

## 8086 Microprocessor Trainer

Made in China



LT-8086

**The system resource is open completely, with rich on-board resources and very high expansibility.**

LT-8086 training platform adopts INTEL8088(compatible 8086) system, all the system resources, 8-bit data line, 16-bit address line, read and write control signal are all lead out and open to the users. The training kit board has rich module resources, please see the module resources list in detail. Besides, it also provides “experiment module extension” interface, and offer rich sensor module packages, thus make the single sensor training platform and microcomputer interface training platform can get rid of the limitations of separating from the teaching, implement the perfect combination of the current sensor and microcomputer interface, make our designed microcomputer interface closer to the actual application and more intelligent.

**Standard configured high speed easy used USB communication interface, can on-line simulation and adjust program**

Standard equipped with USB communication interface, can plug and use at will, can applied for desktop computer and the laptop without serial port, support the operation Systems of WIN98 , WINME , WIN2K , WINXP , WIN7, also can conveniently switchover to RS232 serial communication interface, through upper software connection, can implement online simulation, adjusting and developing program

**Do not need computer and the convenient and rapid demonstration mode**

The system is equipped with management monitoring, in the condition of no PC machine connection, the system can automatic switchover to off-line management state, the users can use the 4\*6 keyboard at the bottom right corner to call the experiment programs in the EPROM, can do the experiment off-line, which is convenient for the teacher to verify and demonstrate during the initial teaching period, at the same enhance the interest and desire of the student.

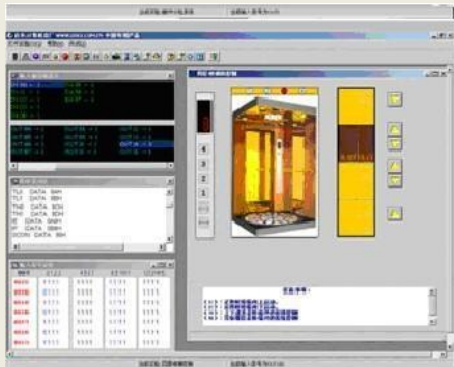
**Its difficulty is increased gradually, with detail experiment introduction**

The experiment difficulty is increased gradually, from simple to complex, make the new learners can completely master all kinds of complex system and programming design from beginning unconsciously,

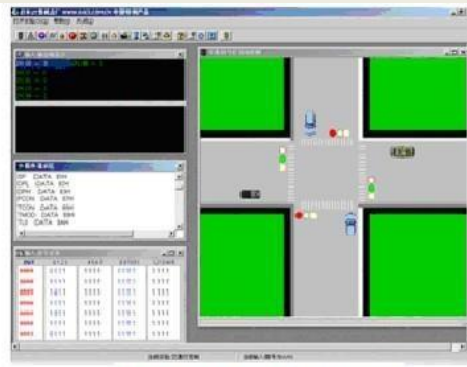
**Vivid digital control type innovative training platform**

LT-DAQ digital control innovative training platform is to describe some complex experiment (such as the four layers elevator control system) by current popular two-dimensional animation technology and with the help of PC resources and control system to simulate the actual object. Through USB interface circuit to implement CPU control to

Virtual controlled object and the both way communication between CPU and virtual controlled object. This training platform is vivid and with strong operability, can implement complex close loop control which is greatly improve the student learning interest and creativity. Comparing with the traditional real object module, it has high-cost performance; do not need the following maintenance and repair, convenient and safety use. At present, this innovative training platform has 15 typical system experiments.



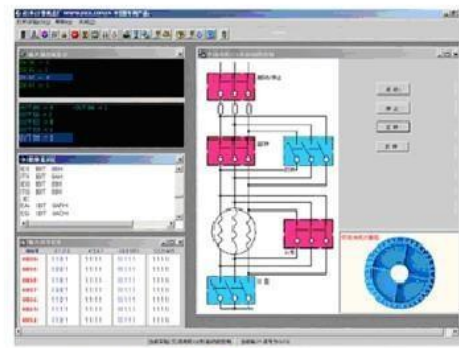
**Four layers elevator control system**



**Traffic light control system**



**Mails sorting control system**



**Star delta start control system**

**Digital control type innovative training platform part demonstration interface**

## LT-8086 microcomputer principal interface training kit

### (1) system composition

The training module resources and accessories list (standard configured)	
1. User CPU (Intel8088), can on-line simulation	2. USB communication interface
3. Data, address line, read and write signal and other control lines and decoding address area	4. Decoding and lock unit 5. (designed by CPLD chip 1032)
6. Extend ROM(64K), extend RAM(64k)	7. Extending module area (can extend sensor and other new type module)
8. RS232 serial communication port	9. 8251 experiment module
10. 8253 experiment module	11. 8279 experiment module
12. 8237 experiment module	13. 8259 experiment module
14. 8255 experiment module	15. 8155 experiment module
16. 4-6 matrix keyboard module	17. 6 bit dynamic nixie light training module
18. 8 bit LED light emitting diode output module	19. 8 bit switch value input module (dial switch)
20. 8 bit switch value input module (button switch)	21. 16*16 dot matrix experiment module
22. 128*64 LCD display module	23. DC power supply module (provide +5V, +12V, -12V)
24. I/O port extension module (74LS244, 74LS273)	25. Buzzer module
26. Emitter follower experiment module	27. Single pulse and fixed clock module
28. Parallel A/D conversion module (ADC0809)	29. parallel D/A conversion module (DAC0832)
30. Adjustable voltage module	31. Audio power amplifier module (LM386)
32. Relay module	33. DC motor module (with hall sensor)
34. Four-phase step motor module (with drive circuit)	35. With CD disc (contains source code, tools software, manual)
36. With 220V power cable 1 pce	37. With experiment jumper wires, 8-core color jumper wires: several

### (2) Electrical performance and size

Electrical performance, size and weight	
1	Input power supply: AC 220V $\pm$ 10% 50HZ
2	Output power supply: DC +5V/3A、+12V/0.5A、-12V/0.5A
3	Working environment: temperature 10~+40 $^{\circ}$ c, relative humidity < 85%, altitude < 4000m
4	Capacity: < 0.5KVA
5	Weight: about 5KG
6	Size: 520*330*140mm

7	With short circuit protection, self-recovery function.
8	Box material: adopts light aluminum alloy frame wooden box, beautiful and elegant, durable. LT-8086

**(3) Experiment project**

<b>Software experiment</b>	
1.Binary system multibit addition experiment	2.convert the binary system to BCD code experiment
3.Convert the BCD code to binary code experiment	4.Decimal number BCD code subtraction operation
5.The memory clearing experiment	6.Digital code display experiment
7.Caculate the maximum and minimum number	8.Data block transmission experiment
9.Branch programming design	
<b>Hard ware experiment</b>	
10.ADC0809 conversion experiment	11.DAC0832 conversion experiment (1)
12.DAC0832 conversion experiment (1)	13.8255A parallel port experiment (1)
14. 8255A parallel port experiment (2)	15. 8253 timer/counter experiment
16. 8259 single stage interrupt controller experiment	17. RS232 serial port transmitting experiment (two machine communication)
18.RS232 serial port receiving experiment (two machines communication)	19.Small DC motor speed regulating experiment
20. Step motor control experiment	21. Relay control experiment
22. Memory unit read and write experiment	23.electronic organ (with audio poweramplifier module)
24.Simple I/O port extension experiment	25. 8251 programmable communication interface and PC machine communication
26. 16*16 LED dot matrix display experiment	27. 128*64 LCD LCD display experiment
28. 8237 DMA transmission experiment	29. 8279 keyboard display experiment
30.8155 module experiment	31.Emitter follower experiment
32LED nixie light display experiment	33.PWM pulse width modulating experiment