RENESAS

RENESAS RA

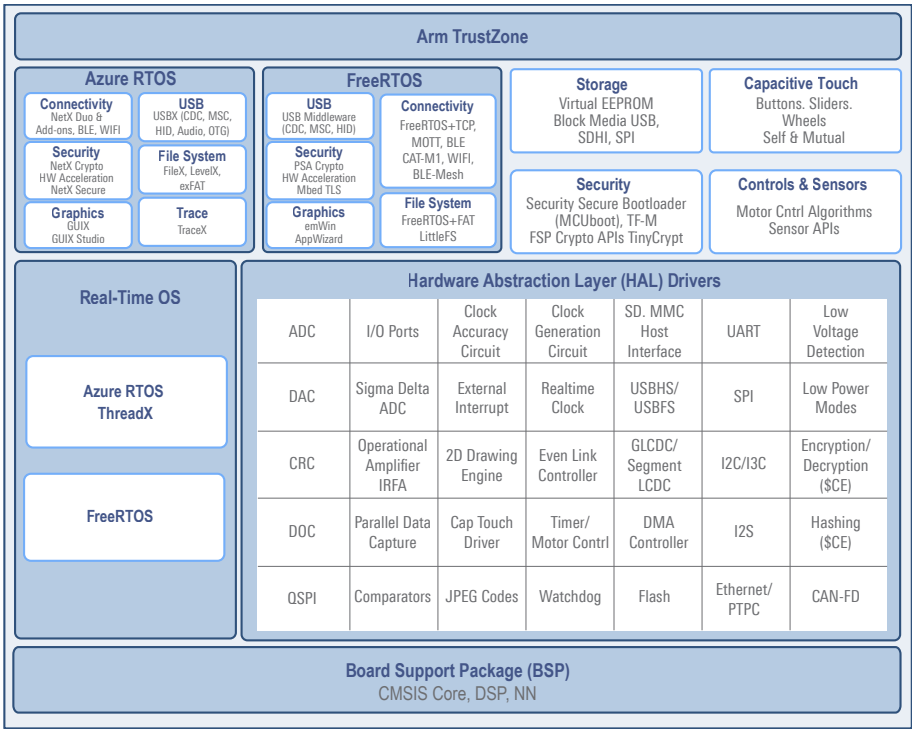
RA MCU Family Software

FLEXIBLE SOFTWARE PACKAGE

Open, flexible development ecosystem provides easy-to-use, scalable, high-quality software for RA MCU embedded designs

The Renesas Flexible Software Package (FSP) is an enhanced software package designed to provide easy-to-use, scalable, high-quality software for embedded system designs using RA Family microcontrollers. With Arm® TrustZone® and other advanced security features, FSP provides a quick and versatile way to build secure, connected IoT devices using production-ready drivers, multiple supported RTOS and a variety of middleware stacks.

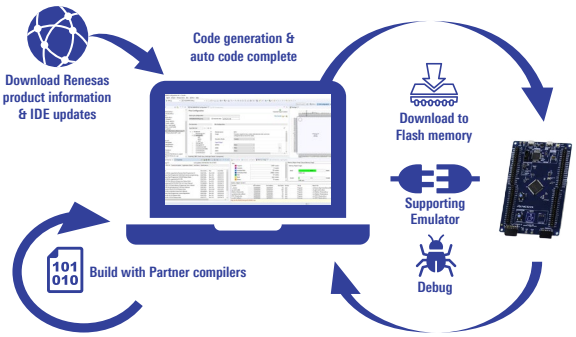
FSP Structure



FLEXIBLE SOFTWARE PACKAGE

Features & Benefits

- Provides easy-to-use, scalable, high-quality software for embedded system designs using RA MCUs
- Includes best-in-class HAL drivers with high performance and low memory footprint
- Middleware stacks with Azure RTOS and FreeRTOS integration are included to ease implementation of complex modules, such as communication and security
- e² studio IDE provides intuitive configurators and intelligent code generation to make programming and debugging easier and faster
- Uses an open software ecosystem and provides flexibility in bare-metal programming, including Azure RTOS, FreeRTOS, your preferred RTOS, legacy code and third-party ecosystem solutions



- Integrated package delivers all required components for easy setup and development start with a single installer for e² studio, CMSIS packs, tool chain and SEGGER J-Link drivers
- Complete source code available on GitHub

Tools and Support

The RA family development environment offers flexibility with support for different on-chip debuggers, IDEs, and compilers. Customers can use Renesas e² studio, Keil MDK and IAR Embedded Workbench. All tools can use the RA configurators for FSP driver and middleware selection and configuration, in addition to pin mapping and clock tree configuration. e² studio offers a complete development flow from initial project generators, graphical FSP configuration and comprehensive debugger options.

IDE	Renesas e²studio	Keil MDK	IAR EWARM
Compiler	• GCC • LLVM • Arm Compiler* • IAR Arm Compiler*	• Arm Compiler*	• IAR Arm Compiler*
Debug Probe	• Renesas E2/E2 Lite • SEGGER J-Link	• SEGGER J-Link • Keil ULINK / CMSIS-DAP (limited support)	• IAR I-jet • SEGGER J-Link • Renesas E2/E2 Lite • CMSIS-DAP (limited support)
Smart Configurator	Built-in • BSP • Clock • Pin • Drivers • Interrupts	Supplied as RASC • BSP • Clock • Pin • Drivers • Interrupts	Supplied as RASC • BSP • Clock • Pin • Drivers • Interrupts
Application Specific Configurators	• QE for Capacitive Touch • QE for BLE • QE for AFE • Motor Control Workbench	NA	NA
Production Programmer	• Renesas PG-FP6 • SEGGER J-Flash • Partner solutions		

* Compiler must be purchased and licensed directly from third party

For more details, please visit renesas.com/fsp

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www.renesas.com

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