



Chimera Smoothieware Configuration

Set up your Smoothieware Firmware to support your new Chimera


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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 looking for the config file. If you have a copy of Smoothieware already, you can find your current configuration file on your firmware SD card.

Step 3 — Enable Dual Extruders

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54 ## Extruder module configuration
55 # See http://smoothieware.org/extruder
56 #extruder.hotend.enable true # Whether to activate the extruder module at all. All configuration is ignored if false
57 #extruder.hotend.default_feed_rate 400 # Default rate (mm/minute) for moves where only the extruder moves
58 #extruder.hotend.acceleration 500 # Acceleration for the stepper motor mm/sec^2
59 #extruder.hotend.max_speed 50 # Maximum speed in mm/s
60 #extruder.hotend.step_pin 2.3 # Pin for extruder step signal
61 #extruder.hotend.dir_pin 0.22 # Pin for extruder dir signal ( add '!' to reverse direction )
62 #extruder.hotend.en_pin 0.23 # Pin for extruder enable signal
63
64 # Extruder offset
65 #extruder.hotend.x_offset 0 # X offset from origin in mm
66 #extruder.hotend.y_offset 0 # Y offset from origin in mm
67 #extruder.hotend.z_offset 0 # Z offset from origin in mm
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69 # Firmware retract settings when using G10/G11, these are the defaults if not defined, must be defined for each extruder if not using the defaults
70 #extruder.hotend.retract_length 3 # Retract length in mm
71 #extruder.hotend.retract_feedrate 45 # Retract feedrate in mm/sec
72 #extruder.hotend.retract_recover_length 0 # Additional length for recover
73 #extruder.hotend.retract_recover_feedrate 8 # Recover feedrate in mm/sec (should be less than retract feedrate)
74 #extruder.hotend.retract_lift_length 0 # Z-lift on retract in mm, 0 disables
75 #extruder.hotend.retract_lift_feedrate 4000 # Z-lift feedrate in mm/min (note mm/min NOT mm/sec)
76
77 #delta_current 1.5 # First extruder stepper motor current
78
79 ## Second extruder module configuration
80 #extruder.hotend2.enable true # Whether to activate the extruder module at all. All configuration is ignored if false
81 #extruder.hotend2.default_feed_rate 400 # Default rate (mm/minute) for moves where only the extruder moves
82 #extruder.hotend2.acceleration 500 # Acceleration for the stepper motor, as of 0.6, arbitrary ratio
83 #extruder.hotend2.max_speed 50 # mm/s
84 #extruder.hotend2.step_pin 2.8 # Pin for extruder step signal
85 #extruder.hotend2.dir_pin 2.13 # Pin for extruder dir signal ( add '!' to reverse direction )
86 #extruder.hotend2.en_pin 4.29 # Pin for extruder enable signal
87
88 #extruder.hotend2.x_offset 0 # X offset from origin in mm
89 #extruder.hotend2.y_offset 25.0 # Y offset from origin in mm
90 #extruder.hotend2.z_offset 0 # Z offset from origin in mm
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92 #eps110n_current 1.5 # Second extruder stepper motor current
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- Scroll to the Extruder Module and make sure that both the primary and second extruders are enabled (set to true).

Step 4 — Thermistor Settings

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93 #extruder.hotend2.z_offset 0 # Z offset from origin in mm
94 #eps110n_current 1.5 # Second extruder stepper motor current
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100 ## Laser module configuration
101 # See http://smoothieware.org/laser
102 #laser_module_enable false # Whether to activate the laser module at all
103 #laser_module_pwm_pin 2.5 # This pin will be PWMed to control the laser.
104 # Only pins 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 1.18, 1.20, 1.21, 1.23, 1.24, 1.26, 3.25 and 3.26
105 # Can be used since Laser requires hardware PWM, see http://smoothieware.org/pwmout
106 # This pin turns on when the laser turns on, and off when the laser turns off.
107 #laser_module_ttl_pin 1.30 # This is the maximum duty cycle that will be applied to the laser
108 #laser_module_maximum_power 1.0 # This is a value just below the minimum duty cycle that keeps the laser
109 #laser_module_minimum_power 0.0 # active without actually burning.
110 #laser_module_default_power 0.8 # This is the default laser power that will be used for outs if a power has not been specified. The value
111 # is a scale between
112 #laser_module_pwm_period 20 # the maximum and minimum power levels specified above
113 # This sets the pwm frequency as the period in microseconds
114
115 ## Temperature control configuration
116 # See http://smoothieware.org/temperaturecontrol
117
118 ## First hotend configuration
119 #temperature_control.hotend.enable true # Whether to activate this ("hotend") module at all.
120 #temperature_control.hotend.thermistor_pin 0.23 # Pin for the thermistor to read
121 #temperature_control.hotend.thermistor Semitec # See http://smoothieware.org/temperaturecontrol#toc
122 #temperature_control.hotend.mcode 104 # M-code to set the temperature for this module
123 #temperature_control.hotend.set_and_wait_mcode 109 # M-code to set-and-wait for this module
124 #temperature_control.hotend.designator C # Designator letter for this module
125 #temperature_control.hotend.max_temp 300 # Set maximum temperature - Will prevent heating above 300 by default
126 #temperature_control.hotend.min_temp 0 # Set minimum temperature - Will prevent heating below if set
127
128 ## Safety control is enabled by default and can be overridden here, the values show the defaults
129 # See http://smoothieware.org/temperaturecontrol#runaway
130 #temperature_control.hotend.runaway_heating_timeout 900 # How long it can take to heat up, max is 2040 seconds.
131 #temperature_control.hotend.runaway_cooling_timeout 0 # How long it can take to cool down if temp is set lower, max is 2040 seconds
132 #temperature_control.hotend.runaway_range 20 # How far from the set temperature it can wander, max setting is 63°C
133
134 ## PID configuration
135 # See http://smoothieware.org/temperaturecontrol#pid
136 #temperature_control.hotend.p_factor 13.7 # P (proportional) factor
137 #temperature_control.hotend.i_factor 0.097 # I (integral) factor
138 #temperature_control.hotend.d_factor 24 # D (derivative) factor
139 #temperature_control.hotend.max_pwm 64 # Max pwm, 64 is a good value if driving a 12V resistor with 24v.
140
141 ## Second hotend configuration
142 #temperature_control.hotend2.enable true # Whether to activate this ("hotend") module at all.
143 #temperature_control.hotend2.thermistor_pin 0.25 # Pin for the thermistor to read

```

- Scroll to the Temperature control configuration and make sure that both the first and second hotends are enabled (set to true).
- Set the following lines:
#temperature_control.hotend.thermistor Semitec
#temperature_control.hotend2.thermistor Semitec

Step 5 — 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 [Chimera page](#) to finish the last few steps before you start printing.