

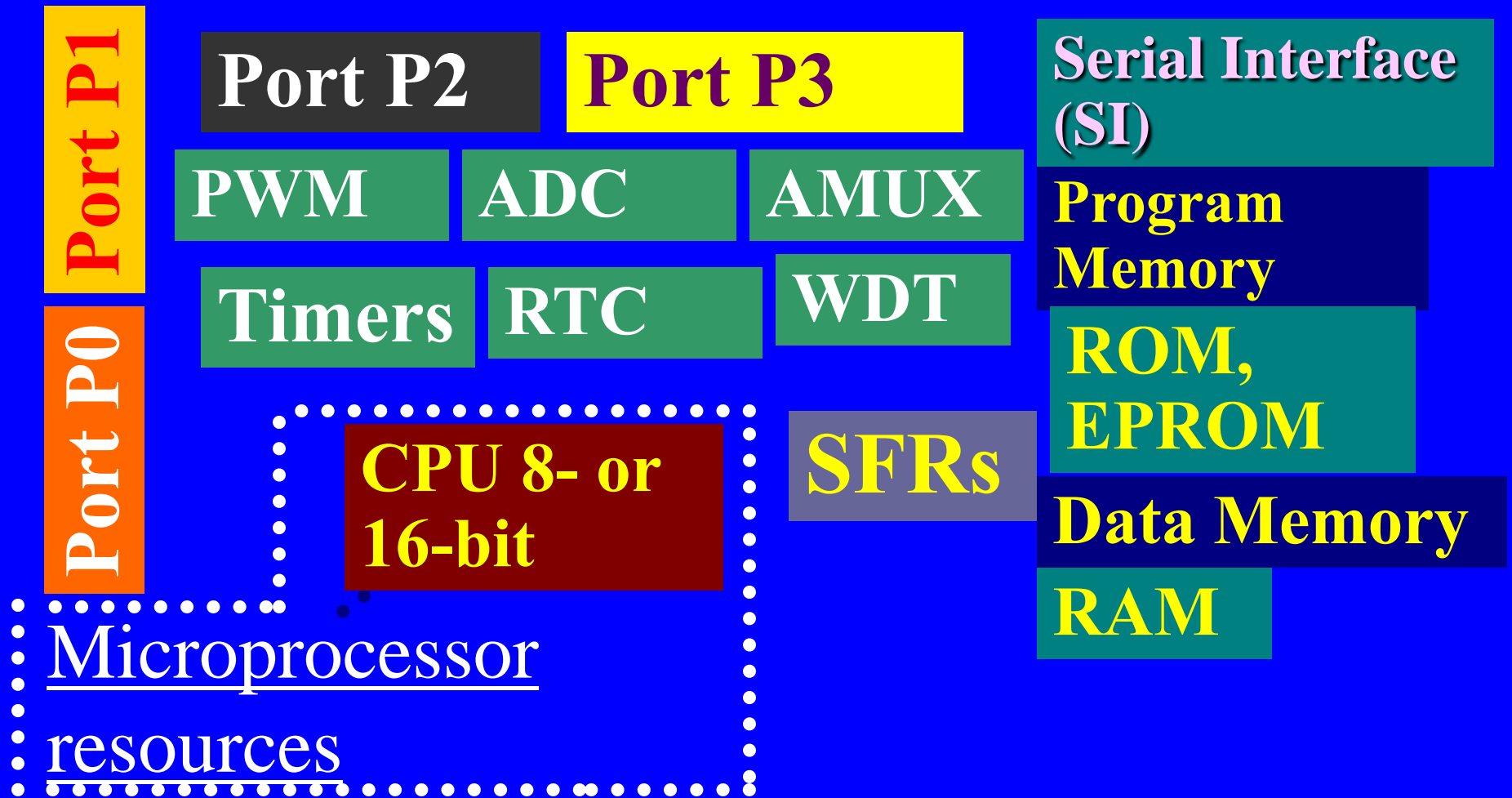
Chapter 2

Overview of Architecture and Microcontroller-Resources

Lesson 6

Resources in Advanced Next generation Microcontrollers

Conventional Microcontroller-resources



Conventional MCU— CPU + Internal Resources

Advanced Microcontrollers and Resources

**On-chip
Compiler**

**1.8 V
0.1 μm**

**Multiplier and
Accumulate
unit**

**Assembly
optimizer**

CPU 32-bit

RISC

**Floating
Point Unit**

Microprocessor
resources

200MHz

High MIPS/mW

Advanced MCU- CPU High MIPS/mW

**Serial Synchronous
Interface (SPI)**

**Serial Asynchronous
Interface (SPI)**

**DMAC
support**

ADC

AMUX

Timers

RTC

WDT

Processor

Ports

**CPU 8- or
16-bit**

**Many
PWMs**

CAN Bus

I/F

Comm.

**Advanced Microprocessor
resources**

**TDM
Ports**

CODEC

**Advanced MCU- CPU + Internal
Resources**

80r16

HSI

SmartCard Interface

Multi-Media Interface

**8 MB Flash
60MHz 0-wait**

**Multi-entry
Buffers**

Advanced CPU 32-bit

PCI

USB

**Advanced Microcontroller-Other
resources Example**

Summary

We learnt

Advanced Microcontrollers and Resources

- Advanced CPU
- RISC
- Low V
- 32-bit
- Advanced Interface Devices