IP License
RX (Renesas Extreme) Core

Industry-Leading Performance, Power Efficient 32-bit CPU

The proven RX CPU is now available. Our RX Core IP, widely adopted in high-quality industrial and consumer applications, makes your design easy from FPGA prototyping to SoC development.

All the development suite you need is supported.
- RX CPU Subsystem including basic peripherals, interconnect bus and memory interfaces
- Comprehensive Development Environment and Partner Ecosystem of RX family

CPU Subsystem
- RX CPU Core
  - includes FPU
- MPU/MMU
- Cache
- Memory Interface
  - Instruction, Data memories
- Debug Function

Block Diagram
Type C (Microcontroller, Accelerator)
RX CPU Core

- Unified Architecture Covering the Small to Large Applications
- Superior Computing Performance and Power Efficiency
  - Compact code size by adopting a variable-length instruction set
  - Optimized pipeline architecture for industry-leading performance
  - Energy-saving cache design to boost energy efficiency
- Unrivaled Digital Signal Processing Performance
  - Integrated DSP and FPU as all the core’s basic configuration
  - Double-precision FPU for easy porting of high precision control models
  - DSP/FPU operations and memory accesses simultaneously for high data supply capability
- Fastest Interrupt Response
  - Single-cycle register saves for minimizing the interrupt handling overhead