

ET-BASE AVR EASY32U4 TRAINING BOX (P-ET-A-00490)

ET-BASE AVR EASY328 TRAINING BOX (P-ET-A-00498)

ET-BASE AVR EASY168 TRAINING BOX (P-ET-A-00389)

ET-BASE AVR EASY88 TRAINING BOX (P-ET-A-00388)

This Training Kit is designed for learning and understanding the operation of AVR MCU in the format of C Language (C++) of Arduino Project as OPEN SOURCE. It can write C Language Program and it can directly DOWNLOAD data from computer PC to board. Moreover, it provides various tools in the Kit in order to interface and test circuits properly, including C Language Program for testing each circuit; it is full of description and illustration. In this case, it is divided into 4 versions as follows;



1. ET-BASE AVR EASY32U4 TRAINING BOX

- Board Microcontroller uses AVR MCU No.ATMEGA32U4 44-PIN TQFP to be MCU on board; RUN Frequency 16.00 MHz
- Use 32 KBYTE FLASH Memory (reserved 4 KBYTE for BOOTLOADER), 2.5 KBYTE RAM, 1 KBYTE EEPROM
- Has USB CONTROLLER insides in the format of USB 2.0 FULL SPEED/LOW SPEED
- When developed by Program Arduino, it can directly program through PORT USB, without using any external Programmer. It is compatible with the Operation System of Windows 98/ XP/ 2000/ VISTA/ 7/ MAC OSX/ LINUX
- Has totally 24PIN DIGITAL I/O (D0-D23); these DIGITAL I/O Pins are used as 12-CH ANALOG INPUT (ADC 10 BIT), 7-CH PWM, 1-CH SPI, 1-CH I2C, 1-CH USART
- Has 4 of 10 PIN ET Connector
- Has RS232 PORT 4 PIN ET with 1-CH LINE DRIVER
- Has Connector USB TYPE B

2. ET-BASE AVR EASY328 TRAINING BOX

3. ET-BASE AVR EASY168 TRAINING BOX

4. ET-BASE AVR EASY88 TRAINING BOX

- Board Microcontroller uses AVR MCU **No.ATMEGA328** for Board "ET-BASE AVR EASY328 TRAINING BOX", **No.ATMEGA168** for Board "ET-BASE AVR EASY168 TRAINING BOX" and **No.ATMEGA88** for Board "ET-BASE AVR EASY88 TRAINING BOX"
- ATMEGA68 has 8 KBYTE FLASH Memory; ATMEGA168 has 16 KBYTE FLASH Memory, 1 KBYTE SRAM, 512 BYTE EEPROM, RUN Frequency 16.00 MHz; and ATMEGA328 has 32 KBYTE FLASH Memory, 2 KBYTE SRAM, 1 KBYTE EEPROM, RUN Frequency 16.00 MHz
- Has 3 of PORT I/O 20 BIT (PB 6 BIT), (PC 6 BIT), (PD 8 BIT); it is RS232, SPI, I2C, TIMER/COUNTER, A TO D 10 BIT 6-CH
- 3 of Connector 10PIN ET, and Connector OUTPUT with 1 of 74HC595 10 PIN IDE ET
- Has SW RESET and SW BL (PD2) to Reset board to run as BOOTLOADER through PORT RS232
- Has PORT RS232 4 PIN ET for use and DOWNLOAD Program



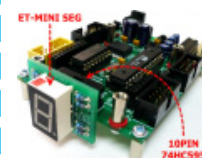
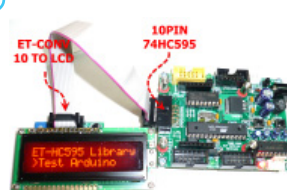
Board Microcontroller version "ET-BASE AVR EASY32U4 TRAINING BOX"



Board Microcontroller version "ET-BASE AVR EASY328 TRAINING BOX", "ET-BASE AVR EASY168 TRAINING BOX", "ET-BASE AVR EASY88 TRAINING BOX", it has the same board's figure but MCU of each version is different.

It can test and learn

1. Structure of writing C Language Program
2. How to use C Language Commands
3. How to test DIGITAL INPUT/OUTPUT
4. How to test ANALOG INPUT
5. How to test with LCD Display
6. How to test with SOUND SPEAKER
7. How to test with STEPPING MOTOR
8. How to test with DC MOTOR
9. How to test with 1-WIRE BUS Device
10. How to test with I2C BUS Device
11. How to test with SPI Device
12. How to test with INTERNAL MEMORY



This Training Kit is contained in the high quality plastic box, so it can use and keep this Training Kit properly. This Training Kit includes

1. Board Microcontroller
2. ET-MINI MCP4922
3. ET-MINI DC MOTOR
4. ET-MINI SMCC V2
5. ET-MINI DS1307
6. ET-MINI PCF8583
7. ET-MINI PCF8574
8. ET-MINI 24xx
9. ET-MINI SEG-A
10. ET-TEST 10P/OUT
11. ET-TEST 10P/INP
12. ET-CONV 10 TO LCD
13. 1-WIRE BUS DS1990A
14. LCD LED BACKLIGHT 16-Character 2-Line
15. SPEAKER, VOLUME, DS18S20
16. DC ADAPTER 10VDC 850mA
17. Manual for testing (THAI LANGUAGE)
18. CD-ROM with C Language and Example Programs for testing
19. Cable USB TYPE A/B (for "ET-BASE AVR EASY32U4 TRAINING BOX")
20. High quality plastic box to keep the Training Kit "ET-BOX1"

