Features

- 8-bit micro-controller built in.
- 128K bytes ROM for MS8527P & MS85272.
  64K bytes ROM for MS85271 only.
- **4K** bytes RAM
- **128** Pins Chip
- Memory Interface:
  - Serial Memory Interface (SMI2).
- Only single crystal (32768Hz)
- Fast Auto-Access Data Channel (FAADC)
- **Programmable Fast Block Move Function**
- Programmable MCU clock rate
  High speed : 8.388MHz, 4.194MHz, 2.097MHz, 1.049MHz, 524KHz and **262KHz**.
  Low speed : 32768Hz.
- **MCU Power saving mode:**
  Clock rate = 524KHz, 262KHz and 32768Hz.
- Ringer/Music tone generator
- Low voltage detector / **Comparator**
- **Programmable low voltage reset (LVR)**
- **Advance power-on reset (mask option)**
- **Fourteen** 8-bit general-purpose timers
  - Timer A
  - Timer B
  - **Timer C (Shared with watchdog timer)**
  - MCC Timer (Shared with MCCIN function)
  - **Two GT timers**
  - **Eight Speech Timers**
- A watchdog timer against deadlock.
- UART controller
- Universal synchronous serial Interface (SSI)
- **Pseudo FIFO for SSI, UART & SMI2**
- MCCIN interface/MCC Timer
- Auto Key scan function (**Up to 16x4**)
- **IrDA Communication Interface**
- **16-bit CRC-CCITT Calculation function**
- **8-Channel Speech Melody (Eight Speech Timers)** for MS8527P and MS85272. (MS85271 not Included).
- **Seven-Level** Priority-based interrupts.
- Input port and I/O ports interface.
  - I/O port A: 4 pins non-open-drain general-purpose I/O ports with **Schmitt trigger interface**, and can interrupt (two-level priority-based interrupts) independently and readable.
  - Open drain I/O port: 2 pins with heavy sinking capability (Shared with SMI2 / UART functions)
  - Multiple-function I/O ports: **SEG57~80, COM1~8, VLCD1~6, CAP1~2, DTONE, VIN and MPORT2~7 with Schmitt trigger & interrupt.**
- Built-in LCD driver
  - Four resolutions: 80SEG x 16COM, 64SEG x 32COM, 80SEG x 8COM or 80SEG x 4COM
  - Four programmable duties: 1/32,1/16, 1/8 or 1/4
  - Three programmable biases: 1/6,1/5 or 1/4
  - Maximum 80/64 segment output pins
  - Maximum 16/32 common output pins
  - **32 level brightness adjustment**
  - Voltage booster (2*DVDD)
  - Current meter for steady display quality
  - Adjustable driving buffers for large LCD panel
- Power Management
  - Standby mode
  - Stop mode
- Operating voltage range: **2.4V~5.5V**

Application

- Corded or Cordless adjunct boxes phone set
- Corded or Cordless Feature phones
- Other communication systems

Package

- **128 Pins** QFP packaged. (**8-CH SPH/MLD output to DTONE pin for MS8527P and MS85272 . MS85271 not included).**
- → LCD: 16X80 (96), VLCD0~6 (7), CAP1~2 (2), RESCM (1) = 106 Pins
- → I/O : PA0~3 (4), PORT0~1 (2), MPORT2~7 (6) = 12 Pins
- → Others: DTONE, VIN, XTLI, XTLO, PLL_RC, **RESETB(MODE)**, VPP, DVDD, DVSS, AVSS = 10 Pins

General Description

The MS8527 SERIES is a CMOS technology integrated circuit designed for the corded/cordless phone applications. A micro-controller is built-in to control the operation of the entire system. The MS8527 SERIES fulfills all the features and functions offered by the former series product and Low Voltage indication. There are several I/O interfaces designed for handshaking with the other peripheral devices. The I/O ports are used for the general-purpose application. Two serial interfaces are used for the specified serial data transmission. Up to **32**-degrees contrast levels are supported to adjust the LCD contrast. It also performs the power control to reduce the power dissipation. Moreover, the operating voltage is enhanced to **2.4V**. It provides a complete solution for the applications of the adjunct boxes, feature phones, and other communication systems.