# Build your own Computer!

"MyCPU v2.3" is a computer that is completely build with standard discrete logic gates. It reaches a speed up to 8 MHz. Many software is available, and for a quick start a Basic Interpreter is part of the provided Operating System.

The "MyCPU v2.3" is ideal for education, and is a nice project for enthusiastic hobbyists. The picture on the right side shows the components that are required for the smallest possible system configuration.
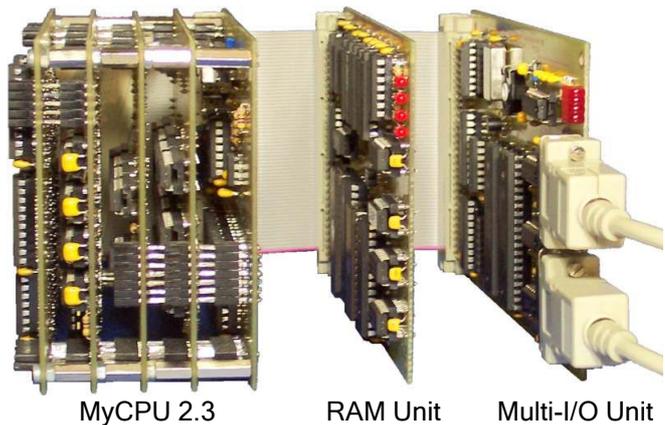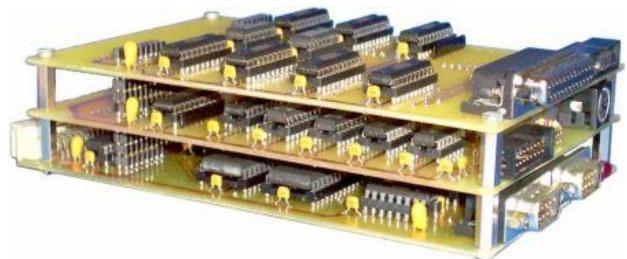

MyCPU 2.3   RAM Unit   Multi-I/O Unit

Required Components:

CPU, 5 Boards

Multi-I/O Unit
3 Boards, only the base board is required for a minimalist system.

Memory-Unit
2 Boards, only the base board is required for a minimalist system.

To getting started with your own computer, do the following:

- Download the MyCPU – Self-Build-Guide and the MemUnit – Self-Build-Guide. Only the first board of the Memory Unit is required, so you need to assemble six printed boards.

- When the CPU and the memory unit do work properly, you can continue with the Multi-I/O-Interface Unit. Download the Multi-I/O-Unit Self-Build-Guide and the overall software package. For a minimal working system you need only to build the base board of the Multi-I/O Unit. Now you have seven printed boards in sum, and with the software package you will end up in the following setup:

COM1 (Terminal)

COM2 (Remote Filesystem)
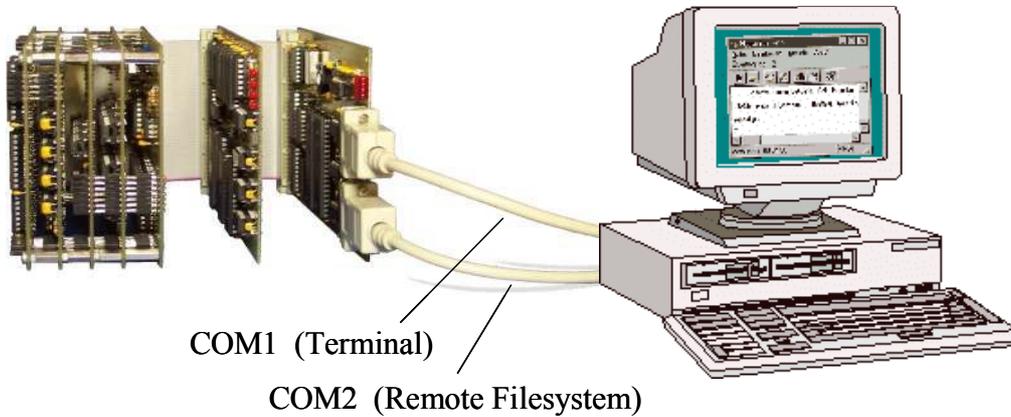
The system uses COM1 for terminal communication and COM2 for file service. The personal computer acts as file server. There are several applications you can use on the MyCPU:

- The Basic Interpreter enables you to write your own basic programs.
- A simple Text Editor is provided, so you can write text files.
- You can write your own programs with the assembler or with the available "C"-Compiler.
- With a bit more hardware you can run telnet and a http web-server on the MyCPU.
- You can dive deeper into the system, i.e. you can develop your own assembly language.

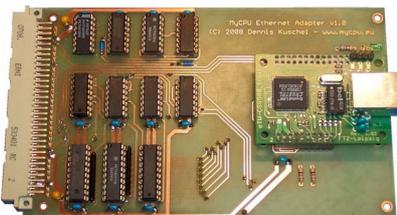This additional hardware is available:
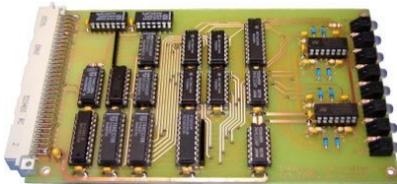
The **Interrupt Controller** allows precise timing through an additional timer interrupt.

The **IDE Interface** allows you to connect Compact Flash Cards for data storage.

The **VGA Graphic Unit** makes it possible to connect big screens (i.e. CRT's or TFT's)

The **Ethernet Controller** connects the MyCPU to the Internet.

More hardware is in planning:

- With the **A/D + D/A** conversion board you can do lots of measurement things.
- With the **Sound Board** the MyCPU is no more silent.
- And many more. Maybe you develop something new for the MyCPU? Let me know!

Visit me at **http://www.mycpu.eu** and get the latest documentation!

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