

Guide to Program AT89C4051 Chip with ChipMax Device Programmer

ChipMax supports a large set of chips. Feel free to shop around other chips to fulfill the requirement of your system, as long as it is programmable with ChipMax.

Devices & Softwares

1. EPROM Programmer ChipMax (http://www.eetools.com/index.cfm?fuseaction=product.display&Product_ID=7)
We have one in lab 208. Contact Tao Jin to arrange a time to use this device.
2. MaxLoader - software that writes the program to chips with ChipMax Device Programmer
[download](#)
3. [SDCC](#) (Small Device C Compiler)

Hello World

1. open command prompt, type "sdcc". If it shows the options for sdcc command, that means the compiler environment has been properly setup and you are ready to go.
2. write a small C program
helloworld.c

```
void main() {  
    int i;  
    i = 0;  
}
```
3. compile helloworld.c
\$ sdcc test.c

SDCC will generate a bunch of files. See [here](#) for info about the generated files
"helloworld.ihx" is the intel hex format load module, which is to be loaded to chip, here we use Atmel AT89C4051

4. Place chip AT89C4051 on the ChipMax Device Programmer
NOTE: The direction of the chip should be the same as the figure printed to the left of the chip slots.
5. open MaxLoader
6. go to Device->Select, search Atmel AT89C4051, choose the DIP20 one.
7. go to File->Load, load helloworld.ihx
8. click "Program Device"
if the log console shows "program Ok. Verification Ok." your program has been properly written to your chip.
9. Now you are ready to play around something more complicated