Microcontrollers

Errata Sheet

16 January 2002 / Release 1.0

Device: **C868-1S**

Stepping Code / Marking: **AA11**

Package: **P-TSSOP-38**

This Errata Sheet describes the deviations from the current user documentation. The classification and numbering system is module oriented in a continual ascending sequence over several derivatives, as well already solved deviations are included. So gaps inside this enumeration could occur.

The current documentation is: User's Manual (?)
Data Sheet (?)
Instruction Set Manual 07.2000

Note: ***Devices marked with EES- or ES are engineering samples which may not be completely tested in all functional and electrical characteristics, therefore they should be used for evaluation only.***

The specific test conditions for EES and ES are documented in a separate Status Sheet.

Functional Problems:

CCU.1: CCU interrupts do not participate in the arbitration of MCU and might be masked by other interrupts.

CCU interrupts do not go through the SCU module. The SCU has the function to lengthen the interrupts so that they can participate in the arbitration of the MCU. The SCU would keep the interrupts to the MCU active until the interrupt flags are reset. However, the CCU module does not offer this feature for CCU interrupts. Thus CCU interrupts are not able to participate in the arbitration of the MCU and might be masked by other interrupts.

Workaround:

The avoid CCU interrupts being masked by other interrupts, they must be set to high priority (priority 1) and all other interrupts of the same priority as CCU interrupts must check for the CCU interrupt flags. Suppose CCU interrupt 0, 1 and 2 together with external interrupt 0 are invoked in the application. CCU interrupt 0, 1 and 2 sources are CC0, CC1 and CC2 inputs respectively (falling edge triggered).

The following is a software workaround:

```
        ORG    0000H
        LJMP   MAIN

        ORG    0003H            ; external interrupt  0 address
        …                       ; external interrupt  0 routine itself
        MOV    A, ISL           ; check CCU interrupt flags
        JNZ    CCU
        RETI

        ORG   0083H             ; CCU interrupt  0 address
        SJMP  CCU

        ORG   008BH             ; CCU interrupt  1 address
        SJMP  CCU

        ORG   0093H             ; CCU interrupt  2 address
CCU:
        MOV   A, ISL
        JNB   ACC.1, CCU1       ; check CCU interrupt 0 flag
```

```
        …                           ; CCU interrupt  0 routine
CCU1:
        JNB    ACC.3, CCU2          ; check CCU interrupt 1 flag
        …                           ; CCU interrupt  1 routine
CCU2:
        JNB    ACC.5, CCUEND        ; check CCU interrupt 2 flag
        …                           ; CCU interrupt  2 routine
CCUEND:
        ORL    SYSCON0, #10H        ; set RMAP
        MOV    ISRL, #0FFH          ; reset CCU interrupt flags
        ANL    SYSCON0, #0EFH       ; clear RMAP
        MOV    A, ISL
        JNZ    CCU
        RETI

        ORG    0100H                ; main program
        …
        MOV    IP0, #00111100B      ; set CCU interrupts to high priority (priority 1)
        …
        …
```

History List

Functional Problems

Functional Problem	Short Description	Fixed
CCU. 1	CCU interrupts do not participate in the arbitration of MCU and might be masked by other interrupts.	

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