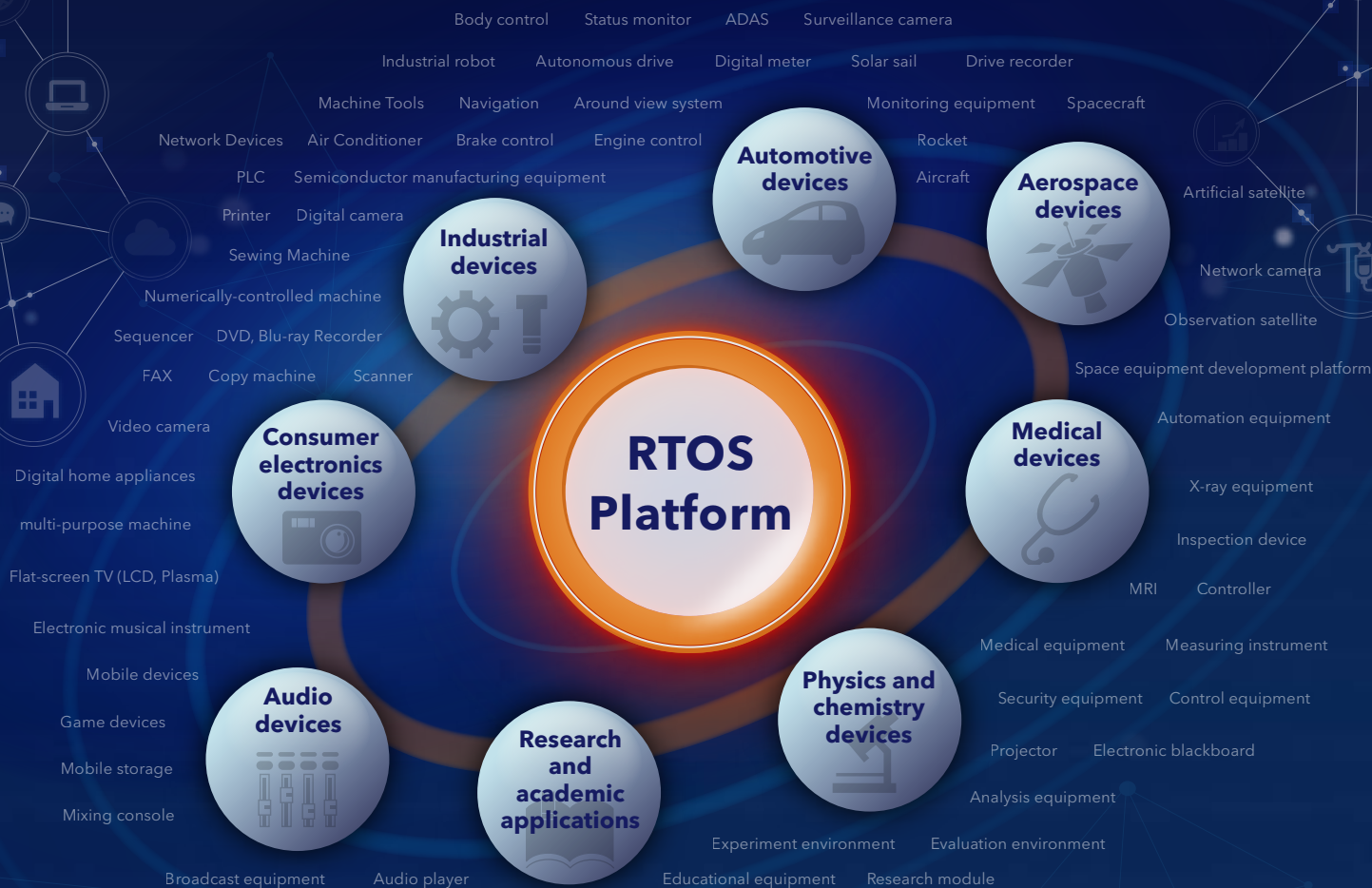# Embedded Platform Solutions
with Real-Time Operating System

eSOL

eMCOS   eT-Kernel

Deployed in over 100 million embedded devices globally

Body control   Status monitor   ADAS   Surveillance camera

Industrial robot   Autonomous drive   Digital meter   Solar sail   Drive recorder

Machine Tools   Navigation   Around view system   Monitoring equipment   Spacecraft

Network Devices   Air Conditioner   Brake control   Engine control   Rocket

PLC   Semiconductor manufacturing equipment   Aircraft

Printer   Digital camera

Sewing Machine

Numerically-controlled machine

Sequencer   DVD, Blu-ray Recorder

FAX   Copy machine   Scanner

Video camera

Digital home appliances

multi-purpose machine

Flat-screen TV (LCD, Plasma)

Electronic musical instrument

Mobile devices

Game devices

Mobile storage

Mixing console

Broadcast equipment   Audio player   Educational equipment   Research module

Artificial satellite

Network camera

Observation satellite

Space equipment development platform

Automation equipment

X-ray equipment

Inspection device

MRI   Controller

Medical equipment   Measuring instrument

Security equipment   Control equipment

Projector   Electronic blackboard

Analysis equipment

Experiment environment   Evaluation environment

Automotive devices
Aerospace devices
Industrial devices
Medical devices
Consumer electronics devices
Physics and chemistry devices
Audio devices
Research and academic applications

RTOS Platform

Key Features

Scalability
Supports single-core MCUs, multi-core MPUs, multi-chip heterogeneous systems, up to High-Performance Computing platforms (HPC).

Tool Integration
OS-awareness debugging with Eclipse-based development tools and middleware components backed by Engineering Services.

Reliability & Safety
Proven track record with millions of deployed units. Established development process approved for Industrial, Automotive and Medical Functional-Safety standards.
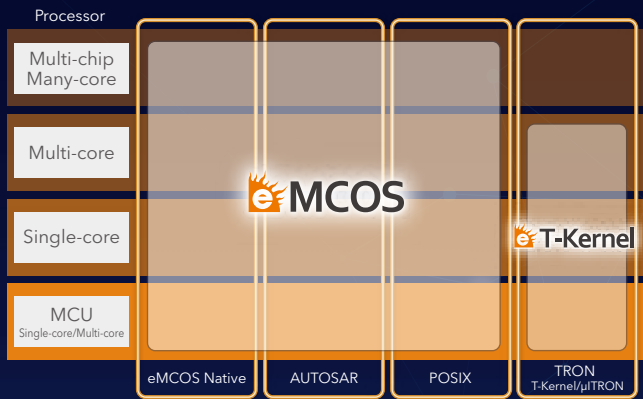
eSOL
Embedded Products Business Unit, Sales Department
E-mail: ep-inq-en@esol.com

eSOL RTOS Line-up

Processor

	eMCOS Native	AUTOSAR	POSIX	TRON T-Kernel/µITRON

- Multi-chip Many-core
- Multi-core
- Single-core
- MCU Single-core/Multi-core

eMCOS

eT-Kernel

Standard RTOS Interface

eMCOS

- Heterogeneous Multi/Many-core / Multi-chip system solution
- AUTOSAR platform support

eT-Kernel

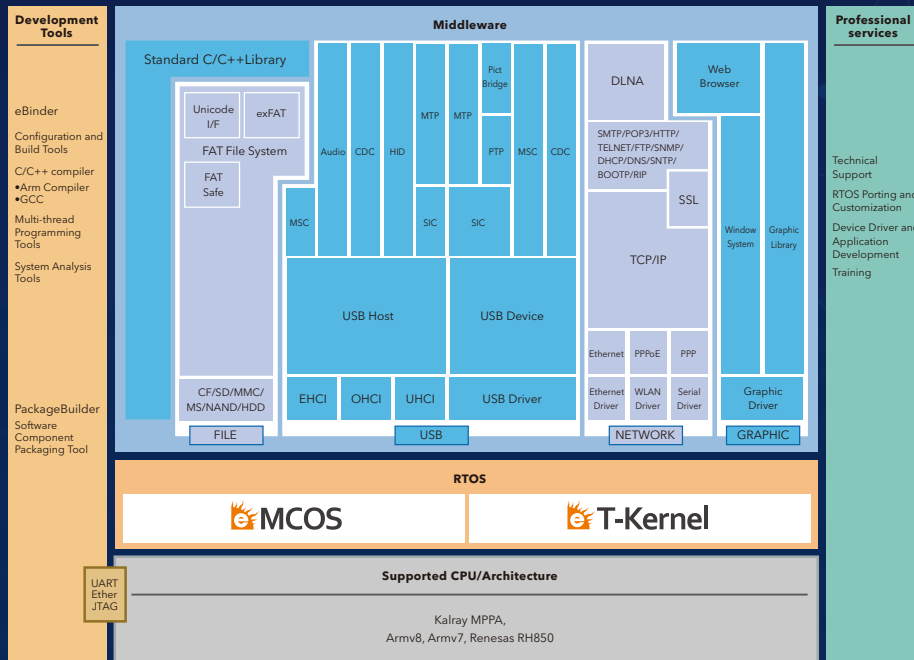- Functional Safety certified TRON-based real-time OS

SGS TÜV SAAR
FUNKTIONALE SICHERHEIT GEPRÜFT
FUNCTIONAL SAFETY APPROVED

eSOL obtained ISO 26262 ASIL D / IEC 61508 SIL 4 certification, the highest level for Functional Safety standards.

Functional Safety Certification

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eSOL embedded platform solution

Development Tools

eBinder
Configuration and Build Tools

C/C++ compiler
• Arm Compiler
• GCC

Multi-thread Programming Tools

System Analysis Tools

PackageBuilder
Software Component Packaging Tool

UART Ether JTAG

Middleware

Standard C/C++ Library

Unicode I/F | exFAT

FAT File System

FAT Safe

Audio | CDC | HID

MSC

MTP | MTP

Pict Bridge

PTP | MSC | CDC

SIC | SIC

USB Host | USB Device

CF/SD/MMC/MS/NAND/HDD | EHCI | OHCI | UHCI | USB Driver

FILE | **USB**

DLNA

Web Browser

SMTP/POP3/HTTP/TELNET/FTP/SNMP/DHCP/DNS/SNTP/BOOTP/RIP

SSL

TCP/IP

Ethernet | PPPoE | PPP

Ethernet Driver | WLAN Driver | Serial Driver

NETWORK

Window System | Graphic Library

Graphic Driver

GRAPHIC

Professional services

Technical Support

RTOS Porting and Customization

Device Driver and Application Development

Training

RTOS

eMCOS | eT-Kernel

Supported CPU/Architecture

Kalray MPPA,
Armv8, Armv7, Renesas RH850
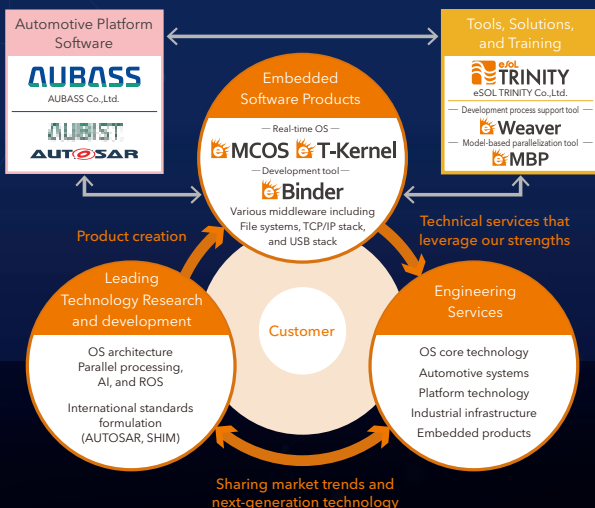
*1 SCE=Single-Core Edition *2 MCE=Multi-Core Edition

Development Tools

eBinder

Eclipse-based Integrated Development Environment for eMCOS / eT-Kernel

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About eSOL

Automotive Platform Software

AUBASS
AUBASS Co.,Ltd.

AUBIST
AUTOSAR

Tools, Solutions, and Training

TRINITY
eSOL TRINITY Co.,Ltd.
Development process support tool

Weaver
Model-based parallelization tool

MBP

Embedded Software Products
— Real-time OS —
eMCOS **eT-Kernel**
— Development tool —
eBinder
Various middleware including File systems, TCP/IP stack, and USB stack

Product creation

Technical services that leverage our strengths

Leading Technology Research and development
OS architecture
Parallel processing, AI, and ROS
International standards formulation (AUTOSAR, SHIM)

Customer

Engineering Services
OS core technology
Automotive systems
Platform technology
Industrial infrastructure
Embedded products

Sharing market trends and next-generation technology

- AUTOSAR Premium Partner
- OS Pioneer in Multi/Many-core
- 40+ years of experience, about 450 employees worldwide
- Chair of Software-Hardware Interface for Multi-many-core (SHIM) WG
- Member of the Multicore Association
- Steering Committee Member of TRON Forum
- eSOL Europe office in France

eSOL