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References

[1] Log and Trace Protocol Specification with protocol version "2"
AUTOSAR_PRS_LogAndTraceProtocol from Release R21-11

[2] Log and Trace Protocol Specification with protocol version "1"
AUTOSAR_PRS_LogAndTraceProtocol from Release R20-11

1 Introduction

1.1 Scope of this document

This document provides an overview of the AUTOSAR standard Foundation Release R21-11.

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`.

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Disclaimers

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 re-
leased 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 on 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 1.4.6.
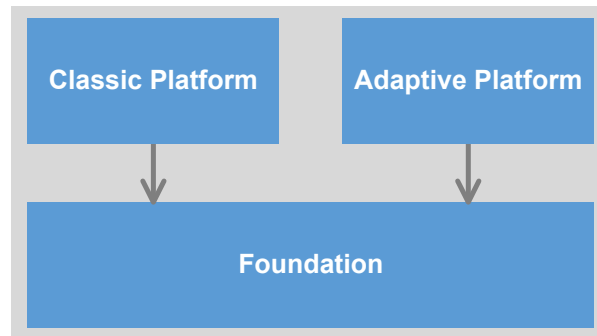
Figure 1.1: Dependencies of AUTOSAR Standards

1.4 Release Numbering and Life Cycle

1.4.1 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.

1.4.2 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.

1.4.3 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.
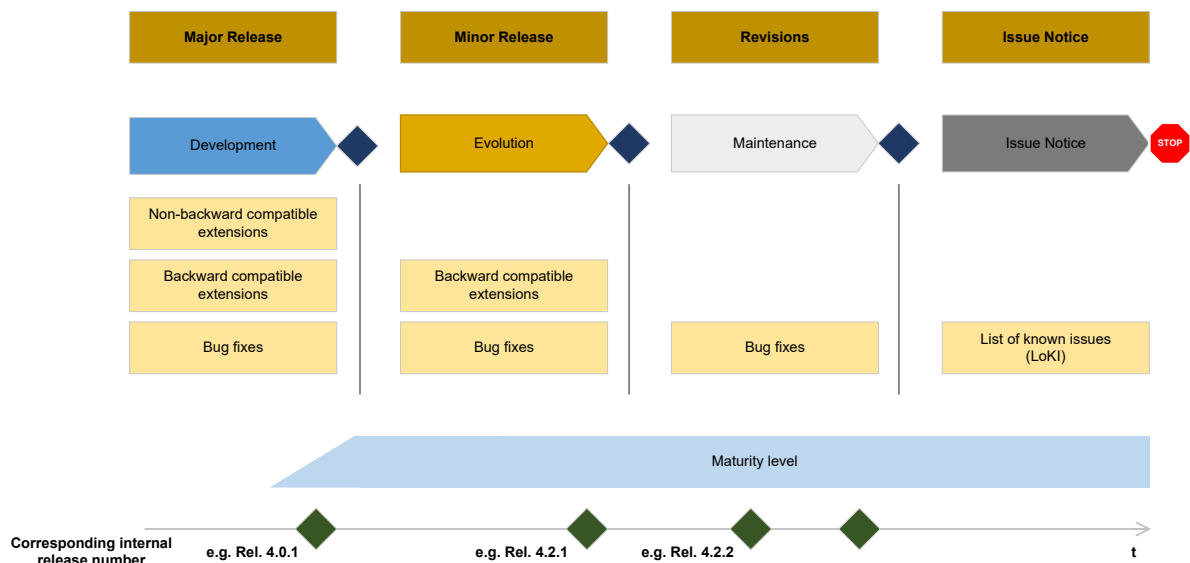
Figure 1.2: Life cycle model of AUTOSAR standards

1.4.4 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 "type". The states are the same as the specification item states.

1.4.5 Overview of AUTOSAR schema versions and corresponding internal AUTOSAR releases

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

According to the release life cycle of AUTOSAR the release R21-11 is a minor release.

1.4.6 Overview of AUTOSAR schema versions and corresponding valid AUTOSAR releases

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

Schema Version	AUTOSAR release
AUTOSAR_00048	R19-11
AUTOSAR_00049	R20-11
AUTOSAR_00050	R21-11

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 R21-11. This chapter is structured according to the clusters being in use in AUTOSAR Foundation Release R21-11.

- Chapter 4 contains remarks about known technical deficiencies.

- Chapter 5 contains the detailed revision history of all released specifications.

2 Summary of changes

This chapter contains a summary of changes which have been implemented since the previous release R20-11.

2.1 Release R21-11

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.

With the current release, this goal has been pursued once more.

2.1.1 Concepts

2.1.1.1 Introduced Concepts

The following concepts in 2.1.1.1.1 - 2.1.1.1.7 have been introduced.

2.1.1.1.1 Mode Dependent Configuration

This concept provides the facility to configure Mode Dependent Supervision (Alive Supervision, Deadline Supervision and Logical Supervision). The modes are derived from Function Group States.
Note: It is also possible to disable Supervision of a Supervised Entity Instance in a particular mode.

Additionally, this concept provides "Failed Reference Cycles Tolerance" per "Alive Supervision". Earlier, "Failed Reference Cycles Tolerance" was available per "Local Supervision".

The concept is applicable for "Adaptive Platform" only. "Classic Platform" already has "Mode Dependent Supervision".

2.1.1.1.2 System Health Management

This concept extends the System Health Monitoring with application interfaces for exchanging Health Information and Health Indicators.

2.1.1.1.3 Classic Platform Flexibility

The concept supports signal and SOME/IP based communication from Software Components located in an Applicative Software Cluster - independently buildable from the Host Software Cluster with its communication stack. The Software Cluster Connection supports now the connection to diagnostic services as Dem, FiM, Dcm. The supervision of safety related functionality is supported with an individual WdgM instance in each Software Cluster.

2.1.1.1.4 Service Discovery Harmonization

The concept SDHarmonization cleans-up the Service Discovery specification, by removing duplicate content and fixing contradicting statements in the documents FO PRS SOMEIPServiceDiscoveryProtocol and CP SWS ServiceDiscovery.

2.1.1.1.5 Memory Stack Rework

The concept extends the existing memory stack by the lower layer components MemAcc and Mem to support new use cases like over the air (OTA) software update by providing memory access coordination for multiple upper layer modules and a memory technology agnostic memory driver interface.

2.1.1.1.6 E2E For Fields

This concept extends the E2E protection to fields, the publisher subscriber pattern of AUTOSAR applications. The E2E protection is applied to Getter/Setter functions of fields and the notification of subscriber applications.

2.1.1.1.7 Rework of PNC related ComM and NM

Replaced synchronization of PN information via ComSignals between ComM and Nm with dedicated APIs and introduced simplification of PNC related functionalities in ComM, NmInterface and <Bus>Nms (e.g. PN timer handling). Clarified the supported PNC gateway use cases and introduced according configuration extensions in ComM. Clarified the handling of multiple top-level PNC coordinators within the same PN topology.

2.1.1.2   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.

- Specifications in *italic* font are affected indirectly as they provide artefacts for the actually impacted specifications.

Concept Name	Specification Long Name	Standard	Concept Lifecycle
Mode Dependent Configuration	Specification of Health Monitoring	Foundation	draft
	Requirements on Health Monitoring		
	Specification of Platform Health Management	Adaptive Platform	
	Specification of Manifest		
	Requirements on Platform Health Management		
System Health Management	Specification of Health Monitoring	Foundation	draft
	Requirements on Health Monitoring		
	Explanation of System Health Monitoring		
Classic Platform Flexibility	Requirements on Diagnostics	Foundation	draft
	Requirements on Software Cluster Connection module	Classic Platform	
	Specification of Software Cluster Connection module		
	Explanation of CP Software Cluster Design And Integration Guideline		
	System Template		
	Specification of RTE Software		
	Requirements on Communication		
	Specification of Communication		
	Specification of Large Data COM		
	Specification of Diagnostic Communication Manager		
	Specification of Diagnostic Event Manager		
	Diagnostic Extract Template		

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Concept Name	Specification Long Name	Standard	Concept Lifecycle
	Specification of PDU Router		
	Specification of Watchdog Manager		
	Specification of Communication Stack Types		
Service Discovery Harmonization	SOME/IP Service Discovery Protocol Specification	Foundation	draft
	Specification of Service Discovery	Classic Platform	
Memory Stack Rework	Specification of NVRAM Manager	Classic Platform	draft
	Layered Software Architecture		
	Requirements on Memory Hardware Abstraction Layer		
	List of Basic Software Modules		
	Specification of Memory Abstraction Interface		
	Specification of Flash EEPROM Emulation		
	Specification of EEPROM Abstraction		
	Guide to BSW Distribution		
	Specification of Memory Access		
	Specification of Memory Driver		
E2E For Fields	Explanation of Diagram Source	Foundation	draft
	Specification of Module E2E Transformer	Classic Platform	
	Specification of Communication Management	Adaptive Platform	
Rework of PNC related ComM and NM	Glossary	Foundation	draft
	Requirements on Network Management	Classic Platform	
	Specification of CAN Network Management		
	Specification of FlexRay Network Management		
	Specification of FlexRay Transport Layer		
	System Template		
	Requirements on Mode Management		
	Specification of Communication Manager		
	Specification of UDP Network Management		

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Concept Name	Specification Long Name	Standard	Concept Lifecycle
	Specification of Ethernet State Manager		
	Specification of Ethernet Interface		
	Specification of Ethernet Driver		
	Specification of FlexRay Network Management		

Table 2.1: Impact of Concepts

2.1.1.3 Validated Concepts

The following concepts have been validated:

- Unified AUTOSAR Timing and Tracing Approach (Part 2)

- Rework of PNC related ComM and NM handling (Part 1) - all features have been validated, except feature "SLAVE_PASSIVE"

2.1.2 Specifications

2.1.2.1 New Specifications

- Log And Trace Extract Template (UID 1024, TPS)

2.1.2.2 Renamed Specifications

- none

2.1.2.3 Migrated Specifications

With this release, the following specification has been moved from Adaptive Platform to the Foundation standard:

- none

With this release, the following specification has been moved from Classic Platform to the Foundation standard:

- Requirements on Network Management (UID 3, SRS) to Requirements on AUTOSAR Network Management (UID 927, RS)

2.1.2.4 Obsolete Specifications

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

- none

2.1.2.5 Removed Specifications

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

- none

2.1.2.6 Reworked Specifications

The following documents have been changed significantly in R21-11

- Main Requirements (UID 054, RS): Chapter 5 (Platform Level Candidates) has been added and several requirements have been moved to that chapter.
  The requirements in this chapter will potentially be moved to a new requirements specification which is currently under discussion.
  A harmonized set of rules for requirements have been applied to all requirements in this document.

2.1.2.7 Moved Specification parts

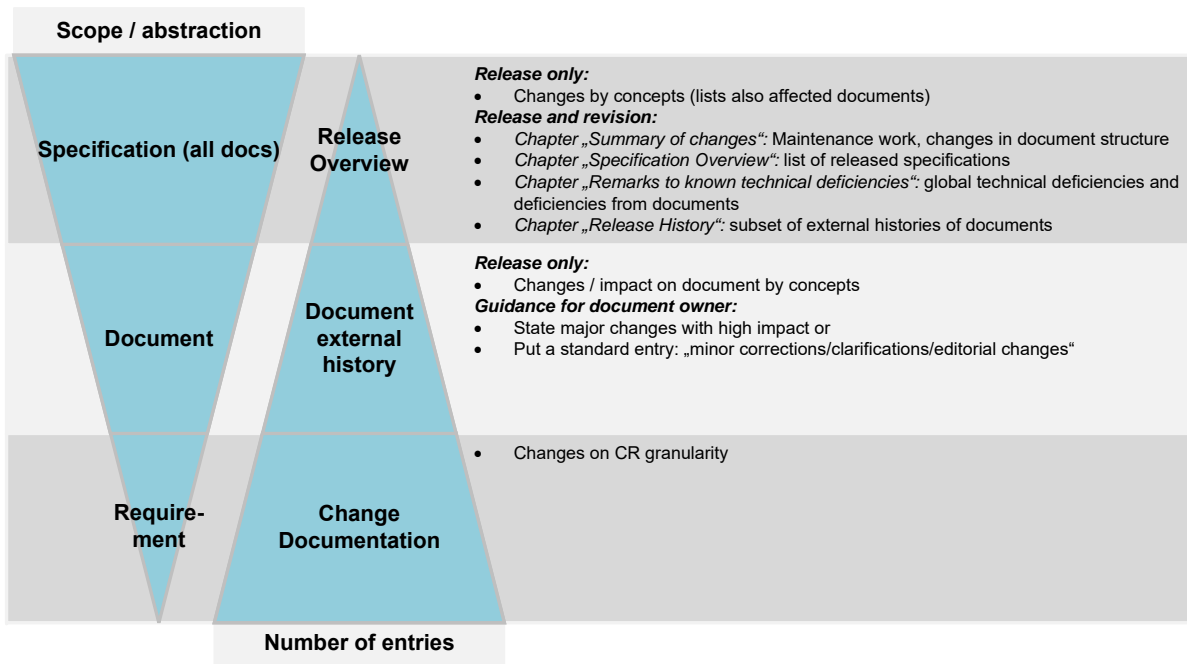The following specification parts have been moved to other documents in R21-11

- none

2.1.3 Release Documentation

There are no major changes in the Release Documentation.

2.2 History information in AUTOSAR

The following diagram shows the location of documentation of changes.

The Change Documentation is also available for Adaptive Platform since release R20-11.

Scope / abstraction		
Specification (all docs)	Release Overview	**Release only:** • Changes by concepts (lists also affected documents) **Release and revision:** • Chapter „Summary of changes": Maintenance work, changes in document structure • Chapter „Specification Overview": list of released specifications • Chapter „Remarks to known technical deficiencies": global technical deficiencies and deficiencies from documents • Chapter „Release History": subset of external histories of documents
Document	Document external history	**Release only:** • Changes / impact on document by concepts **Guidance for document owner:** • State major changes with high impact or • Put a standard entry: „minor corrections/clarifications/editorial changes"
Require-ment	Change Documentation	• Changes on CR granularity
	Number of entries	

Figure 2.1: History information in AUTOSAR

3 Specification overview

The published specifications are divided into the clusters

- Release Documentation

- Communication Management

- Diagnostics

- General

- Health Monitoring

- Methodology and Templates

- Protocols

- Safety

- Security

- System Services

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

Long Name	File Name	Life cycle changes
Release Documentation		
Foundation Release Overview	AUTOSAR_TR_FoundationRelease Overview	
AUTOSAR Foundation Specification Hashes	AUTOSAR_TR_Foundation SpecificationHashes	
Communication Management		
Requirements on AUTOSAR Network Management	AUTOSAR_RS_NetworkManagement	
Requirements on Debugging, Tracing and Profiling support of AUTOSAR Components	AUTOSAR_RS_ FoundationDebugTraceProfile	
Requirements on E2E	AUTOSAR_RS_E2E	
Requirements on Log and Trace	AUTOSAR_RS_LogAndTrace	
Diagnostics		
Requirements on Diagnostics	AUTOSAR_RS_Diagnostics	
General		
Explanation of Diagram Source	AUTOSAR_EXP_DiagramSource	
Glossary	AUTOSAR_TR_Glossary	
Main Requirements	AUTOSAR_RS_Main	
Predefined Names in AUTOSAR	AUTOSAR_TR_PredefinedNames	
Project Objectives	AUTOSAR_RS_ProjectObjectives	
Health Monitoring		
Explanation of System Health Monitoring	AUTOSAR_EXP_ SystemHealthMonitoring	
Requirements on Health Monitoring	AUTOSAR_RS_HealthMonitoring	

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Long Name	File Name	Life cycle changes
Specification of Health Monitoring	AUTOSAR_ASWS_HealthMonitoring	
Methodology and Templates		
ARXML Serialization Rules	AUTOSAR_TPS_ARXMLSerializationRules	
AUTOSAR Feature Model Exchange Format	AUTOSAR_TPS_FeatureModelExchangeFormat	
AUTOSAR Feature Model Exchange Format Requirements	AUTOSAR_RS_FeatureModelExchangeFormat	
AUTOSAR Miscellaneous Support Files	AUTOSAR_MOD_MiscSupport	
AUTOSAR XML Schema Production Rules	AUTOSAR_TPS_XMLSchemaProductionRules	
Collection of blueprints for AUTOSAR M1 models	AUTOSAR_MOD_GeneralBlueprints	
Collection of constraints on AUTOSAR M1 models	AUTOSAR_TR_AutosarModelConstraints	
Generic Structure Template	AUTOSAR_TPS_GenericStructureTemplate	
Interoperability of Autosar Tools Supplement	AUTOSAR_TR_InteroperabilityOfAutosarToolsSupplement	
Log And Trace Extract Template	AUTOSAR_TPS_LogAndTraceExtract	Initial release
Meta Model	AUTOSAR_MMOD_MetaModel	
Meta Model-generated XML Schema	AUTOSAR_MMOD_XMLSchema	
Requirements on Methodology for Classic and Adaptive Platform	AUTOSAR_RS_Methodology	
Requirements on Security Extract Template	AUTOSAR_RS_SecurityExtractTemplate	
Requirements on Standardization Template	AUTOSAR_RS_StandardizationTemplate	
Requirements on Timing Extensions	AUTOSAR_RS_TimingExtensions	
Security Extract Template	AUTOSAR_TPS_SecurityExtractTemplate	
Specification of Abstract Platform	AUTOSAR_TPS_AbstractPlatformSpecification	
Standardization Template	AUTOSAR_TPS_StandardizationTemplate	
Standardized M1 Models used for the Definition of AUTOSAR	AUTOSAR_MOD_GeneralDefinitions	
Supplementary material of the AUTOSAR XML Schema	AUTOSAR_TR_XMLSchemaSupplement	
Protocols		
E2E Protocol Specification	AUTOSAR_PRS_E2EProtocol	
Log and Trace Protocol Specification	AUTOSAR_PRS_LogAndTraceProtocol	
Requirements on IPsec Protocol	AUTOSAR_RS_IPsecProtocol	
Requirements on SOME/IP Protocol	AUTOSAR_RS_SOMEIPProtocol	
Requirements on SOME/IP Service Discovery Protocol	AUTOSAR_RS_SOMEIPServiceDiscoveryProtocol	
Requirements on Time Synchronization	AUTOSAR_RS_TimeSync	
SOME/IP Protocol Specification	AUTOSAR_PRS_SOMEIPProtocol	

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Long Name	File Name	Life cycle changes
SOME/IP Service Discovery Protocol Specification	AUTOSAR_PRS_ SOMEIPServiceDiscoveryProtocol	
Specification of Intrusion Detection System Protocol	AUTOSAR_PRS_ IntrusionDetectionSystem	
Specification of Secure Onboard Communication Protocol	AUTOSAR_PRS_SecOcProtocol	
Specification of the AUTOSAR Network Management Protocol	AUTOSAR_PRS_ NetworkManagementProtocol	
Time Synchronization Protocol Specification	AUTOSAR_PRS_TimeSyncProtocol	
Safety		
Safety Requirements for AUTOSAR Adaptive Platform and AUTOSAR Classic Platform	AUTOSAR_RS_Safety	
Security		
List of known Issues of Secure Hardware Extensions	AUTOSAR_TR_ListOfKnownIssuesSe- cureHardwareExtensions	
Requirements on Intrusion Detection System	AUTOSAR_RS_ IntrusionDetectionSystem	
Specification of Secure Hardware Extensions	AUTOSAR_TR_ SecureHardwareExtensions	
System Services		
Recommended Methods and Practices for Timing Analysis and Design within the AUTOSAR Development Process	AUTOSAR_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
787	Log and Trace Protocol Specification	PRS	4.1
986	Safety Requirements for AUTOSAR Adaptive Platform and AUTOSAR Classic Platform	RS	4.2

4.1 Log and Trace Protocol Specification (UID 787, PRS)

Although Log and Trace Protocol version "2" (compare [1]) is already available, the Dlt module in AUTOSAR Classic Platform currently only supports version "1" of the Log and Trace Protocol [2].

4.2 Safety Requirements for AUTOSAR Adaptive Platform and AUTOSAR Classic Platform (UID 986, RS)

- Description Field in Chapter 5: Requirements Tracing contain 'No Description'

- Trace Synopis Warning on local BuildSystem after UpdateTooling and UpdateCommonFiles

5 Release history

5.1 Release R21-11

Name	Specification history entry
Foundation Release Overview	● Release Life Cycle Status: R21-11 is in Evolution, R21-11 supersedes R20-11
ARXML Serialization Rules	● no content changes
AUTOSAR Feature Model Exchange Format	● Changed all lower multiplicities in the meta-model to 0 and introduced constraints that define at which time which model elements need to be available. For details please refer to the ChangeDocumentation.
AUTOSAR XML Schema Production Rules	● minor corrections / clarifications / editorial changes
E2E Protocol Specification	● New profiles 08m,44m ● New protocol independent flowcharts
Explanation of System Health Monitoring	● Added the architecture for each platform to handle HoS idea
Generic Structure Template	● Improve Collection ● Restructure UML Tags ● Update Life Cycle States
Glossary	● Added terms for Intermediate PNC coordinator, PN shutdown message, Top-level PNC coordinator, PNC leaf node ● Added terms for Logging, Tracing, Profiling ● Improved definition of System term
List of known Issues of Secure Hardware Extensions	● No content changes
Log And Trace Extract Template	● Initial release
Log and Trace Protocol Specification	● Add support for specific format and precision coding (TYFM & TYPR). ● Fix "RestoreToFactoryDefault()" to "ResetToFactoryDefault()" and fixes in response parameter of "GetLogInfo()". ● Introduction of v2 of the protocol. ● Non-VerboseMessage-format-ARXML is now in TPS_LogAndTrace_Extract.
Main Requirements	● Requirements reworked with experts ● Requirements rephrased according sentence pattern ● Requirements checked according requirements quality criteria ● RS_Main_00700 added
Predefined Names in AUTOSAR	● Added abbreviations for AIDSM ● Removed ARTI definitions
Project Objectives	● No content changes

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Name	Specification history entry
Recommended Methods and Practices for Timing Analysis and Design within the AUTOSAR Development Process	- Added "Timing Requirements and Abstraction Levels" in section 2.1 - Extended description of Timing Reference Platform (TRP) in appendix A - Added TIMEX to ARTI mapping in appendix B - Minor updates and improvements
Requirements on AUTOSAR Network Management	- AUTOSAR_SRS_NetworkManagement has been incorporated into this document - NM handling has been reworked - Node detection bit has been replaced with Repeat Message Request bit - Editorial changes/clarifications
Requirements on Debugging, Tracing and Profiling support of AUTOSAR Components	Shifted internal glossary to AUTOSAR glossary
Requirements on Diagnostics	- New requirements for CP and AP - Correction of requirement assignment to CP and AP - Additional requirement for SW Cluster support in AUTOSAR Classic
Requirements on E2E	No content changes
Requirements on Health Monitoring	- Update requirements for SystemHealthMonitoring - Add requirements for Mode Dependent Configuration
Requirements on Intrusion Detection System	no content change
Requirements on IPsec Protocol	no content changes
Requirements on Log and Trace	Fix references to RS_Main
Requirements on Methodology for Classic and Adaptive Platform	No content changes
Requirements on Security Extract Template	no content change
Requirements on SOME/IP Protocol	No content changes
Requirements on SOME/IP Service Discovery Protocol	No content changes
Requirements on Standardization Template	No content changes
Requirements on Time Synchronization	- New function allowing to clone a timebase introduced - Update of CanTSyn module for supporting of hardware timestamping - Trace IDs update
Requirements on Timing Extensions	No content changes
Safety Requirements for AUTOSAR Adaptive Platform and AUTOSAR Classic Platform	- add classic platform requirements chapter - add requirements for CP WDG, CP OS, CP E2E - rework top level safety requirements structure - add TLSR RS_SAF_00006 - update PHM, EM, SM requirements - update functional safety requirements to be AUTOSAR Platform and Foundation
Security Extract Template	No content changes

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Name	Specification history entry
SOME/IP Protocol Specification	• Added Restriction of Server Connection from Clients • Added Restriction of Client Connection to Server • Clarification on String Handling in SOME/IP • SOME/IP Header shall be encoded in network byte order • Editorial Change
SOME/IP Service Discovery Protocol Specification	• Removal of Explicit Initial Data Control Flag and Initial Data Requested Flag • Introduced optional functionality to subscribe to a multicast address pre-defined by a ClientService • Consideration of the connection status of a security associations for clients and servers was added • Moved specification item from CP SWS ServiceDiscovery to FO PRS SOMEIPServiceDiscoveryProtocol based on harmonization activities of both document
Specification of Abstract Platform	• CompositeInterface renamed to ApplicationInterface • support for attributes in an ApplicationInterface
Specification of Health Monitoring	• Add Application Interfaces for SystemHealthMonitoring • Add Mode Dependent Configuration
Specification of Intrusion Detection System Protocol	• Improved explanations of protocol fields • Increased consistency between overview and detailed tables • Corrections in frame size calculation
Specification of Secure Hardware Extensions	• no content changes
Specification of Secure Onboard Communication Protocol	• no content changes
Specification of the AUTOSAR Network Management Protocol	• Updates for the rework of PNC related ComM and NM handling • Updates for AP and CP NetworkManagement harmonization
Standardization Template	• update life cycle states • improve traceability to RS document
Time Synchronization Protocol Specification	• Inconsistent handling of Sequence Counter jumps resolved • Trace IDs clean-up