

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: (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=1	
<input type="checkbox"/>	Brown-out detection enabled; [BODEN=0]
Brown-out detection level at VCC=2.7 V; [BODLEVEL=1]	
<input type="checkbox"/>	Boot Reset vector Enabled (default address=\$0000); [BOOTRST=0]
Boot Flash section size=1024 words Boot start address=\$0C00; [BOOTSZ=00] ; default	
<input type="checkbox"/>	Preserve EEPROM memory through the Chip Erase cycle; [EESAVE=0]
<input type="checkbox"/>	CKOPT fuse (operation dependent of CKSEL fuses); [CKOPT=0]
<input checked="" type="checkbox"/>	Serial program downloading (SPI) enabled; [SPIEN=0]
<input type="checkbox"/>	Watch-dog Timer always on; [WDTON=0]
<input type="checkbox"/>	Reset Disabled (Enable PC6 as i/o pin); [RSTDISBL=0]

Manual fuse bits configuration

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	<input type="checkbox"/> BODLEVEL Brown out detector trigger level	<input type="checkbox"/> RSTDISBL Disable reset
6	<input type="checkbox"/> BODEN Brown out detector enable	<input type="checkbox"/> WDTON Enable watchdog
5	<input type="checkbox"/> SUT1 Select start-up time	<input checked="" type="checkbox"/> SPIEN Enable Serial programming and Data Downloading
4	<input checked="" type="checkbox"/> SUT0 Select start-up time	<input type="checkbox"/> CKOPT Oscillator Options
3	<input type="checkbox"/> CKSEL3 Select Clock Source	<input type="checkbox"/> EESAVE EEPROM memory is preserved through chip erase
2	<input type="checkbox"/> CKSEL2 Select Clock Source	<input checked="" type="checkbox"/> BOOTSZ1 Select Boot Size
1	<input type="checkbox"/> CKSEL1 Select Clock Source	<input checked="" type="checkbox"/> BOOTSZ0 Select Boot Size
0	<input type="checkbox"/> CKSEL0 Select Clock Source	<input type="checkbox"/> BOOTRST Select Reset Vector

Current 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
<input type="text" value="0xEF"/>	<input type="text" value="0xD9"/>	<input type="button" value="Apply values"/> <input type="button" value="Defaults"/>	-U lfuse:w:0xef:m -U hfuse:w:0xd9:m
Apply manual changes to the values on the left side, or load factory default values for the selected device.			Select (try triple-click) and copy-and-paste this option string into your avrdude command line. You may Engbedded AVR Fuse Calculator

