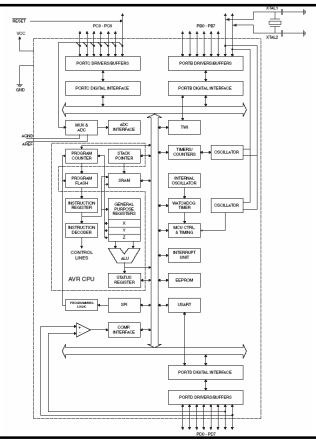
Programování mikrokontrolerů

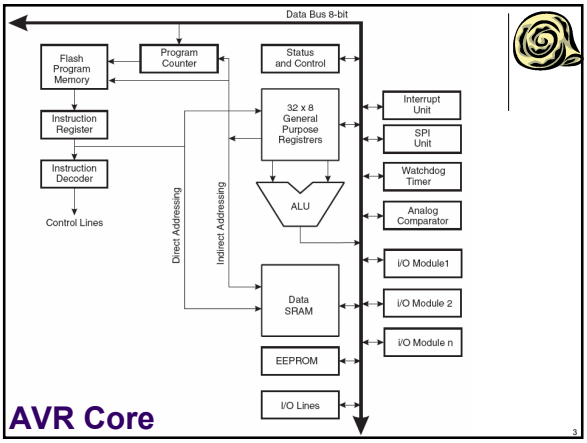
Atmel AVR/ATmega8

EEPROM

ATmega8



AVR Core



- ATmega8 – 512B EEPROM
- Endurance: at least 100.000 write/erase cycles
- Not directly accessible

EEPROM Address Registers

	7	6	5	4	3	2	1	0
EEARH	-	-	-	-	-	-	-	EEAR8
EEARL	EEAR7	EEAR6	EEAR5	EEAR4	EEAR3	EEAR2	EEAR1	EEAR0
	R	R	R	R	R	R	R	R/W
	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W
	0	0	0	0	0	0	0	x
	x	x	x	x	x	x	x	x

EEARH7:1 reserved

EEARH8:EEARL0 0-511 memory address

EEPROM Data Register

EEDR	7	6	5	4	3	2	1	0
	MSB							LSB
	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W
	0	0	0	0	0	0	0	0

EEDR EEPROM data read / to be written

EEPROM Control Register

EECR	7	6	5	4	3	2	1	0
	-	-	-	-	EERIE	EEMWE	EEWE	EERE
	R	R	R	R	R/W	R/W	R/W	R/W
	0	0	0	0	0	0	x	0

EERIE EEPROM Ready Interrupt Enable
EEMWE EEPROM Master Write Enable
EEWE EEPROM Write Enable
EERE EEPROM Read Enable

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Memory – EEPROM

- přístup pomocí EEAR, EEDR, EECR:
- Zápis:
  - EEWE=0? SPMEN=0?
  - adresa → EEAR
  - data → EEDR
  - EEMWE=1, EEWE=0
  - do 4 tiků EEWE=1
    {2 tiky halt}
    hotovo, když EEWE=0 (~8.5ms)
- Čtení:
  - adresa → EEAR
  - EERE=1
    {4 tiky halt}
    hotovo

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