

NovaMake Software User Guide

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1. Introduction

NovaMake is an intelligent software that integrates model loading, model editing and 3D printer operations. It's applicable to all 3D printing devices of Nova3D to complete the functions of editing, slicing, uploading and printing of the model.

2. NovaMake Installation

Download and install NovaMake software on Nova3D website at: <u>http://www.nova3dprinter.com</u>, enter the "Software" page of "Support" as shown in the figure, download the version installation package with corresponding digits of the computer, and then install NovaMake.







NovaMaker is the 3D slicing software independently developed by nova, which combines power with easy operation. It can not only complete 3D model slicing well, but also automatically scan LAN printers and remotely control them.

▲ Note

3. User Interface

The software has 3 major functional sections: 3D Slice, Printer Control and 3D Views Control.

The 3D slice function can move, scale, copy, place and slice 3D model files. The printer control function is to manage the printing devices, modify the connected device parameters, upload the slice file, etc. The views control function can check the view of each direction of the model and the internal view of the model cut surface.





3.1. 3D Slice

The main function of 3D slice is concentrated on the left side of the software, display of the model can be adjusted by mouse:

Drag the left mouse button: rotate the view

Drag the right mouse button: move the view

Rolling mouse wheel: zoom the view

After selecting the model with the left button, the toolbar on the left side of the software will be brightened. Function of each icon is as follows:

•	Move	Move: Place the model at a reasonable position on the
*	Contra	platform
×	Scale	Scale: Scale up or down the model volume
Q	Rotate	Rotate: Rotate the model in X, Y, Z directions
4 b	Flip	Flip: Flip the model according to the X, Y, Z axis
þ	Copy	Copy: Copy the selected model
	Layout	Layout: Automatically place the model at a reasonable
(i)	Info	platform position
	iiiio	Info: View the size and volume of the model
12	Support	Sunnaut: Add sunnaut to the model
		Support: Add support to the model
	Slice	Slice: Slice the model file and upload it for printing

3.2. Printer Control

Printer Control includes: PrintJobs, Printables, Printers, Setting.

3.2.1. PrintJobs

- 1. Layer thickness (default: 0.05mm)
- 2. Slice status (current completed layers/total layers)
- 3. Motor speed (mm/min)
- 4. Printing status (printing)
- 5. Pause (pause printing task)
- 6. Stop (stop current printing task)
- 7. Progress bar (displays the percentage of printing progress)
- 8. Current printing file name (print file name)
- 9. Current printing status
- 10. Currently printed image (real-time display current slice interface)



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L3130 Printer 192.168.0.153	L3130 Printer 192.168.0.145 192.168.0.119	L3130 Printer 192.168.0.172		Ð
PrintJobs Printables Printers Setting	1. 0.050 mm 132/576 132/576 100 mm/min 100 mm/min 4. Printing Image: Second second	9.	00:37:56/02:33:01	

3.2.2. Printables

- 1. Print: to print current selected .cws file
- 2. Delete: to delete the .cws file stored in the printer
- 3. Upload: to upload the file to print
- 4. List of files stored in the printer





3.2.3. Printers

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L3130 Printer 192.168.0.153	L3130 Printer 192.168.0.145	r L3130 Printer 9 192.168.0.172	L3130 Printer 192.168.0.165		\oplus
PrintJobs	Printer Controls(m	^{m)} ♠ 10 ♠ 5	0 Honing	↓ 50 ↓ 10	↓ 1 ↓ 0.05
Drintaples	Default Print Parameters	For SLC			
Setting	ExposureTime(ms) – BottomLayers – BottomTimes(ms) –	6,000 + Lift D 4 + Lift S 40,000 +	istance – 4 peed – 100	+ save	

(1) **Printer Control:** controls the lift and decrease as well as reset of the platform.

The platform can be moved at a distance of 0.05, 1, 10, 50mm, the user can adjust the position of the platform according to the actual situation.



(2) **Default Print Parameters for SLC:** When printing with a .cws file, the parameters are generally defaulted and do not need to be changed. If you need to adjust the parameters, please contact Nova3D after-sales engineers for technical support.

Exposure Time (ms): set the exposure time of each layer

Bottom Layers: set the number of bottom layers

Bottom Time (ms): set the exposure time of bottom layers

Lift Distance (cm): control the lift distance of the platform after a layer is printed

Lift Speed (mm/min): control the lift speed of the platform



Default Print Parai	meters F	or SLC						
ExposureTime(ms)	-	6,000	+	Lift Distance	-	4	+	save
BottomLayers	-	4	+	Lift Speed	-	100	+	
BottomTimes(ms)	-	40, 000	+					

3.2.4. Setting

Users can read printer information including: WiFi network configuration, wired ethernet IP, hardware information, upgrades, etc.

NovaMaker v2	2.4.4 64-bit			- 🗆 ×
L3130 Printer 192.168.0.153	L3130 Printer 192.168.0.145	L3130 Printer 192.168.0.119		Ð
PrintJobs Printables Printers Setting	Netwo Current Wi 192.168.0. Access Po Password Enter pas	* fi: 145 pint: sword	WredEthermet Static IP: Dynamic IP: Hardware Snsid: 67af7aee06 Model: L3130-K40 Upgrade Current version: 1.2.0 检查版本	

3.3. Views Control

The views control menu at the upper right corner of the software corresponds to the switching and scaling of the view. Including: left view, right view, bottom view, top view, front view.







Cross Section View

Once the model is loaded, you can drag the scroll bar on the right to see the cross section and internal details of the model at different Z-axis values.

4. Import Model File

Double-click the desktop icon to open the NovaMake software, click

on

the upper right corner of the software and select "Open" to import the 3D model you want to print. You can also drag and drop the file directly into the software printing platform area. The supported file types are .stl, .obj, and .3mf. Multiple models can be loaded in one scene. Import 3D model file, and select the model with the left mouse button to zoom, move, add support, and transfer files. The commonly used jewelry design software exports models in .slc format that can be used directly for printing.





5. Adding Support

5.1. Auto Support&Manual Support

5.1.1. Auto Support

The software provides an intelligent support algorithm. When the model structure is complicated, the auto support can be applied, the auto-generated support can meet most printing needs. To ensure the success of printing, you can also increase the support density for the lowest point part of the model.

5.1.2. Manual Support

When the model structure is relatively simple, you can choose manual support, and add support at the lowest point part of the model.

5.2. Other Support Configuration

Thickness:	0.15mm ‡	Add+Update Whole Support

: Add a base plate to the model and set

the thickness of the base plate (reference range 0.2-0.6mm).



Remove all supports

: Here you can delete all the generated supports (select a support and

press the DEL key to delete the specific support)

Model move Z:	0.00mm ‡	Add+Up	date Support	5	Shape:
Thickness:	0.15mm ‡	Add+Up	date Whole S	apport	Rectangle 🔻
Auto support					
Spacing:	3.0mm ‡	uto gener dd suppor	ate t array		
Manual support					
🗌 Click to star	t manually add	l support			
Support shape					
Radius	1		Height:		
Head to	op: C).5mm ‡	Head:	2.0mm	n ‡
		Comm *	Connectio	ar Rad	

Support shape: Set the support radius and height, which can be adjusted according to the size of the object, suggested value:

Head top: 0.5-0.8mm
 Head bottom: 0.7-1.5mm
 Height: 1-2mm
 Example:



Umbrella-shaped support: ① top multi-point: Hold down "shift" to select the point where you want to add support (2 points or more), and finally release shift when you select the drop point.② point-to point: Hold down "shift" to select one point where you want to add support, and finally release the shift when you select the drop point. Set the support top and bottom radius and support height.

Before the support is added, the adjustment of the position and angle of the model is very helpful for printing. Generally follow the principle of heavy head down, because it is printed from bottom to top layer by layer, which can provide better support against gravity.

Principles:

Theory one: Theoretically, any angle layout model can be successfully printed by adding support.

Theory two: Choose the optimal layout direction and angle.

Theory three: In some cases, there is no need to add support.

Theory four: Support to the lowest point part of the model is a must.

Theory five: If the upper part is continuous and the slope is large, support is only needed at the lowest point part, the upper part does not need to be supported.

Theory six: Overall stress of the model should be taken into consideration while determining how many support to add.

6. Slice Configuration

The .slc file does not need to be sliced and can be directly uploaded to print. The .stl file needs to be added with support, sliced, and then uploaded for printing. NovaMake is the only slicing software for Nova3D printers. If you use other software to add support, you need to export the model to a file in .stl format and then import it into NovaMake software for slicing.

6.1. Set Printing Parameters

Parameter configuration is required before slicing. Even for the same model, different parameters need to be set if printed with different resin materials.

The default parameters are grayed out and cannot be changed. Click on "clone". The cloned data can be modified corresponding to the material used. (Setting steps as shown below)



NovaMaker v2.4.4 64-bit	ļļi	
NovaMaker v2.4.4 64-bit Image: Constraint of the second	I Slice config Config Group: ①Reference config ①我的跟踪 Cone Pelete Rename 2.Click"Clone" icon	Select L3130-K40 Anis-aliasing 2.0 ‡ Platform movement: 0.050 ‡ mm Lift total height(mm) 4.0 ‡ Lift total height(mm) 100 ‡ Lift down speed(mm/min) 100 ‡ Lift down speed(mm/min) 100 ‡ Valit after stop(seconds) 2.0 ‡
1.C	lick configuration icon Config 我的說法: L3130-H40, 0.05mm	Volume 9.49 mL Layers 734 Estimated print time 3:17:00

6.2. Parameter Setting Considerations

(1) When printing with Elfin, check the slicing software version at the upper left, the version needs to be above 2.4.2. If the version is below 2.4.2, please contact customer service to provide the latest software version.

NovaMaker v2.4.4 64-bit	ļļ	i Bl	≡ – □ ×
The NovaMake V	Persion needs to be V2.4.	2 or newer Printer Model 12130-1240 (73*131*151) Resin type Rigid resin * Exposure: Select the printer mo Thickness 0.050 ‡ mm Bottom layers 3 ‡ layers Bottom layers 3 ‡ layers Bottom layers 2 0 ‡ seconds Exposure time 0.0 ‡ seconds Exposure time 0.0 ‡ seconds Z/Anti-aliasing 2.0 ‡ Platform movement: Lift total height(mm) 4.0 ‡ Lift up speed(mm/min) 100 ‡ Wait after stop(seconds) 2.0 ‡ Apply Camel 0K	t a a a a a a a a a a a a a a a a a a a
s	lice Config 我的酒酒: L3130-K40, 0.05mm	Volume 9.49 mL Layers 734 Estimated print time 3:17:00	



 $(2)\,$ Select printer model "L3130-K40", other models correspond to the other printers of Nova3D.

(3) The layer thickness is generally selected to be 0.05mm, taking into account accuracy, printing time, and hardware characteristics. 0.05mm is almost the most reasonable choice.

(4) The exposure time and bottom layers exposure time are related to the resin. The default value is the optimum value after testing, the user can adjust according to the actual effect. (Note: The maximum exposure time is 150 seconds).

Click the "Slice" icon, select a file directory, enter the name of the saved file, and click "Save" to wait for the end of the slice.

7. Connectivity

7.1. Ethernet Connection:

Click on the right side of NovaMake title bar to enter the printer management interface, then click "+" on the upper right side to display a pop-up box for "Printers Add Guidelines", select the first item (the printer has not been configured on the network...) and then click "Next" until you are prompted to add the printer successfully.



7.2. WIFI Connection:

WIFI connected.

After connecting WiFi in the device "Network Settings", Click on the right side of NovaMake title bar to enter the printer management interface, then click "+" on the upper right side to display a pop-up box for "Printers Add Guidelines", select the second item (the printer has been configured WIFI...) as showed below, next, enter the current IP of the device until





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2 311				
-	The printer has not been configured on the network, such as a newly purcha.	sed printer		
/	The printer has been configured WIFI or connected to the router, you know the context of the printer has been configured WIFI or connected to the router, you know the context of the printer has been configured WIFI or connected to the router, you know the context of the printer has been configured WIFI or connected to the router, you know the context of the printer has been configured WIFI or connected to the router, you know the context of the printer has been configured with the printer has been context of the printer has been configured with the printer has been context of the printer has been configured with the printer has been context of the printer has been context of the printer has been context of the printer has been context.	e printer's IP		
		Next	Car	icel

8、 Uploading Slice File

After connecting the device, Click "Printables" icon on the left side to import the .cws file just sliced, the uploaded file will appear in the file list, select the file, click Print to start the print job.

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	L3130 Printer 192.168.0.145	L3130 Printer 192:168.0.119	L3130 Printer 192.168.0.172			\oplus
PrintJobs	Name: 1minu Size: 2039	Click print ico	n to start the pr	rint job		
Printables	Name: TEST Size: 638703	NOVA_8040	Select t	he file to prir	nt	
Printers Setting	Name: 雨伞 Size: 294689	8				
	PgUp	page 5/8	PgOn	ofresh		