ENK805X Development Board Reference Design User Manual

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Features Introduction

- MCU: ATMEL AT89S52 (also can support AT89C51/AT89C52/AT89S51)/ISP connector for in-circuit programming.
- RS-232 serial port interfacing.
- 1602 LCD connection port.
- 1 * RS-232 communication for connection with a PC.
- Digital LED display with 6 bit and 7 sections.
- 8 LEDs are provided.
- RELAY with 3A/30VDC 3A/220VAC NO and NC contacts with screw terminals.
- 2-ch. DC motor driver with indicators. Support motor voltage 1.5 to 5Vdc.
- Beeper.
- 4 buttons are provided.
- Small (98mm x 47mm x 15mm).
1 ENK805X KIT Board Schematic

1.1 Introduction

This document includes design information, schematics and parts list, for the ENK805X KIT reference board.

1.2 Revision History

The revision history for this document is provided in the following table.

<table>
<thead>
<tr>
<th>Table 1-1 Revision history</th>
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<tbody>
<tr>
<td><strong>Version</strong></td>
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<td>1.00</td>
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1.3 Schematic

The schematic is not optimized for production due to its conservative design approach.
Package includes the following item:

1. ENK805X ATMEL 8051 Development Board * 1 (included 1pcs AT89S52-24(PU) Chip)
2. 3pin Experimental wire * 1
3. 4pin Experimental wire * 1
4. Nuts and Screws set * 4
5. user manual please download for www.ienk.com

Notice:

Worldwide shipping by Registered Air Mail---- about 5-15days
ENK805X Board functional description

- Support AT89C51/AT89C52/AT89S51
- LCD 1602 PORT
- POWER LED
- Motor drive chip
- Serial Output Interface
- RS232 chip
- 8 Led & LCD 1602 switch
- 8-bit Digital LED 6 bit and 7 sections
- Standard ISP Interface
- RF RX module interface
- Motor chip OUT
- SYS RESET
- FUN KEY1
- FUN KEY2
- FUN KEY3
- Beep
- DC Motor signal input switch
- Relay OUT
- POWER Switch
- POWER LED
- L:98mm
- W:47mm
Power Connection

Power modules supplies power for the entire development board ENK805X, it provides 5VDC output for all functional modules to work. Power Interface shown in Figure.

The connection needs through the external input direct-current power supply, the input range in 6V~12V, to recommend 9V the voltage. **Note: The interface to the center of the positive.**

LCD power supply and 8*LED power supply switching

In the figure above demonstration is 8*LED the power source condition

In the figure above demonstration is LCD the power source condition
Serial port connection explanation

As shows, black 3Pin part for serial port output connection position. The design idea is facilitates other modules the connection. The serial port may connect computer's serial port position.

DC motor drive connecting the output

DC motor driver IC is the completion of a similar DIY robot movements and toy car motor drive motor drive. It can drive one or two motors running.

Please note: I do not recommend you use it to drive high-power DC motor, due to driver IC connected to the L7805, power the greater the power consumption may increase in L7805. Possibly will damage the power supply chip-L7805.
Relay control output

Relay outputs can be isolated for high-voltage electrical switch control. The relay outputs has two cluster switches, a group is often open, a group is often closed. You may need to implement an external device according to the switch control.

Please note: Use the relay switch, try not to use high-voltage electrical equipment to do controlled experiments. In order to avoid electric shock accident.

External Control Interface

the 6Pin jack, uses in the external signal the input. Such as the RF received signal. You can programmatically control the input or output. At the same time you can refer to ENK schematic to understand and learn.

You can contact me via e-mail way, tell me all the problems you encounter, I will try to help you. Be happy to help you.
ISP programming

ENK805X development board offers a standard ISP programming interface AT89S52 Chip, you can be very easy to use with the ISP to connect to the control of programmers.

You can through the website http://www.ienk.com/documents.php?type=3, download digital LED test code. File Name: ledclock.hex. Test ENK805X digital LED, the following is my own computer presentations.
Last note: I am writing skills in English is not good, please excuse. The case in the use ENK805X process, have any questions please send an e-mail to me.

Regards,
Brian.song

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