

G20 G21 Inch Millimeters
G90 G91 Absolute Relative
G53 Absolute Coordinates
G54-G59.3 Coordinate System
G28->G53 Move to Origin (Home) change G28->G53 for Fusion360
G92 Set Position
G60 save current Position to slot
G0 rapid G1 work Moves G0-G3 Buffer G0|1 XYZ E F=feed (if M452: S=laser H=
G2 CW G3 CCW Arc Moves G3 X2 Y3 I0.5 J0.4
G17-19 XY plane for Arc Moves G17 only (no action) !!!!
G4 Dwell (delay, timer)
G10 Retract (-delete)
G10 Tool Offset &| workplace Coordinates &| Tool Temperatures
G29 Mesh Bed Probe
G30 Single Z Probe
G32 Z Probe & calculate Z Plane
G31 Report Current Probe status
G38.2-38.5 Straight Probe

PROGRAM

M115 Firmware Version
M997 Firmware Update
M555 Set Compatibility (marlin,Teacup,Sprinter...)
M580 Select Roland
M667 Select CoreXY mode
M910 Set Decay mode
M665 Set Delta config
M666 Set Delta endstop adjustment
M669 Set Kinematics type & kinematics parameters (Cartesian...)
M122 Diagnose
M122 Diagnose (P100-P105)
M502 Read Parameters from "config.h"
M589 Config access point Parameters
M110 Set current Line Number (M110 N123 ;set next line to 124)
M561 Set Identity Transform
M120 Push
M121 Pop (exemple: before call macro) (read info) S0=OFF
M111 Set Debug Level
M226 Gcode Initiated Pause
M400 Wait for current moves to finish
M207 Set Retract length
M2 Program End
M999 Restart

TIME

M170 Set clock values
M905 Set local date & time

WIFI - I2C - SERIAL - CAN

M550 Name
M551 Password
M540 MAC address
M552 IP address, ON/OFF network
M586 Config network protocols (HTTP,FTP,Telnet)
M587 Store WiFi host network in list,|list stored networks
M588 Forget WiFi host network
M553 Set Netmask
M554 Set Gateway
M260 i2c Send Data
M261 i2c Request Data
M575 Set serial comms parameters PanelDue (speed,)
M952 Set CAN-FD bus data rate Change le debit du data S=Mbit/sec

SD

M23 Select SD file (select file for print "12345678.123")
M38 Compute SHA1 hash of target file (calculer le hachage file in hex)
M36 Return file info (info in format JSON)
M560 Upload web page file
M559 Upload config file
M505 Set config file folder
M21 Initialize SD card (M21 P0 ;P0=cart #, boot with SD)
M20 List SD card (M20 "gcode/tst" ;gcode|tst->list all)
M470 Create Directory on SD card
M471 Rename File/Directory on SD card
M30 Delete a file on SD card (M30 "name.g")
M28 Begin write to SD card (created|overwritten, next M->writing)
M29 Stop writing to SD card (stop writing)
M22 Release SD card (for eject)
M39 Report SD card info (ReprapFirmware 1.21... in format JSON)
M929 Start/stopEvent logging to SD card
M26 Set SD position (M26 S428 ;position:428th byte)
M500 Store parameters
M501 Read parameters config-override.g (reprend les dernieres valeurs setter du config)
M32 Select file&start SD Print (M32=M23+M24)
M24 Start/resume SD Print
M25 Pause SD Print (M25 ;pause print, M24 continue print)
M27 Report SD Print (status (Pronteface:message position actualy print) (S0=Print ,S1=simulation:calculTimeWork,(calculTimeCalcul)) (macro CALL other... "0 .g" "1 .g") (close current macro))
M37 Simulation mode
M98 Call Macro/Subprogram
M99 Return from Macro/Subprogram

PRINTER - MESSAGE

M503 Set Print
M451 Select FFF Printer Mode
M450 Report Printer Mode
M292 Acknowledge Message
M117 Display Message (M117 message here)
M291 Display Message & optionally wait for response
M118 Send Message to Specific Target (...P1=USB P2=PanelDue...)
M998 Request resend of line

SONG - LCD

M300 Play beep sound
M150 Set LED colours (RUBY RUB=RGB Y=brightness)
M918 Config direct connect display

MOTOR

M579 Scale Cartesian axes. (delta,... M453 P2 R5000 P2=E1 heater,pin control spindle
M453 Switches CNC mode. M3-5 Milling Spindles=S1-4, R=RPM,F=PWM,T=Tool (RRF3: P,I=not used)
M569 Set motor driver direction, enable polarity & step pulse timing
M584 Set drive mapping set axe
M350 Set microstepping mode
M92 Set microsteps/mm after M584
M290 Babystepping
M205 Set max instantaneous speed change in mm/sec
M566 Set allowable instantaneous speed change
M220 Set speed factor override % (M220 S42 ;42% S120 ;120%)
M203 Set max feedrate
M201 Set max printing Acceleration
M204 Set default Acceleration
M593 Config dynamic Acceleration Adjustment
M906 Set motor currents M906 X800 Y800 Z800 I30 // idle=30% 800mA/bobine
M913 Set motor % of normal current M906 X50 Y50 Z50 E30:40 // XYZ =50% E0=30% E1=40%
M917 Set motor standstill current reduction
M914 Set/Get Expansion voltage Level Translator

M0 Stop | Unconditional Stop (buffer&cancel.g OFF->motor,(heater)) cancel.g->ifnot->stop.g ON->G,M
M1 Sleep | Conditional Stop (buffer&cancel.g OFF->motor,(heater)) cancel.g->ifnot->sleep.g ON->G,M
M112 Emergency Stop OFF-> motor, heater ON->reset button
M84 Stop idle hold (M84 Y S5 idle-> motor Y after 5sec inativity) ON->G,M
M18 Disable M18 XYZUW E (motor freely) OFF-> motor

M911 Config auto_save on loss of Power M911 S21 R22 P"
M915 Config motor stall detection

POWER

M80 M81 ATX Power On Off
M916 Resume print after Power failure

SERVO

M280 Set servo Position
M340 Control the servos
M950 Create heater, fan|GPIO/servo device

LASER

M452 Laser Mode->then G0-1->S=PowerLaser 0-254
H0=no_action H1=LSW+M208->limite H3=LSW+position_axe->limite H2=individuel axe

SCANNER

M750 Enable 3D scanner extension
M751 Register 3D scanner extension over USB
M752 Start 3D scan
M753 Cancel current 3D scanner action
M754 Calibrate 3D scanner
M755 Set alignment mode for 3D scanner
M756 Shutdown 3D scanner

PIN - TRIGGER

M950 Create 0-9 H=Heater,F=Fan,S=ServoP=GPIO --> assign #pin(S) M950 before other command
M950 P0 C "heater3" Q500 ;Port0 assign to pin heater3 at 500Hz
M42 Switch IO pin (RRF3:no F) M42 P0 S0.5 ;GPIO Port0 S0-1 -> 50% PWM=250Hz
M670 Set IO port bit mapping M42 P0 S25 ;defini pin0 avec la valeur 25 0-255
M351 Toggle MS1->MS2 pins directly
M581 Config external trigger
M582 Check external trigger

POSITION

M208 Set axis max travel (M208 X200 Y200 Z90 ;axis max ...S1 min...)
M556 axis compensation
M673 Align plane on rotary axis
M114 Get current Position
M675 Find center of cavity
M674 Set Z to center point

HEIGHT Z

M951 Set height following mode parameters
M594 Enter/Leave height following mode
M374 Save height map
M375 Load height map

ENDSTOP

M564 Limit axes M564 H1 S1 //H1=need set home H0=no need, S1=use M208 S0=unuse
M574 Set Endstop config
M123 Endstop Logic (MK4duo)
M119 Get Endstop Status (tst)
M577 Wait until Endstop is triggered
M671 Define positions of Z leadscrews|Bed leveling screws
M206 Offset axes

TOOL FAN

M106 Fan On (many parameter) M107 Fan Off (not used. But-> M563 F)
T1 Tool, Nozzle, Extruder, ...
M563 Define|remove a tool (normally extruder)
M567 Set tool mix ratios

SPINDLE - CNC

M3 Spindle ON CW M3-5: see MOTOR -> M453 CNC mode
M4 Spindle ON CCW
M5 Spindle OFF

PEEL

M650 Set peel move parameters
M651 execute peel move

FIRE

M578 Fire inkjet bits

PROBE

M585 Tool Probe
M558 Set Z Probe type (... P0=disable ...)
M672 Program Z Probe
M557 Set Z Probe point|define probing grid
M401 Deploy Z Probe exe -> deployprobe.g
M402 Retract Z Probe exe -> retractprobe.g

FILAMENT

M404 Filament width & nozzle diameter
M200 Set Filament diameter
M701 Load Filament
M702 Unload Filament
M703 Config Filament
M591 Config Filament sensing
M600 Filament change pause

EXTRUDER

M563 Define|remove a tool (normally extruder)
M408 Report JSON style reponce (type S0-S5 read info)
M592 Config nonlinear Extrusion
M571 Set output on Extrude
M221 Set Extrude factor override %
M302 Allow cold Extrudes
M82 Set Extruder to absolute mode (value)
M83 Set Extruder to relative mode (value)
M104 Set Extruder Temperature (M104 S190C 190degree C)
M109 Set Extruder Temperature & Wait (read info)
M105 Set Extruder Temperature (M105->obsolete, used M408)
M572 Set|report Extruder Pressure advance
M700 Level plate
M320 Activate autoLevel (Repetier)
M321 Deactivate autoLevel (Repetier)
M301 Set PID parameters
M135 Set PID sample interval (Proportional-Integral-Derivative)

HEATER

M116 Wait temperature change
M141 Set Chamber temperature (Fast)
M912 Set electronics temperature monitor adjustment
M305 Set temperature sensor parameters
M308 Set|report sensor parameters
M562 Reset temperature fault
M143 Maximum heater temperature
M570 Config heater fault detection
M573 Report heater PWM
M307 Set|report heating process parameters
M108 Cancel heating (read info)

BED

M304 Set PID Bed parameters
M191 Wait for Chamber temperature to reach target temp
M190 Wait for Chamber temperature to reach target temp
M140 Set Bed temperature (Fast)
M144 Bed Standby (set to temperature de veille)
M376 Set Bed compensation taper
M373 End Bed level calibration mode
M374 Save calibration grid