µ-KIT-CPU-88

Microprocessor Trainer

General

The Hampden **Model µ-KIT-CPU-88** Microprocessor Trainer provides students with valuable hands-on experience in the wiring, testing, operation and troubleshooting of the most popular 16-bit microprocessor available in industry today.

Description

The Hampden **Model µ-KIT-CPU-88** contains all of the circuits and components necessary to construct an actual singleboard microprocessor, including the Intel 8088 16-bit CPU chip, a printed circuit board, keypad for data entry, LED display, expansion bus, I/O connector, and assorted support integrated circuit chips.

Once the student has assembled and properly tested the trainer, they are able to concentrate on programming and running programs via the 36-function keypad.

The **µ-KIT-CPU-88** interfaces with equipment such as programmable controllers, motors, or robots through circuits connected to the I/O Bus. The on-board 16K bytes of RAM and 8K bytes of EPROM are expandable to up to 1 megabyte of memory via add-on boards connected through the Expansion Bus.

Remote operation and interfacing can be accomplished through the onboard RS-232 serial and parallel ports. An on-board DCDC converter provided the ±12V needed for serial operation.

Operation

The Hampden **Model µ-KIT-CPU-88** can be assembled within a single 3-hour class period, depending on the skill and experience of the student.

The completed unit must be powered by a separate 5V DC power supply. The µ-KIT-CPU-88 draws 450mA max.

Following are some of the principal characteristics of the Hampden **Model µ-KIT-CPU-88:**

1. The Intel 8088 CPU chip uses the most popular instruction set of all 16-bit microprocessors, utilizing the same commands as the IBM PC and PS/2 family of computers.
2. Uses a 4.77 MHz clock speed. This allows the student to use an oscilloscope with a speed of 20 MHz.
3. The 24-key, 36 function keypad is under control of the system monitor, a source program loaded into the 8K EPROM chip at the factory. The student thus interfaces directly with the microprocessor by programming in machine language. No assemblers or compilers are needed.
4. The students receive their feedback from the CPU via a 12-character LED display.
5. The µ-KIT-CPU-88 has 16K of RAM memory, 1K of which is allocated for the monitor program's use. The remaining 15K is free to be used by student applications.

Accessories

MODEL µ-KIT-MPS-88 Power Supply Module, consisting of:

- A 5V DC, 3A power supply with a fuse-protected, 120/240V AC - 1ϕ - 50/60Hz input.
- Mini-pomona jacks provide convenient connection terminals.
- 2 cords

MODEL µ-KIT-EBA Experiment Board Accessories Module, consisting of:

- A 26-conductor ribbon cable for connection to the I/0 bus of the µ-KIT-CPU-88.
- A breadboard module for assembly of experiments, such as AC control, DC control, A/D and D/A acquisition.

MODEL µ-KIT-TVT BASIC Interpreter

- The student is able to attach a serial terminal to the integral RS232 port and program the µ-KIT-CPU directly in the BASIC language.

MODEL µ-KIT-FDI Floppy Disk Interface, consisting of:

- This module provides an interface for the standard 3.5" floppy format typical of IBM PC computers and compatibles.

All Hampden units are available for operation at any voltage or frequency

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