

## 32-bit CPU IP

# H8SX CPU subsystem (H8SX C3000) IP

### Overview

H8SX is a high speed 32-bit CPU.

It is upward-compatible with H8/300, H8/300H and H8S CPUs on an object level.

This subsystem IP, which is for IP license, supports many and powerful microcontroller functions, including bus controller (BSC), interrupt controller (INT), data transfer controller (DTC), DMA controllers (DMAC and EXDMAC), timers, serial communication interface (SCI) and on-chip debug functions.

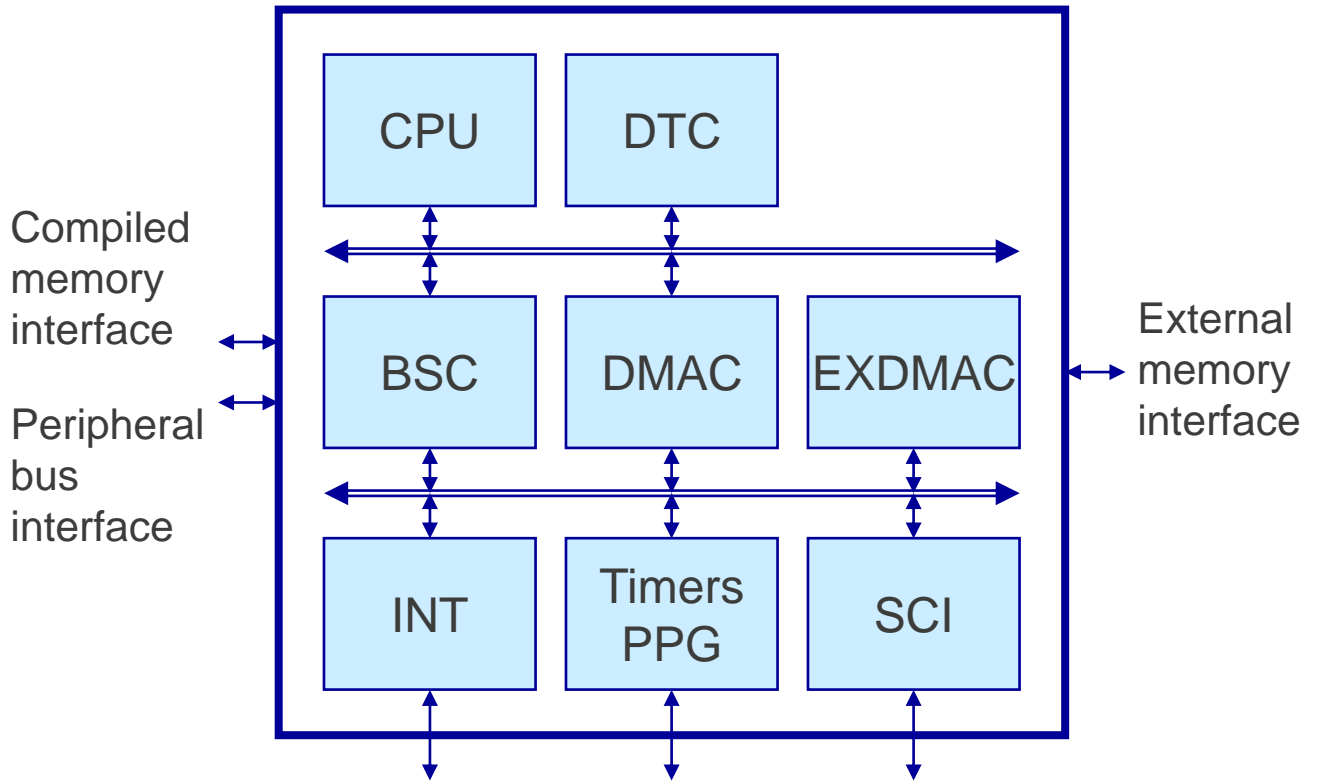
### Key Features

- An original subsystem for SoCs other than microcontrollers
- 3 type interfaces available to connect user functions or IPs
  - compiled memory interface
  - external memory interface
  - peripheral bus interface
- 3 type data transfer functions
  - data transfer controller (DTC)
  - direct memory access controller (DMAC)
  - external bus direct memory access controller (EXDMAC)
- 3 type timers
  - 16-bit timer pulse unit (TPU)
  - 8-bit timer
  - Watchdog timer (WDT)
- Programmable pulse generator (PPG)
- Serial communication interface
- Supporting on-chip debug functions (option)
- Applicable to various processes and FPGAs

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**Block Diagram**

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