Engbedded Atmel AVR® Fuse Calculator
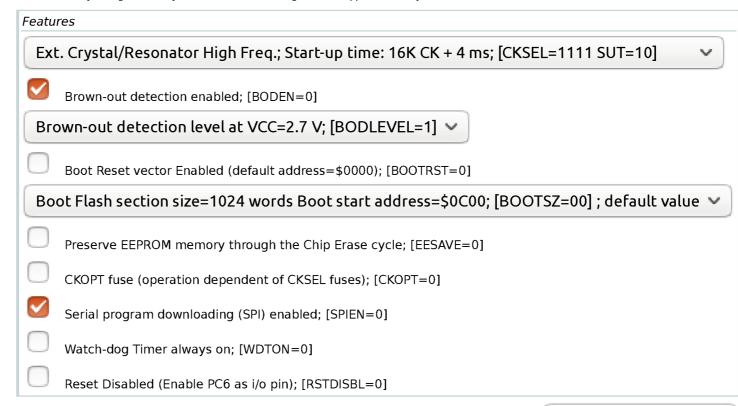
Device selection

Select the AVR device type you want to configure. When changing this setting, default fuse settings will automatically be applied. Presets (hexadecimal representation of the fuse settings) can be reviewed and even be set in the last form at the bottom of this page.

AVR part name: [ATmega8 ▾] [Select]   (141 parts currently listed)

Feature configuration

This allows easy configuration of your AVR device. All changes will be applied instantly.

Features

[Ext. Crystal/Resonator High Freq.; Start-up time: 16K CK + 4 ms; [CKSEL=1111 SUT=10] ▾]

☑ Brown-out detection enabled; [BODEN=0]

[Brown-out detection level at VCC=2.7 V; [BODLEVEL=1] ▾]

☐ Boot Reset vector Enabled (default address=$0000); [BOOTRST=0]

[Boot Flash section size=1024 words Boot start address=$0C00; [BOOTSZ=00] ; default value ▾]

☐ Preserve EEPROM memory through the Chip Erase cycle; [EESAVE=0]

☐ CKOPT fuse (operation dependent of CKSEL fuses); [CKOPT=0]

☑ Serial program downloading (SPI) enabled; [SPIEN=0]

☐ Watch-dog Timer always on; [WDTON=0]

☐ Reset Disabled (Enable PC6 as i/o pin); [RSTDISBL=0]

Manual fuse bits configuration

[Apply feature settings]

This table allows reviewing and direct editing of the AVR fuse bits. All changes will be applied instantly.

Note: ☐ means unprogrammed (1); ☑ means programmed (0).

Bit	Low	High
7	☐ BODLEVEL — Brown out detector trigger level	☐ RSTDISBL — Disable reset
6	☑ BODEN — Brown out detector enable	☐ WTDON — Enable watchdog
5	☐ SUT1 — Select start-up time	☑ SPIEN — Enable Serial programming and Data Downloading
4	☑ SUT0 — Select start-up time	☐ CKOPT — Oscillator Options
3	☐ CKSEL3 — Select Clock Source	☐ EESAVE — EEPROM memory is preserved through chip erase
2	☐ CKSEL2 — Select Clock Source	☑ BOOTSZ1 — Select Boot Size
1	☐ CKSEL1 — Select Clock Source	☑ BOOTSZ0 — Select Boot Size
0	☐ CKSEL0 — Select Clock Source	☐ BOOTRST — Select Reset Vector

Current settings

[Apply manual fuse bit settings]

These fields show the actual hexadecimal representation of the fuse settings from above. These are the values you have to program into your AVR device. Optionally, you may fill in the numerical values yourself to preset the configuration to these values. Changes in the value fields are applied instantly (taking away the focus)!

Low	High	Action	AVRDUDE arguments
0x AF	0x D9	[Apply values] [Defaults] Apply manual changes to the values on the left side, or load factory default values for the selected device.	`-U lfuse:w:0xaf:m -U hfuse:w:0xd9:m` Select (try triple-click) and copy-and-paste this option string into your avrdude command line. You may specify multiple -U arguments within one call of avrdude.

References

All information based on database **ATmega8.xml** build **186**.
Applied patches: **SUT and WDTON default values (Mark Haemmerling)**

If you find bugs in the user interface or the database backend(s), please report them.