

Software Application Note

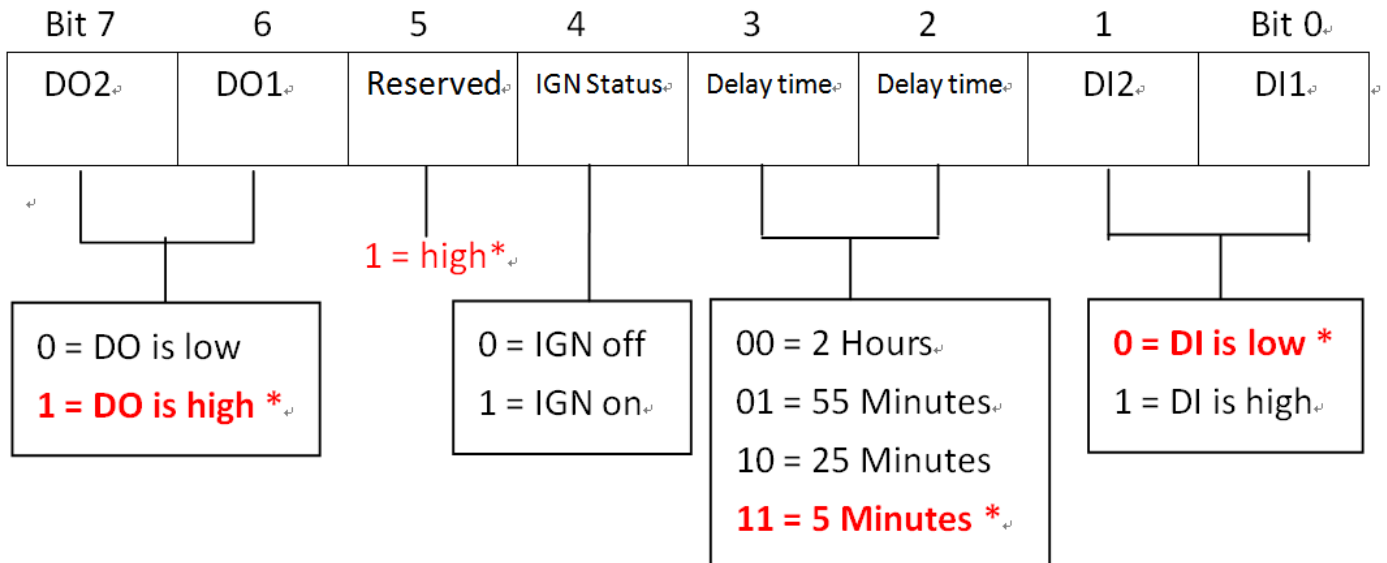
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Reversion		Date	Notes	Author(s)	
From	To				
0.1		Mar 21, 2011	Initial document issued	Daniel. T	
0.1	0.2	Jun 06, 2011	Add Ignition status and 4 level for delay time setting for firmware checksum 0xF56F	Daniel. T	
0.2	0.3	Aug 17, 2011	Correction IGN status and delay time table mapping error	Daniel. T	

1. GPIO & Delay Time Setting

I/O port: A25h

1.1 GPIO and Delay Time Control Register

The General Purpose I/O is an interface available on some devices. These can read digital signals from other parts of a circuit, or output to control other devices. At GPIO control register, the GPI is use to receive data, the GPO is set data to send.



1.2 GPIO Programming Procedure

(1) Write Register

```
SetPortVal(0xa25, 0xFC, 1); // F0 (11111100) => DO1,DO2 is High / Delay time is 5 minutes
```

(2) Read Register

```
GetPortVal(0xa25, &PortVal, 1); // Read Ignition and GPI Status
```

(3) Example Code

// C# use Winio

```
SetPortVal(0x2E, 0x87, 1); // Enter to IO PNP Mode Start Write 87h Key to 2E ADDRESS
SetPortVal(0x2E, 0x01, 1); // Write 01h Key to 2E ADDRESS
SetPortVal(0x2E, 0x55, 1); // Write 55h Key to 2E ADDRESS
SetPortVal(0x2E, 0x55, 1); // Write 55h Key to 2E ADDRESS
SetPortVal(0x2E, 0x07, 1); // LDN[07h] Register
SetPortVal(0x2F, 0x07, 1); // Write LDN[07h] TO Data Port
SetPortVal(0x2E, 0xCD, 1); // GPIO0-7 Register
SetPortVal(0x2F, 0xF0, 1); // Set GPIO 0-3 "0" is Input and GPIO 4-7 "F" is Output
// (Low is input, High is Output)
SetPortVal(0xa25, 0xFC, 1); // DO1,DO2 is High / Delay time is 5 minutes
GetPortVal(0xa25,&PortVal, 1); // Read Status
SetPortVal(0x2E, 0x02, 1); // Exit PNP Mode
SetPortVal(0x2E, 0x02, 1); // Exit PNP Mode
```

2. WDT Setting

I/O port:

07H 71H R/W 00H WatchDog Timer Control Register
07H 72H R/W 00H WatchDog Timer Configuration Register
07H 73H R/W 00H WatchDog Timer Time-out Value Register

2.1 Watchdog Timer Control Register

The Watchdog Timer Control Register controls the WDT working mode. Write the value to the WDT Configuration Port. The following table describes the Control Register bit definition:

Configure Control (Index=02h)

Bit Description

7-2 Reserved

1 Returns to the Wait for Key state. This bit is used when the configuration sequence is completed

0 Resets all logical devices and restores configuration registers to their power-on states.

WatchDog Timer Control Register (Index=71h, Default=00h)

Bit Description

- 7 WDT is reset upon a CIR interrupt
- 6 WDT is reset upon a KBC (mouse) interrupt
- 5 WDT is reset upon a KBC (keyboard) interrupt
- 4 WDT is reset upon a read or a write to the Game Port base address
- 3-2 Reserved
- 1 Force Time-out. This bit is self-clearing 0 WDT Status
- 1: WDT value reaches 0.
- 0: WDT value is not 0

WatchDog Timer Configuration Register (Index=72h, Default=00h)

Bit Description

- 7 WDT Time-out value select
 - 1: Second
 - 0: Minute
 - 6 WDT output through KRST (pulse) enable
 - 5-4 Reserved
 - 3-0 Select the interrupt level Note for WDT
- WatchDog Timer Time-out Value Register (Index=73h, Default=00h)

Bit Description

- 7-0 WDT Time-out value 7-0

2.2 Watchdog Timer Programming Procedure

(1) Example Code

```
SetPortVal(0x2E, 0x87, 1); // Enter to SuperIO Start Write 87h Key to 2E ADDRESS
    SetPortVal(0x2E, 0x01, 1); // Write 01h Key to 2E ADDRESS
    SetPortVal(0x2E, 0x55, 1); // Write 55h Key to 2E ADDRESS
    SetPortVal(0x2E, 0x55, 1); // Write 55h Key to 2E ADDRESS
    SetPortVal(0x2E, 0x07, 1); // LDN[07h] Register
    SetPortVal(0x2F, 0x07, 1); // Write LDN[07h] TO Data Port
    SetPortVal(0x2E, 0x73, 1); // Set watchdog timer value
    SetPortVal(0x2F, 0x0A, 1); // Set watchdog timer 10 Sec / Min (0A is 00001010 = 10)
    SetPortVal(0x2E, 0x72, 1);
    SetPortVal(0x2F, 0xC0, 1); // Set watchdog timer unit to be Sec (C0 is Sec)
    SetPortVal(0x2E, 0x02, 1);
    SetPortVal(0x2F, 0x02, 1); // Exit PNP Mode
```