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Table of Contents

1 Introduction

1.1 Scope of this document

This document provides an overview of the AUTOSAR standard Foundation Release R20-11.

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 is currently planning a discussion with all the working groups to replace these terms starting in R21-11. 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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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.
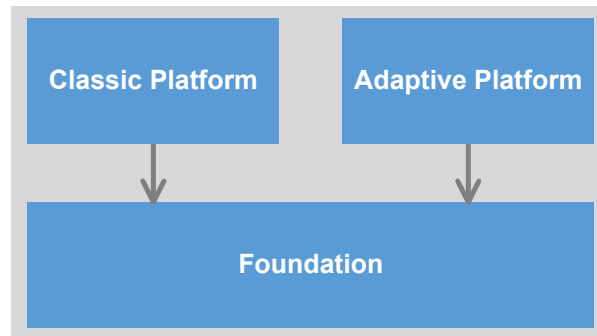
Figure 1.1: Dependencies of AUTOSAR Standards

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.
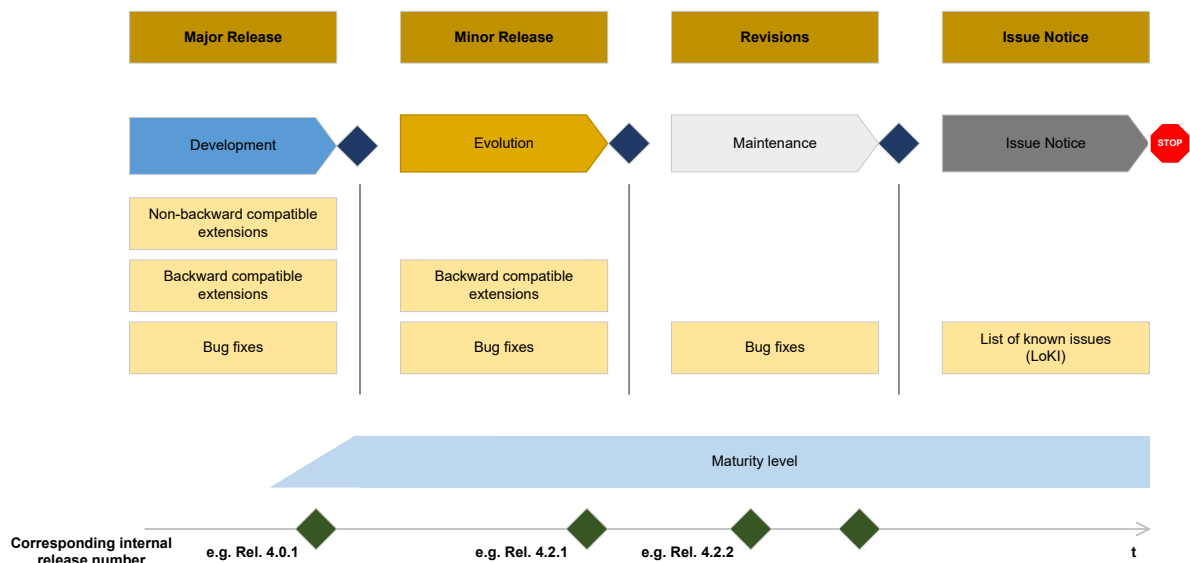
Figure 1.2: Life cycle model of AUTOSAR standards

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

According to the release life cycle of AUTOSAR the release R20-11 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

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 R20-11. This chapter is structured according to the clusters being in use in AUTOSAR Foundation Release R20-11.

- 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 R19-11.

2.1   Release R20-11

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. Especially in the technical fields of security, safety and health management progress has been made to strengthen the interoperability between Classic and Adaptive Platform.

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   Vehicle Network State Management

The concept extends the existing PNC coordination algorithm which is based on static routings by the possibility to learn additional routings dynamically. This learning is implemented as a special phase within the PNC algorithm and can be triggered by application or diagnostic.

2.1.1.1.2   Intrusion Detection System Manager

The concept "Intrusion Detection System Manager" specifies a framework for an AUTOSAR based Intrusion Detection System (IDS). This includes the BSW components "Intrusion Detection System Manager (IdsM)" and "Adaptive Intrusion Detection System Manager (Adaptive IdsM)". Furthermore extensions of basic software modules are specified to enable reporting of security events to the IdsM. A protocol specification for transmitting qualified security events over the vehicle network was released. The security extract template specified by concept "Intrusion Detection System Manager" allows to model properties of the IDS on system level.

2.1.1.1.3 System Health Management

System Health Monitor uses health information from PHM instances or WdgM instances to build an overall Health Indicator. The estimated Health Indicator can then be used by Adaptive SM or Classic BswM to trigger according platform specific recovery actions, or by other dependent System Health Monitors for their own Health Indicators. Additionally, the Health Indicator can be attached to existing services as some kind of "Health of Service".

2.1.1.1.4 Ethernet Wakeup On Dataline

The concept extends the Ethernet communication stack to use OA TC10 compliant Ethernet hardware (PHY) in combination with existing communication features, e.g. partial network. OA TC10 compliant PHY's provide the possibility to wake up and sleep on dataline and to forward a received wake up to neighbouring PHY's. This support a Ethernet switched network, where a wake up could be propagate across the whole network. The essential properties is to trigger a wake up on the network upon an active communication request (e.g. a PNC request), to trigger a sleep if a communication channel shutdown and to configure a PHY properly regarding the wake up forwarding behaviour.

2.1.1.1.5 Classic Platform Flexibility

The concept of Classic Platform Flexibility aims to split today's monolithic AUTOSAR Classic Platform binary into several software clusters that can be independently developed, integrated, tested, and programmed.

2.1.1.1.6 RS Safety

The concept of "RS Safety" aims to provide safety requirements for the AUTOSAR Adaptive Platform within a requirement specification (RS) document: RS Safety. Providing safety requirements in this form allows the derivation and detailing of safety requirements from RS Main in a generic fashion: as Functional Safety Requirements (FSRs), and targeting the platform and the respective functional clusters as Technical Safety Requirements (TSRs). The TSRs can then be traced to from the requirement specifications of functional clusters towards RS Safety.

2.1.1.1.7 Rework of PNC related ComM and NM handling

Concept part 1 extends the network management protocol for partial network functionality to ensure a synchronized PNC shutdown across the partial network topology from the top-level PNC coordinator down to the subordinated PNC nodes. The es-

sential property is a synchronized PNC shutdown even if one or multiple intermediate PNC coordinators are involved. This should avoid abnormalities in the network, e.g. timeout failure of expected data reception on application level or unexpected restart of communication channels of a PNC gateway.

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
Ethernet Wakeup On Dataline	Glossary	Foundation	draft
	System Template	Classic Platform	
	Specification of Ethernet Transceiver Driver		
	Specification of Ethernet Driver		
	Specification of Ethernet Switch Driver		
	Specification of Ethernet State Manager		
	Specification of Ethernet Interface		
	Specification of Communication Manager		
	Specification of Communication Manager		
	Specification of Basic Software Mode Manager		
	Requirements on Mode Management		
	Requirements on Ethernet Support in AUTOSAR		
	Guide to Mode Management		
Vehicle Network State Manager	Specification of Network Management	Adaptive Platform	draft
	Specification of UDP Network Management	Classic Platform	
	Specification of Network Management Interface		

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Concept Name	Specification Long Name	Standard	Concept Lifecycle
Vehicle Network State Manager	Specification of FlexRay Network Management	Classic Platform	draft
	Specification of Communication Manager		
	Specification of CAN Network Management		
	System Template		
	Requirements on Network Management		
	Requirements on Mode Management		
	Specification of the AUTOSAR Network Management Protocol	Foundation	
	Requirements on AUTOSAR Network Management		
Unified Timing and Tracing Approach	Specification of AUTOSAR Run-Time Interface	Classic Platform	draft
	Recommended Methods and Practices for Timing Analysis and Design within the AUTOSAR Development Process	Foundation	
SystemHealthManagement	**Explanation of System Health Monitoring**	Foundation	draft
	Glossary		
	Requirements on Health Monitoring		
	Specification of Health Monitoring		
RS Safety	**Safety Requirements for AUTOSAR Adaptive Platform and AUTOSAR Classic Platform**	Foundation	draft
	Requirements on Log and Trace		
	Requirements on IPsec Protocol		
	Requirements on Health Monitoring		
	Requirements on Update and Configuration Management	Adaptive Platform	
	Requirements on Persistency		
	Requirements on Operating System Interface		
	Requirements on Execution Management		

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Concept Name	Specification Long Name	Standard	Concept Lifecycle
RS Safety	Requirements on Communication Management	Adaptive Platform	draft
Classic Platform Flexibility	Glossary	Foundation	draft
	Main Requirements		
	Requirements on Timing Extensions		
	Specification of Software Cluster Connection module	Classic Platform	
	List of Basic Software Modules		
	Specification of Timing Extensions		
	System Template		
	Software Component Template		
	Basic Software Module Description Template		
	Specification of RTE Software		
	Specification of Operating System		
	Requirements on Software Cluster Connection module		
	Requirements on Runtime Environment		
	Requirements on System Template		
	Layered Software Architecture		
	Explanation of CP Software Cluster Design And Integration Guideline		
Intrusion Detection System Manager	**Specification of Intrusion Detection System Protocol**	Foundation	partially validated
	Requirements on Intrusion Detection System		
	Requirements on Security Extract Template		
	Security Extract Template		
	Glossary		
	Requirements on Diagnostic Extract Template	Classic Platform	
	Requirements on AUTOSAR Features		
	Specification of Socket Adaptor		

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Concept Name	Specification Long Name	Standard	Concept Lifecycle
Intrusion Detection System Manager	Layered Software Architecture	Classic Platform	partially validated
	Specification of Key Manager		
	Specification of Secure Onboard Communication		
	General Requirements on Basic Software Modules		
	General Specification of Basic Software Modules		
	Specification of CAN Driver		
	Specification of CAN Interface		
	Specification of Diagnostic Communication Manager		
	Specification of Diagnostic Event Manager		
	Specification of Ethernet Interface		
	Specification of Intrusion Detection System Manager		
	Specification of NVRAM Manager		
	Specification of TCP/IP Stack		
	Diagnostic Extract Template		
	Software Component Template		
	List of Basic Software Modules		
	Requirements on Manifest Specification	Adaptive Platform	
	Specification of Intrusion Detection System Manager for Adaptive Platform		
	Specification of Communication Management		
	Specification of Cryptography for Adaptive Platform		
	Specification of Manifest		

Table 2.1: Impact of Concepts

2.1.1.3 Validated Concepts

The following concepts have been validated:

- AUTOSAR Run Time Interface (ARTI)

- DoIP Extension

- Signal Service Translation

2.1.2 Specifications

2.1.2.1 New Specifications

- Specification of Secure Onboard Communication Protocol (UID 969, PRS)

2.1.2.2 Renamed Specifications

- Specification of Health Monitoring (UID 850, SWS) has been renamed to Specification of Health Monitoring (UID 850, ASWS), i.e. document type was changed

2.1.2.3 Migrated Specifications

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

- Specification of Abstract Platform (UID 947, TPS)

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

- Recommended Methods and Practices for Timing Analysis and Design within the AUTOSAR Development Process (UID 645, TR)

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 fundamentally in R20-11

- none

2.1.2.7 Moved Specification parts

The following specification parts have been moved to other documents in R20-11

- 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.

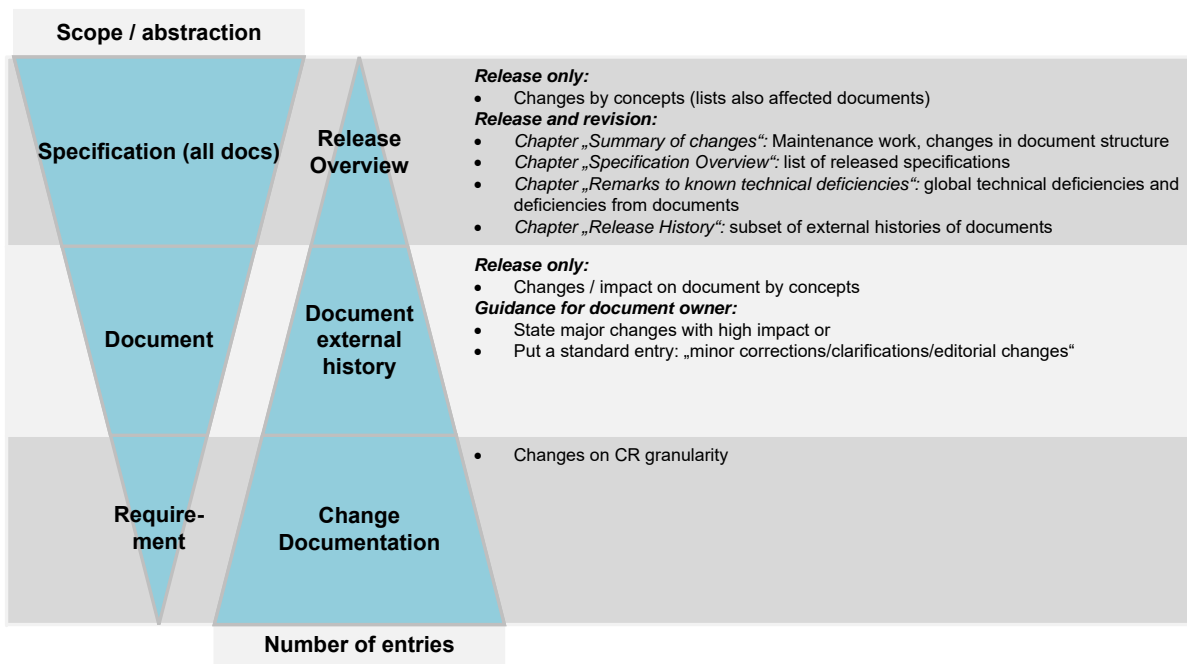The Change Documentation will be available for Adaptive Platform starting with R20-11.

Figure 2.1: History information in AUTOSAR

3 Specification overview

The published specifications are divided into the clusters

- Release Documentation
- General
- Methodology and Templates
- Diagnostics
- Communication Management
- Protocols
- Health Monitoring
- Crypto
- 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	
General		
Explanation of Foundation Diagram Source	AUTOSAR_EXP_ FoundationDiagramSource	
Glossary	AUTOSAR_TR_Glossary	
Main Requirements	AUTOSAR_RS_Main	
Predefined Names in AUTOSAR	AUTOSAR_TR_PredefinedNames	
Project Objectives	AUTOSAR_RS_ProjectObjectives	
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	
Collection of blueprints for AUTOSAR M1 models	AUTOSAR_MOD_GeneralBlueprints	

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Long Name	File Name	Life cycle changes
Collection of constraints on AUTOSAR M1 models	AUTOSAR_TR_ AutosarModelConstraints	
Generic Structure Template	AUTOSAR_TPS_ GenericStructureTemplate	
Interoperability of Autosar Tools Supplement	AUTOSAR_TR_InteroperabilityOfAutosarToolsSupplement	
Meta Model	AUTOSAR_MMOD_MetaModel	
Meta Model-generated XML Schema	AUTOSAR_MMOD_XMLSchema	
Requirements on Methodology	AUTOSAR_RS_Methodology	
Requirements on Security Extract Template	AUTOSAR_RS_ SecurityExtractTemplate	Initial release
Requirements on Standardization Template	AUTOSAR_RS_ StandardizationTemplate	
Requirements on Timing Extensions	AUTOSAR_RS_TimingExtensions	
Security Extract Template	AUTOSAR_TPS_ SecurityExtractTemplate	Initial release
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	
XML Schema Production Rules	AUTOSAR_TPS_ XMLSchemaProductionRules	
Diagnostics		
Requirements on Diagnostics	AUTOSAR_RS_Diagnostics	
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	
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	
SOME/IP Service Discovery Protocol Specification	AUTOSAR_PRS_ SOMEIPServiceDiscoveryProtocol	

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Long Name	File Name	Life cycle changes
Specification of Intrusion Detection System Protocol	AUTOSAR_PRS_ IntrusionDetectionSystem	Initial release
Specification of Secure Onboard Communication Protocol	AUTOSAR_PRS_SecOcProtocol	Initial release
Specification of the AUTOSAR Network Management Protocol	AUTOSAR_PRS_ NetworkManagementProtocol	
Time Synchronization Protocol Specification	AUTOSAR_PRS_TimeSyncProtocol	
Health Monitoring		
Explanation of System Health Monitoring	AUTOSAR_EXP_ SystemHealthMonitoring	Initial release
Requirements on Health Monitoring	AUTOSAR_RS_HealthMonitoring	
Specification of Health Monitoring	AUTOSAR_ASWS_HealthMonitoring	
Crypto		
List of known Issues of Secure Hardware Extensions	AUTOSAR_TR_ListOfKnownIssues SecureHardwareExtensions	
Secure Hardware Extensions	AUTOSAR_TR_SecureHardware Extensions	
Safety		
Safety Requirements for AUTOSAR Adaptive Platform and AUTOSAR Classic Platform	AUTOSAR_RS_Safety	Initial release
Security		
Requirements on Intrusion Detection System	AUTOSAR_RS_ IntrusionDetectionSystem	Initial release
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
645	Recommended Methods and Practices for Timing Analysis and Design within the AUTOSAR Development Process	TR	4.1
849	E2E Protocol Specification	PRS	4.2
850	Specification of Health Monitoring	ASWS	4.4
981	Specification of Intrusion Detection System Protocol	PRS	4.3

Table 4.1: Overview of known technical deficiencies

4.1 Recommended Methods and Practices for Timing Analysis and Design within the AUTOSAR Development Process (UID 645, TR)

Note that Appendix A Timing Reference Platform was part of concept "Unified Timing and Tracing Approach". As concept "Unified Timing and Tracing Approach" was not validated for the AUTOSAR release R20-11, this content is added as draft to the current AUTOSAR release.

4.2 E2E Protocol Specification (UID 849, PRS)

E2E communication protection is limited to periodic or semi-periodic data communication paradigm, where the receiver (subscriber) has an expectancy on the regular reception of data and in case of communication loss/timeout or error, it performs an error handling.

Data communication is called sender/receiver in Classic Platform, and it is called event communication in Adaptive Platform. Note that the word event is a bit confusing as a periodic communication is required. This means, not all protection methods are supported for client-server (methods) as well as non-periodic data communication.

4.3 Specification of Intrusion Detection System Protocol (UID 981, PRS)

There is no limit defined for the context data size. The recommendation is to set the limit for a complete individual QSEv to 16 kByte.

4.4 Specification of Health Monitoring (UID 850, ASWS)

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

- Concrete mappings for abstract interfaces to Classic or Adaptive Platform interfaces are not provided in R20-11.

5 Release history

5.1 Release R20-11

Name	Specification history entry
Requirements on Diagnostics	• New requirements for CP and AP • Correction of requirement assignment to CP and AP
Main Requirements	• Requirement from concept Signal Service Translation set to valid • Extended support for deployment and reallocation of AUTOSAR Application Software to AP and CP • Editorial Changes
Glossary	• Added new terms: • E2E protection alive counter • E2E protection sequence counter • Vehicle State Manager • Health Indicator • System Health Monitor • Wake-up and sleep on dataline • Foundation • Intrusion Detection System • Onboard Security Event
XML Schema Production Rules	• allow additional property configuration, see section 4.1.2.3 • minor corrections / clarifications / editorial changes
Generic Structure Template	• Extend Splitable • Migration of document to standard FO
Requirements on Log and Trace	• Update "Applies to" information for some requirements • Fix wording of some requirements to comply with common wording rules
Requirements on Methodology	• Editorial changes
Requirements on Timing Extensions	• Migration of document to standard AUTOSAR Foundation (FO) • Added requirement for supporting Adaptive Platform • Added requirement for supporting Classic Platform Software Custer • Revised the structure of the document to comply with the specifications for AUTOSAR requirements specifications
Standardization Template	• introduce advisory markup • editorial changes • Migration of document to standard FO • changed Document Status from Final to published
Requirements on Standardization Template	• Migration of document to standard FO
Project Objectives	• No content changes

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Document ID 781: AUTOSAR_TR_FoundationReleaseOverview

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Name	Specification history entry
Predefined Names in AUTOSAR	• Added abbreviations for DEXT, SECXT, ATS and ATR • Modified abbreviations for MetaModel and XmlSchema
AUTOSAR Feature Model Exchange Format Requirements	• Document moved to Foundation
AUTOSAR Feature Model Exchange Format	• Document moved to Foundation
Recommended Methods and Practices for Timing Analysis and Design within the AUTOSAR Development Process	• Migration of document to standard "Foundation" • Added description of Timing Reference Platform (TRP) in appendix A. • Minor updates and improvements • Editorial changes
SOME/IP Protocol Specification	• Removed Draft Status from TLV Requirements • Fixed discrepancies between SWS and PRS • Clarified usage of length field • Restricted alignment of variable length arrays to 8, 16, 32, 64, 128 or 256 Bits • Editorial Changes
ARXML Serialization Rules	• no content changes
Foundation Release Overview	• Release Life Cycle Status: R20-11 is in Evolution, R20-11 supersedes R19-11
Log and Trace Protocol Specification	• Restructured document for better differentiation between verbose and non-verbose mode • Improved definition of "first" DLT arguments • Reworked Use Case diagrams • Fixed contradicting message counter requirements
Requirements on SOME/IP Protocol	• No content changes
Requirements on SOME/IP Service Discovery Protocol	• Editorial changes
SOME/IP Service Discovery Protocol Specification	• Contradicting requirements improved • Editorial changes
Requirements on E2E	• No content changes
E2E Protocol Specification	• E2E for methods. • New profiles 08,44,4m,7m • Extension of E2E State Machine
Specification of Health Monitoring	• Change document type from SWS to ASWS • Remove arbitration rules and actions • Remove HealthChannel supervision • Add SystemHealthMonitoring • Remove spec item numbers from API chapter
Requirements on Health Monitoring	• Move AP specific requirements to RS_PlatformHealthManagement • Add requirements for SystemHealthMonitoring
Time Synchronization Protocol Specification	• Added Sequence Counter handling • New configuration parameters

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Name	Specification history entry
Requirements on Time Synchronization	• Moved certain contents from other SWS Documents • TLV information access handling • Rate Correction, Sync- TB and -TG updates • figures, abreviations and wording correction
Requirements on Debugging, Tracing and Profiling support of AUTOSAR Components	• Changed document status from draft to valid
Requirements on AUTOSAR Network Management	• Dynamic PNC Mapping added • Use Cases added • Synchronized PNC shutdown added
Specification of the AUTOSAR Network Management Protocol	• Moved Use Cases chapter to FO RS NetworkManagement • Added Partial Network Learning (PNL) bit in CBV • Added PN Shutdown Request Bit (PNSR) bit in CBV
Specification of Abstract Platform	• Migration of document to standard Foundation • Restructuring and further conceptual detailing • Addition of several Appendix examples
Specification of Secure Hardware Extensions	• No content changes
Specification of Secure Onboard Communication Protocol	• Initial release
Requirements on IPsec Protocol	• No content changes • Changed Document Status from Final to published
List of known Issues of Secure Hardware Extensions	• No content changes
Requirements on Intrusion Detection System	• Initial release
Requirements on Security Extract Template	• Initial release
Security Extract Template	• Initial release
Specification of Intrusion Detection System Protocol	• Initial release
Safety Requirements for AUTOSAR Adaptive Platform and AUTOSAR Classic Platform	• Initial release
Explanation of System Health Monitoring	• Initial release
Collection of constraints on AUTOSAR M1 models	• Updated constraints according to changes in TPS documents • Removed all SWS constraints • Split document into 3 documents, reflecting the standards CP, AP, FO

Table 5.1: Release History