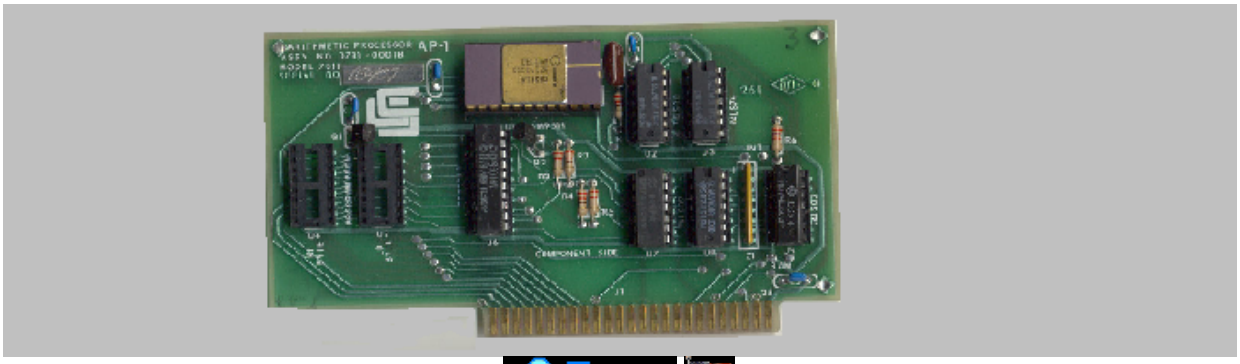
ARITHMETIC MODEL 7811



Zoom

Card manufactured by CALIFORNIA COMPUTER SYSTEMS (CCS) from a 32-bit arithmetic processor the AM9511. Mathematical functions are more than greatly improved and therefore better speed can be obtained by graphics software.

AMD 9511

The AMD 9511 (AM9511) is a mathematical processor performing floating point and trigonometric calculations, on 16 and 32 bits. It can use an input / output system or DMA.

The 8231A APU (Arithmetic Processing Unit) is the Intel clone of the AMD 9511. No, you are not dreaming! Intel did well with AMD clones !!! (and until 1986 for this processor ...)

Card templates

There are three models of cards
- 7811
- 7811B with a CCSOFT diskette 7811C
- with CCSOFT on a ROM

There is another option, the 7811 D, which is intended for users with an APPLE 64K. In this case the CCSOFT software is loaded into the language card but IMPOSES that the APU card must be in SLOT 1.

The CCS card uses CCSOFT software to execute the operations and functions of APPESOFT and for functions not existing in APPLESOFT, they can be performed using the command USR (x)

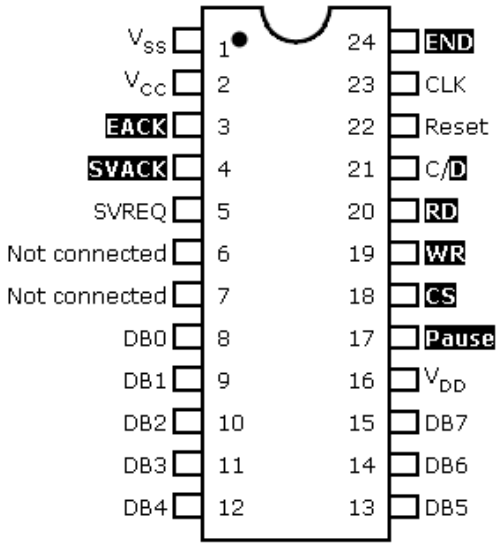
CCS had planned to interface CCSOFT and PASCAL.

Obviously I have neither the floppy nor the ROM to use the card from the INTEGER or APPESOFT. That said in assembly it poses no problem of use, it would even be better.

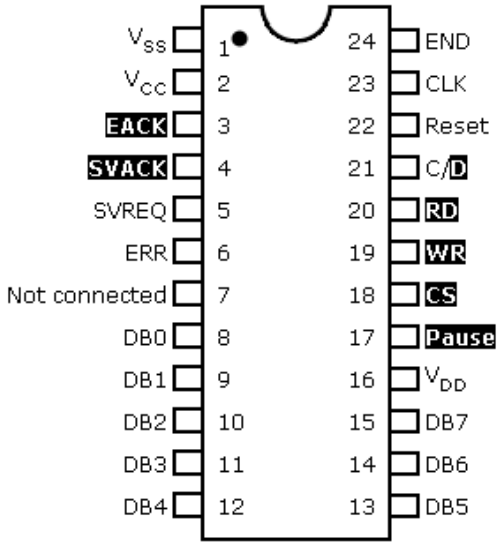
Documentation

Pinout of CPU 9511 and 9512

9511 FPU



9512 FPU



Does my card work?

To test the card in entry and exit, it is necessary to know the addresses of entry / exit of the card which, very conventionally, depend only on the number of slot and are of the form C0xN or the value x will be (Slot + 8) therefore:

- Slot 1 x = 9
- Slot 2 x = A
- Slot 3 x = B Do not use on Apple // e!
- Slot 4 x = C
- Slot 5 x = D
- Slot 6 not recommended this is drive
- Slot 5 not recommended the boot will not go well

Then you have to go under the monitor (CALL-151) then hit the following commands: **C0x1: 1A** RETURN **C0x0.C0x7** RETURN You should see the following result: **C0x0 - 02 00 C9 00 0F 00 DA 00**

The 1st, 3rd, 5th and 7th bytes are the result data
The 2nd, 4th, 6th and 8th bytes correspond to the status of 9511

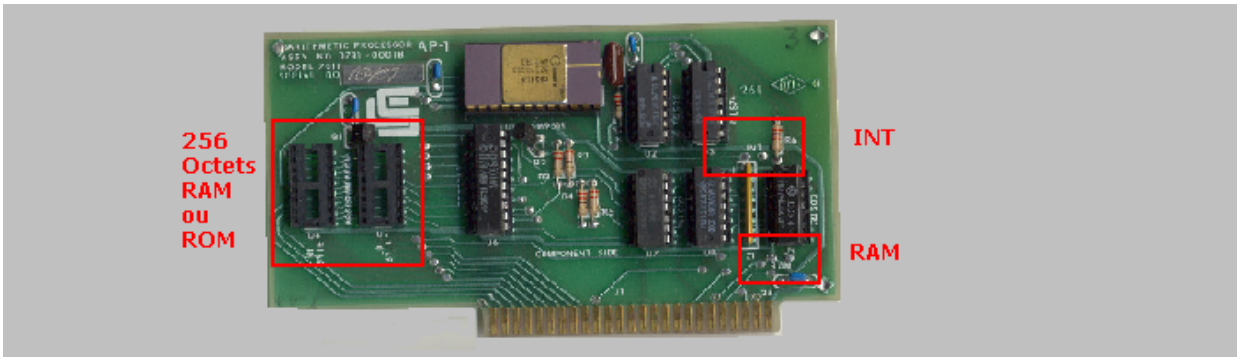
Floppy disks

Diskette ... Please send it if you have it!

Vintage advertisements

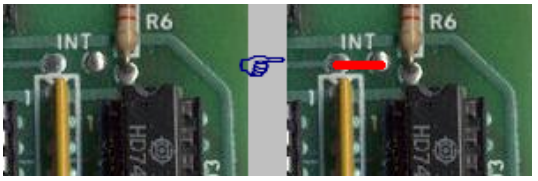
Tips and tricks

The two techniques below are not useful with CCSOFT software but only if you want to write specific drivers or if your application requires it.



Switch to IRQ / DMA mode

the card supports the INT mode in chain but for this it is essential to solder the jumper which is above the circuit U9, to the left of the resistor R6



Addition of memory on U4 and U5

You can add 256 bytes of memory (RAM) but for this it is essential to solder the jumper which is under the circuit U9