



V6 Smoothieware Configuration

Set up your Smoothieware Firmware to support your new E3D HotEnd


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Step 1 — Download Smoothieware



- First things first: you're going to need a copy of Smoothieware.
- You can get your existing configuration file off the SD card in your printer.
- If you're building a new printer, or simply want to upgrade to the latest version of Smoothieware, download it at <http://smoothieware.org/getting-smoothie>

 If you download a fresh version of Smoothieware you'll have to configure more settings than the ones mentioned in this guide so that it will work well with your printer.

Step 2 — Open Smoothieware in a text editor



- Unzip Smoothieware from the zip file you downloaded and put the resulting folder anywhere on your computer for safe keeping.
- You're working with the config file.

Step 3 — Thermistor Settings

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38 #extruder.hotend2.z_offset      0      # z offset from origin in mm
39
40 #epsilon_current                1.5    # Second extruder stepper motor current
41
42
43 ## Laser module configuration
44 # See http://smoothieware.org/laser
45 laser_module_enable            false  # Whether to activate the laser module at all
46 laser_module_pwm_pin           1.5    # This pin will be PWMed to control the laser.
47                                     # Only pins 1.0, 2.1, 2.2, 2.3, 2.4, 2.5, 1.16, 1.20, 1.21, 1.23, 1.24, 1.26, 3.25 and 3.26
48                                     # can be used since Laser requires hardware PWM, see http://smoothieware.org/pinout
49 #laser_module_pwm_period        20    # This pin turns on when the laser turns on, and off when the laser turns off.
50
51 #laser_module_ttl_pin           1.30  # This is the maximum duty cycle that will be applied to the laser.
52 #laser_module_maximum_power     1.0    # This is a value just below the minimum duty cycle that keeps the laser
53 #laser_module_minimum_power     0.0    # active without actually burning.
54 #laser_module_default_power     0.8    # This is the default laser power that will be used for cuts if a power has not been specified. The value
55 #laser_module_default_power     is a scale between
56 #laser_module_pwm_period        20    # the maximum and minimum power levels specified above
57                                     # This sets the pwm frequency at the period in microseconds
58
59 ## Temperature control configuration
60 # See http://smoothieware.org/temperaturecontrol
61
62 # First hotend configuration
63 temperature_control.hotend.enable true   # Whether to activate this ( "hotend" ) module at all.
64 temperature_control.hotend.thermistor_pin 0.23 # Pin for the thermistor to read
65
66 temperature_control.hotend.thermistor Semitec # See http://smoothieware.org/temperaturecontrol#semitec
67 #temperature_control.hotend.ksthermistor 250 # To get the best value
68
69 #temperature_control.hotend.set_m_code 104 # M-code to set the temperature for this module
70 #temperature_control.hotend.set_and_wait_m_code 109 # M-code to set-and-wait for this module
71 #temperature_control.hotend.designator S # Designator letter for this module
72 #temperature_control.hotend.max_temp 300 # Set maximum temperature - Will prevent heating above 300 by default
73 #temperature_control.hotend.min_temp 0 # Set minimum temperature - Will prevent heating below if set
74
75 # Safety control is enabled by default and can be overridden here, the values show the defaults
76 # See http://smoothieware.org/temperaturecontrol#runaway
77 #temperature_control.hotend.runaway_heating_timeout 900 # How long it can take to heat up, max is 2040 seconds.
78 #temperature_control.hotend.runaway_cooling_timeout 0 # How long it can take to cool down if temp is set lower, max is 2040 seconds
79 #temperature_control.hotend.runaway_range 20 # How far from the set temperature it can wander, max setting is 63°C
80
81 ## PID configuration
82 # See http://smoothieware.org/temperaturecontrol#pid
83 #temperature_control.hotend.p_factor 11.7 # P ( proportional ) factor
84 #temperature_control.hotend.i_factor 0.997 # I ( integral ) factor
85 #temperature_control.hotend.d_factor 24 # D ( derivative ) factor
86
87 #temperature_control.hotend.max_pwm 64 # Max pwm, 64 is a good value if driving a 12v resistor with 24v.
88
89 ## Second hotend configuration
90 #temperature_control.hotend2.enable true # Whether to activate this ( "hotend" ) module at all.
91 #temperature_control.hotend2.thermistor_pin 0.25 # Pin for the thermistor to read
92
93

```

- On the SD card that contains your printer's firmware, update the configuration file with the following line:
temperature_control.hotend.thermist or Semitec

Step 4 — Upload Firmware



- Save the firmware to your SD card as you normally would. If you're having issues, check with your printer's manufacturer.
- If you're unsure of how to update your printer's firmware, check with its manufacturer.

Head back to the [V6 Assembly page](#) to finish the last few steps before you start printing.

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