AUTOSAR solutions from ETAS

Tools, basic software, and services

AUTOSAR Classic Platform RTA-CAR

Complete solution ready-to-go

– Comprehensive AUTOSAR solution
– One development framework for multiple OEM platforms
– Wide range of hardware support across many components like OS, HSM, MCAL, transceivers and switches
– World's smallest and fastest AUTOSAR OS
– OEM extensions and flash bootloaders
– Enhanced solutions by non-AUTOSAR extensions

Market leading state of the art security

– Cutting edge AUTOSAR security stack combined with CycurHSM
– Functional safety and ISO26262 certified up to ASIL-D

Proven and reliable

– More than 3 billion ECUs on the road
– Qualified by several OEMs
– Proven at hundreds of customers

RTA-SAFE	RTA-SEC	RTA-DIAG	RTA-M939	RTA-COM	RTA-MEM	RTA-IDAE
WdgM	CSM	Dem	J11939Tp	Com	Num	Ecu_IA
WdgM	CAL	Dec	J1939Dcm	PduR	MemIf	Ecu_ID
E2E	CRY	Fim	J1939Rm	IpduM	Fec	Ecu_PWM
CAC	CycurHSM		J1939Nm	ComM	EsS	Ecu_PM
				Nm		Ecu_PO

RTA-BASE	RTA-CAN	RTA-FRAY	RTA-LIN	RTA-ETH	RTA-XCP	RTA-HWD
WdgM	CanTp	FrTp	LinTp	EthIf	XCP	Ecu_IA
WdgM	CanSM	FrSM	LinSM	EthSM	XCPW	Ecu_ID
E2E	CanNM	FrNM	LinNM	SoAd		Ecu_PWM
CAC	CanIf	FrIf	LinIf	UDPNm	RTA-CD	Ecu_PM
				Tcplp	CD	Ecu_PO
				Sd		

RTA-MCAL

WDG	ICU	ADC	OCU			CAN	LIM	FRAY	ETH
MCU	PORT	DIO	PMW	SPI	FLS				

☐ Hardware–department modules available today for a wide range of microcon combinations with further ports availble on request

☐ Hardware–department modules

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AUTOSAR Adaptive Platform RTA-VRTE

Off the shelf solution

– Cloud development ready
– Integrates with a wide range of 3rd party software solutions
– Runs on POSIX OS (Linux and QNX out of the box)
– Easy and user-friendly configuration
– Nominated by various customers for upcoming series cars
– Supporting the newest standards
– Starter kit, which gets you running immediately

Safety & security from the inside out

– Ready for integration in safety related ECUs up to ISO26262 and ASIL-B (up to ASIL-D on request)
– Cutting edge security extensions in combination with ETAS security solutions

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Application services

Basic application services/semantic middleware

Layer 5 Vehicle dependent platform services	Vehicle Diagnosis	Vehicle Lifecycle Management	Vehicle Update Management	Vehicle Power Management	Optional functionality / layer
	Vehicle Network Management	Vehicle Personalisation	Vehicle Configuration Management		

Development Support

Layer 4 ECU dependent platform services	SW Watchdog	Diagnostics (ara::diag)	Lifecycle/Mode Management	Error Management (ara::phm)	Measurement & Calibration	Logging (ara::log)
	Update Management (ara::ucm)	Device Sharing	Security Services (ara::crypto, ara::iam)	Configuration Management	Functional Mock-Up	

Communication Management

Layer 3 Service-oriented communication middleware	Gateway	Quality of Service	Data Safety	Data Security	
	Firewall	Service-oriented Communication (ara::com)	Signal-based Communication (ara::s2s)	Network Management (ara::nm)	

Layer 2 OS dependent infrastructure SW	Communication Stack(s) & Protocols				Analytics & Debug	HW Acceleration Framework
	Execution Management (ara::exec)	Time Management (ara::tsync)	Storage Management (ara::per)	SW Lockstep		

Layer 1 HW dependent infrastructure SW	OS Kernel	Peripherals Management	HW Self-Test	HW Monitoring		
	Secure HW Management	Intra-domain Com. Channel	Inter-VM Com. Channel	Inter-node Com. Channel		
	Inter-ECU Com. Channel	Vehicle to extern Com. Channel	Manufacturing Support	Boot	ECU to tooling Com. Channel	

Hypervisor

Hardware (µC, µP, Hardware Acclerator (HWA)

Customer / third party providers · ETAS · Third party providers

☐ Scope of VRTE ☐ Functional building block. Implemented by SW on µC, µP, SoC or HWA in various domains. ☐ Functional building block with AUTOSAR Adaptive functionality

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EMBEDDED SYSTEMS SOLUTIONS