

Re: Bootloader – erase flash memory

Source: <http://coding.derkeiler.com/Archive/General/comp.arch.embedded/2004-11/0892.html>

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- > *how you can erase the flash with assembly code?*
- > *What exactly is the principle of erasing memory? Is it to set every bit to*
- > *zero or exactly does that mean?*

Erasing flash means setting every bit to 1. Programming flash means to set an arbitrary number of bits to 0. Bits cannot be "programmed" from 0 back to 1, except by erasing (possible only for a whole page at once).

So, to write your firmware into the flash, you have to first erase the flash, and then program your firmware.

To avoid accidental writes, most flash chips need a special programming sequence (and a special erase sequence as well). Usually the sequence begins with writing 0xAAAA to address 0xAAAA, followed by writing 0x5555 to address 0x5554, and then writing a command (eg "ERASE") to address 0xAAAA. These writes are purely virtual and don't overwrite your firmware addresses 0x5554 or 0xaaaa. They make the flash listen to your command.

Read the datasheet of your flash, or copy off a working flash driver to make your project going.

Marc