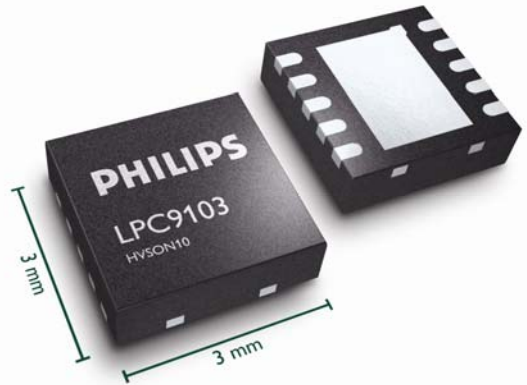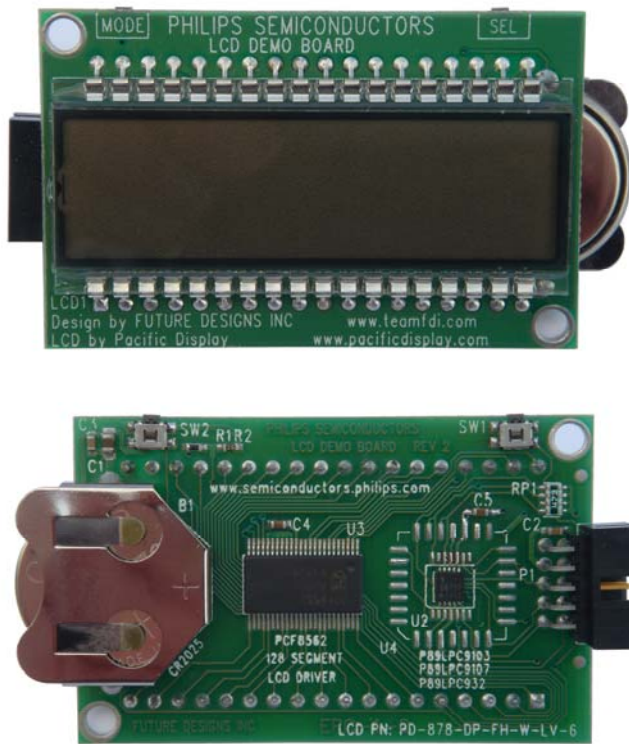# LCD Demo

Highlights

- Low-cost 2-chip solution for LCD User Interface
- Flexible layout supports 3 microcontroller options
  - 10 pin HVSON to 28 pin PLCC package
  - 1KB to 8KB internal Flash memory
- 8-character alphanumeric LCD
- I2C based LCD driver with 128 segment support
- Powered by a single 3V coin cell battery
- Two miniature push-buttons for user control
- Reprogrammable by the user via 10-pin ICP header

The NXP LCD Demo is a reference design for a low cost microcontroller and LCD solution. The two main NXP parts used in this design can be purchased for less than $1.50 in 1,000 unit quantities and only a few other external components are required. The Demo Board is controlled by a simple two-button user interface (MODE and SELECT). The Demo Board CD includes example code for several sample applications: an FM Radio display during a simulated channel scan, a 15 minute count down timer, a repeating pattern of 4 text lines and a scrolling message window. The user can edit this code and download to the reprogrammable Flash microcontroller via a 10-pin header included on the board using any external ICP style programmer. A small USB based ICP programmer that allows ICP programming of the P89LPC9103 and many other NXP microcontrollers from any PC with a USB port is also available from Future Designs, Inc. Details can be found at www.teamfdi.com/USB-ICP

Features

P89LPC9103 8-bit, 2-clock, 80C51 MCU

- 1 KB Flash, 128 bytes RAM
- 10-pin HVSON package (3 x 3mm^2)
- Internal RC Oscillator
- UART, ADC, DAC
- Two 16-bit timers & RTC
- Keypad Interrupt
- WDT with on chip 400kHz oscillator

PCF8562TT Single-chip LCD controller/driver

- 48-Pin TSSOP package
- 32 x 4-bit RAM for display data storage
- 400 kHz I^{2}C-bus interface
- No external components
- Wide supply range

Flexible board design – LPC9103, LPC9107 & LPC93x microcontrollers can be installed by the customer for prototyping new designs.

Ordering Information

Part Number: LCD-DEMO-KIT
Order Online Now at:
www.digikey.com

NXP: OM10088
12 NC #: 935282474598

Warranty: 30-day money back guarantee
Availability: Stock

(256) 883-1240 Phone
(256) 883-1241 FAX
E-mail:
www.teamfdi.com

Contents

LCD Demo Board:
- P89LPC9103 1KB Flash microcontroller
- PCF8562TT 128-segment LCD Driver
- 8-character alphanumeric LCD
- 3V Coin Cell Battery

LCD Demo CD:
- I2C bit-bang code for LCD Driver
- Demo application code
- Schematic
- In Circuit Programming (ICP) Documentation

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FDI Future Designs, Inc.
Your Development Partner