

## \* Clock

↳ Concept →

↳ Provide Pulse → to operation Processor

↳ System clock → clock provide pulse to Enable Processor

↳ detect Instruction cycle speed time

ex → System clk = 8 MHz →  $\frac{1}{f} = 8000000$  clk/sec

↳ Risc → one Instruction in one clk  
↳ speed → 8000000 Instruction

↳ Provide Freq → Pulse

↳ Calc clock

## Clock Sources

→ RCC

↳ ① Internal oscillator

↳ ② External crystal →



vert → pulse

↳ ③ RC oscillator

↳ ④ PLL Phase locked loop

# clock type

↳ ① system clock → Processor

↳ ② Peripheral clock → timer / SPI / I2C  
ADC

↳ ③ Watch dog clock