

# Intel 8088 - A blast from the past

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[www.ednutter.ws](http://www.ednutter.ws)

<https://www.embeddedrelated.com/showarticle/1041.php>



The Intel 8088 is an 8 bit processor related to the 16 bit 8086.

The Microcomputer class consisted of wire-wrapping the chips to perfboard using sockets. I had taken computers apart, soldered, etc., but had never used wire-wrapping to construct a computer board to that point. Most people carried the board to class. A few people stared when I opened the plywood box with breadboard area, and plugged the full-sized power supply in. The lid is wide enough to hold the 11x17 paper the schematics were printed on.

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Once the boards were working properly, we started writing assembly language programs to perform various tasks.

The second class involved wiring more chips on the board and more programming.

I remember in the CS Assembly course, we had to write everything ourselves. In this course, we could use some of the existing language features.

Today, the Raspberry Pi far surpasses the performance for the price of this board, but you can't build it yourself...

X86 Assembly Language

[https://en.wikipedia.org/wiki/X86\\_assembly\\_language](https://en.wikipedia.org/wiki/X86_assembly_language)

[http://bitsavers.informatik.uni-stuttgart.de/pdf/intel/dataBooks/1981\\_iAPX\\_86\\_88\\_Users\\_Manual.pdf](http://bitsavers.informatik.uni-stuttgart.de/pdf/intel/dataBooks/1981_iAPX_86_88_Users_Manual.pdf)

8088 Datasheet:

<http://www.nj7p.org/Manuals/PDFs/Intel/231456-006.pdf>

8237 Direct Memory Access Controller:

<http://www.intersil.com/content/dam/Intersil/documents/82c3/82c37a.pdf>

8251 Programmable Communication Interface

<http://www.alldatasheet.com/datasheet-pdf/pdf/66096/INTEL/8251A.html>

8254 Programmable Interval Timer

<http://www.alldatasheet.com/datasheet-pdf/pdf/66099/INTEL/8254.html>

8259 Programmable Interrupt Controller

<http://www.alldatasheet.com/datasheet-pdf/pdf/66107/INTEL/8259A.html>

8284 Clock Generator Chip

<http://www.alldatasheet.com/datasheet-pdf/pdf/124124/INTEL/8284A.html>

LM1489 Line Receiver:

<http://www.ti.com/lit/ds/symlink/ds1489.pdf>

LM1489 Line Driver:

<http://www.onsemi.com/pub/Collateral/MC1488-D.PDF>

Other information:

<http://www.homebrew8088.com/>

<http://sasteven.multics.org/8088page.html>