



User Manual

- IT3D P300 Dual Pellet 3D Printer



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1. Packing List

		
	Wrench and screw	Diagonal pliers
		
IT3D P300 Dual Pellet	SD card	TF card
		
Power cable	Ethernet Cable	Nozzle
		
Spatula	Pellet	Card reader
		
Grease	Glue stick	Nozzle cleaner

2. The Basic Parameters

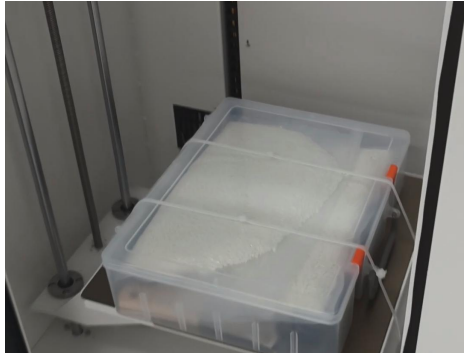
Printer Name	IT3D P300 Dual Pellet
Build Volume (Single Mode)	200*300*450mm
Build Volume (Mirror Mode)	100*300*450mm
Build Volume (Copy Mode)	150*300*450mm
Printing Technology	IDEX
Nozzle Quantity	Dual nozzle
Layer Thickness	0.05mm - 0.4mm
Nozzle Diameter	Standard 0.4mm (0.6,0.8,1.0mm can be optional)
Printing Accuracy	±0.2mm
Supported Filaments	PLA/ABS/PETG/TPU...
Pellet Diameter	2-4mm
Slicing Format	STL / OBJ/ AMF
Connecting Method	Ethernet cable/WIFI/SD card/USB
Slicing Software	Cura
Heated Chamber Temp	Max 60°C
Printing Base	PEI Steel plate
Camera View	Yes
Max Temp of Hot Bed	120°C
Max Temp of Nozzle	300°C
OS Compatible	Win 7 / Win 10
Max Printing Speed	300mm/s
Resume Printing	Yes
Filament Run Out Detection	Yes
Rated Power	600W
Output Voltage	24V
Rated Voltage	100 - 120V / 200 - 240V 50 / 60 HZ
Gross Weight	98.5kg
Package Size	75*73*118cm

PART 1. INSTALLATION

3. Printer Installation

3-1. Cut all the cable ties, take out the tool box.

Note: Pls remember to remove all cut cable ties.



3-2. Move the 2 extruders to the center position of the machine.



3-3. Adjust the Screen to the appropriate angle.



3-4. Plug in the power cord and turn on the power.



4. Reset X,Y,Z Axis

4-1. Click "More" → "Home" → "Home all".



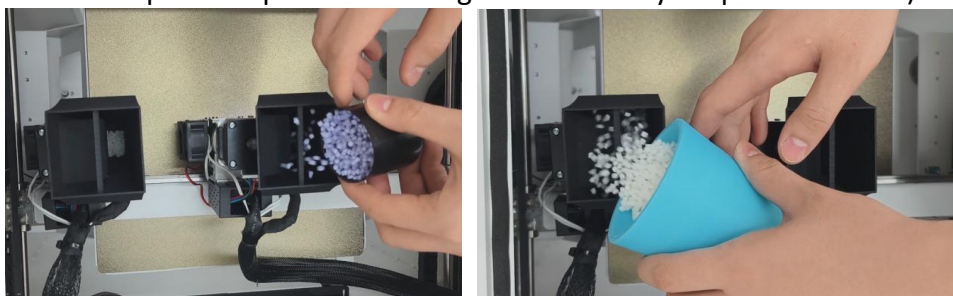
5. Extrude the Pellet

5-1. Click "Temperature", there will be different types of materials in the right corner of the screen, select the material you need, the tool box include PLA pellet.

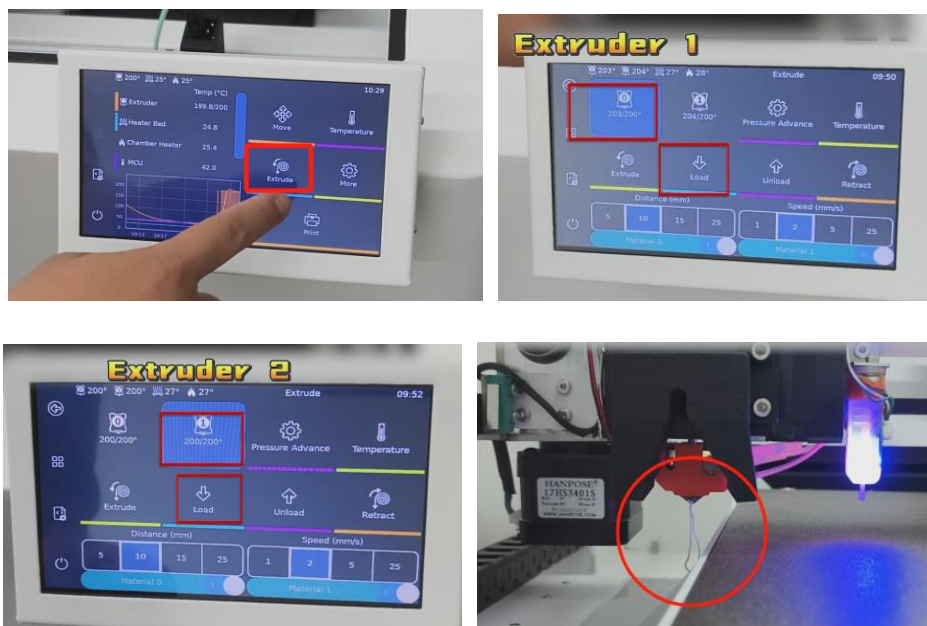


5-2. Pour the pellets into the hopper.

(Note: Determine how much pellet to put in according to the size of your printed model)



5-3. Click the “Extrude” button for extruder 1 on the screen, then click “Load”, repeat the above steps to load extruder 2.



6. Install the Slicing Software

Cura installation version: Cura 5.8.0 or above (Cura 5.X general) version.

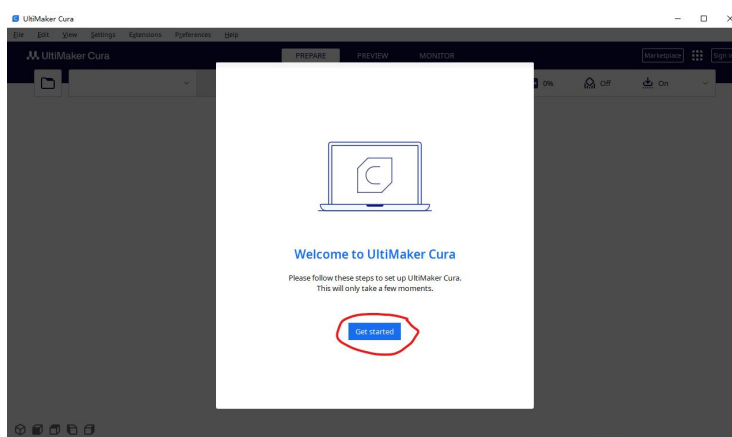
Compatible operating systems:

Windows 10 or later, 64-bit;
Mac OS X 11 Big Sur or later, 64-bit;
Linux, 64-bit.

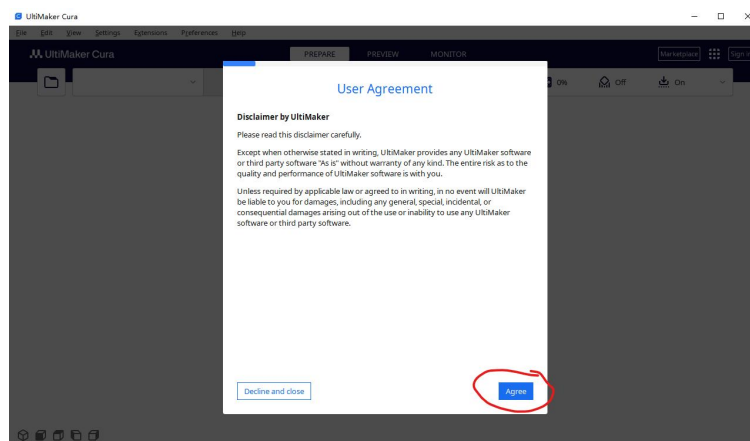
This configuration parameter is ONLY for the following models:
IT3D H300 Dual, IT3D HP300 Dual Mix, IT3D P300 Pellet, IT3D P300 Dual Pellet.

6-1. Install Cura Setup

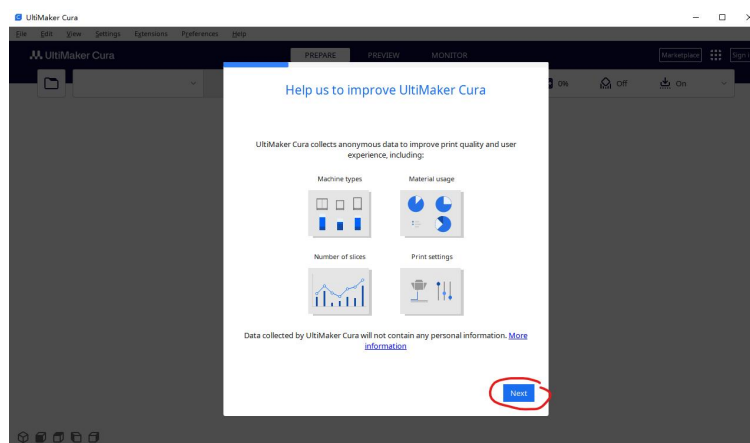
6-1-1. After installation is finished, open Cura and click "Get started":



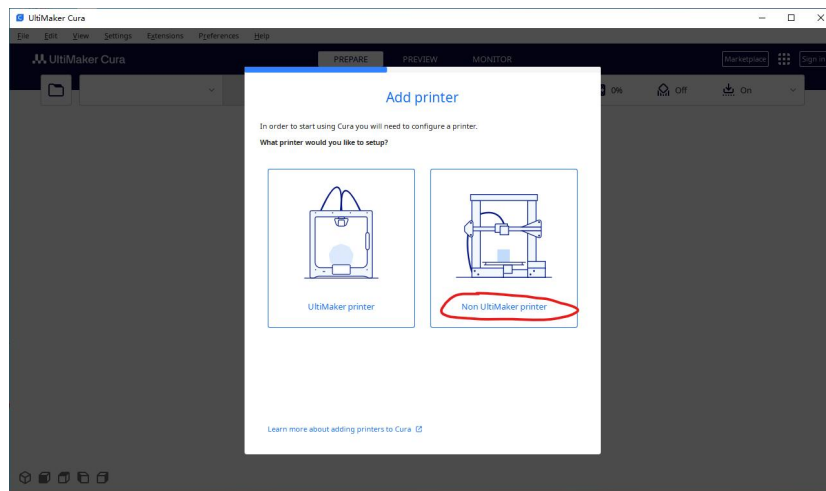
6-1-2. Agree to the user agreement and click “Agree”.



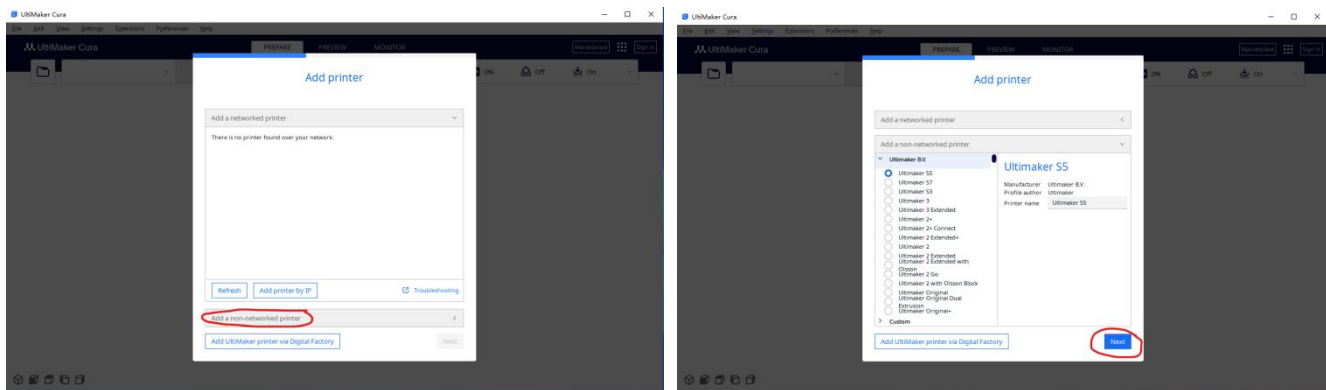
6-1-3. Click “Next”



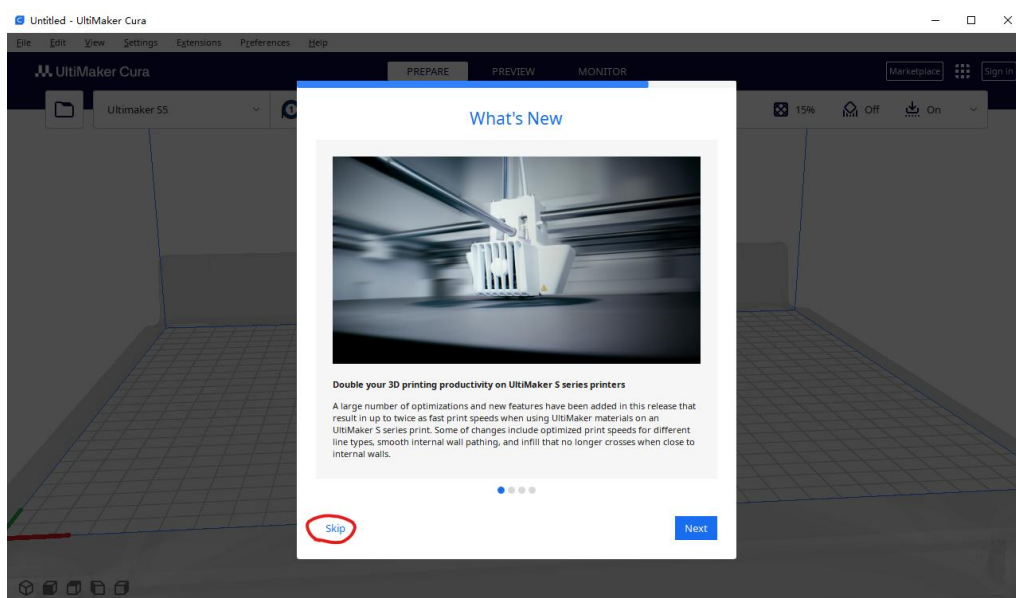
6-1-5. Add a printer and select “Non UltiMaker printer”, which is a non-UltiMaker printer.



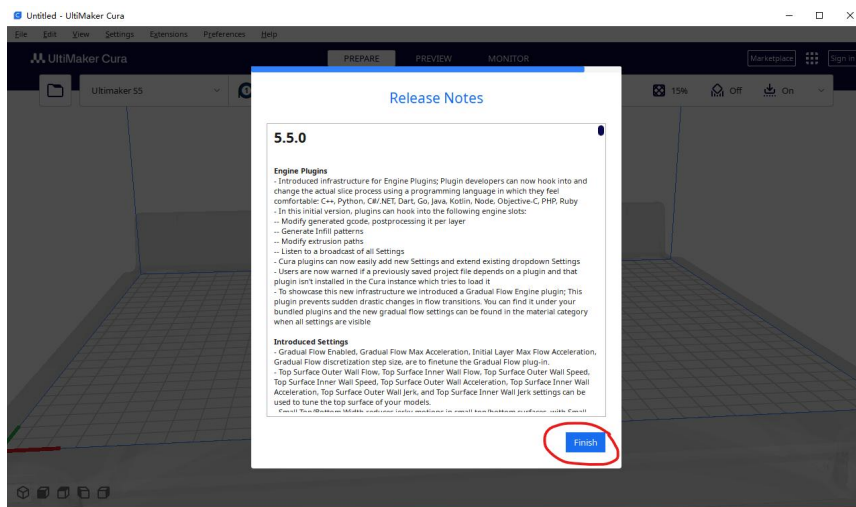
6-1-6. Click “Add a non-networked printer”, you can add the IT3D model.



6-1-7. Taking the addition of the "S5" model as an example, here is the introduction of new functions. You can directly click "Skip" to skip, or "Next" to learn more.



6-1-8. This page contains the Cura version update instructions. Click "Finish" to complete the setup wizard.

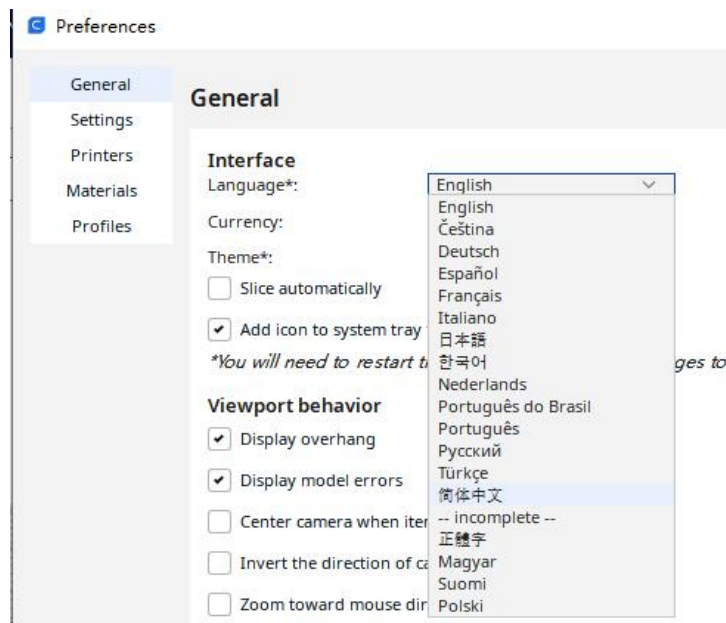


6-2. Modify Cura language

6-2-1. Under the Preferences option in the menu bar, select Configure Cura.

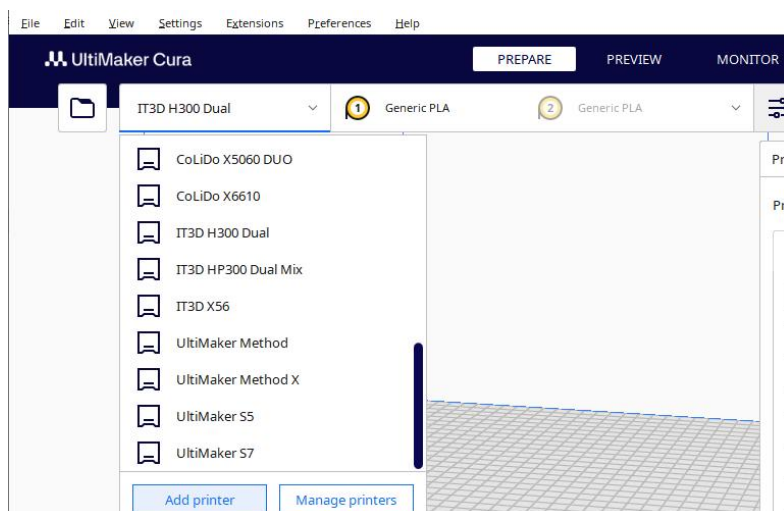


6-2-2. In the pop-up window, select the "General tab", click the drop-down box to the right of Language under the Interface class, select "Simplified Chinese", and restart Cura.

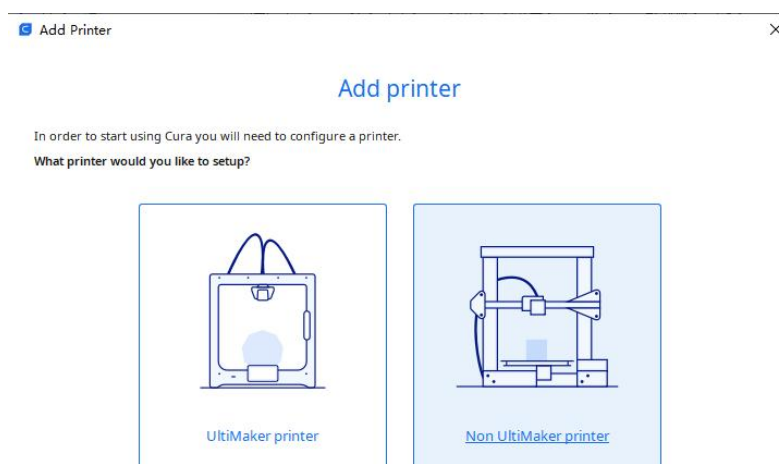


6-3. Select the machine model you have

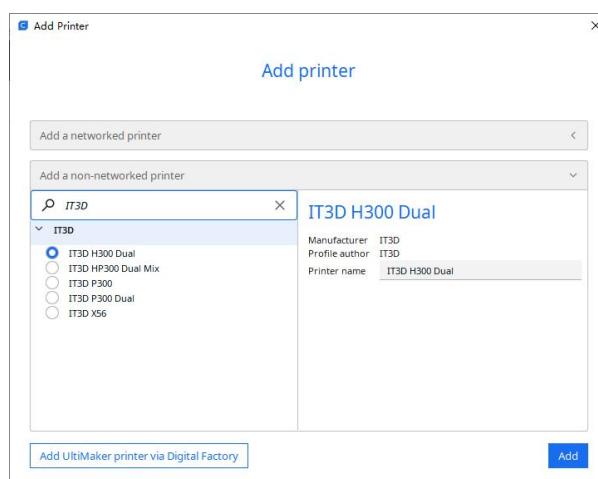
6-3-1. Click "Add Printer":



6-3-2. Select "Non-UltiMaker Printer" in the pop-up window:



6-3-3. Select the "Add a non-networked printer" column, find the IT3D brand, and select the corresponding model to add.

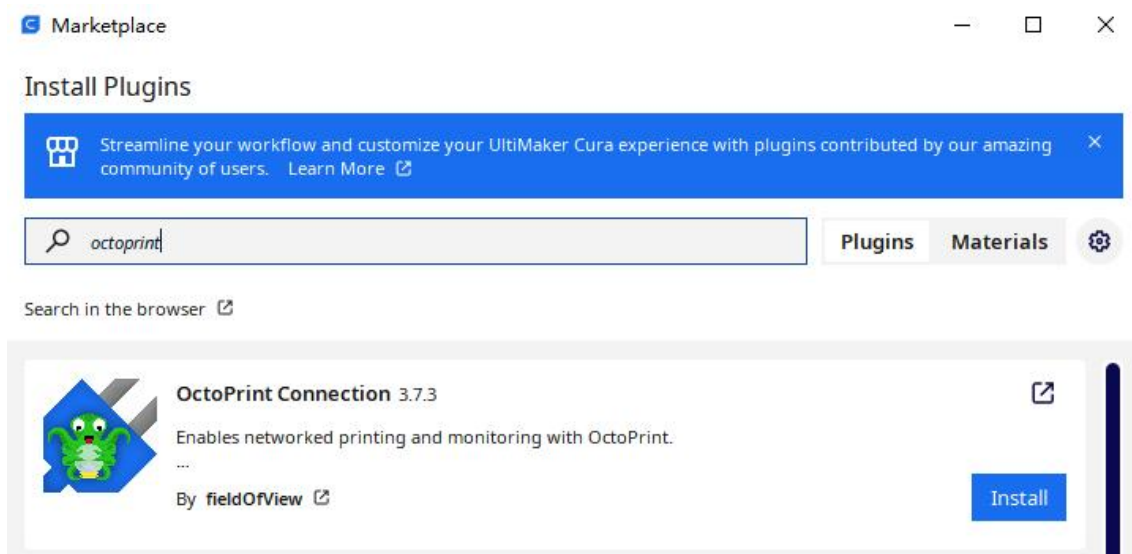


6-4. Add Cura network plug-in (**Note: the machine needs to be connected to the LAN first.**)

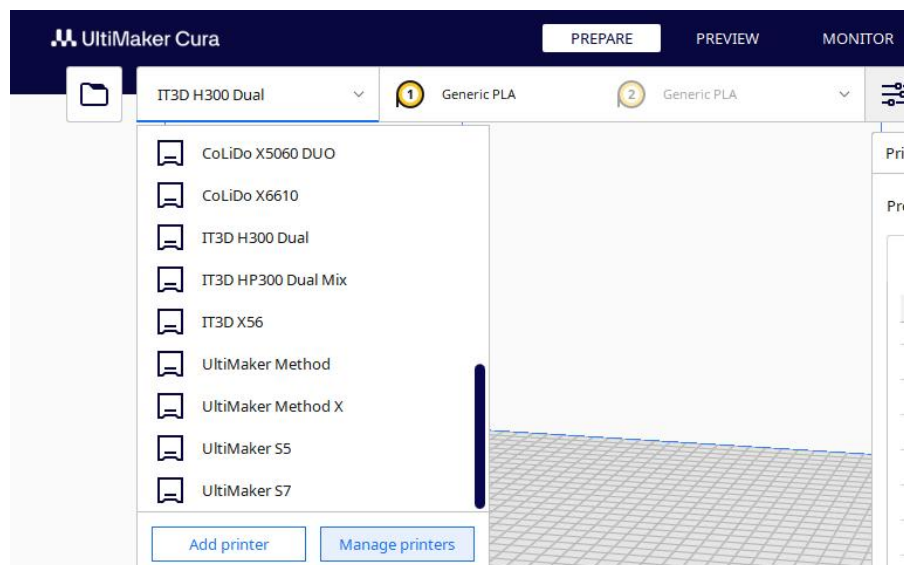
6-4-1. In the Cura interface, click the "Marketplace" button in the upper right corner



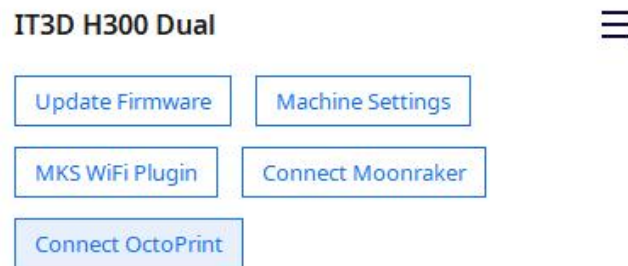
6-4-2. In the search box on the pop-up interface, enter "octoprint", click Install and agree to the relevant agreements. It will take effect after restarting Cura.



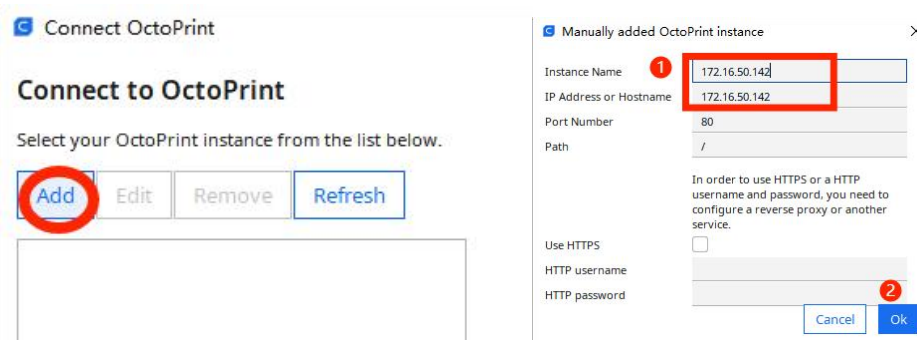
6-4-3. After restarting Cura, click the IT3D H300 Dual drop-down box in the upper left corner and select "Manage Printers".



6-4-4. In the pop-up "Preferences" window, select as shown ("Printer" -> "Default Printer" -> "IT3D H300 Dual" -> "Connect OctoPrint")

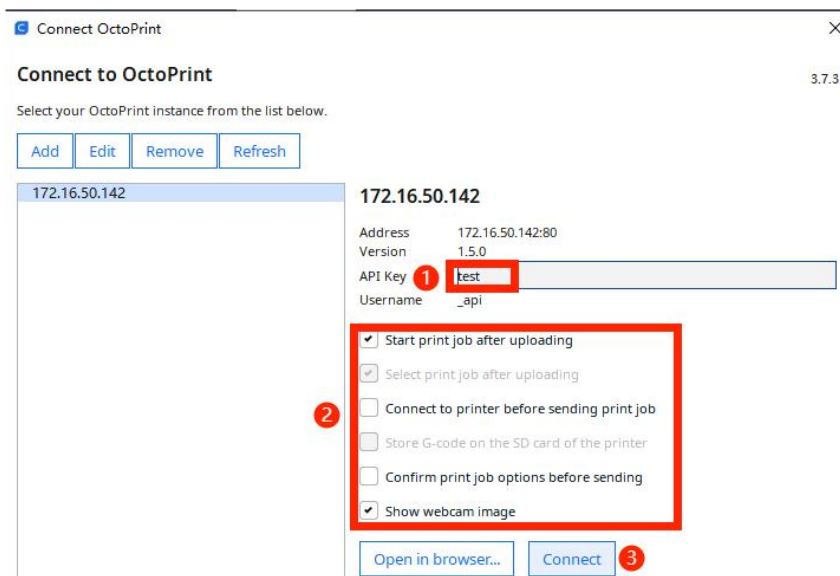


6-4-5. In the pop-up plug-in box, click "Add" and fill in the IP address of the machine.

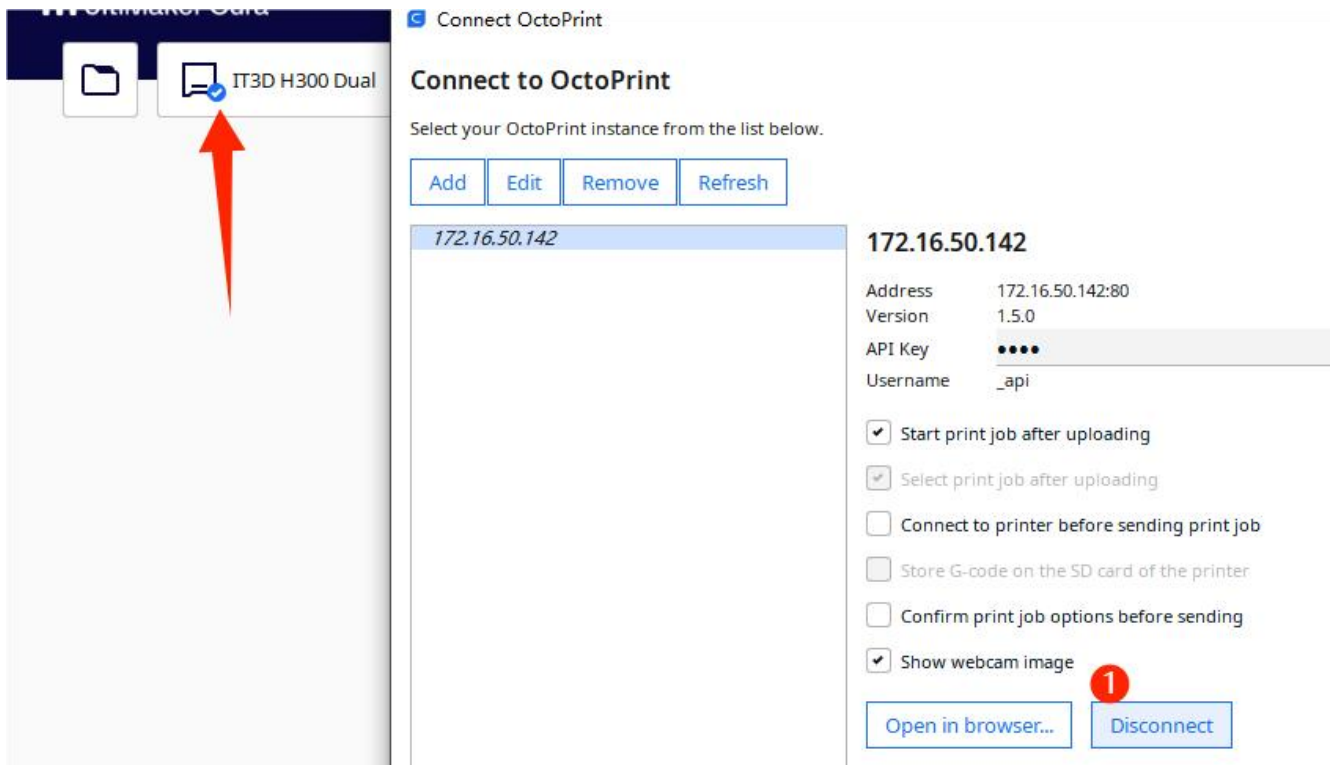


6-4-6. Fill in an API Key, you can fill in anything, such as "test", and then select the functions you want to enable as needed. Finally, click "Connect" to complete the connection.

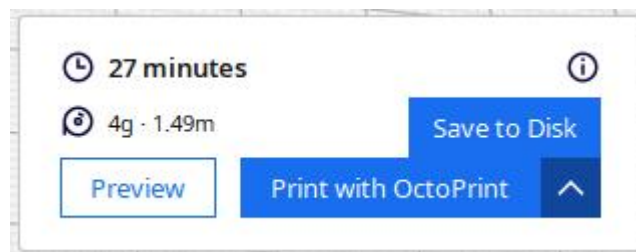
Note: The camera image displayed by the plug-in may appear flipped. Please use the web page to view the camera.



6-4-7. When the interface is displayed, the connection is successful, and then close the plug-in interface.

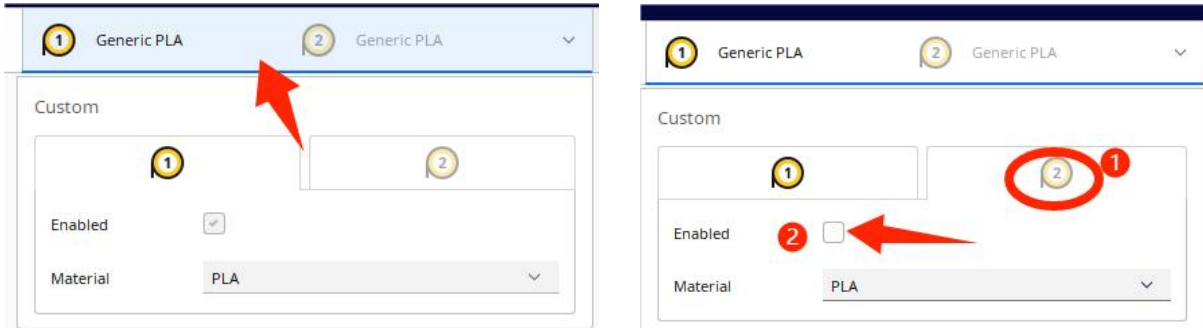


6-4-8. After slicing, you can directly send the Gcode file to the printer.



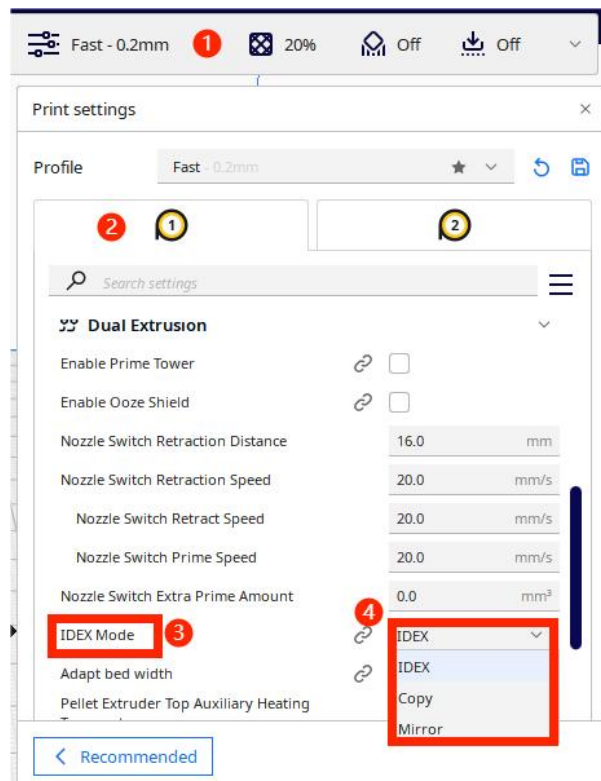
6-5. Dual Extruder Configuration

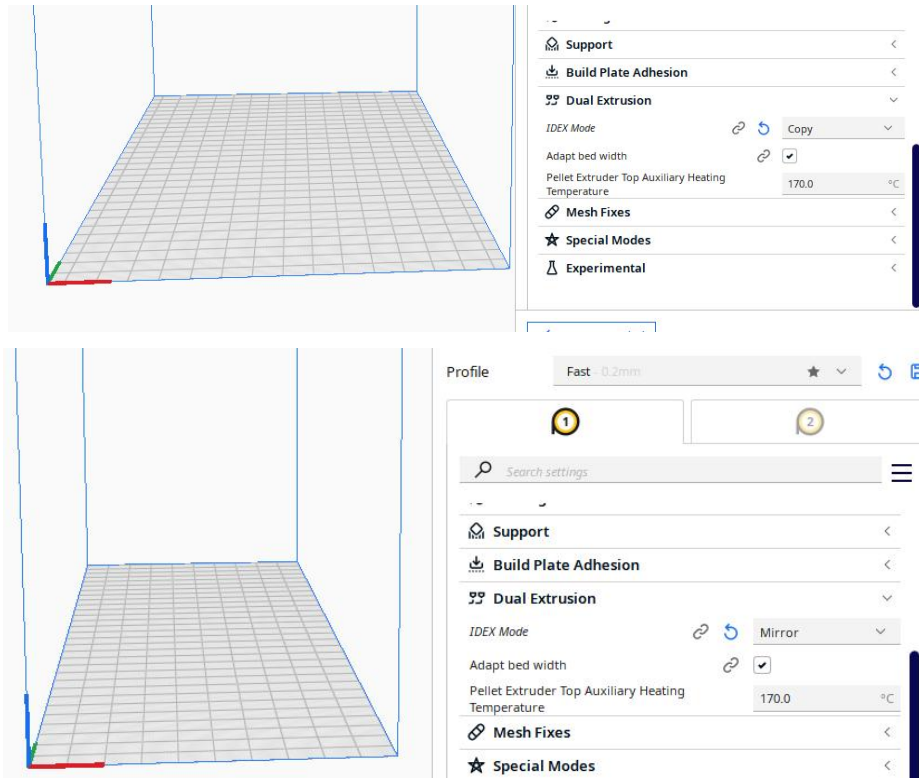
6-5-1. When you open the software for the first time, the default is IDEX mode - the two extruders move independently. By default, only extruder 0 (the main printer near the X-axis zero point (the left side of the front of the machine)) is turned on. To turn on extruder 1, click the second filament position and check Enabled.



Note: If only one extruder is required to work, turn off the other extruder, otherwise it will cause simultaneous heating. If the two extruders work separately, check Enable for both.

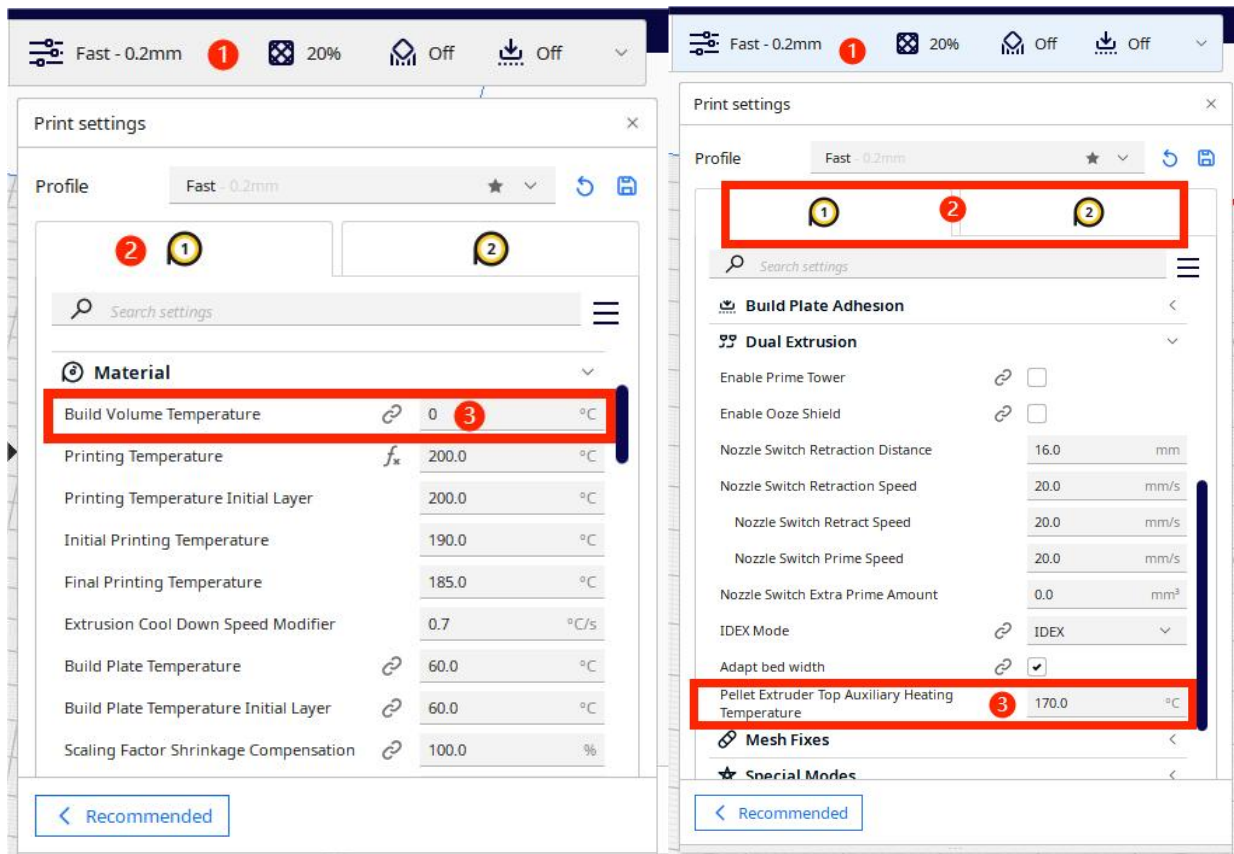
6-5-2. If you want to choose mirror or copy printing, select the "Dual Extrusion" column in "Print settings" and operate on consumable ① by default. Both mirror and copy modes only enable consumable ① and turn off consumable ② (automatically executed), and the printable size will be automatically adjusted.





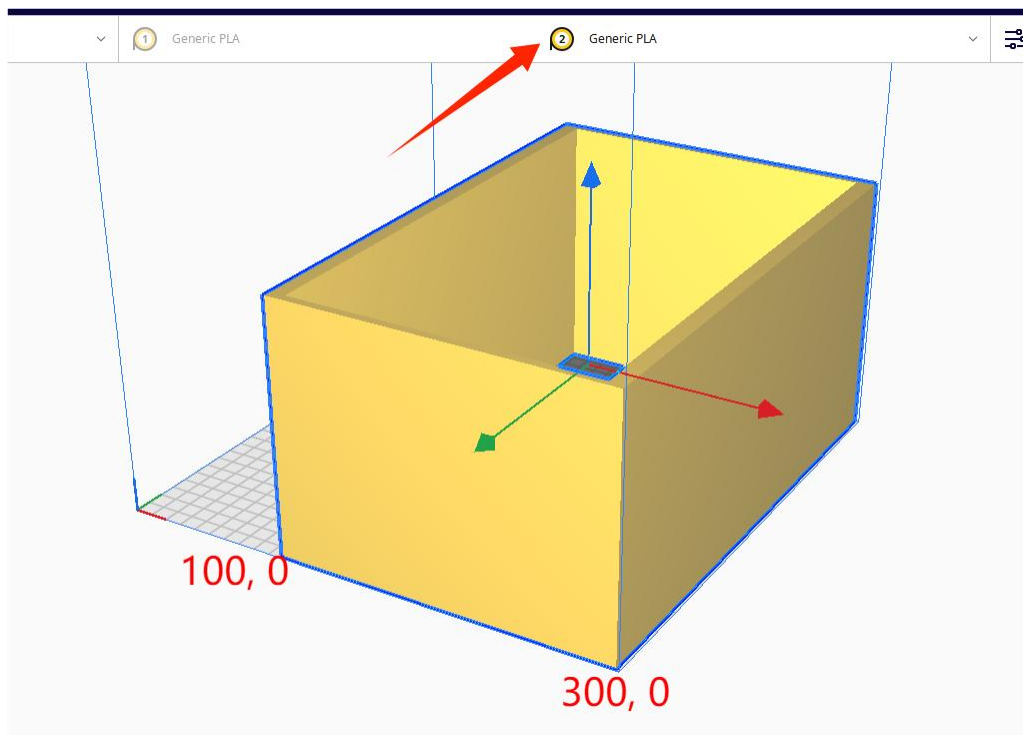
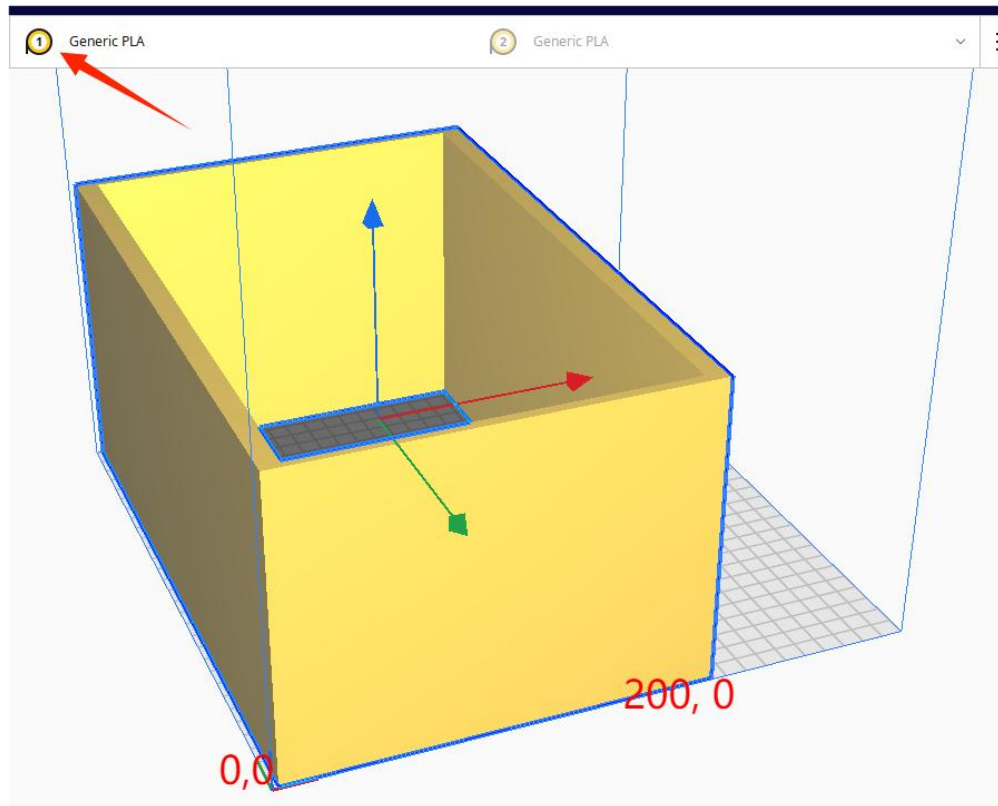
6-6. Chamber temperature adjustment

In the "Material" column in "Print settings". Generally, it can be turned on when printing ABS materials. If it needs to be turned on, it can be around 50°C:



6-7. Print size reminder

The print size of a dual extruder machine in single extruder printing or IDEX printing mode is limited. The print size of the extruder 1 is 200x300mm, and the X-axis range is (0~200mm); the print size of the extruder 2 is also 200x300mm, and the X-axis range is (100-300mm)



7. Start Printing

7-1. Find the USB drive in the tool box, insert it, and choose the file you want to print.



First print completed!

PART 2. MACHINE FUNCTION INTRODUCTION

8. Screen Functions

The temperature is displayed on the left side of the screen, and the operating functions are displayed on the right side of the screen.



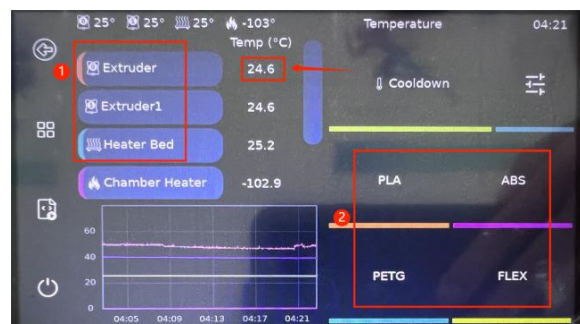
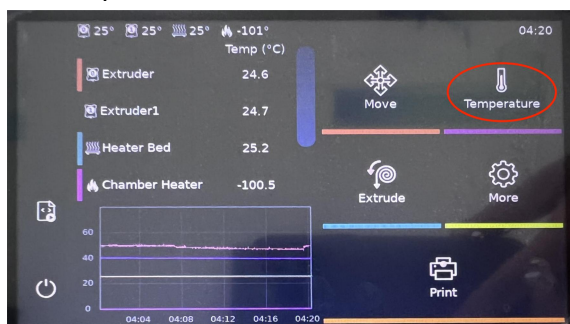
8-1. "Move" interface:

Each XYZ axis can be moved and reset to zero. Each time the machine is turned on, it is necessary to reset to zero before moving each axis.



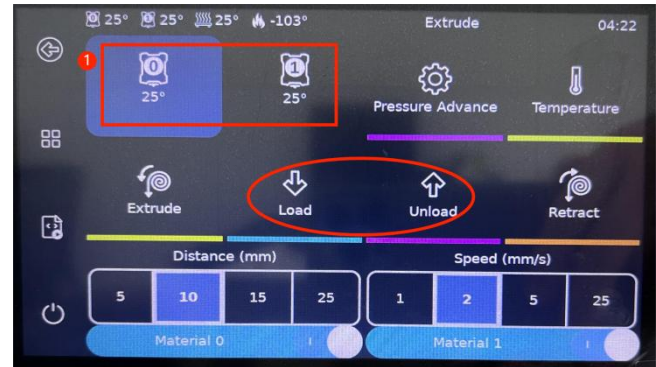
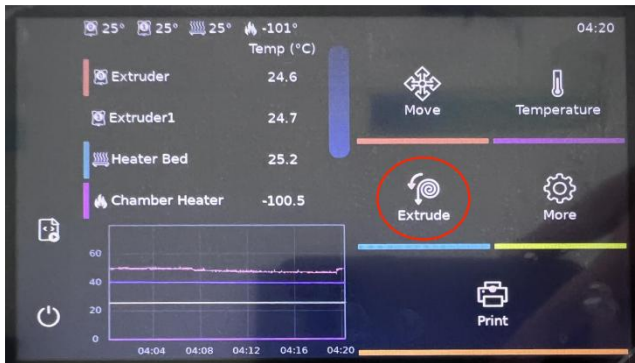
8-2. "Temperature" interface:

The preheating temperatures for various materials have been preset. Select the item you want to heat in the column on the left side of the screen, then click the button for the printing material currently in use in the lower right corner of the screen. You can also directly enter the temperature to adjust the temperature.



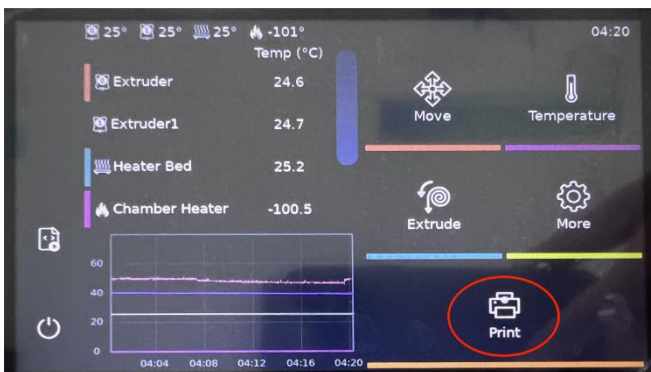
8-3. "Extrude" interface:

If the dual-nozzle machine can switch the nozzles and perform feed and retract operations, if you want to move the other nozzle, you need to complete the switch here and then return to the "Move" interface to move the extruder. "Load" and "Unload" are the preset feed and retract programs; "Extrude" and "Retract" perform filament extrusion and retract operations according to the "Distance" and "Speed" set on the screen.



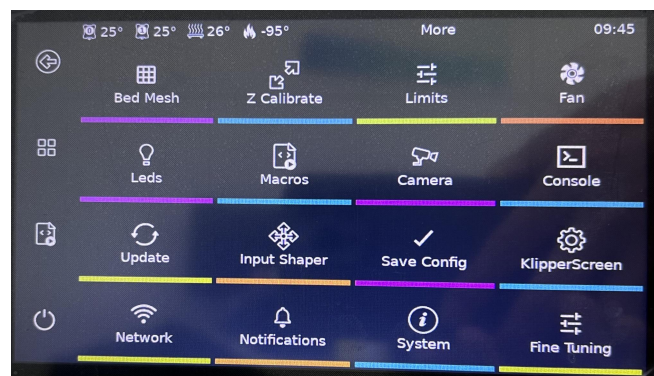
8-4. "Print" interface:

You can sort the files as needed at the top of the screen. Click the print button to print normally. If you use a USB storage device, you need to press the refresh button at the top after connecting it to read the information normally.



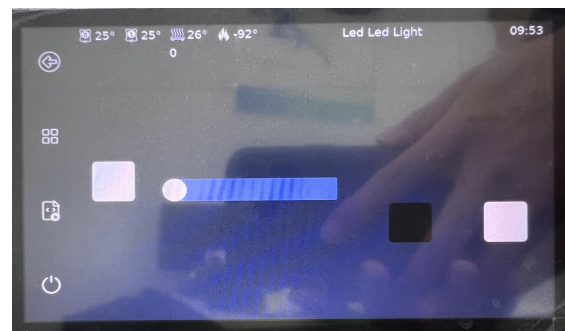
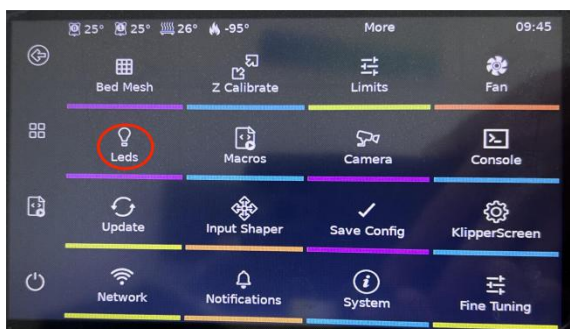
8-5. The "More" settings interface:

- Bed Mesh: The hot bed is leveled. It will be automatically leveled before you start printing. It is generally not needed.
- Z Calibrate: Calibrate the Z-axis leveling switch (z_offset). It will be calibrated before leaving the factory. It is generally not need to use.
- Fan: Fan speed adjustment.
- Leds: LED light brightness adjustment.
- Macros: Macro operation. It is strictly prohibited to use.
- Camera: Click to view the camera monitoring interface. Click again to exit.
- Input Shaper: Vibration compensation calibration. Calibration can be performed every once in a while as needed.
- Network: Connect to Wi-Fi for operation.



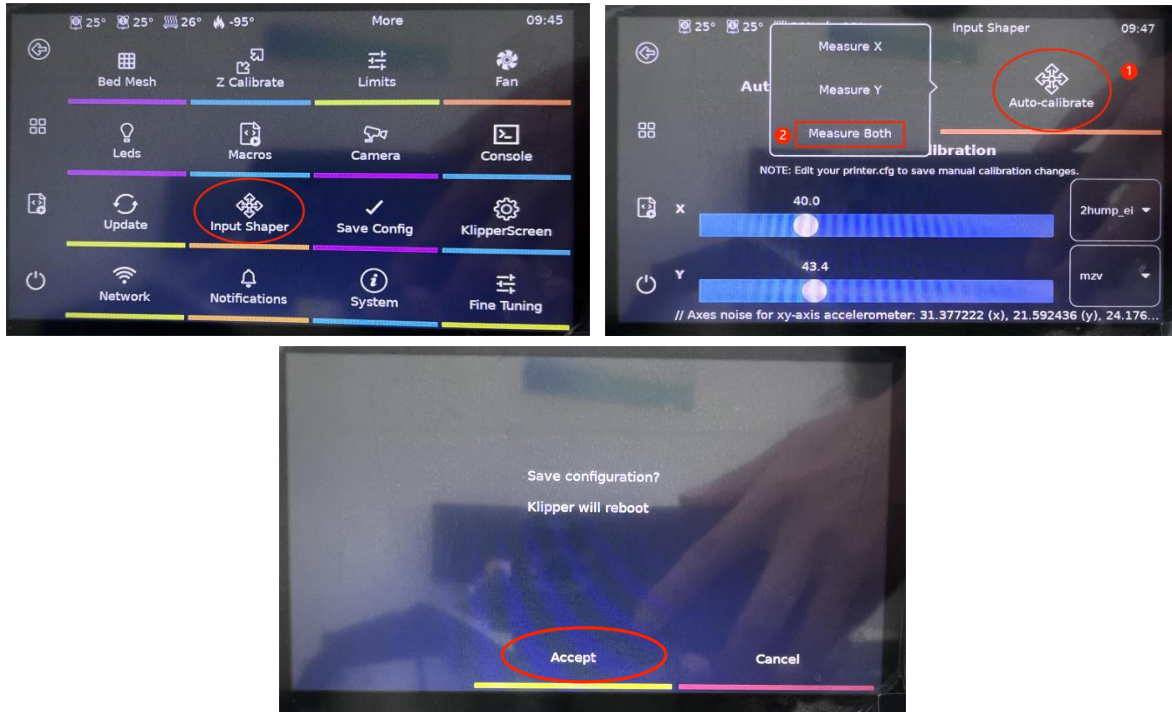
8-6. Built-in Light Control:

Slide the screen slider to adjust the brightness. Click the black block to turn off the brightness completely, and click the white block to turn on the brightness completely.



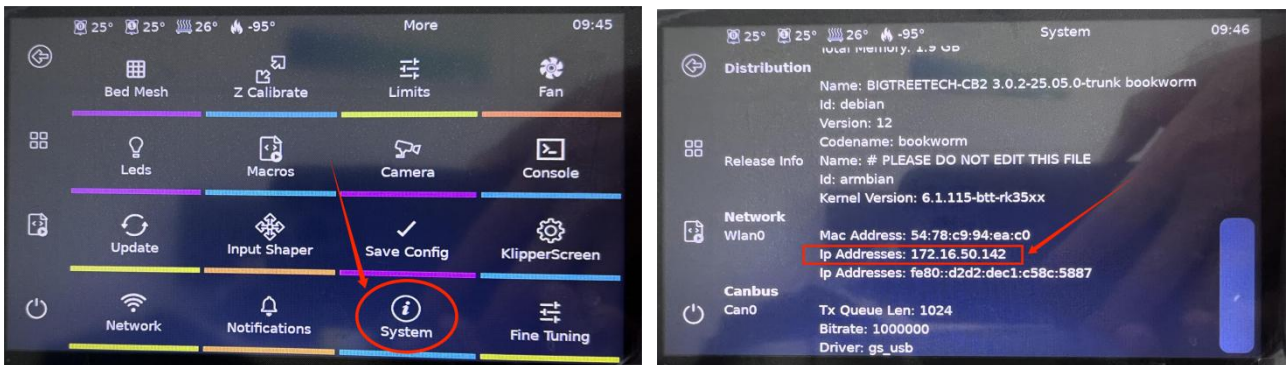
8-7. Input shaper calibration:

After entering, wait for the sensor to initialize. After completion, "Auto-calibrate" will automatically light up. Click "Auto-calibrate" and select "Measure Both" to automatically calibrate the vibration compensation value of the machine. After the save interface pops up, click "Accept" to save the calibration parameters.

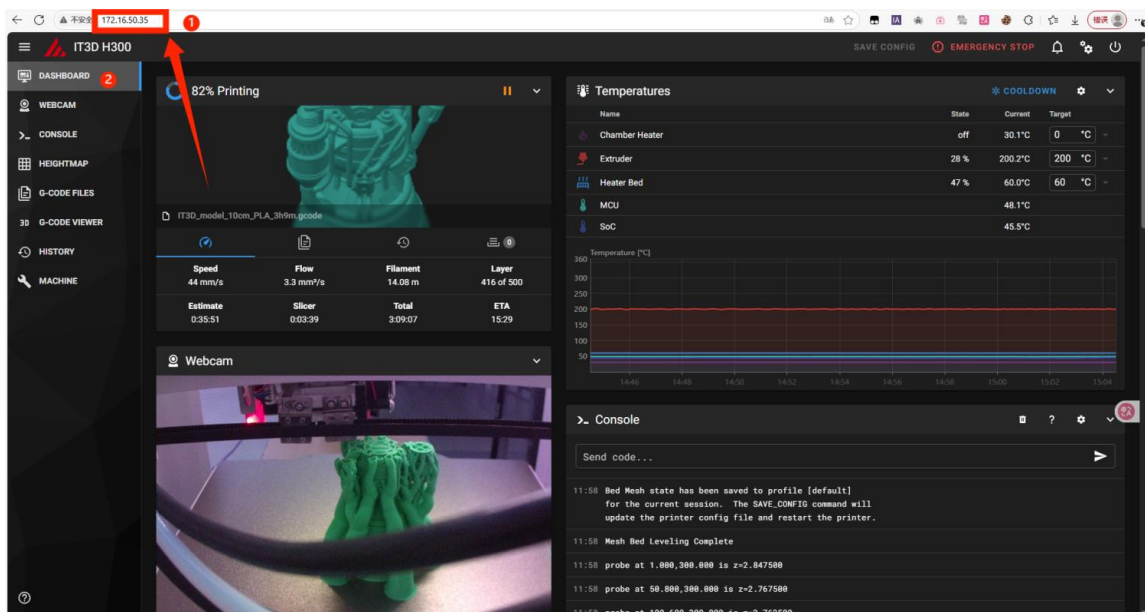
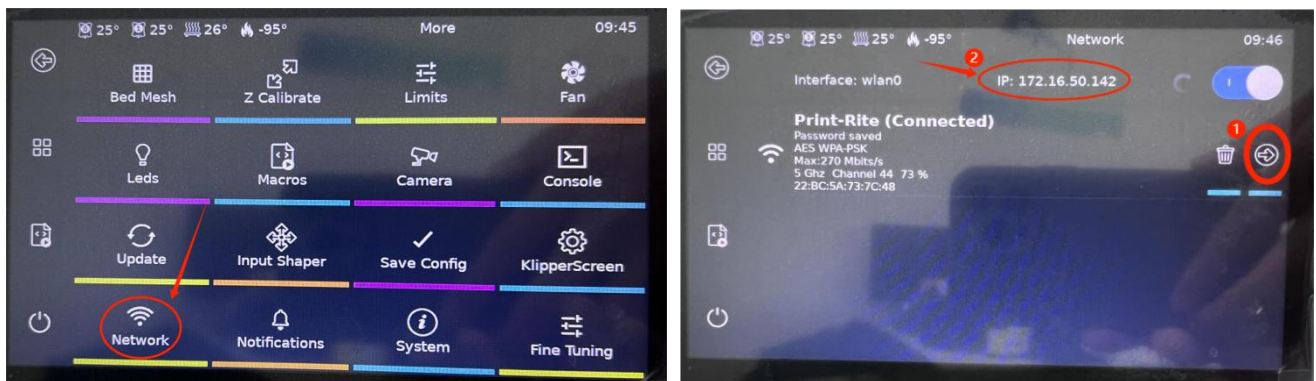


9. Remote Connection

9-1. Option 1: Use an Ethernet cable to connect the machine to the router. Check the IP in System in the machine settings interface.

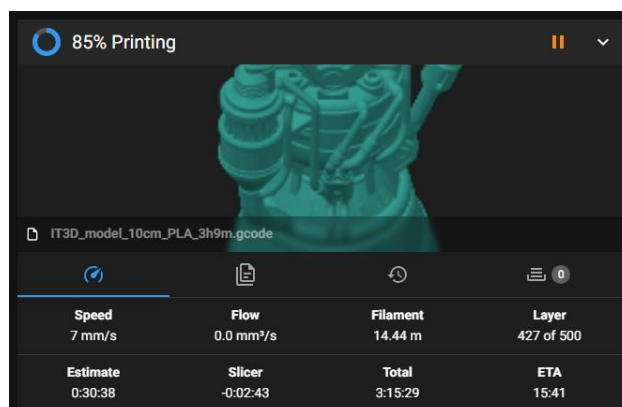


9-2. Option 2: Connect the machine to WIFI and check the IP in the Network of the machine setting interface. In the browser or slicing software, enter the IP address of the machine and enter the DASHBOARD column to access the printer control interface.

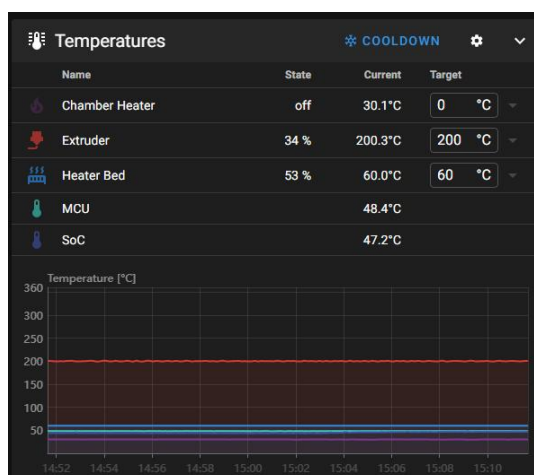


10. Control Interface Introduction

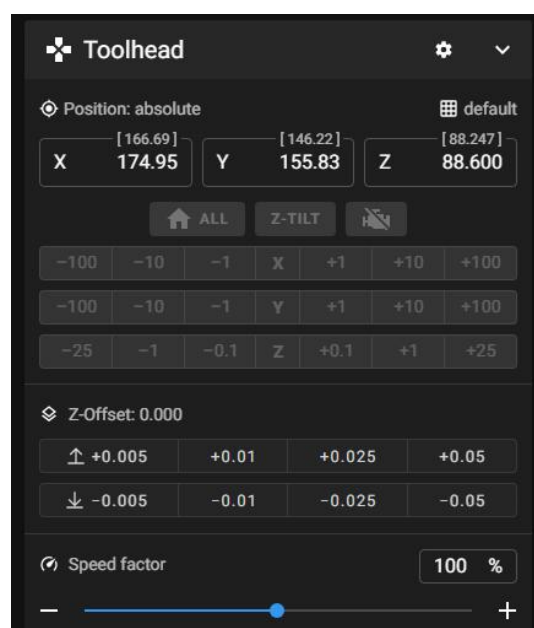
10-1. Printing progress:



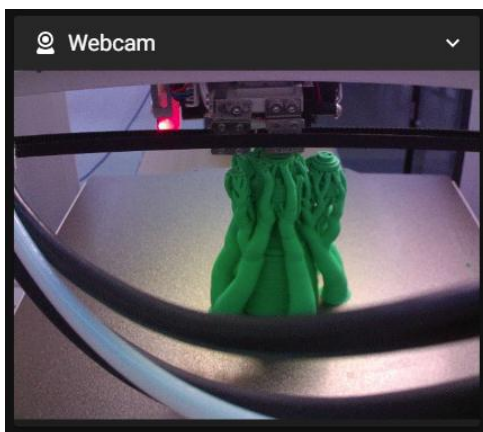
10-2. Temperature control and visualization interface:



10-3. Reset and control the X,Y,Z axes:



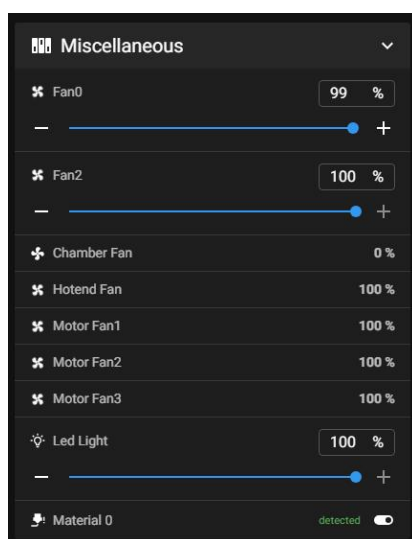
10-4. Camera interface:



10-5. Extruder Settings:



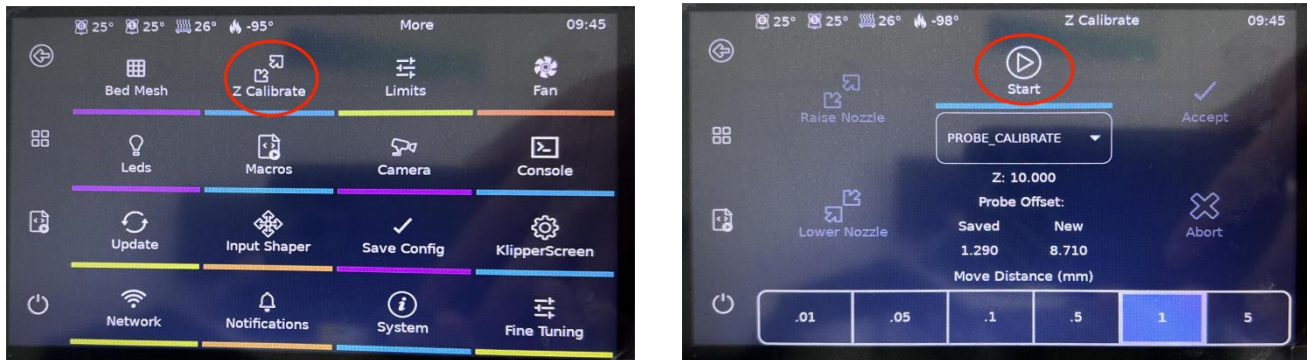
10-6. Fan and LED light control, you can adjust the fan speed or LED light brightness through the blue slider bar or directly enter the percentage:



11. The Z Calibrate interface

Note: Calibration has been completed before leaving the factory. Calibration is only required when the automatic leveling result is incorrect (the first layer is printed too tight or too loose). You can also achieve a similar effect by adjusting the z offset during printing.

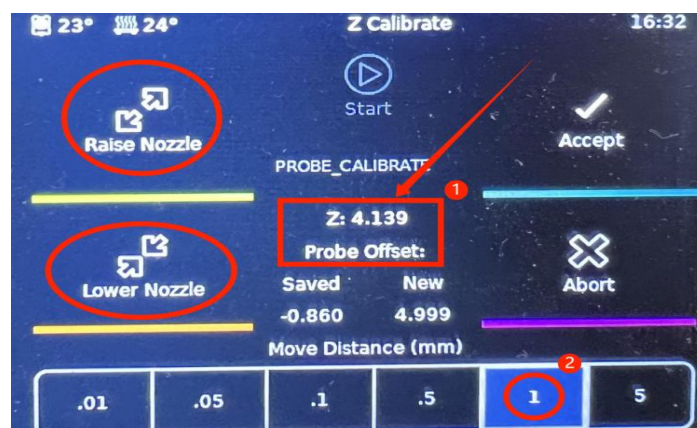
11-1. Enter the Z Calibrate interface through the settings interface:



11-2. If there is filament residue on the nozzle, please clean the nozzle first (it may be necessary to heat and remove the filament).

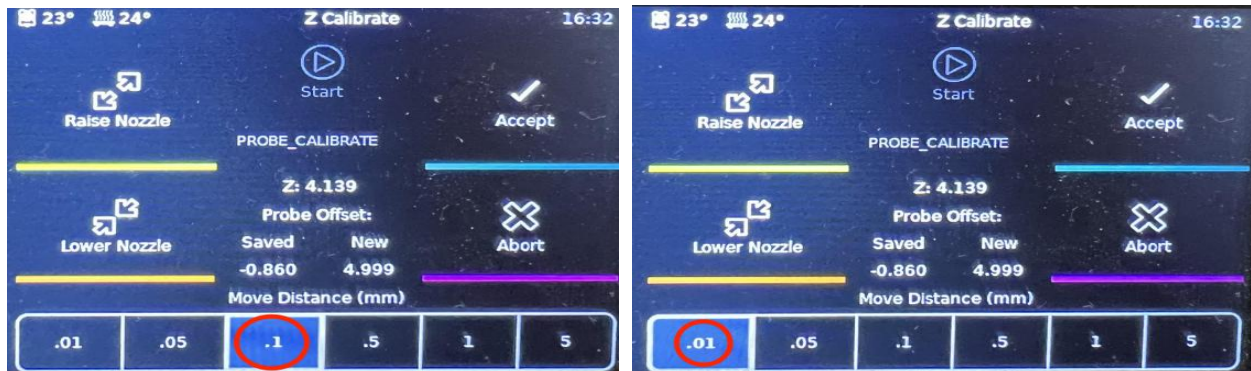
11-3. After the nozzle is cleaned, click the return button in the upper left corner of the screen, select "Z offset calibration", and click "Start".

11-4. After starting, the XYZ three-axis zeroing operation will be automatically performed. After the movement stops, take an A4 paper and place it between the nozzle and the hot bed. The purpose is to allow a slight friction between the nozzle and the A4 paper (calibration standard). Too tight or too loose will affect the automatic leveling effect.

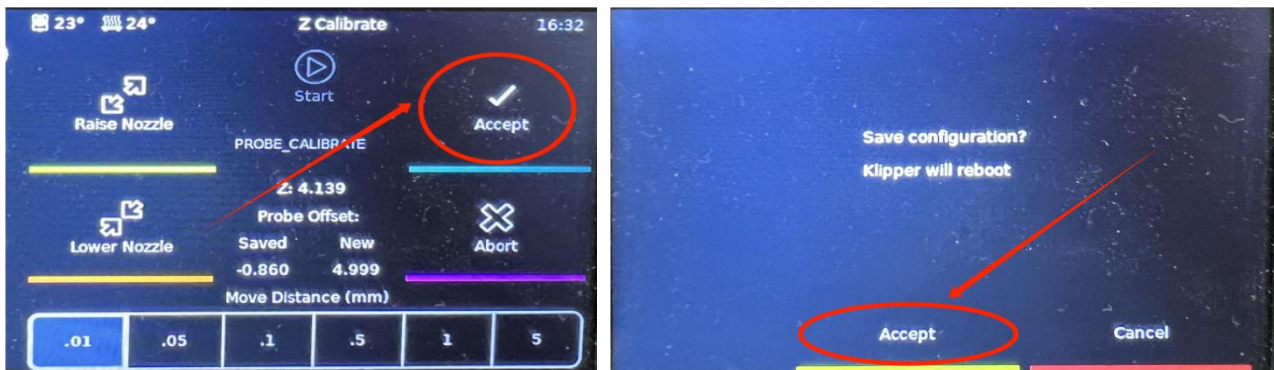


11-5. You can see the default Z position. At this time, pull the A4 paper back and forth, or observe the distance between the extruder and the A4 paper. In general, if the distance between the two is far, click "Lower Nozzle"; otherwise, click "Raise Nozzle". The following explains the situation where the nozzle is far away from the A4 paper.

By default, you can first select the moving distance as "1", then click "Lower Nozzle", lower it once and pull the A4 paper back and forth. Once you find it is too tight, immediately click "Raise Nozzle" once, and then change the moving distance to ".1". Continue to click "Lower Nozzle" and pull the A4 paper back and forth. Once you find it is too tight, raise the nozzle and select the moving distance as ".01" again. Continue to click "Raise" or "Lower" the nozzle and pull the A4 paper back and forth, and finally make the A4 paper and the nozzle have a little friction.



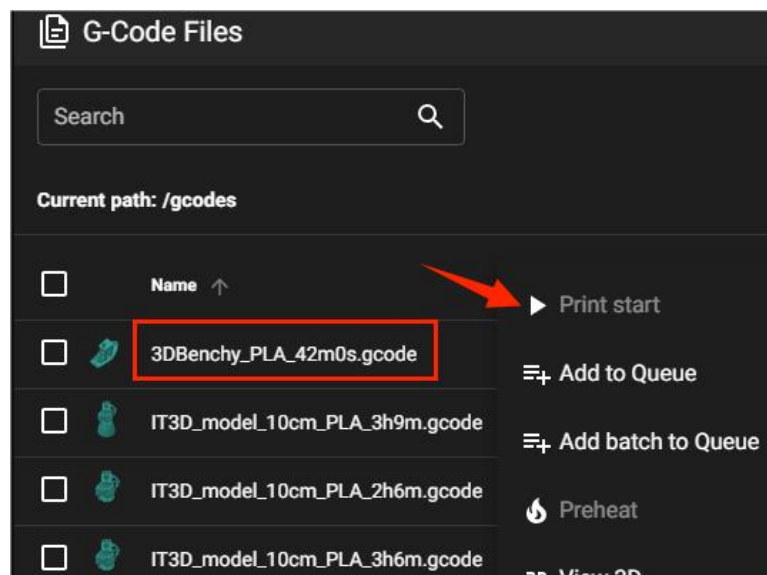
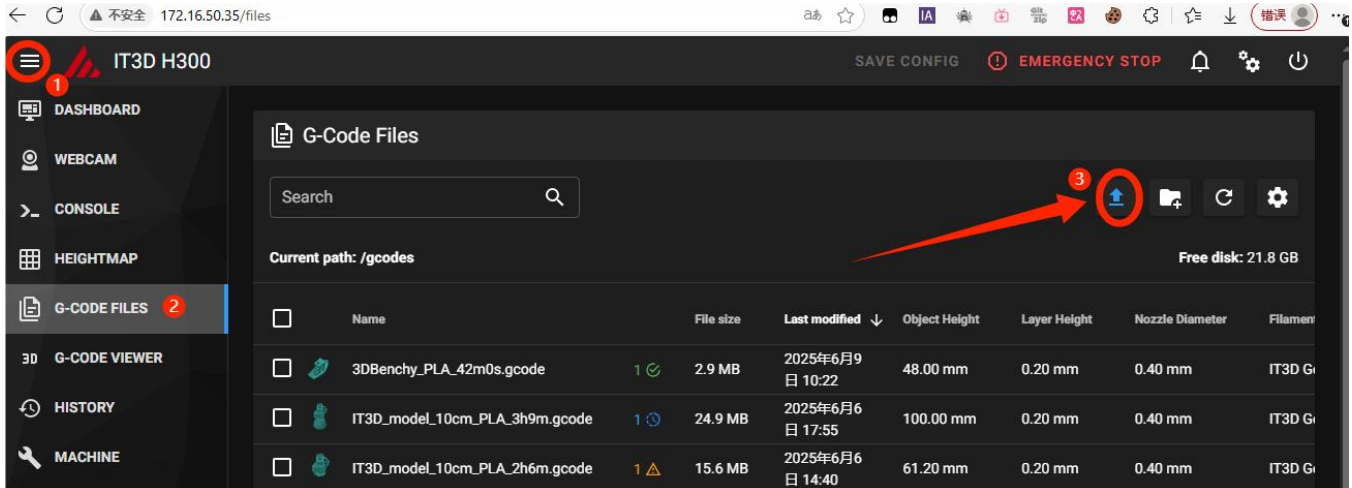
11-6. After confirming that there is a slight friction between the A4 paper and the nozzle, click the "OK" button in the upper right corner. When the "Save Settings" interface pops up, click "Confirm" again. After the firmware restarts normally, you can start printing. The parameters will be saved until you adjust them again next time.



12. Upload the printing Gcode file

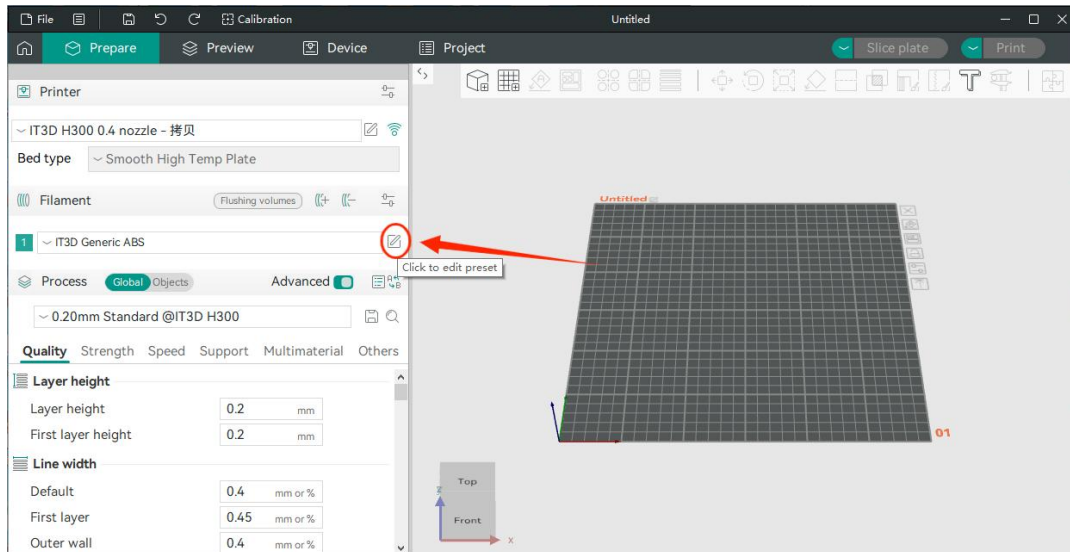
12-1. You can slice and upload in the slicing software.

12-2. Upload the file directly in the browser, select G-CODE FILES in the sidebar, and then click the upload button to select the Gcode file to be printed. After uploading, right-click the icon of the file to be printed, and select "Print start" to start printing.

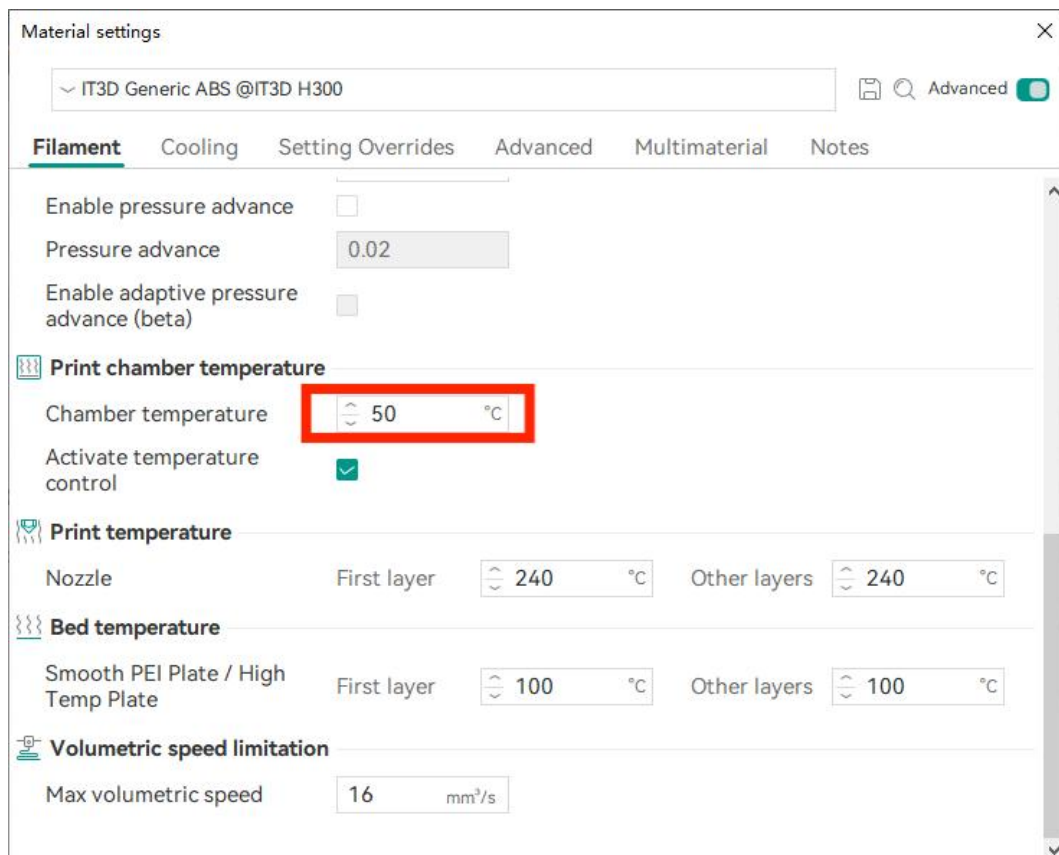


13. Printer Chamber Temperature Settings

13-1. Generally, this setting is only required when printing with ABS consumables. Click the consumable edit button in the consumable column.



13-2. Slide to find "Print chamber temperature" and change it to the required temperature, up to 60°C.



PART 3. PRINTER DEBUGGING INSTRUCTIONS

This method only for the following models:

IT3D H300, IT3D H300 Dual, IT3D P300 Pellet, IT3D P300 Dual Pellet, IT3D HP300 Dual Mix.

(This method should be performed only when the machine needs to be debugged and should not be changed without permission!)

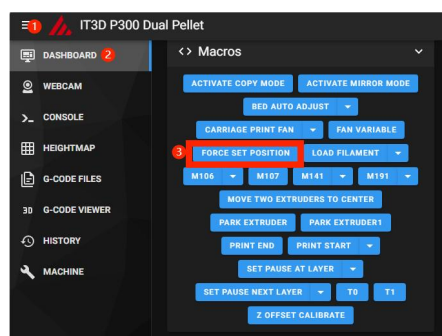
14. Debug Mode

14-1. Force the XYZ axis coordinates (0, 0, 100) to move the XYZ axis. By default, it needs to be reset after powering on before it can be moved. If you need to force movement, you can execute this mode. After debugging, you need to reset all XYZ axes once, or shut down and restart.

14-2. Operation method on the machine: Enter the "More" setting interface, select "Macros", and finally execute "force_set_position", then you can return to the Move interface to move each axis.



14-3. Web operation method: Enter the DASHBOARD panel, find the Macros module, and click "FORCE SET POSITION"



CAUTIONS

- 1. Do not try to use the machine in any way not described in the instructions to avoid accidental personal injury and property loss;*
- 2. Do not place the machine near flammable and explosive items or high heat sources. Please place the machine in a ventilated, cool and dust-free environment;*
- 3. Do not place the printer on a platform with large vibration or other unstable platforms. The shaking of the machine will affect the printing quality of the printer;*
- 4. It is recommended to use the consumables recommended by the manufacturer to avoid clogging the extruder and causing damage to the machine;*
- 5. Do not use other product power cords instead during installation. Please use the power cord included with the machine. The power plug must be plugged into a three-hole socket with a ground wire;*
- 6. Do not touch the nozzle and hot bed when the printer is working to prevent high temperature burns and personal injury;*
- 7. Do not wear gloves or wraps when operating the machine to prevent movable parts from being squeezed and cut to human parts;*
- 8. After printing, use the residual heat of the nozzle to clean the consumables on the nozzle with tools in time. Do not touch the nozzle directly with your hands when cleaning to prevent burns;*
- 9. Perform product maintenance regularly. When the power is off, clean the printer with a dry cloth to remove dust, stuck printing materials, and foreign objects on the guide rails;*
- 10. Children under the age of 10 should not use the machine without supervision to avoid personal injury.*