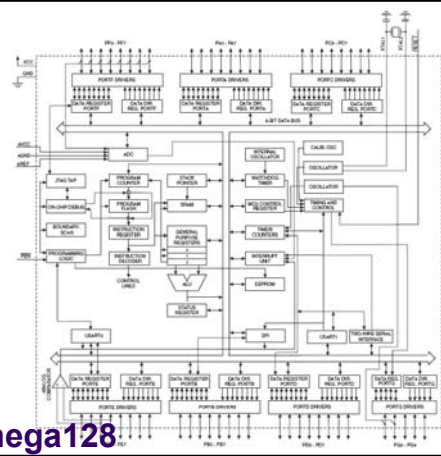
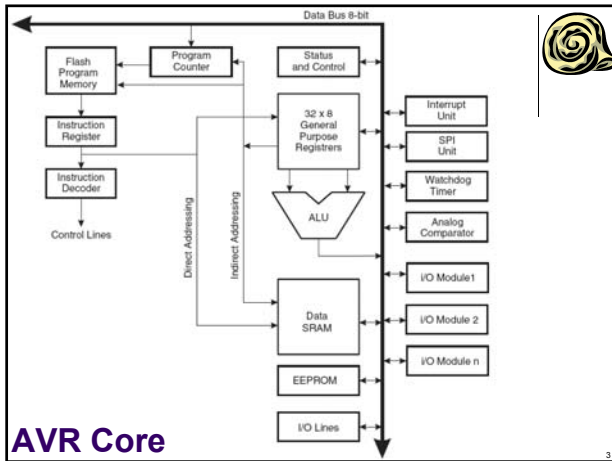


Programování mikrokontrolerů

Atmel AVR/ATmega8
EEPROM



ATmega128



AVR Core



- ATmega128 – 4kB EEPROM
- Endurance: at least 100.000 write/erase cycles
- Not directly accessible



EEPROM Address Registers

	7	6	5	4	3	2	1	0
EEARH	-	-	-	-	EEAR11	EEAR10	EEAR9	EEAR8
EEARL	EEAR7	EEAR6	EEAR5	EEAR4	EEAR3	EEAR2	EEAR1	EEAR0
	R	R	R	R	R/W	R/W	R/W	R/W
	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W
	0	0	0	0	x	x	x	x
	x	x	x	x	x	x	x	x

EEARH7:4 reserved

EEARH11:EEARL0 0-4095 memory address



EEPROM Data Register

EEEDR	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

EEEDR 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? SPEN=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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