

### FEATURES

- ROM Capacity
  - Program ROM 24K × 23-bits
  - Character ROM 6 × 8 × 256-bits
  - Constant ROM 1K × 4-bits
- RAM Capacity
  - Working RAM 256 × 4-bits
  - Display RAM 98 × 32-bits
  - Data RAM 512 × 8-bits
- Memory Expansion (External) 16M × 8 bits × 4
- Built-in Battery Detector
- LCD Display 98 Segment × 32 Common
- I/O Ports
  - Parallel I/O 8-bits
  - Input 2-bits
  - Output 3-bits
  - Buzzer Output 1-bit (4 kHz)
  - Key Input 6-bits
- Standby Release 2 Events (Timer Signal, Key Input)
- LCD Contrast Adjustable 16 Levels

- Built-in Oscillator
  - System Clock (Built-in CR Oscillator) 1 MHz
  - System Clock (External Ceramic Resonator) 1 MHz
  - Timer (Built-in CR Oscillator) 32.8 kHz
  - Timer (External Crystal) 32.768 kHz
- Instruction Cycle Time 3 μs
- Operating Temperature -10°C to +60°C
- Supply Voltage 3.8 V to 6.0 V
- 208-pin QFP Package (QFP208-P-2828)  
(Test Sample Only)

### DESCRIPTION

The SM3511 is a CMOS 4-bit single-chip microcomputer for data bank use incorporating data memory RAM, LCD driver (the output is adjustable in 16 steps for various contrast), key/switch input circuit, 8-bit parallel I/O port, 3 output ports, external memory control circuit, and buzzer output circuit and voltage detector circuit. One of three ports contains special output circuit for infrared (IR) communication. It is easy to realize timer function by timer signal interrupt since the oscillator circuit is built-in.

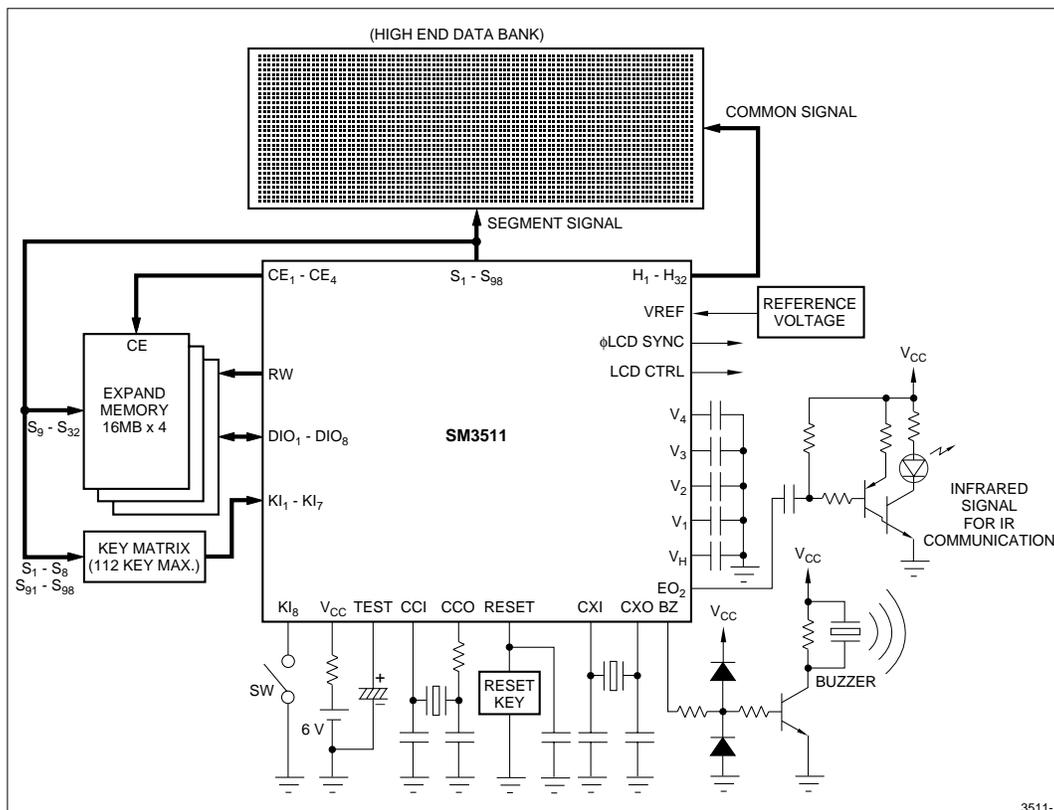


Figure 1. System Configuration Example

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