R06PM0061EJ0100
Rev.1.00
2018.09.20

32-bit RISC CPU Datasheet

M32R CPU

Overview

- M32R is a 32-bit RISC CPU.

Key Features

- RISC architecture
- 32-bit general purpose register x 16
- Number of instructions 83
- 5 stage pipeline
- Two formats of 16 bit length instruction and 32 bit instruction are adopted
  - The code size of the program can be suppressed by the instruction format of 16 bit length
- Multiply-accumulate function
  - Built-in 32-bit x 16-bit multiplier enables execution of 32-bit x 32-bit integer multiplication instruction with 3 CPUCLK
  - Execute multiply-accumulate instruction with 56-bit accumulator
- Peripheral circuit
  - SRAM, cache, bus control circuit, interrupt controller, multifunction timer, serial I / O, watchdog timer

Block diagram