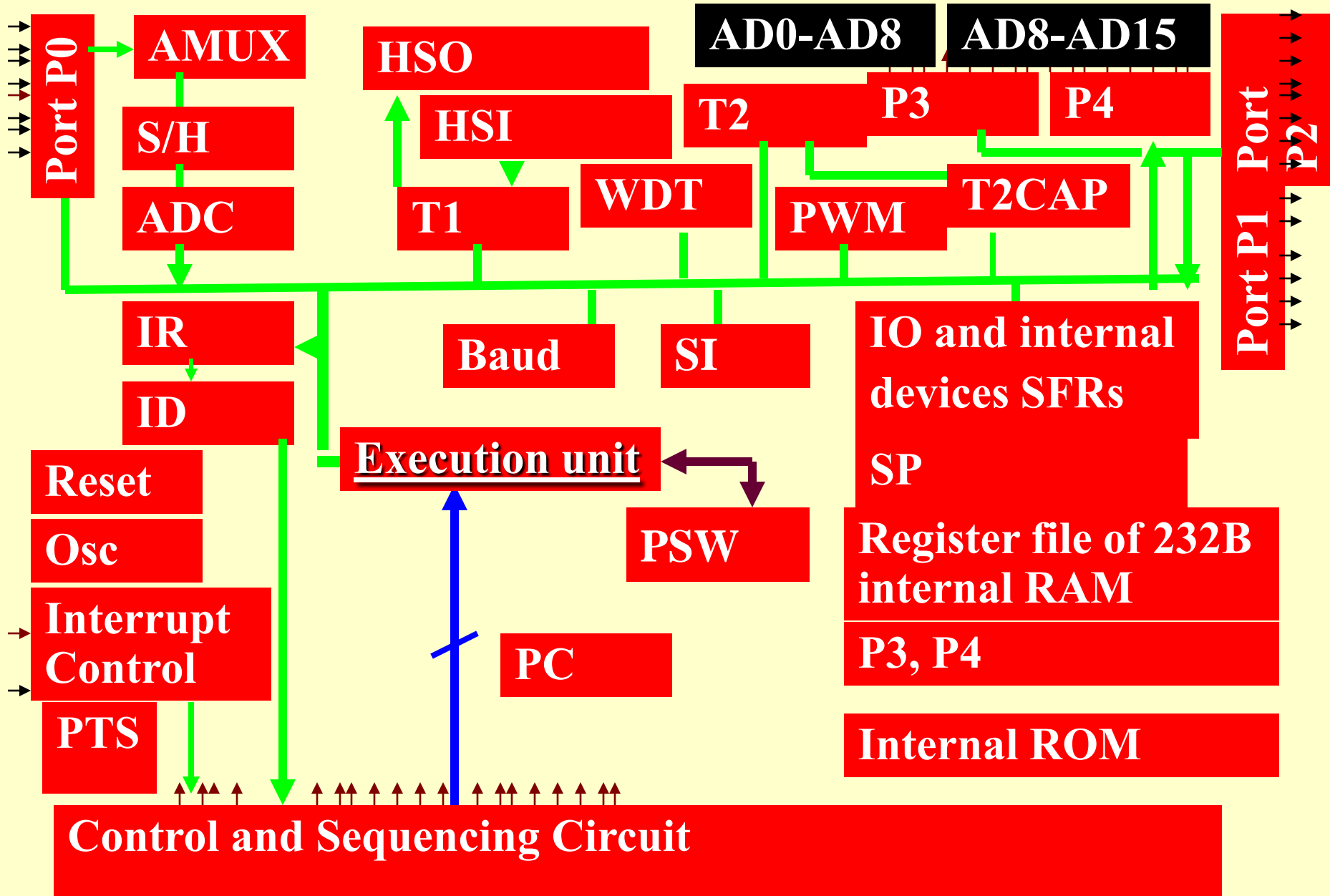


Chapter 14

80x96 Family Microcontrollers



Lesson4 on On-chip and off-chip Memory

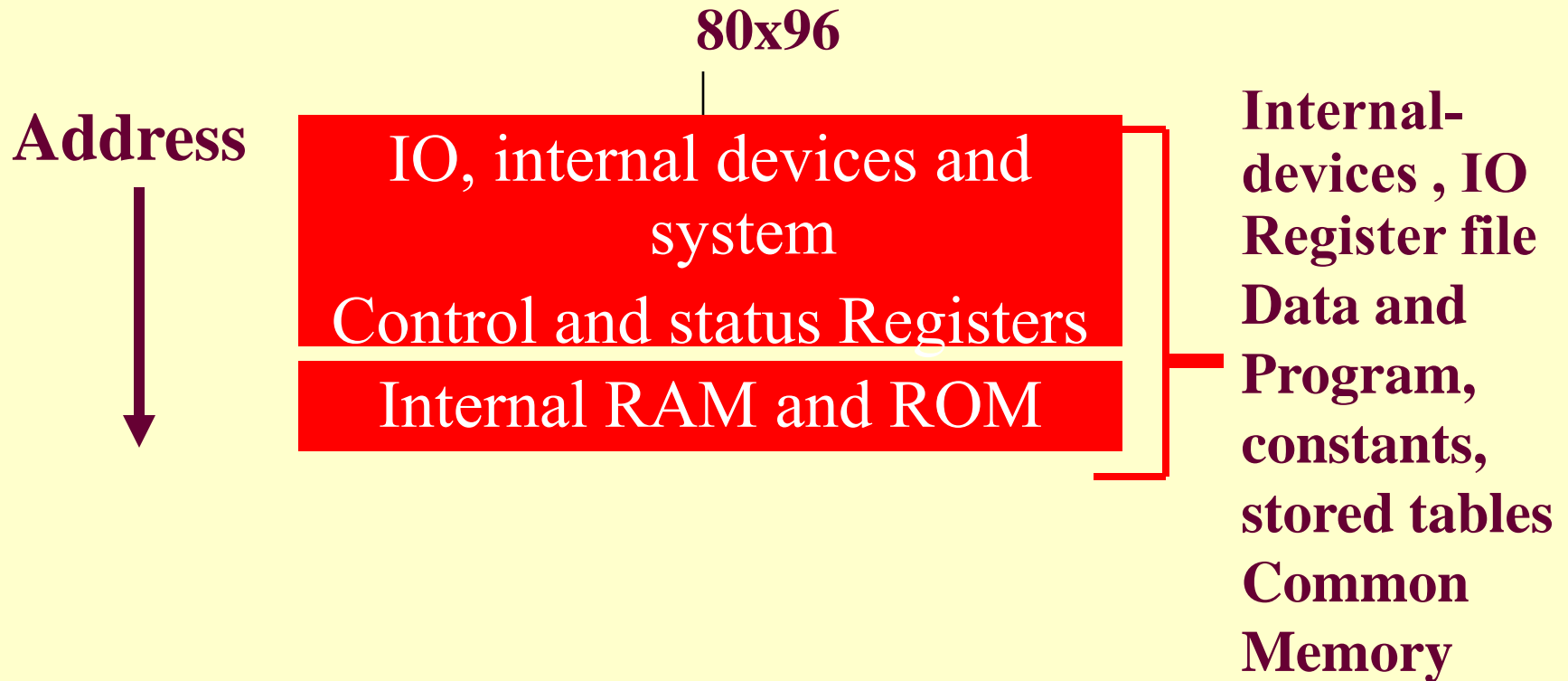
16 bit addresses

16-bit addresses 0100H to FFFFH



**Internal and External
ROM and RAM**

Addressing space



On-Chip Memory Architecture

On-Chip Memory Addresses

80x96

Address Space

00H-19H
Page 0

1AH-FFH
Page 0

100H-1FFH
Page 1

2000H-5FFFH

**IO and internal
Devices Registers**

System Registers

Internal RAM

Additional RAM

16 kB ROM in 80C196KC

WSR

b6-b0

selects/

switches

to a V or

H-window

Internal 16kB ROM in 80196KC

2000H-2013H

Lower Table of Interrupt
Vectors

2018H

Config byte

2018-2FH

Security Key ROM/EPROM

2030-3FH

Upper Table of Interrupt
Vectors

2040-5DH

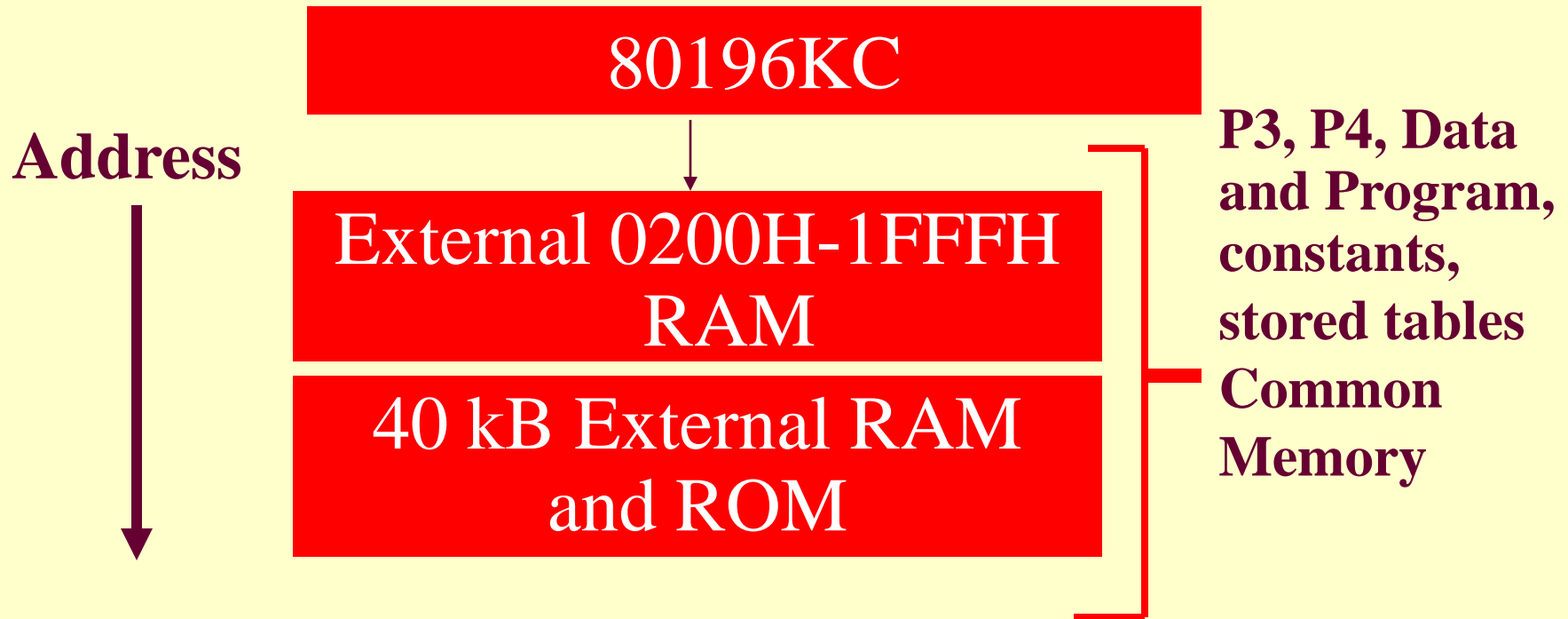
Peripheral Transactions Server
Vectors

2080H-

5FFFH

User Program, constants,
stored tables

Addressing space 80196KC



Off-Chip Memory Architecture

Off-Chip Memory Addresses

80196KC

0200H-
1FFFH

External RAM, P3 and P4

6000H-
FFFFH

External ROM/RAM

Memory Map 80196KC

Address bits

0000H-1FFH



**IO and internal
Devices, and System Registers
and Internal RAM**

0200H-1FFFH



External RAM

2000H-5FFFH



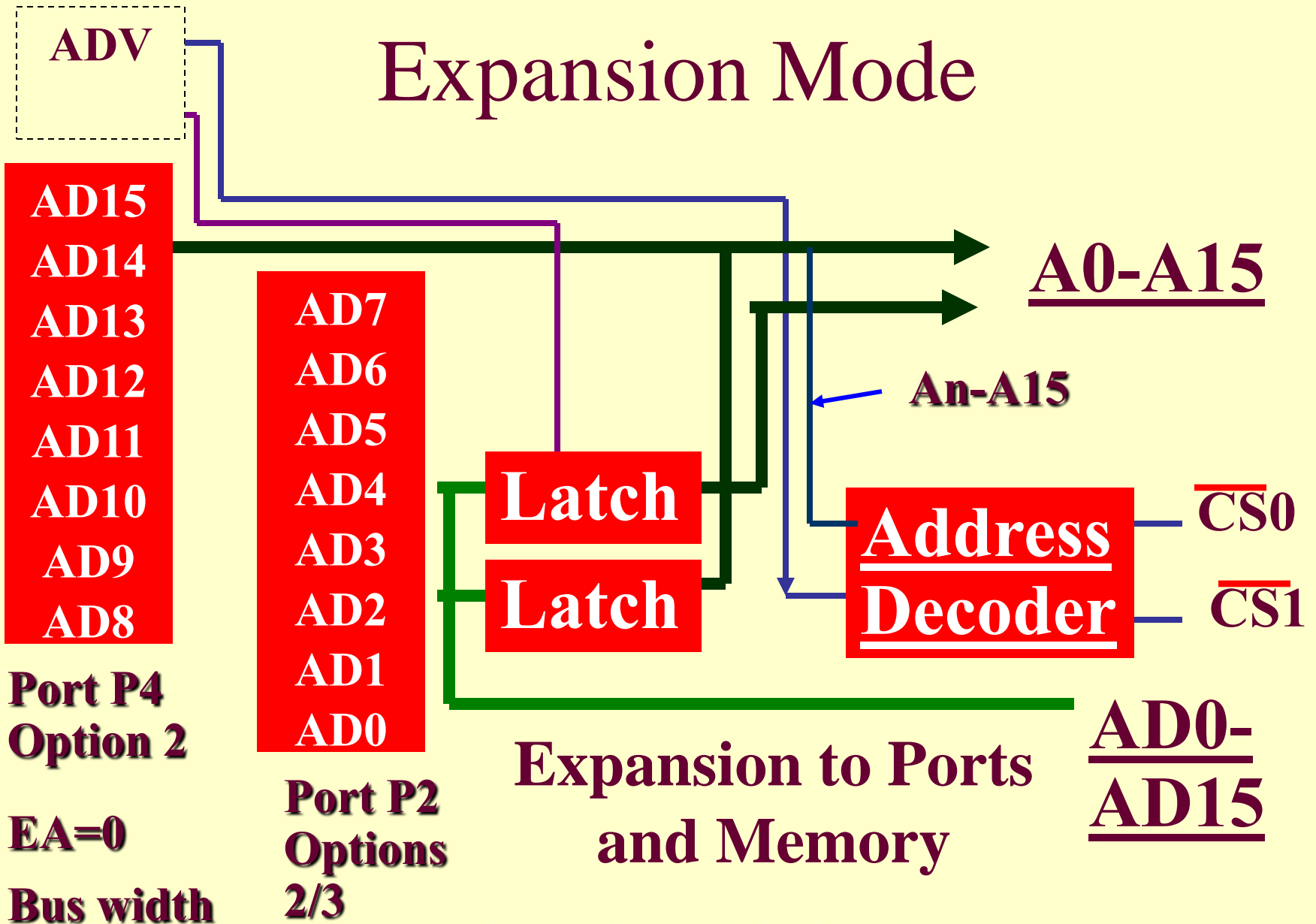
16 kB Internal ROM

6000H-FFFFH



40 kB External RAM/ROM

Expansion Mode



Summary

We learnt

- Internal and External ROM and RAM between 0100 to FFFFH
- On-chip Memory Architecture
- Off-Chip Memory Architecture

End of Lesson4 on On-chip and off-chip Memory