

<b>Document Title</b>	List of Basic Software Modules
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<b>Document Change History</b>			
<b>Date</b>	<b>Revision</b>	<b>Changed by</b>	<b>Change Description</b>
2022-11-24	R22-11	AUTOSAR Release Management	<ul style="list-style-type: none"> <li>• Removed Compiler Abstraction</li> <li>• Added Vehicle-2-X Data Manager</li> <li>• Added MACsec Key Agreement</li> <li>• Added CAN XL</li> <li>• Added Data Distribution Service</li> <li>• Added Chinese Vehicle-2-X</li> </ul>
2021-11-25	R21-11	AUTOSAR Release Management	<ul style="list-style-type: none"> <li>• Added AUTOSAR Run-Time Interface</li> <li>• Added Memory Driver, Memory Access</li> </ul>
2020-11-30	R20-11	AUTOSAR Release Management	<ul style="list-style-type: none"> <li>• New range for custom Complex Drivers</li> <li>• Added Software Cluster Connection</li> <li>• Added Intrusion Detection System Manager</li> </ul>
2019-11-28	R19-11	AUTOSAR Release Management	<ul style="list-style-type: none"> <li>• Added Bulk NvData Manager</li> <li>• Added BSW Multicore Library</li> <li>• Changed Document Status from Final to published</li> </ul>
2018-10-31	4.4.0	AUTOSAR Release Management	<ul style="list-style-type: none"> <li>• Added Bus Mirroring</li> <li>• Added Key Manager</li> <li>• Removed LinNm</li> </ul>
2017-12-08	4.3.1	AUTOSAR Release Management	<ul style="list-style-type: none"> <li>• Corrected prefix for Crypto Driver</li> </ul>

Date	Revision	Changed by	Change Description
2016-11-30	4.3.0	AUTOSAR Release Management	<ul style="list-style-type: none"> <li>• Corrected DLT layer assignment after DLT rework</li> <li>• Deprecated Debugging module removed</li> <li>• Added SOME/IP-Transport Protocol</li> <li>• Introduced modules for Vehicle-2-X communication</li> <li>• Introduced modules for new Crypto stack</li> </ul>
2015-07-31	4.2.2	AUTOSAR Release Management	<ul style="list-style-type: none"> <li>• Adopted name for "DefaultErrorTracer"</li> </ul>
2014-10-31	4.2.1	AUTOSAR Release Management	<ul style="list-style-type: none"> <li>• Added COMBased-Transformer</li> <li>• Added E2E-Transformer</li> <li>• Added SOME/IP-Transformer</li> <li>• Added Ethernet Switch Driver</li> <li>• Added Large Data COM</li> <li>• Added Secure Onboard Communication</li> <li>• Added Global Time Synch Modules</li> </ul>
2013-03-15	4.1.1	AUTOSAR Administration	<ul style="list-style-type: none"> <li>• Corrected prefix for module "Dlt" and "CorTst"</li> <li>• Layer assignment of module "Flash EEPROM Emulation" (Fee) corrected</li> <li>• List of abbreviations removed (please refer to AUTOSAR_TR_Glossary instead)</li> <li>• Added J1939Dcm, J1939Nm, J1939Rm</li> <li>• Added new Output Compare Unit Driver "Ocu"</li> <li>• Added new Eth. Modules "Tcplp", "Sd", "DoIP"</li> <li>• Added new Timer Services "Tm"</li> <li>• Prepared new HW-Test Interface/Manager</li> <li>• Added MemMap as special file</li> </ul>
2011-12-22	4.0.3	AUTOSAR Administration	<ul style="list-style-type: none"> <li>• Changed "FlexRay Transport Layer" into "FlexRay ISO Transport Layer"</li> <li>• Added FlexRay AUTOSAR Transport Layer</li> <li>• Layer assignment of module "Flash Test" (FlsTst) corrected</li> <li>• Added page "Special Files"</li> </ul>

Date	Revision	Changed by	Change Description
2011-04-15	4.0.2	AUTOSAR Administration	<ul style="list-style-type: none"> <li>• Abbreviations list completely redone</li> <li>• Added comment about the OS prefix</li> <li>• Added second specification document to the EcuM entry</li> <li>• Beautification of file names</li> </ul>
2009-12-18	4.0.1	AUTOSAR Administration	<ul style="list-style-type: none"> <li>• Added new R4.0 modules like “Diagnostic Log and Trace” or “Ethernet Driver”</li> <li>• The BSW Scheduler Module (SchM) became part of the RTE</li> <li>• Removed Cluster and Cluster Variants</li> <li>• Simplified the Module List</li> <li>• Added new list for libraries</li> <li>• Legal disclaimer revised</li> </ul>
2009-02-04	3.0.4	AUTOSAR Administration	Correction of LinNM classification
2008-06-09	3.0.3	AUTOSAR Administration	Legal Disclaimer revised
2007-12-21	3.0.1	AUTOSAR Administration	<ul style="list-style-type: none"> <li>• FlexRay, CAN and LIN State manager short name Camelcase adjusted</li> <li>• Complex Device Driver module ID set to 255</li> <li>• ICC2 clustering updated</li> <li>• Release assignment column updated for R3.0 release</li> <li>• AUTOSAR Service column updated for consistency</li> </ul>
2007-01-24	2.1.15	AUTOSAR Administration	<ul style="list-style-type: none"> <li>• ICC2 cluster overview and cluster variant added</li> <li>• Add modules: Generic NM and Lin Transceiver Driver</li> <li>• Change name: Generic NM to CAN Generic NM</li> <li>• Add columns</li> <li>• Mapping to other releases</li> <li>• Legal disclaimer revised</li> <li>• “Advice for users” revised</li> </ul>

## Disclaimer

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## List of Basic Software Modules

Module short name	Module abbreviation (API service prefix)	Module ID (uint16)	Specification document	AUTOSAR SW Layer
ADC Driver	Adc	123	AUTOSAR_SWS_ADCDriver.pdf	I/O Drivers
AUTOSAR Run-Time Interface	Arti	005	AUTOSAR_SWS_ClassicPlatformARTI.pdf	System Services
BSW Mode Manager	BswM	042	AUTOSAR_SWS_BSWModeManager.pdf	System Services
BSW Scheduler Module	SchM	130	"since Rel. 4.0 part of RTE"	System Services
Bulk NvData Manager	BndM	023	AUTOSAR_SWS_BulkNvDataManager.pdf	Memory Services
Bus Mirroring	Mirror	048	AUTOSAR_SWS_BusMirroring.pdf	Communication Services
CAN Driver	Can	080	AUTOSAR_SWS_CANDriver.pdf	Communication Drivers
CAN Interface	CanIf	060	AUTOSAR_SWS_CANInterface.pdf	Communication HW Abstraction
CAN Network Management	CanNm	031	AUTOSAR_SWS_CANNetworkManagement.pdf	Communication Services
CAN State Manager	CanSM	140	AUTOSAR_SWS_CANStateManager.pdf	Communication Services
CAN Transceiver Driver	CanTrcv	070	AUTOSAR_SWS_CANTransceiverDriver.pdf	Communication HW Abstraction
CAN Transport Layer	CanTp	035	AUTOSAR_SWS_CANTransportLayer.pdf	Communication Services
CAN XL Driver	CanXL	085	AUTOSAR_SWS_CANXLDriver.pdf	Communication Drivers
CAN XL Transceiver Driver	CanXLTrcv	072	AUTOSAR_SWS_CANXLTransceiverDriver.pdf	Communication HW Abstraction
CellularV2X Driver	CV2x	189	AUTOSAR_SWS_CellularV2XDriver.pdf	Wireless Comm. Drivers
Chinese Vehicle-2-X Management	CnV2xM	193	AUTOSAR_SWS_ChineseV2XManagement.pdf	Off-board Comm. Services
Chinese Vehicle-2-X Message	CnV2xMsg	190	AUTOSAR_SWS_ChineseV2XMessage.pdf	Off-board Comm. Services
Chinese Vehicle-2-X Network	CnV2xNet	191	AUTOSAR_SWS_ChineseV2XNetwork.pdf	Off-board Comm. Services
Chinese Vehicle-2-X Security	CnV2xSec	192	AUTOSAR_SWS_ChineseV2XSecurity.pdf	Off-board Comm. Services
COM	Com	050	AUTOSAR_SWS_COM.pdf	Communication Services
COM Based Transformer	ComXf	175	AUTOSAR_SWS_COMBasedTransformer.pdf	Communication Services
COM Manager	ComM	012	AUTOSAR_SWS_COMManager.pdf	System Services
Complex Drivers	no prefix (AUTOSAR interface)	255; 2048-4095	not applicable	Complex Drivers
Core Test	CorTst	103	AUTOSAR_SWS_CoreTest.pdf	Microcontroller Drivers
Crypto Driver	Crypto	114	AUTOSAR_SWS_CryptoDriver.pdf	Crypto Drivers

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Crypto Interface	CryIf	112	AUTOSAR_SWS_CryptoInterface.pdf	Crypto HW Abstraction
Crypto Service Manager	Csm	110	AUTOSAR_SWS_CryptoServiceManager.pdf	Crypto Services
Data Distribution Service	Dds	047	AUTOSAR_SWS_ClassicPlatformDataDistributionService.pdf	Communication Services
Default Error Tracer	Det	015	AUTOSAR_SWS_DefaultErrorTracer.pdf	System Services
Diagnostic Communication Manager	Dcm	053	AUTOSAR_SWS_DiagnosticCommunicationManager.pdf	Communication Services
Diagnostic Event Manager	Dem	054	AUTOSAR_SWS_DiagnosticEventManager.pdf	System Services
Diagnostic Log and Trace	Dlt	055	AUTOSAR_SWS_DiagnosticLogAndTrace.pdf	Communication Services
Diagnostic over IP	DoIP	173	AUTOSAR_SWS_DiagnosticOverIP.pdf	Communication Services
DIO Driver	Dio	120	AUTOSAR_SWS_DIODriver.pdf	I/O Drivers
E2E Transformer	E2EXf	176	AUTOSAR_SWS_E2ETransformer.pdf	Communication Services
ECU State Manager	EcuM	010	AUTOSAR_SWS_ECUSTateManager.pdf	System Services
EEPROM Abstraction	Ea	040	AUTOSAR_SWS_EEPROMAbstraction.pdf	Memory HW Abstraction
EEPROM Driver	Eep	090	AUTOSAR_SWS_EEPROMDriver.pdf	Memory Drivers
Ethernet Driver	Eth	088	AUTOSAR_SWS_EthernetDriver.pdf	Communication Drivers
Ethernet Interface	EthIf	065	AUTOSAR_SWS_EthernetInterface.pdf	Communication HW Abstraction
Ethernet State Manager	EthSM	143	AUTOSAR_SWS_EthernetStateManager.pdf	Communication Services
Ethernet Switch Driver	EthSwt	089	AUTOSAR_SWS_EthernetSwitchDriver.pdf	Communication HW Abstraction
Ethernet Transceiver Driver	EthTrcv	073	AUTOSAR_SWS_EthernetTransceiverDriver.pdf	Communication HW Abstraction
Flash Driver	Fls	092	AUTOSAR_SWS_FlashDriver.pdf	Memory Drivers
Flash EEPROM Emulation	Fee	021	AUTOSAR_SWS_FlashEEPROMEmulation.pdf	Memory HW Abstraction
Flash Test	FlsTst	104	AUTOSAR_SWS_FlashTest.pdf	Memory Drivers
FlexRay AUTOSAR Transport Layer	FrArTp	038	AUTOSAR_SWS_FlexRayARTransportLayer.pdf	Communication Services
FlexRay Driver	Fr	081	AUTOSAR_SWS_FlexRayDriver.pdf	Communication Drivers
FlexRay Interface	FrIf	061	AUTOSAR_SWS_FlexRayInterface.pdf	Communication HW Abstraction
FlexRay ISO Transport Layer	FrTp	036	AUTOSAR_SWS_FlexRayISOTransportLayer.pdf	Communication Services

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FlexRay Network Management	FrNm	032	AUTOSAR_SWS_FlexRayNetworkManagement.pdf	Communication Services
FlexRay State Manager	FrSM	142	AUTOSAR_SWS_FlexRayStateManager.pdf	Communication Services
FlexRay Transceiver Driver	FrTrcv	071	AUTOSAR_SWS_FlexRayTransceiverDriver.pdf	Communication HW Abstraction
Function Inhibition Manager	FIM	011	AUTOSAR_SWS_FunctionInhibitionManager.pdf	System Services
GPT Driver	Gpt	100	AUTOSAR_SWS_GPTDriver.pdf	Microcontroller Drivers
ICU Driver	Icu	122	AUTOSAR_SWS_ICUDriver.pdf	I/O Drivers
Intrusion Detection System Manager	ldsM	108	AUTOSAR_SWS_IntrusionDetectionSystemManager.pdf	Crypto Services
IO HW Abstraction	no prefix (AUTOSAR interface)	254	AUTOSAR_SWS_IOHardwareAbstraction.pdf	I/O HW Abstraction
IPDU Multiplexer	IpduM	052	AUTOSAR_SWS_IPDUMultiplexer.pdf	Communication Services
Key Manager	KeyM	109	AUTOSAR_SWS_KeyManager.pdf	Crypto Services
Large Data COM	LdCom	049	AUTOSAR_SWS_LargeDataCOM.pdf	Communication Services
LIN Driver	Lin	082	AUTOSAR_SWS_LINDriver.pdf	Communication Drivers
LIN Interface	LinIf	062	AUTOSAR_SWS_LINInterface.pdf	Communication HW Abstraction
LIN State Manager	LinSM	141	AUTOSAR_SWS_LINStateManager.pdf	Communication Services
LIN Transceiver Driver	LinTrcv	064	AUTOSAR_SWS_LINTransceiverDriver.pdf	Communication HW Abstraction
MACsec Key Agreement	Mka	151	AUTOSAR_SWS_MACsecKeyAgreement.pdf	Communication Services
MCU Driver	Mcu	101	AUTOSAR_SWS_MCUDriver.pdf	Microcontroller Drivers
Memory Abstraction Interface	MemIf	022	AUTOSAR_SWS_MemoryAbstractionInterface.pdf	Memory HW Abstraction
Memory Access	MemAcc	041	AUTOSAR_SWS_MemoryAccess.pdf	Memory HW Abstraction
Memory Driver	Mem	091	AUTOSAR_SWS_MemoryDriver.pdf	Memory Drivers
Network Management Interface	Nm	029	AUTOSAR_SWS_NetworkManagementInterface.pdf	Communication Services
NVRAM Manager	NvM	020	AUTOSAR_SWS_NVRAMManager.pdf	Memory Services
OCU Driver	Ocu	125	AUTOSAR_SWS_OCUDriver.pdf	I/O Drivers
OS	Os (not used as API prefix)	001	AUTOSAR_SWS_OS.pdf	System Services - OS

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PDU Router	PduR	051	AUTOSAR_SWS_PDURouter.pdf	Communication Services
Port Driver	Port	124	AUTOSAR_SWS_PortDriver.pdf	I/O Drivers
PWM Driver	Pwm	121	AUTOSAR_SWS_PWMDriver.pdf	I/O Drivers
RAM Test	RamTst	093	AUTOSAR_SWS_RAMTest.pdf	Memory Drivers
RTE	Rte	002	AUTOSAR_SWS_RTE.pdf	RTE
SAE J1939 Diagnostic Communication Manager	J1939Dcm	058	AUTOSAR_SWS_SAEJ1939DiagnosticCommunicationManager.pdf	Communication Services
SAE J1939 Network Management	J1939Nm	034	AUTOSAR_SWS_SAEJ1939NetworkManagement.pdf	Communication Services
SAE J1939 Request Manager	J1939Rm	059	AUTOSAR_SWS_SAEJ1939RequestManager.pdf	Communication Services
SAE J1939 Transport Layer	J1939Tp	037	AUTOSAR_SWS_SAEJ1939TransportLayer.pdf	Communication Services
Secure Onboard Communication	SecOC	150	AUTOSAR_SWS_SecureOnboardCommunication.pdf	Communication Services
Service Discovery	Sd	171	AUTOSAR_SWS_ServiceDiscovery.pdf	Communication Services
Socket Adaptor	SoAd	056	AUTOSAR_SWS_SocketAdaptor.pdf	Communication Services
Software Cluster Connection	SwCluC	016	AUTOSAR_SWS_SoftwareClusterConnection.pdf	System Services
SOME/IP Transformer	SomelpXf	174	AUTOSAR_SWS_SOMEIPTransformer.pdf	Communication Services
SOME/IP Transport Protocol	SomelpTp	177	AUTOSAR_SWS_SOMEIPTransportProtocol.pdf	Communication Services
SPI Handler Driver	Spi	083	AUTOSAR_SWS_SPIHandlerDriver.pdf	Communication Drivers
Synchronized Time-Base Manager	StbM	160	AUTOSAR_SWS_SynchronizedTimeBaseManager.pdf	System Services
TCP/IP Stack	Tcplp	170	AUTOSAR_SWS_Tcplp.pdf	Communication Services
Time Service	Tm	014	AUTOSAR_SWS_TimeService.pdf	System Services
Time Sync Over CAN	CanTSyn	161	AUTOSAR_SWS_TimeSyncOverCAN.pdf	Communication Services
Time Sync Over Ethernet	EthTSyn	164	AUTOSAR_SWS_TimeSyncOverEthernet.pdf	Communication Services
Time Sync Over FlexRay	FrTSyn	163	AUTOSAR_SWS_TimeSyncOverFlexRay.pdf	Communication Services
TTCAN Driver	Ttcan	084	AUTOSAR_SWS_TTCANDriver.pdf	Communication Drivers
TTCAN Interface	TtcanIf	066	AUTOSAR_SWS_TTCANInterface.pdf	Communication HW Abstraction
UDP Network Management	UdpNm	033	AUTOSAR_SWS_UDPNetworkManagement.pdf	Communication Services



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Module short name	Module abbreviation (API service prefix)	Module ID (uint16)	Specification document	AUTOSAR SW Layer
V2X Data Manager	V2xDm	186	AUTOSAR_SWS_V2XDataManager.pdf	Off-board Comm. Services
Vehicle-2-X Basic Transport	V2xBtp	183	AUTOSAR_SWS_V2XBasicTransport.pdf	Off-board Comm. Services
Vehicle-2-X Facilities	V2xFac	184	AUTOSAR_SWS_V2XFacilities.pdf	Off-board Comm. Services
Vehicle-2-X GeoNetworking	V2xGn	182	AUTOSAR_SWS_V2XGeoNetworking.pdf	Off-board Comm. Services
Vehicle-2-X Management	V2xM	185	AUTOSAR_SWS_V2XManagement.pdf	Off-board Comm. Services
Watchdog Driver	Wdg	102	AUTOSAR_SWS_WatchdogDriver.pdf	Microcontroller Drivers
Watchdog Interface	Wdglf	043	AUTOSAR_SWS_WatchdogInterface.pdf	Onboard Device Abstraction
Watchdog Manager	WdgM	013	AUTOSAR_SWS_WatchdogManager.pdf	System Services
Wireless Ethernet Driver	WEth	087	AUTOSAR_SWS_WirelessEthernetDriver.pdf	Wireless Comm. Drivers
Wireless Ethernet Transceiver Driver	WEthTrcv	074	AUTOSAR_SWS_WirelessEthernetTransceiverDriver.pdf	Wireless Comm. HW Abstraction
XCP	Xcp	212	AUTOSAR_SWS_XCP.pdf	Communication Services

## List of libraries

Libraries short name	Libraries abbreviation (API service prefix)	Libraries (Module) ID (uint16)	Specification document
BFx Library	Bfx	205	AUTOSAR_SWS_BFXLibrary.pdf
BSWMulticore Library	Bmc	214	AUTOSAR_SWS_BSWMulticoreLibrary.pdf
CRC Library	Crc	201	AUTOSAR_SWS_CRCLibrary.pdf
E2E Library	E2E	207	AUTOSAR_SWS_E2ELibrary.pdf
EFx Library	Efx	208	AUTOSAR_SWS_EFXLibrary.pdf
IFI Library	Ifl	209	AUTOSAR_SWS_IFLLibrary.pdf
IFx Library	Ifx	213	AUTOSAR_SWS_IFXLibrary.pdf
MFI Library	Mfl	210	AUTOSAR_SWS_MFLLibrary.pdf
MFx Library	Mfx	211	AUTOSAR_SWS_MFXLibrary.pdf

## List of special files

AUTOSAR name	Short name (API service prefix)	File name	Module ID	Specification document
Communication Stack Types	Comtype	ComStack_Types.h	196	AUTOSAR_SWS_CommunicationStackTypes.pdf
Memory Mapping	MemMap	(Prefix_)MemMap.h	195	AUTOSAR_SWS_MemoryMapping.pdf
Platform Types	Platform	Platform_Types.h	199	AUTOSAR_SWS_PlatformTypes.pdf
Standard Types	Std	Std_Types.h	197	AUTOSAR_SWS_StandardTypes.pdf