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; Date : April '01

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; File : SPIfram.asm

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; Hardware : ADuC814

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; Description : sends sample values via SPI to FRAM

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$MOD814

SS EQU P3.5 ; P3.5 drives slave device's SS pin

CSEG

ORG 0050H ; locate code above interrupts

MOV RCAP2H,#0FFh ; config UART for 9600 baud

MOV RCAP2L,#-7 ;

MOV TH2,#0FFh

MOV TL2,#-7

MOV SCON,#52h

MOV T2CON,#34h

setb ss

mov cfg814,#01h

mov SPICON,#031H

CLR SS ; Set slave select low

MOV A,#00000110B ; write enable

MOV SPIDAT,A ; trigger data transfer

JNB ISPI,$

CLR ISPI

setb ss ; Complete transmission of op-code

NOP

NOP

NOP

clr ss ;

MOV A,#00000010b ; write data

MOV SPIDAT,A ; trigger data transfer

JNB ISPI,$

CLR ISPI

MOV A,#00h

MOV SPIDAT,A ; trigger data transfer

JNB ISPI,$

CLR ISPI

MOV A,#00h ; start at address 0000h

MOV SPIDAT,A ; trigger data transfer

JNB ISPI,$

CLR ISPI

MOV R0,#00H ; clear R0

loop: MOV A,R0 ; send test value

MOV SPIDAT,A ; trigger data transfer

JNB ISPI,$

CLR ISPI

INC R0

CJNE R0,#20,loop ; Loop till 20 values sent

SETB SS ; finish write sequence

NOP

NOP

NOP

CLR SS

MOV A,#00000011b ; READ data

MOV SPIDAT,A ; trigger data transfer

JNB ISPI,$

CLR ISPI

MOV A,#00h

MOV SPIDAT,A ; trigger data transfer

JNB ISPI,$

CLR ISPI

MOV A,#00h ; start at address 0000h

MOV SPIDAT,A ; trigger data transfer

JNB ISPI,$

CLR ISPI

loop2: MOV A,#00h ; generate clocks for reception

MOV SPIDAT,A

JNB ISPI,$

CLR ISPI

mov A,SPIDAT

CALL SENDVAL

CJNE A,#19,loop2

exit: jmp $

$INCLUDE(UARTIO.ASM)

end