DOS Reboot Example

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Here are DOS C example codes to show programmer how to reboot system on DMP/ICOP boards.

Use Vortex86 Watchdog Timer

```
void Vortex86_Reboot()
{
  outp(0x84a, 0x01);
  outp(0x84b, 0x8c);
}
```

System will reboot within 4ms. Refer to
http://www.dmp.com.tw/tech/dmp-hw/cpu-vortex86/Use_Vortex86_Watchdog_Timer.pdf to get more detail.

Use M6117D Watchdog Timer

```
#include <conio.h>

void M6117D_Reboot()
{
  unsigned char c;

  outp(0x22,0x13); // Lock register
  outp(0x23,0xc5); // Unlock config. register

  //  1ms
  outp(0x22,0x3b);
  outp(0x23,0);
  outp(0x22,0x3a);
  outp(0x23,0);
  outp(0x22,0x39);
  outp(0x23,1);

  // Reset system
  outp(0x22,0x38);
  c = inp(0x23);
  c &= 0x0f;
  c |= 0xd0;
  outp(0x22,0x38);
  outp(0x23,c);
```

```
  // Enable watchdog timer
  outp(0x22,0x37);
  c = inp(0x23);
  c |= 0x40;
  outp(0x22,0x37);
  outp(0x23,c);


  outp(0x22,0x13); // Lock register
  outp(0x23,0x00); // Lock config. register
}
```

System will reboot within 1ms. Refer to

http://www.dmp.com.tw/tech/dmp-hw/cpu-m6117d/Use_M6117D_Watchdog_Timer.pdf to get more detail.

Use BIOS to Reset System

Those two example function can work okay on Vortex86 and M6117D series.

```
#include <dos.h>
// FFFF:0000 jump 1 byte FFFF:0001 store offset FFFF:0003 store segment
void Reboot()
{
  typedef void interrupt (*FP) ();


  FP  Reset;
  Reset = (FP) MK_FP(peek(0xffff, 0x0003), peek(0xffff, 0x0001));
  Reset();
}
```

or

```
// jmp ffff:0000
void Reboot()
{
  asm
  {
    db 0xea, 0x00, 0x00, 0xff, 0xff
  };
}
```

Technical Support

For more technical support, please visit http://www.dmp.com.tw/tech or mail to tech@dmp.com.tw.