

Intelligent Programmable Serial/USB Color LCD Module



ezLCD-001
Intelligent LCD Module



ezLCD-001-EDK
Intelligent LCD Module
Evaluation Kit

Eval Board

Applications

- Industrial Control
- Home Automation
- Instrumentation
- Digital Signage
- Robotics
- Medical Devices
- Status Monitor
- Embedded Applications
- Automotive
- Avionics
- Nautical

Features

- Easily programmable with versatile interface
- Configure/save bitmap images for upload to Flash
- The only color serial LCD compatible with BASIC Stamp
- Icon command instantly updates screen with bitmaps
- Firmware upgradable via RS-232 or USB
- Downloadable fonts and image library
- TrueType font conversion
- Serial+USB+I²C+Parallel interfaces
- Interfaces with any microcontroller
- USB port for quick and easy bitmap uploads
- Color TFT Display
- 128Kb standard Flash memory
- Low power
- Portrait or landscape aspect

Specifications

- Sony 2.7" LCD (diagonal)
- Color active matrix TFT
- 240x160
- Reflective with LED frontlight
- 13:1 contrast ratio
- 512 colors
- Atmel ATmega 128L Embedded Processor
- Epson SED1375 LCD Controller
- USB
- RS-232 (115200 bps)
- I²C
- 8 bit parallel (Centronix printer protocol)
- 3.3-6.6 volt operation
- 100 ma maximum current

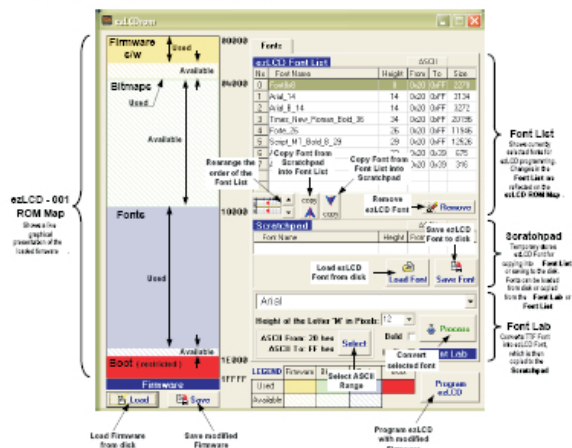
ezLCDrom Utility

Overview

The ezLCDrom is a utility, which allows the user to customize the Firmware of the ezLCD-001 by:

1. Adding and removing fonts
2. Adding and removing bitmaps or icons
3. Changing ezLCD settings like serial baudrate, pin assignments, etc.

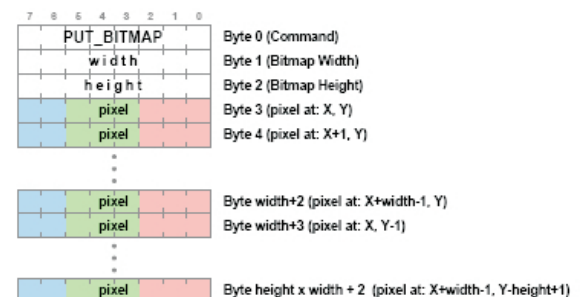
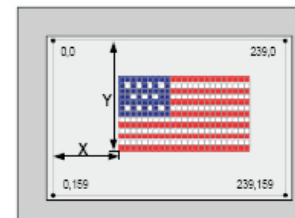
Note: In this preliminary version only 1. is implemented



*ezLCDrom Configuration Program
to configure and save bitmaps
to PC for quick Flash image update*

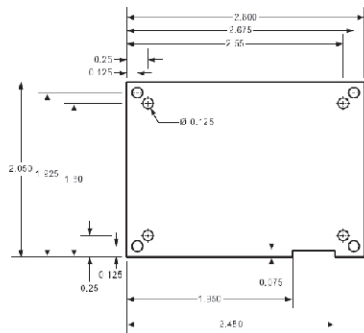
PUT_BITMAP

Description: Puts Bitmap on the screen starting at Current Position, then UP and RIGHT
Class: Multi Byte Command
Code: 2Ehex, 46dec, . ASCII

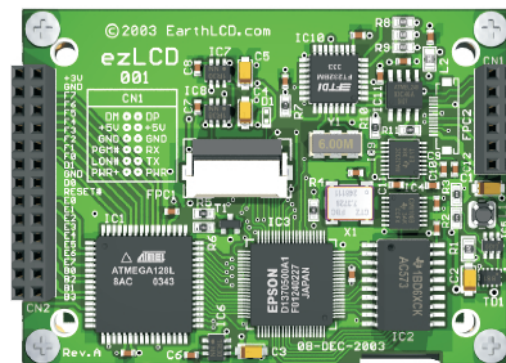


Extensive command set

NOTE: All dimensions are in inches



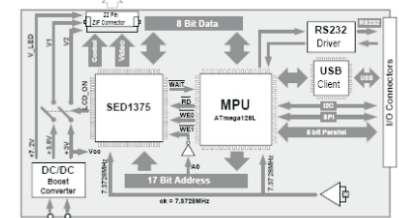
Board Layout



ezLCD-001 LCD Module
Shown at Actual Size
2.8" x 2.05"



Block Diagram



WHAT IS IT? ezLCD-001 is the first in an exciting new family of intelligent extended life products designed for quick time-to-market for OEMs by simplifying color LCD integration into a product or control system by providing unprecedented 'ez' connectivity and programmability via Serial, USB, I²C, SPI, or Parallel interfaces. It is an LCD terminal that can have its fonts and graphics icons personalized with an easy to use PC based utility and then be driven with a \$2 microcontroller to graphically enable and enhance any embedded system in as quick as an afternoon.

ezLCD is the world's first Programmable Color Serial LCD Display!

WHAT DOES IT DO? Bitmaps and fonts can easily be uploaded to the ezLCD with the included ezLCDrom utility. Once preconfigured then complex graphics, fonts and icons can be called up with as little as two byte commands from a microcontroller. This allows existing embedded projects to add a graphics user interface or status display with very little change to the base system in a very short period of time. ezLCD can run as a stand alone unit for use as a bitmap slideshow, or ezLCD can remain connected to a PC as an "intelligent display" for live data feeds for applications such as a continuously updating digital sign on a retail shelf, or a remote status display on an industrial machine. ezLCD is even compatible with BASIC Stamp, I²C, and AVR.

WHAT DO I NEED? The ezLCD-001-EDK Development Kit includes an ezLCD-001 module, power supply, serial cable, USB cable, ezLCDrom software, and an Eval Board which provides connectivity to the integrated Serial, USB, and power connectors for a quick path to development. Only one single Development Kit is required for programming and testing purposes, allowing the ezLCD-001 LCD Module to then be purchased in larger cost effective quantities.

The ezLCD-001 LCD Module can easily be removed from the Eval Board (gently lift off) for 'ez' integration into an OEM product. Interfacing to the serial/USB and power connections can then be accomplished by wiring directly into the ezLCD Module pinouts.

Minimum Requirements:

PC running Windows 95/98/ME/2000/XP

WHAT IS NEXT? More models with various screen sizes and features will be added to the ezLCD family of products!

WHAT DOES IS IT COST?

ezLCD-001 2.7" Color TFT Intelligent LCD Module \$149

ezLCD-001-EDK 2.7" Color TFT Intelligent LCD Module Evaluation Kit \$199

WHERE CAN I BUY IT?

www.EarthLCD.com (<http://store.earthlcd.com/ezlcd>)

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