8-bit micro-controller with 320 dots LCD driver

Features

- 8-bit single chip micro-controller

- Operating voltage: 2.4V−5.5V

- Ring oscillator up to 4MHz (Typ. 2MHz) for oscillator

- Memory :
  - Program ROM : 32K-byte
  - Data RAM : 192-byte
  - LCD display RAM : 40-byte

- 10 input/output pins
  - 4 input pins (P0.0 to P0.3) with wake-up function
  - 2 Input/output pins (P1.0 to P1.1)
  - 2 output pins (P2.0 to P2.1)
  - 2 input pins (P3.0 to P3.1) under 8-common-LCD mode

- One 6-bit DAC output pin for audio output

- LCD driver output
  - 32-segment × 8-common or 10-common
  - 1/8 or 1/10 duty, 1/4 bias driving mode

- Three types of interrupts:

  Reset, TM1, 1.0kHz (Fosc/2048)

- Built-in frequency divider circuit

- Built-in programmable timer
  - Timer 1: 8-bit timer with four internal clock sources and auto-reload function

- HALT mode and STOP mode for power saving

- 16-level deep stack for subroutine nesting (include interrupt)

Application Field

Hand-held game

Toy

MEGAWIN

General Description

MLC610A/B is a cost effective, high performance 8-bit micro-controller of MEGAWIN. It integrates an 8-bit pipeline CPU core, ROM, RAM, timers, LCD driver, I/O ports and system control circuits into a single chip. There are also three interrupt sources and 16-level deep stack for interrupt/call applications. The MLC610A/B provides a build-in oscillator as clock source. It is suitable for hand-held game, toy controllers and other products.