

DIGITAL LOGIC DESIGN TRAINING & MEASUREMENT KIT

HBE-DTK-20K-240

HBE-DTK-20K-240 can make an inspection of DSP design, FILTER design, Combinatorial Logic design, Storage Arithmetic Logic design, and Logic motions as well as the Basic Logic Circuit Practice using the basic input/output device. Hanback Electronics Co., Ltd. offer MAX+plus II University Version of ALTERA Com. with HBE-DTK-20K-240. MAX+plus II University Version can use HBE-DTK-20K-240 Board without purchasing the formal software extra by supporting EPF10K20R240-4 installed in HBE-DTK-20K-240.



■ Characteristics of HBE-DTK-20K-240 Training kit

- 1) Diverse designs by using EPF10K20RC-240 device of FLEX10K family of ALTERA Ltd..
 - Integration of complex circuits
 - Design of one chip circuit
 - Economy in the developing expenditure
 - Performance of the basic ASIC Emulator function
- 2) One chip design of DSP(filter), Processor, Controller and Algorithm etc.
After designing the digital logic such as DSP(filter), processor and controller with MAX+plus II of ALTERA Ltd, it is possible to verify that its operation is normal by downloading it to HBE-DTK-240 board.
- 3) Multimode configuration method
 - Byteblaster : It is possible to check the operation of a circuit by directly configuring the designed circuit from PC to the device.
 - PS(Passive Serial) : It is possible to program the serial ROM by user first-hand and to configure to the device directly by using the programmed ROM.
- 4) Selection of diverse input frequencies(16 series)
It is possible to select 16 modes including 80 MHz, 40 MHz, 20 MHz, 16 MHz, 10 MHz, 8 MHz, 5 MHz, 4 MHz, 2.5 MHz, 2 MHz, 1.25 MHz, 1 MHz, 100 kHz, 10 kHz and 100 Hz of oscillator and 25.174 MHz of external clock for use.
- 5) Interfacing among other input/output devices and other circuits by using an expansion port
As two 50-pin and ten 20-pin expansion ports are mounted in the equipment, the logic can be verified through other board or other external test equipment.

■ Technical Specification

Model Name	Specifications
Device	EPF10K20RC240-4
Gate Level	20,000 Gate
Device Internal memory	12,288 bit
Applied Program	MAX+PLUS II 9.1 이상
External memory	RAM(256 kbit) , ROM(256 kbit)
EEPROM	Configuration Serial EEPROM
Input/Output Equipment	Button Switch, Bus Switch, VGA Port, RS232C Port, PS 2
Input Frequency	80MHz, 40MHz, 20MHz, 16MHz, 10MHz, 8MHz, 5MHz, 4MHz, 2.5MHz, 1.25MHz, 1MHz, 100KHz, 10KHz, 100KHz, External Clock
Expansion Port	50 pin x 2
I/O Interrupt Switch	8 pole dip switch * 8
Power Source	DC 5 V
Board Size(mm)	340 x 240
Case Size(mm)	360 x 260 x 128