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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: [ATmega1284P ▲▼] [Select]   (141 parts currently listed)

Feature configuration

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

Features
Full Swing Oscillator; Start-up time: 16K CK + 65 ms; Crystal Osc.; slowly rising power; [CKSEl
☐ Clock output on PORTB1; [CKOUT=0]
☐ Divide clock by 8 internally; [CKDIV8=0]
☑ Boot Reset vector Enabled (default address=$0000); [BOOTRST=0]
Boot Flash section size=2048 words Boot start address=$F800; [BOOTSZ=01]
☑ Preserve EEPROM memory through the Chip Erase cycle; [EESAVE=0]
☐ Watchdog timer always on; [WDTON=0]
☑ Serial program downloading (SPI) enabled; [SPIEN=0]
☐ JTAG Interface Enabled; [JTAGEN=0]
☐ On-Chip Debug Enabled; [OCDEN=0]
Brown-out detection level at VCC=4.3 V; [BODLEVEL=100] ▲▼

[Apply feature settings]

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	Extended
7	☐ CKDIV8 Divide clock by 8	☐ OCDEN Enable OCD	
6	☐ CKOUT Clock output	☐ JTAGEN Enable JTAG	
5	☐ SUT1 Select start-up time	☑ SPIEN Enable Serial programming and Data Downloading	
4	☐ SUT0 Select start-up time	☐ WDTON Watchdog timer always on	
3	☑ CKSEL3 Select Clock Source	☑ EESAVE EEPROM memory is preserved through chip erase	
2	☐ CKSEL2	☑ BOOTSZ1	☐ BODLEVEL2

	Select Clock Source	Select Boot Size	Brown-out Detector trigger level
1	☐ CKSEL1 Select Clock Source	☐ BOOTSZ0 Select Boot Size	☑ BODLEVEL1 Brown-out Detector trigger level
0	☐ CKSEL0 Select Clock Source	☑ BOOTRST Select Reset Vector	☑ BODLEVEL0 Brown-out Detector trigger level

<div align="right">

[Apply manual fuse bit settings]

</div>

| 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*	*Extended*	*Action*	*AVRDUDE arguments*

0x `F7`	0x `D2`	0x `FC` *	[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:0xf7:m`
				`-U hfuse:w:0xd2:m`
				`-U efuse:w:0xfc: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.
				
				* Note that some numerical values refer to fuses containing undefined bits (set to '1' here). Depending on the target device these fuse bits will be read either as '0' or '1'. Verification errors will occur if the values are read back with undefined bits set to '0'. Everything is fine if the values read from the device are either the same as programmed, or the following values (undefined set to '0'): **Extended: 0x04**.

| References

All information based on database **ATmega1284P.xml** build **1**.
Unreviewed original XML backend database from Atmel. Probably buggy! Please report.

No responsibility is taken for the correctness of the presented information.
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User interface version: 0.9.2.

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