

*Preliminary*

## GENERAL DESCRIPTION

EM73362 is an advanced single chip CMOS 4-bit micro-controller. It contains 3K-byte ROM, 52-nibble RAM, 4-bit ALU, 13-level subroutine nesting, 22-stage time base, one 12-bit timer for the kernel function and one high speed counter. EM73362 also contains 5 interrupt sources, 1 input port, 1~4 bidirection ports, built-in watch-dog-timer and LCD display (27x3 to 15x3).

Except low-power consumption and high speed, EM73362 have the STOP mode and IDLE mode operation for power saving function.

## FEATURES

- Operation voltage : 1.1V or 1.8V.(clock frequency : 32 K Hz)
- Clock source : Single clock system for crystal, connect a external resistor or external clock source, available by mask option.
- Instruction set : 109 powerful instructions.
- Instruction cycle time : Up to 122 $\mu$ s for 32 K Hz .
- ROM capacity : 3072 x 8 bits.
- RAM capacity : 52 x 4 bits.
- Input port : 1 port (4-bit).
- Bidirection port : 4 ports (P4, P6, P7, P8) are available by mask option. P4 is a high current port. (P4.0 and  $\overline{\text{TONE}}$  available by mask option. P4.1~P4.3 are shared with the input/output of RF counter.) P6, P7 and P8 are shared with SEG15-SEG26.
- 12-bit timer : One 12-bit timer is programmable for timer.
- High speed counter : The high speed counter includes one 8-bit high speed counter, one 12-bit general counter and a resistor frequency oscillator. It has frequency measurement mode, melody mode and auto load timer mode.
- Built-in time base counter: 22 stages.
- Subroutine nesting : Up to 13 levels.
- Interrupt : External interrupt . . . . . 2 input interrupt sources.  
Internal interrupt . . . . . 2 timer overflow interrupts ,  
1 time base interrupt.
- LCD driver : 27x3 to 15x3 dots available by mask option. 1/3, 1/2 and static three kinds of duty (1/2 bias) selectable. The programming method of LCD driver is I/O mapping.
- Built-in watch-dog-timer is available by mask option.
- Built-in low battery detector.
- Power saving function : STOP mode and IDLE mode.
- Package type : Chip form 49 pins.