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: ATtiny13 Select (141 parts currently listed)

Feature configuration

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

Features

Int. RC Osc. 9.6 MHz; Start-up time: 14 CK + 64 ms; [CKSEL=10 SUT=10]; default value

- [x] Divide clock by 8 internally; [CKDIV8=0]
- [ ] Watch-dog Timer always on; [WDTON=0]
- [ ] Preserve EEPROM memory through the Chip Erase cycle; [EESAVE=0]
- [x] Serial program downloading (SPI) enabled; [SPIEN=0]
- [ ] Reset Disabled (Enable PB5 as i/o pin); [RSTDISBL=0]

Brown-out detection disabled; [BODLEVEL=11]

- [ ] Debug Wire enable; [DWEN=0]
- [ ] Self Programming enable; [SELFPRGEN=0]

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*
7	☑ **SPIEN** SPI programming enable	
6	☐ **EESAVE** Keep EEprom contents during chip erase	
5	☐ **WDTON** Watch dog timer always on	
4	☑ **CKDIV8** Start up with system clock divided by 8	☐ **SELFPRGEN** Self Programming Enable
3	☐ **SUT1** Select start-up time	☐ **DWEN** DebugWire Enable
2	☑ **SUT0**	☐ **BODLEVEL1**

2	SUT0 Select start-up time	BODLEVEL1 Enable BOD and select level
1	☐ **CKSEL1** Select Clock Source	☐ **BODLEVEL0** Enable BOD and select level
0	☑ **CKSEL0** Select Clock Source	☐ **RSTDISBL** Disable external reset

Apply manual fuse bit settings

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*

0x 6A	0x FF *	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:0x6a:m`
			`-U hfuse:w:0xff: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'): **High: 0x1f**.

References

All information based on database **ATtiny13.xml** build **249**.
Unreviewed original XML backend database from Atmel. Probably buggy! Please report.

No responsibility is taken for the correctness of the presented information.

User interface version: 0.9.1.

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