduced in the AUTOSAR Adaptive Platform. It allows to utilize the hardware for heavy algorithms in the most effective way.

The new Requirements document for Safe Hardware Acceleration in AUTOSAR AP was provided in a 'Draft' status. Explanatory document was renamed to be in consistency with all other documents related to the concept.

2.1.1.3 I2CDriver

I2C (Inter-Integrated Circuit) is a 2-wire serial data bus. It was developed by Philips Semiconductors (now NXP Semiconductors). I2C is a simply structured bus system and is widely used in the automotive industry.

2.1.1.4 Adaptive Platform Machine Configuration

The configuration of a machine on the AUTOSAR adaptive platform by means of an M2-based modeling exposes several significant drawbacks that are addressed by the concept.

The stated objective of the concept is to provide an alternative modeling approach that overcomes existing drawbacks and restrictions and provides domain experts with a better and more flexible approach to describe the machine/target configuration on the AUTOSAR adaptive platform.

In comparison to an equivalent implementation of the configuration model for the AUTOSAR adaptive platform on the M2 level, the chosen approach provides various benefits that are explained in TPS APMC.

The results of the concept will change the canonical way for machine configuration on the AUTOSAR adaptive platform, but not immediately after the concept has been finalized.

It is planned to keep the existing M2-based configuration model for some time to give all stakeholders time to switch to the new configuration approach at a convenient point in time.

The big picture of the manifest configuration on the AUTOSAR adaptive platform looks very similar to the configuration model on the AUTOSAR classic platform, as described by the TPS Ecu Configuration.

The difference between the ApmC and EcuC is that the approach on the AUTOSAR adaptive platform is simpler because it is not constrained by some of the boundary conditions that apply for the AUTOSAR classic platform.

2.1.1.5 DDS Protocols

The goal of this concept part is to centralize and homogenize DDS Service-oriented communication protocols by means of:

1. Identifying Service-oriented usages of DDS in Classic and Adaptive Platforms, such as Service Instance Discovery and Provided-Required Service Instance Communication
2. Defining mappings of usages to DDS concepts (entities, types, topics, QoS policies) and mechanisms (standard API calls)
3. Refactoring the DDS Network Binding or Adaptive Platform Communications Management Functional Cluster to rely upon and reference mappings where necessary

2.1.1.6 Vehicle Data Protocol

The concept introduces the Vehicle Data Protocol (VDP) as a new in-vehicle communication mechanism to efficiently and controllably collect data from distributed Electronic Control Units. VDP addresses the needs of highly volatile data collection use cases in production vehicles by decoupling sampling from transmission. This allows for flexible and resource-efficient data collection strategies, making it well-suited for dynamic in-vehicle data collection.

2.1.1.7 Feature Graph

This concept introduces the feature graph, which addresses challenges in understanding, specifying, and maintaining the standard by introducing a structured and visual overview. The feature graph tackles the problem of complexity and hidden dependencies by organizing the standard as a browsable graph, which provides a market-oriented perspective, allowing users to navigate seamlessly from a high-level view to a detailed representation. Moreover, the feature graph illustrates cross-cutting features, and their relationships across different documents. The concept delivers a model in a machine-readable format and a technical report, which explains the features.

2.1.2 Impact of Concepts

The introduced concepts had impact on several specifications. The following table provides a detailed overview.

Please note that some of the specifications are marked by special text formatting:

- Specifications in **bold** font are completely new specifications originating from the particular concept.
- If specifications or models like the BSW UML model or the ECUC model are only indirectly affected because they just provide artifacts for other specifications, they are not listed here.

Concept Name	Specification Long Name	Affected Standard	Concept Lifecycle
Automotive API	Technical Report on AUTOSAR Features	Adaptive Platform, Foundation	draft
	AUTOSAR Feature Model		
	Standardized M1 Models used for the Definition of AUTOSAR		
	Glossary		
Safe API for hardware accelerators	Glossary	Adaptive Platform, Foundation	draft

▽

△

Concept Name	Specification Long Name	Affected Standard	Concept Lifecycle
I2CDriver	Glossary	Classic Platform, Foundation	draft
	AUTOSAR Feature Model		
	Technical Report on AUTOSAR Features		
Adaptive Platform Machine Configuration	Glossary	Adaptive Platform, Foundation	draft
	Predefined Names in AUTOSAR		
	Standardized M1 Models used for the Definition of AUTOSAR		
DDS Protocols	**Specification of DDS Service Communication Protocol**	Adaptive Platform, Classic Platform, Foundation	draft
	Specification of DDS Service Discovery Protocol		
Vehicle Data Protocol	**Requirements on Vehicle Data Protocol**	Foundation	draft
	Vehicle Data Protocol Specification		
Feature Graph	**AUTOSAR Feature Model**	Foundation	draft
	Technical Report on AUTOSAR Features		

Table 2.1: Impact of concepts

2.1.3 Validated Concepts

The following concepts have been validated:

- Secured Time Synchronization
- Tracing for Adaptive Platform
- Unified AUTOSAR Timing and Tracing Approach

2.2 Specifications

2.2.1 New Specifications

The following new specifications have been introduced via concepts:

- Technical Report on AUTOSAR Features (UID 1104, TR)
- AUTOSAR Feature Model (UID 1105, MOD)
- Specification of DDS Service Communication Protocol (UID 1110, PRS)
- Specification of DDS Service Discovery Protocol (UID 1111, PRS)

- Requirements on Vehicle Data Protocol (UID 1118, RS)
- Vehicle Data Protocol Specification (UID 1119, PRS)

In addition to the above listed new specifications, the following documents have been added with this release:

- Technical Report on Security Events Specification (UID 1122, TR)

2.2.2 Migrated Specifications

With this release, the following specifications have been moved from FO to AP, CP:

- none

2.2.3 Obsolete Specifications

The following specifications have been set to status "obsolete" in this release:

- Main Requirements (UID 54, RS)

2.2.4 Removed Specifications

The following specifications have been set to status "removed" in this release and hence are not released anymore:

- none

2.2.5 Reworked Specifications

This release removes support for Offset Time Bases because AUTOSAR does no longer see relevant use cases. All traceable items that only related to Offset Time Bases are removed. From traceable items that related to both Synchronized and Offset Time Bases, the part related to Offset Time Bases is removed. Any explanatory text that related to Offset Time Bases is removed. This change affects the following documents of the AUTOSAR Foundation:

- Time Synchronization Protocol Specification (UID 897, PRS)
- Requirements on Time Synchronization (UID 906, RS)
- Standardized M1 Models used for the Definition of AUTOSAR (UID 636, MOD)

For effects on the other AUTOSAR platforms, refer to their release overview documents.

2.2.6 Moved Specification Parts

The following specification parts have been moved to other documents in this release:

- none

2.2.7 Renamed Specifications

The following specifications have been renamed in this release:

- none

2.3 Release Documentation

There are no major changes in the Release Documentation.

3 Specification Overview

The published specifications are divided into the clusters:

- ReleaseDocumentation
- CommunicationManagement
- Diagnostics
- General
- HealthMonitoring
- MethodologyAndTemplates
- Protocols
- Safety
- Security
- SystemServices

The assignment of the specifications to these clusters is shown below.

Long Name	File Name	Life cycle changes
ReleaseDocumentation		
Foundation Release Overview	AUTOSAR_FO_TR_ReleaseOverview	
AUTOSAR Foundation Specification Hashes	AUTOSAR_FO_TR_Specification Hashes	
CommunicationManagement		
Explanation of Time Sensitive Network features	AUTOSAR_FO_EXP_TimeSensitive NetworkFeatures	
Requirements on Debugging, Tracing and Profiling support of AUTOSAR Components	AUTOSAR_FO_RS_DebugTraceProfile	
Requirements on E2E	AUTOSAR_FO_RS_E2E	
Requirements on IEEE1722	AUTOSAR_FO_RS_IEEE1722	
Requirements on Log and Trace	AUTOSAR_FO_RS_LogAndTrace	
Requirements on MACsec	AUTOSAR_FO_RS_MACsec	
Requirements on AUTOSAR Network Management	AUTOSAR_FO_RS_Network Management	
Diagnostics		
Requirements on Diagnostics	AUTOSAR_FO_RS_Diagnostics	
General		
Explanation of Diagram Source	AUTOSAR_FO_EXP_DiagramSource	
Explanation of Adaptive and Classic Platform Software Architectural Decisions	AUTOSAR_FO_EXP_SWArchitectural Decisions	
Explanation of Safety Overview	AUTOSAR_FO_EXP_SafetyOverview	
Explanation of Security Overview	AUTOSAR_FO_EXP_Security Overview	

▽

△

Long Name	File Name	Life cycle changes
AUTOSAR Feature Model	AUTOSAR_FO_MOD_Features	
Main Requirements	AUTOSAR_FO_RS_Main	obsolete
Project Objectives	AUTOSAR_FO_RS_ProjectObjectives	
Technical Report on AUTOSAR Features	AUTOSAR_FO_TR_Features	initial release
Glossary	AUTOSAR_FO_TR_Glossary	
Predefined Names in AUTOSAR	AUTOSAR_FO_TR_PredefinedNames	
HealthMonitoring		
Specification of Health Monitoring	AUTOSAR_FO_ASWS_Health Monitoring	
Explanation of System Health Monitoring	AUTOSAR_FO_EXP_SystemHealth Monitoring	
Requirements on Health Monitoring	AUTOSAR_FO_RS_HealthMonitoring	
MethodologyAndTemplates		
Meta Model	AUTOSAR_FO_MMOD_MetaModel	
Meta Model-generated XML Schema	AUTOSAR_FO_MMOD_XMLSchema	
Collection of blueprints for AUTOSAR M1 models	AUTOSAR_FO_MOD_General Blueprints	
Standardized M1 Models used for the Definition of AUTOSAR	AUTOSAR_FO_MOD_General Definitions	
AUTOSAR Miscellaneous Support Files	AUTOSAR_FO_MOD_MiscSupport	
AUTOSAR Feature Model Exchange Format Requirements	AUTOSAR_FO_RS_FeatureModel ExchangeFormat	initial release
Requirements on Methodology for Classic and Adaptive Platform	AUTOSAR_FO_RS_Methodology	
Requirements on Security Extract Template	AUTOSAR_FO_RS_SecurityExtract Template	
Requirements on Standardization Template	AUTOSAR_FO_RS_Standardization Template	
Requirements on Timing Extensions	AUTOSAR_FO_RS_TimingExtensions	
ARXML Serialization Rules	AUTOSAR_FO_TPS_ ARXMLSerializationRules	
Specification of Abstract Platform	AUTOSAR_FO_TPS_AbstractPlatform Specification	
AUTOSAR Feature Model Exchange Format	AUTOSAR_FO_TPS_FeatureModel ExchangeFormat	
Generic Structure Template	AUTOSAR_FO_TPS_GenericStructure Template	
Log And Trace Extract Template	AUTOSAR_FO_TPS_LogAndTrace Extract	
Security Extract Template	AUTOSAR_FO_TPS_SecurityExtract Template	
Standardization Template	AUTOSAR_FO_TPS_Standardization Template	
AUTOSAR XML Schema Production Rules	AUTOSAR_FO_TPS_XMLSchema ProductionRules	
Collection of constraints on AUTOSAR M1 models	AUTOSAR_FO_TR_AutosarModel Constraints	
Interoperability of Autosar Tools Supplement	AUTOSAR_FO_TR_InteroperabilityOf AutosarToolsSupplement	

▽

△

Long Name	File Name	Life cycle changes
Supplementary material of the AUTOSAR XML Schema	AUTOSAR_FO_TR_XMLSchema Supplement	
Protocols		
Specification of DDS Service Communication Protocol	AUTOSAR_FO_PRS_ DDSCommunicationProtocol	initial release
Specification of DDS Service Discovery Protocol	AUTOSAR_FO_PRS_DDSService DiscoveryProtocol	initial release
E2E Protocol Specification	AUTOSAR_FO_PRS_E2EProtocol	
Specification of Intrusion Detection System Protocol	AUTOSAR_FO_PRS_Intrusion DetectionSystem	
Log and Trace Protocol Specification	AUTOSAR_FO_PRS_LogAndTrace Protocol	
Specification of the AUTOSAR Network Management Protocol	AUTOSAR_FO_PRS_Network ManagementProtocol	
SOME/IP Protocol Specification	AUTOSAR_FO_PRS_ SOMEIPProtocol	
SOME/IP Service Discovery Protocol Specification	AUTOSAR_FO_PRS_SOMEIPService DiscoveryProtocol	
Specification of Secure Onboard Communication Protocol	AUTOSAR_FO_PRS_SecOcProtocol	
Time Synchronization Protocol Specification	AUTOSAR_FO_PRS_TimeSync Protocol	
Vehicle-2-X Remote Access Layer Protocol Specification	AUTOSAR_FO_PRS_V2XRemote AccessLayer	
Vehicle Data Protocol Specification	AUTOSAR_FO_PRS_VDP	initial release
Requirements on Data Distribution Service	AUTOSAR_FO_RS_DataDistribution Service	
Requirements on IPsec Protocol	AUTOSAR_FO_RS_IPsecProtocol	
Requirements on SOME/IP Protocol	AUTOSAR_FO_RS_SOMEIPProtocol	
Requirements on SOME/IP Service Discovery Protocol	AUTOSAR_FO_RS_SOMEIPService DiscoveryProtocol	
Requirements on Time Synchronization	AUTOSAR_FO_RS_TimeSync	
Requirements on Vehicle Data Protocol	AUTOSAR_FO_RS_VDP	initial release
Safety		
Safety Requirements for AUTOSAR Adaptive Platform and AUTOSAR Classic Platform	AUTOSAR_FO_RS_Safety	
Security		
Requirements on Firewall	AUTOSAR_FO_RS_Firewall	
Requirements on Intrusion Detection System	AUTOSAR_FO_RS_IntrusionDetection System	
List of known Issues of Secure Hardware Extensions	AUTOSAR_FO_TR_ListOfKnown IssuesSecureHardwareExtensions	
Specification of Secure Hardware Extensions	AUTOSAR_FO_TR_SecureHardware Extensions	
Technical Report on Security Events Specification	AUTOSAR_FO_TR_SecurityEvents Specification	initial release
SystemServices		
Timing Analysis and Design	AUTOSAR_FO_TR_TimingAnalysis	

Table 3.1: Specification overview

4 Remarks to Known Technical Deficiencies

The technical deficiencies per specification are – if applicable – mentioned inside the respective specification in a chapter “Known Limitations” located after the table of contents.

The following technical deficiencies are to be mentioned, where clicking on the section reference will bring you to the respective document:

Document UID	Long Name	Document Type	Section Reference
969	Specification of Secure Onboard Communication Protocol	PRS	4.1
850	Specification of Health Monitoring	ASWS	4.2

Table 4.1: Overview of known technical deficiencies

4.1 Specification of Secure Onboard Communication Protocol

The protocol specification aims to ensure compatibility between AP and CP, and it assumes the communication is realized over ethernet. Depending of the communication paradigm between AP and CP, the functionality of the protocol is limited. In the case of SOME/IP, the protocol will not support separate transmission of Authentic PDU and Cryptographic PDU and will not support usage of part of the payload as freshness information (the details are described in the chapter Configuration Parameters of the specification).

4.2 Specification of Health Monitoring

The logic for determination of Health Indicator values is not standardized as a part of AUTOSAR.

5 Release History

5.1 Release R24-11

The following deliverables had major changes.

Name	Specification history entry
ARXML Serialization Rules	• No content changes
AUTOSAR Feature Model Exchange Format	• Added imposition time to constraints.
AUTOSAR Feature Model Exchange Format Requirements	• No content changes
AUTOSAR XML Schema Production Rules	• Editorial changes
E2E Protocol Specification	• E2EPW Support removed • Profile 76 added
Explanation of Adaptive and Classic Platform Software Architectural Decisions	• Added architectural decisions for release R24-11 • Clarified the use of the final specifier in dec_3a_ar94700 • Removed obsolete decisions
Explanation of Safety Overview	• Editorial changes • Update figure 3.6
Explanation of Security Overview	• Added chapter Isolated Runtime Environment. • Added chapter Global Platform Standards. • Added chapter Secure Communication.
Explanation of System Health Monitoring	• No content changes
Explanation of Time Sensitive Network features	• No content changes
Foundation Release Overview	• Release Life Cycle Status: R24-11 is in Evolution, R24-11 supersedes R23-11
Generic Structure Template	• Improve Splitable due to merging aspects • Introduce Definition and Application of Imposition Time
Glossary	• Added terms for Trusted Platform, Adaptive Platform Machine Configuration, Inter-Integrated Circuit, Automotive API (Gateway) • Changed definition for Adaptive Application • Extended abbreviation list
List of known Issues of Secure Hardware Extensions	• No content changes
Log And Trace Extract Template	• Adapted definition of Strings as networkRepresentation of a DltArgument • Improved descriptions of examples • Added imposition times to constraints
Log and Trace Protocol Specification	• Add missing elements in Extension Header table • Clarification of constant/variable elements in non-Verbose messages
Main Requirements	• set document to obsolete
Predefined Names in AUTOSAR	• Added list of available Imposition Times (Chapter chapter_ImpositionTimes) • Removed obsolete information categories (Table table_InformationCategories)
Project Objectives	• No content changes
Requirements on AUTOSAR Network Management	• No content changes
Requirements on Data Distribution Service	• Editorial changes

▽

△

Name	Specification history entry
Requirements on Debugging, Tracing and Profiling support of AUTOSAR Components	• No content changes
Requirements on Diagnostics	• New requirements for CP and AP • Correction of requirement assignment to CP and AP • Relocation of requirements from SRS Ethernet to RS Diagnostic
Requirements on E2E	• E2E timeout detection rephrased
Requirements on Firewall	• Editorial changes
Requirements on Health Monitoring	• No content changes
Requirements on IEEE1722	• No content changes
Requirements on IPsec Protocol	• No content changes
Requirements on Intrusion Detection System	• No content changes
Requirements on Log and Trace	• Removed 'draft' state for RS_LT_00059, RS_LT_00060, RS_LT_00061 and RS_LT_00062
Requirements on MACsec	• No content changes
Requirements on Methodology for Classic and Adaptive Platform	• No content changes
Requirements on SOME/IP Protocol	• No content changes
Requirements on SOME/IP Service Discovery Protocol	• No content changes
Requirements on Security Extract Template	• No content changes
Requirements on Standardization Template	• No content changes
Requirements on Time Synchronization	• Removal of Offset Time Bases
Requirements on Timing Extensions	• No content changes
Requirements on Vehicle Data Protocol	• Initial release
SOME/IP Protocol Specification	• Protocol updates for interoperability issues between AP and CP regarding SOME/IP Error responses • Added configurable timer for SOME/IP-TP reception timeout time • Editorial Changes
SOME/IP Service Discovery Protocol Specification	• Editorial changes and bug fixes
Safety Requirements for AUTOSAR Adaptive Platform and AUTOSAR Classic Platform	• Fix editorial issues • Add change history
Security Extract Template	• Reporting Security Events
Specification of Abstract Platform	• No content changes
Specification of DDS Service Communication Protocol	• Initial release
Specification of DDS Service Discovery Protocol	• Initial release
Specification of Health Monitoring	• No content changes
Specification of Intrusion Detection System Protocol	• Introduction of Context Data Version • Clarification on Context Data Length
Specification of Secure Hardware Extensions	• No content changes
Specification of Secure Onboard Communication Protocol	• Removal of implementation specific contents • Removal of configuration parameters not used in the document and not relavant for PRS. • Added new spec items and refined the existing spec items according to the PRS relevance.
Specification of the AUTOSAR Network Management Protocol	• No content changes

▽

△

Name	Specification history entry
Standardization Template	• Obsolete categories of traceable removed in TPS_STDT_00098
Technical Report on AUTOSAR Features	• Initial release
Technical Report on Security Events Specification	• Initial release
Time Synchronization Protocol Specification	• Offset Time Bases removed
Timing Analysis and Design	• Updated TIMEX to ARTI mapping in appendix chap_3a_TIMEXARTI • Updated MetaClass used for SL-LET
Vehicle Data Protocol Specification	• Initial release
Vehicle-2-X Remote Access Layer Protocol Specification	• No content changes

Table 5.1: Overview of specification release histories