

PCM-9361 Watchdog Programming Note

Control IC – SCH3114

I/O base address-----800h

Device Register offset:

GPIO/WDT Selection Register (default = 0x01) -----47h

- Bit [0] -> In/Out : don't care
- Bit [1]-> Polarity : don't care
- Bit [3:2] 11 - WDT; 00 - GPIO; 01 - LED1----- set to 11
- Bit [6:4] -> reserved
- Bit [7] Output Type Select -> 1 - Open Drain, 0 - Push Pull----- set to 0

Watch-dog Timeout Register (default = 0x00) -----65h

- Bit [6:0] -> reserved
- Bit [7] -> Time out Value Unit Select: 0 - Minute (default), 1 - Second

Watch-dog Timeout Value Register (default = 0x00) -----66h

- Binary coded. Units=minutes (default) or seconds, selectable via Bit[7] of Watch-dog timeout register (0x65)
- 0x00 -> Time out disable
- 0x01 -> Time out = 1 minute (second)
-
- 0xFF -> Time-out = 255 minutes (second)

Watch-dog Timer Configuration (default = 0x00)-----67h

- Bit [0] -> reserved
- Bit [1] -> Keyboard Enable:
 - 1- WDT is reset upon a keyboard interrupt
 - 0 - WDT is not affected by keyboard interrupts
- Bit [2] -> Mouse Enable:
 - 1- WDT is reset upon a mouse interrupts.
 - 0 - WDT is not affected by mouse interrupts.
- Bit [3] -> reserved
- Bit [7:4] -> WDT Interrupt Mapping”
 - 1111 = IRQ15
 -
 - 0011 = IRQ3
 - 0010 = IRQ2 (do not use)
 - 0001 = IRQ1
 - 0000 = Disable

Watch-dog Timer Control (default = 0x00)-----68h

- Bit [0] -> Watch-dog Status bit, RW:
 - 1 - WD timeout occurred
 - 0 - WD timer counting
- Bit [1] -> reserved
- Bit [2] -> Force Timeout, W:
 - 1 - Force WD timeout event, this bit is self-clearing

- Bit [3] -> P20 Force Timeout Enable, R/W
 - 1 - Allows rising edge of P20, from Keyboard Controller to force the WD timeout event. A WD timeout event may still be forced by setting the force timeout bit – bit 2
 - 0 - P20 activity dose not generate the WD timeout event
- Bit [7:4] -> reserved

Sample code in Assembly Language

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_PCM-9361 WDTO MAIN  PROC
    .....

    MOV DX, 847h
    IN AL, DX
    OR AL, 0Ch          ; Set to Watch-dog function
    OUT DX, AL

    MOV DX, 865h
    IN AL, DX
    OR AL, 80h         ; Mode -> second
    OUT DX, AL

    MOV DX, 866h
    MOV AL, ??         ; Set ?? sec
    OUT DX, AL        ; Start WDT
    .....

_PCM-9361 WDTO MAIN  ENDP
    .....

```