General Description

The ET4003MTC is a high performance, low cost CMOS 8-bit single chip microcontroller with an embedded 8K*16bit OTPROM, a high precision 5MHz oscillator, 13 general IO or 13 key scan IO and an infrared receiving and transmitting circuit.

The ET4003MTC is best suited for applications such as ordinary remote or learning remote controller, general IO application controller .etc.

Features

- 8-bit microcontroller, 53 single word instructions
- Embedded 8K*16 bit program memory, 512-byte data memory
- Program memory can be configured as 4k*16 bit MTP and program twice
- CPU operation voltage rang is from 2.0v to 3.6v
- Embedded 5MHz oscillator, adjustment error is less than + / - 0.5%
- Sleep mode current is about 1.0uA (when key scan is enable)
- 8-level hardware stacks
- 15 Interrupt sources(internal:2 Timer,external:13 Input port)
- All 13 I/O can be configured as General Purpose I/O or keyboard scan IO
- Support T-type keyboard and the key code can be read by hardware
- Embedded Timer A(include PWM generator)and Timer B
- 3 programmable PWM output port(the two PWM output port is sharing by two general IO port)
- Key wakeup, M-type or T-type key change wake-up from SLEEP mode
- Built in Transistor for IR LED Drive
    IOL = 220mA at VDD =3V & VO =0.3V and pwm_curt=1
    IOL = 150mA at VDD =3V & VO =0.3V and pwm_curt=0
- Built in IR receiving module can supply capture function with sensitivity adjustable.(9uA,13uA,19uA)
- Watchdog timer
- power-on reset circuit
- Voltage drop detection circuit
    Reset occurrence ---------1.7 V(Ta=25℃)
    Reset release --------------1.9 V(Ta=25℃)
- Package: SOP16

Applications

Learning Remote Controller
Ordinary Remote Controller
General IO Application Controller

Pin Configuration

```
          ┌─────────────────────────┐
GND    1 ─┤ ○                        ├─ 16   VDD
          │                          │
KS12/PT1_7 2 ─┤                      ├─ 15   RMT
          │                          │
KS11/PT1_6 3 ─┤                      ├─ 14   KS10/PT2_7
          │                          │
KS0/PT1_5 4 ─┤     ET4003MTC         ├─ 13   KS9/PT2_6
          │                          │
KS1/PT1_4 5 ─┤                       ├─ 12   KS8/PT2_5
          │                          │
KS2/PT1_3 6 ─┤                       ├─ 11   KS7/PT2_4
          │                          │
KS3/PT2_0 7 ─┤                       ├─ 10   KS6/PT2_3
          │                          │
KS4/PT2_1 8 ─┤                       ├─ 9    KS5/PT2_2
          └─────────────────────────┘
```