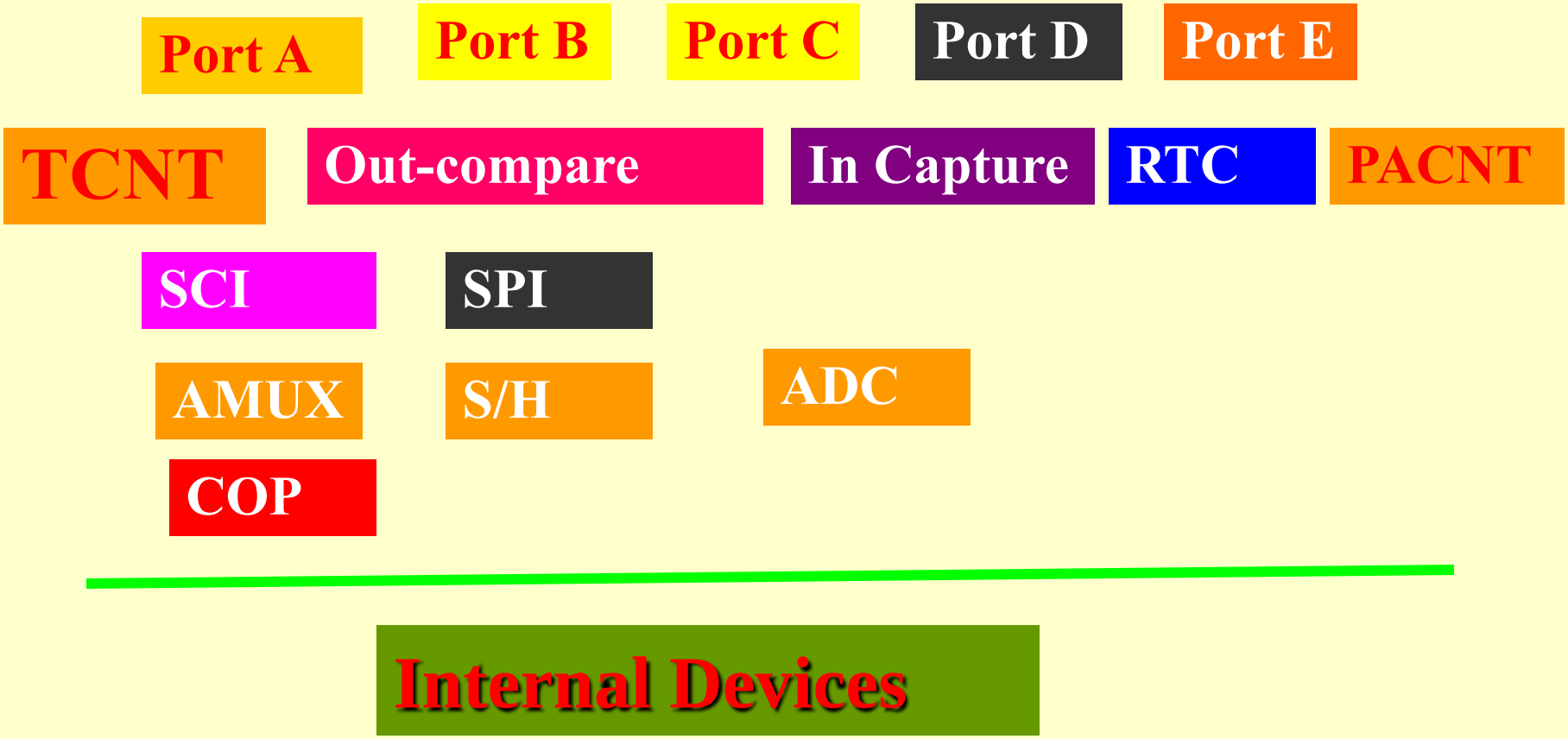
Chapter 16

Motorola MC68HC11 Family MCU Architecture

Lesson 2

Ports, Registers and System Control Registers

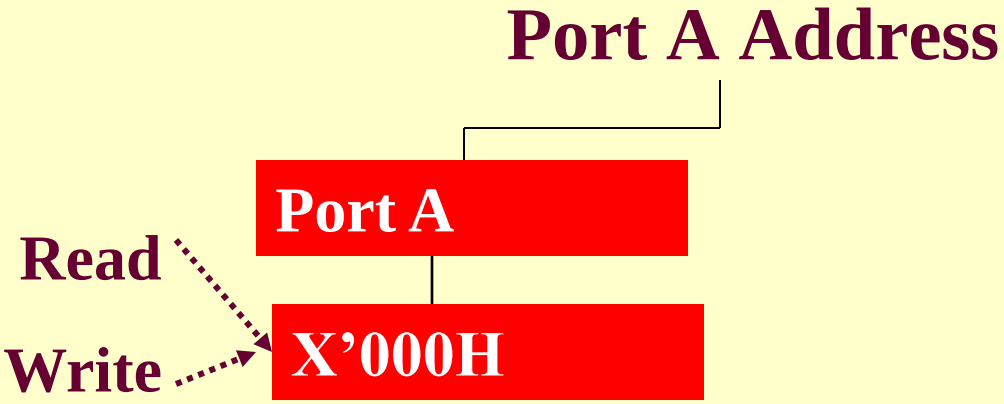
68HC11 MCU Internal Devices


Port A
Port B
Port C
Port D
Port E
TCNT
Out-compare
In Capture
RTC
PACNT
SCI
SPI
AMUX
S/H
ADC
COP
Internal Devices

IO Ports

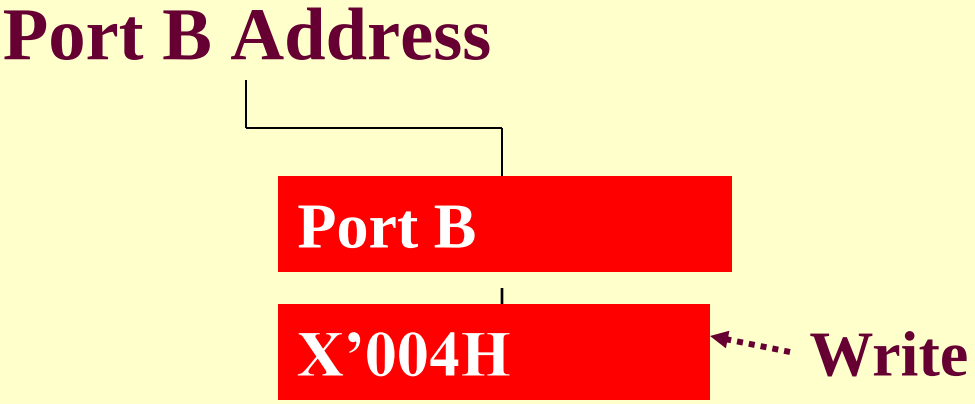
- Port E/AN0-AN7 inputs
- Port B /A8-A15 outputs
- Port C with DDRC / AD0-AD7/
- Port A /IC1-IC3, OC1-OC5
- Port D with DDRD/SCI/SPI Master/Slave

Port A also functions for IC1-IC3 inputs and OC1-OC5 outputs



X' four bits are as per init register

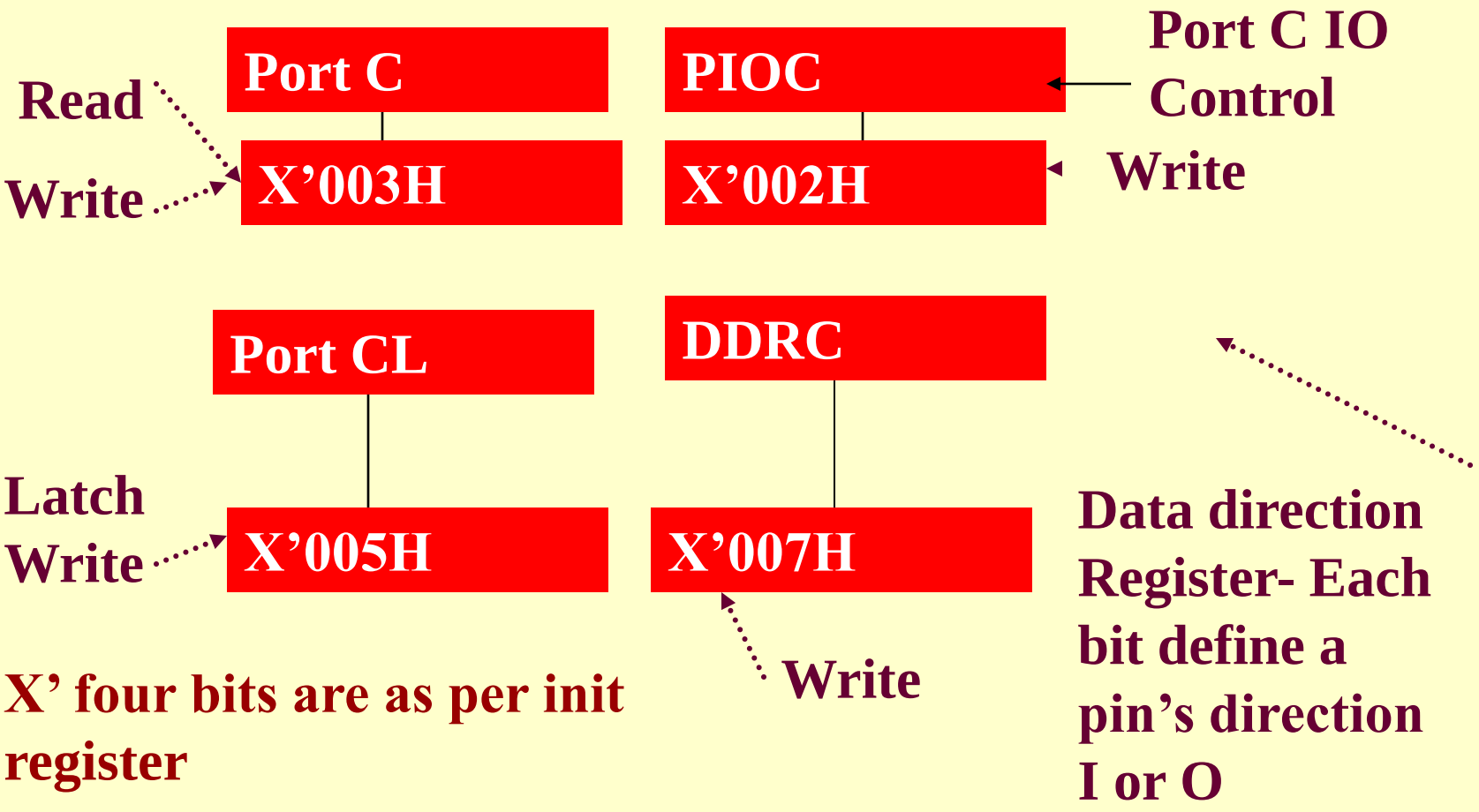
Port B also functions as Higher order address bus A8-A15 in Expanded mode



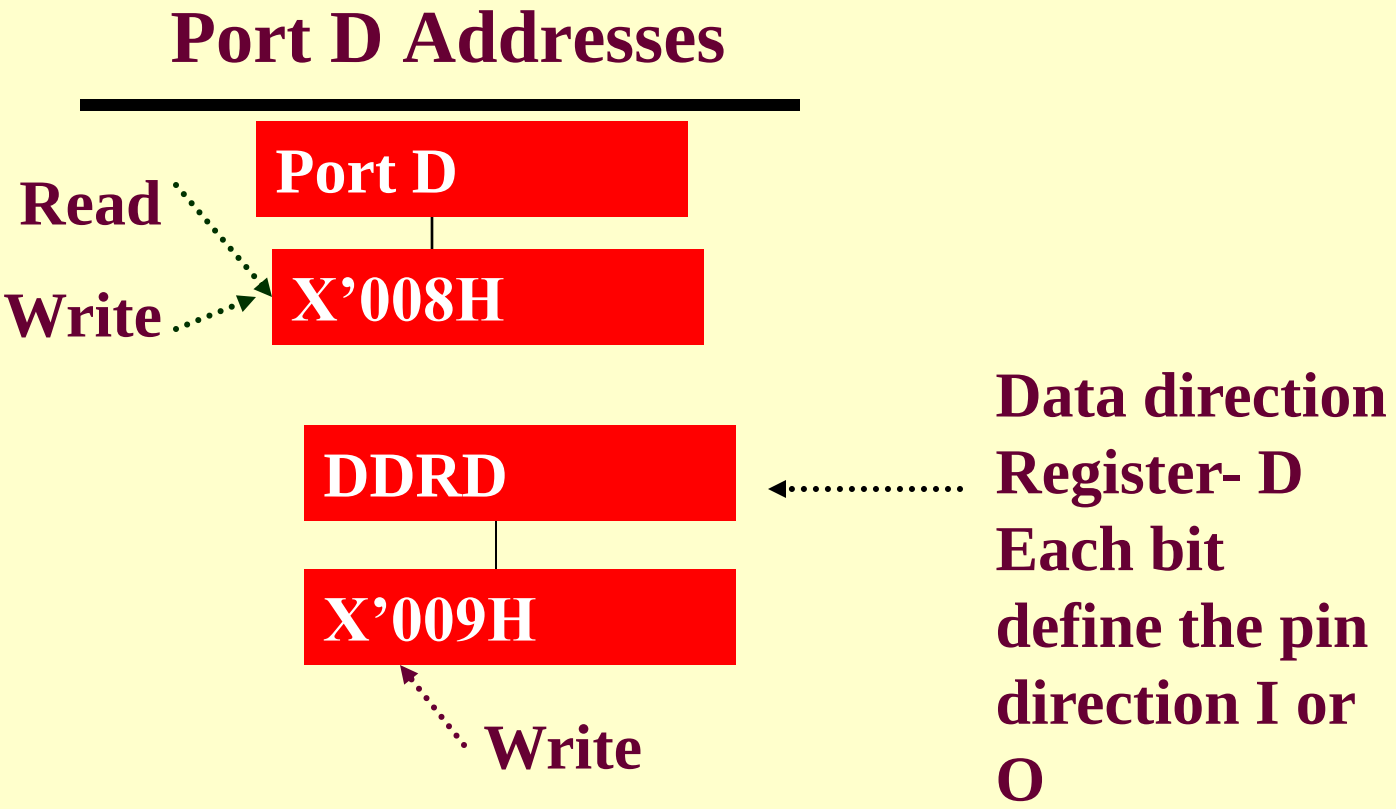
X' four bits are as per init register

Port C Addresses

Port C also functions as Lower order address cum data bus in Expanded mode

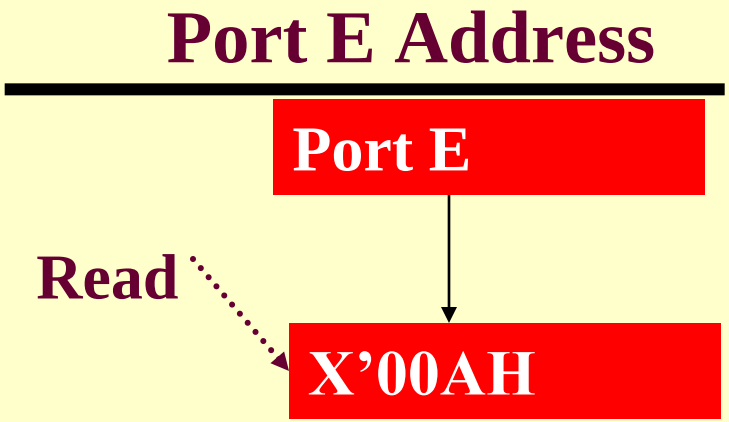


Port D also functions for device inputs and outputs for the SPI and SCI



X' four bits are as per init register

Inputs for internal multi channel ADC device also at Port E pins



X' four bits are as per init register

System Control Registers

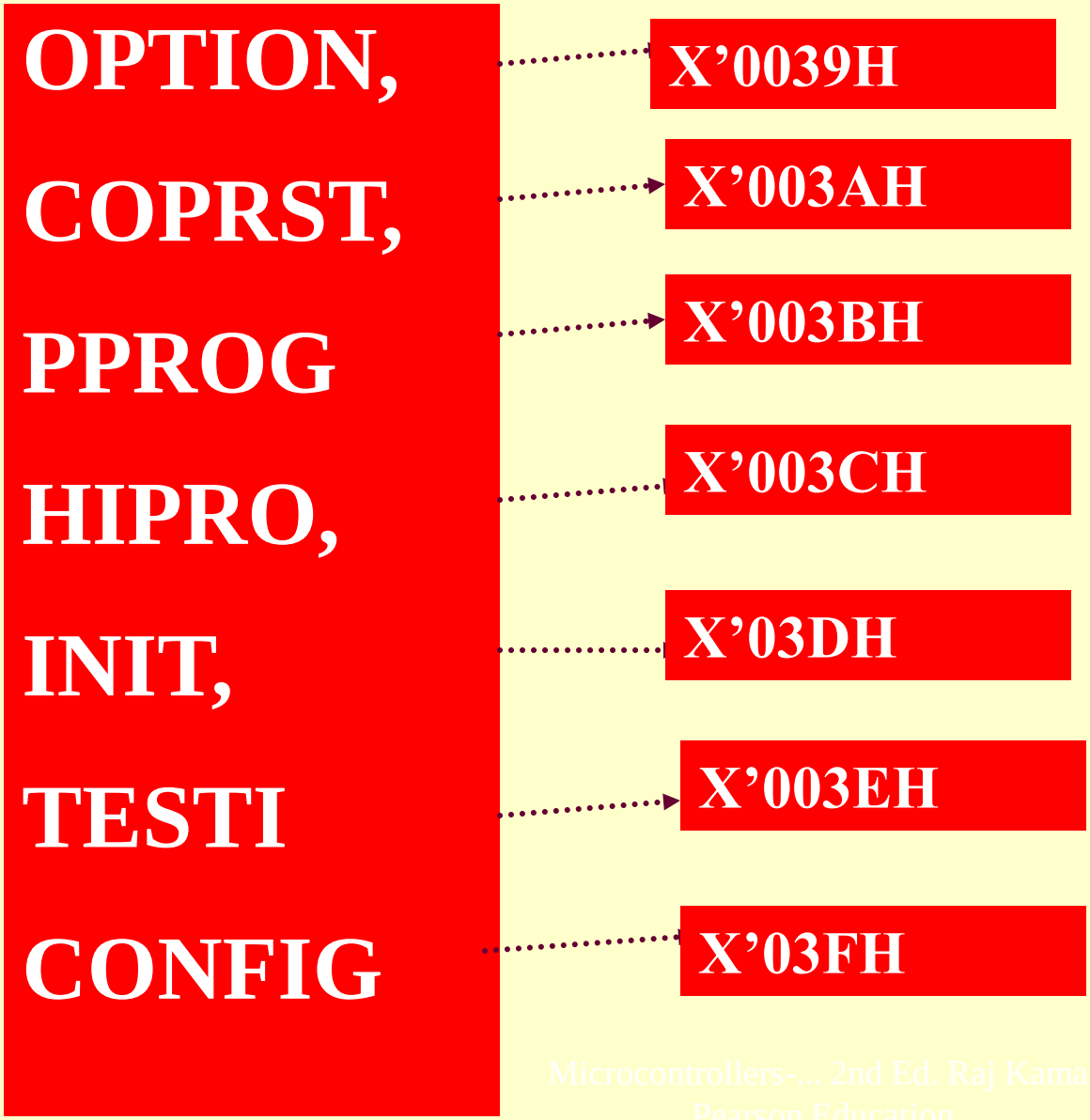
System Control and Status Registers

- OPTION,
- COPRS,
- IPRO,
- INIT,
- CONFIG,
- TESTI

System Function Control Registers

OPTION,	System configuration options
COPRST,	Computer operation no proper reset
PPROG	EEPROM Programming control
HIPRO,	High priority I bit and options
INIT,	Initialize Registers and RAM addresses by X' and X bits
TESTI	Factory test control set
CONFIG	Enables EEPROM, COP, ….

System Function Control Registers



Summary

We learnt

- Internal Devices
- Ports, Registers and their Addresses
- System Control Registers

End of Lesson 2 on MCU Ports and System Registers