

# Wanhao Duplicator i3 mini

Alternative names: MonoPrice i3 mini, Cocoon Create Model Maker, PowerSpec Duplicator i3 Mini

Printer properties: No heated bed 0.4mm extruder 1.75mm PLA filament Build size 120 x 135 x 100 mm (w/d/h) Bed size 165 x 240mm (w/d) Print speed 10-70mm/s Travel speed 10-70mm/s

Tips: Use cura as slicer (win/mac/linux) <https://ultimaker.com/software/ultimaker-cura> - Install Cura autorotation and octoprint plugins

<https://marketplace.ultimaker.com/app/cura/plugins/fieldofview/OctoPrintPlugin> Use glue stick for bed adhesion or better glass bed 150x230mm Borosilicate Glass

<https://www.amazon.co.uk/230mm-Borosilicate-Printers-Perfectly-Polished/dp/B07SVF71P9/> Set to 220C-225C print temp if filament doesn't stick to bed properly. Otherwise leave at 210C Manually level before each couple of prints with plain paper feel slight resistance Use zigzag infill to save material Use raft only for models with small bed footprint or where support material is required

Support settings: You want to change the following settings in Cura under 'Support': Support Density - 5-10% Support Pattern - Lines Support Placement - Touching Build plate Use flat nose / tweezer nose pliers (serrated) and flush cutter to remove supports. A deburring tool can be useful as well.

The best thing you can do is reduce the amount of supports in the first place. I like to use Custom Supports in Cura, especially the Cylindrical Custom Supports which you can find in the plugins.

<https://marketplace.ultimaker.com/app/cura/plugins/lokster/CustomSupports>

<https://marketplace.ultimaker.com/app/cura/plugins/5axes/CustomSupportCylinder>

One of the best ways to avoid printing with supports is using the best part orientation, so there aren't as many 45 degree or sharper angles that your designs or objects have.

<https://3dprinterly.com/how-to-make-3d-printing-supports-easier-to-remove/>

Possible mods: Heated bed Network via octoprint server <https://octoprint.org/>

<https://www.blackcj.com/blog/2018/12/02/3d-printer-bed-leveling-duplicator-i3-mini/>

[https://www.reddit.com/r/wanhaoi3/comments/96okg0/wanhao\\_i3\\_mini/](https://www.reddit.com/r/wanhaoi3/comments/96okg0/wanhao_i3_mini/)

## Cura installation

Use cura as slicer (win/mac/linux) <https://ultimaker.com/software/ultimaker-cura> - Install Cura autorotation and octoprint plugins

<https://marketplace.ultimaker.com/app/cura/plugins/fieldofview/OctoPrintPlugin>

Plugins: CustomSupports, CustomSupportCylinder, OctoPrintPlugin, Auto-Orientation

[Cura Icon.png](#)

```
sudo mkdir /opt/cura
sudo chown $USER:users /opt/cura
```

```
sudo chmod 775 /opt/cura
mv ~/Downloads/UltiMaker*.AppImage /opt/cura
chmod 775 /opt/cura/UltiMaker*.AppImage

#download and copy cura icon to /opt/cura
cat >>> .local/share/applications/ultimaker-cura.desktop << EOF
[Desktop Entry]
Name=Ultimaker Cura
Exec=/opt/cura/UltiMaker-Cura-5.3.0-linux-modern.AppImage
Comment=
Terminal=false
Icon=/opt/cura/cura-icon-6.png
Type=Application
EOF
```

## Webcam

see [mjpeg-server-from-webcam](#)

## Printer Mods

Print Bed stabiliser prevents the print bed screws from moving around inside the holes, stabilising it and avoiding layer shifts.

Tower cover improves the look and protects the filament mechanism from dust and pet hair.

Print Bed Stabiliser	<a href="https://www.thingiverse.com/thing:3056318">https://www.thingiverse.com/thing:3056318</a>	Print at 105%
Print Bed Stabiliser v4	<a href="https://www.thingiverse.com/thing:3971793">https://www.thingiverse.com/thing:3971793</a>	
Tower Cover for Wanhao i3 mini	<a href="https://www.thingiverse.com/thing:4767664">https://www.thingiverse.com/thing:4767664</a>	
Tower Cover for Wanhao i3 mini	<a href="https://www.thingiverse.com/thing:3143915">https://www.thingiverse.com/thing:3143915</a>	
Thumb wheels	<a href="https://www.thingiverse.com/thing:1595794">https://www.thingiverse.com/thing:1595794</a>	
Thumb wheels	<a href="https://www.thingiverse.com/thing:874155/makes">https://www.thingiverse.com/thing:874155/makes</a>	
Thumb screw with numbers	<a href="https://www.thingiverse.com/thing:2692587">https://www.thingiverse.com/thing:2692587</a>	
Bed Adjustment Nut	<a href="https://www.thingiverse.com/thing:2768366">https://www.thingiverse.com/thing:2768366</a>	
Control Wheel	<a href="https://www.thingiverse.com/thing:4425414">https://www.thingiverse.com/thing:4425414</a>	
Control Wheel Button Wrap	<a href="https://www.thingiverse.com/thing:1825073">https://www.thingiverse.com/thing:1825073</a>	
Control Wheel Knob	<a href="https://www.thingiverse.com/thing:2784217">https://www.thingiverse.com/thing:2784217</a>	
LED Lights	<a href="https://www.thingiverse.com/thing:4414651">https://www.thingiverse.com/thing:4414651</a>	
Filament Sensor Box	<a href="https://www.thingiverse.com/thing:4842897">https://www.thingiverse.com/thing:4842897</a>	
Auto Bed Levelling	<a href="https://www.thingiverse.com/thing:4736440">https://www.thingiverse.com/thing:4736440</a>	

Glass Bed for smooth first print layer and better adhesion Glass bed 150x230mm Borosilicate Glass <https://www.amazon.co.uk/230mm-Borosilicate-Printers-Perfectly-Polished/dp/B07SVF71P9/>

Glass Bed corners	<a href="https://www.thingiverse.com/thing:3053300">https://www.thingiverse.com/thing:3053300</a>
i3 Glass bed corner clamps	<a href="https://www.thingiverse.com/thing:2303045">https://www.thingiverse.com/thing:2303045</a>
i3 mini Glass bed corner clamps	<a href="https://www.thingiverse.com/thing:4639855">https://www.thingiverse.com/thing:4639855</a>
Glass Bed corners	<a href="https://www.thingiverse.com/thing:2336468">https://www.thingiverse.com/thing:2336468</a>
Corner Bracket	<a href="https://www.thingiverse.com/thing:2218972">https://www.thingiverse.com/thing:2218972</a>
Corner Holder	<a href="https://www.thingiverse.com/thing:1902898">https://www.thingiverse.com/thing:1902898</a>
Glass Clamp	<a href="https://www.thingiverse.com/thing:3207594">https://www.thingiverse.com/thing:3207594</a>
Glass Bed Light	<a href="https://www.thingiverse.com/thing:4845956">https://www.thingiverse.com/thing:4845956</a>

Adjust Z-Axis Limit Switch after Glass Bed installation:

[https://www.diyelectronics.co.za/wiki/3DPrinters/Wanhao/How\\_to\\_adjust\\_the\\_height\\_of\\_your\\_Z-Axis\\_Limit\\_Switch.pdf](https://www.diyelectronics.co.za/wiki/3DPrinters/Wanhao/How_to_adjust_the_height_of_your_Z-Axis_Limit_Switch.pdf) [how\\_to\\_adjust\\_the\\_height\\_of\\_your\\_z-axis\\_limit\\_switch.pdf](https://www.diyelectronics.co.za/wiki/3DPrinters/Wanhao/How_to_adjust_the_height_of_your_z-axis_limit_switch.pdf)

Spool Adapters:

<a href="https://www.thingiverse.com/thing:537084">https://www.thingiverse.com/thing:537084</a>
<a href="https://www.thingiverse.com/thing:4639892">https://www.thingiverse.com/thing:4639892</a>
<a href="https://www.thingiverse.com/thing:735213">https://www.thingiverse.com/thing:735213</a>
<a href="https://www.thingiverse.com/thing:3387464">https://www.thingiverse.com/thing:3387464</a>

Filament guide:

Corner Filament Guide	<a href="https://www.thingiverse.com/thing:2163508/">https://www.thingiverse.com/thing:2163508/</a>
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Spool holder:

Round Top Spool Holder	<a href="https://www.thingiverse.com/thing:2024695/">https://www.thingiverse.com/thing:2024695/</a>
Useless Spinner	<a href="https://www.thingiverse.com/thing:2299324">https://www.thingiverse.com/thing:2299324</a>

Level label reminder:

Reminder	<a href="https://cdn.thingiverse.com/assets/49/00/79/b7/9c/image.jpg">https://cdn.thingiverse.com/assets/49/00/79/b7/9c/image.jpg</a>
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## Cura USB Printing

You can disable the USB Printing part of Cura and it will no longer touch your USB ports, causing issues with Octoprint on the same system.

- Go to "Marketplace"
- Go to the "Installed" tab
- Scroll down to "USB Printing"
- Uncheck the checkbox in front of it
- Restart Cura

## 3D Designs

Dyson Vacuum Pick	<a href="https://www.thingiverse.com/thing:4818696">https://www.thingiverse.com/thing:4818696</a>
Metric screw gauge	<a href="https://www.thingiverse.com/thing:4807266">https://www.thingiverse.com/thing:4807266</a>
Angled LED strip holder	<a href="https://www.thingiverse.com/thing:4805470">https://www.thingiverse.com/thing:4805470</a>
SoDIMM storage box	<a href="https://www.thingiverse.com/thing:4824502">https://www.thingiverse.com/thing:4824502</a>
Headphone desk holder	<a href="https://www.thingiverse.com/thing:4825780">https://www.thingiverse.com/thing:4825780</a>
Retractable key case	<a href="https://www.thingiverse.com/thing:4809375">https://www.thingiverse.com/thing:4809375</a>
Filament spool holder	<a href="https://www.thingiverse.com/thing:4814049">https://www.thingiverse.com/thing:4814049</a>
Battery dispenser	<a href="https://www.thingiverse.com/thing:4808156/">https://www.thingiverse.com/thing:4808156/</a>
Bike handle bar end cap	<a href="https://www.thingiverse.com/thing:131475">https://www.thingiverse.com/thing:131475</a>
Bike grips 12 designs	<a href="https://www.thingiverse.com/thing:3057306">https://www.thingiverse.com/thing:3057306</a>
Handle bar plug	<a href="https://www.thingiverse.com/thing:940904">https://www.thingiverse.com/thing:940904</a>
Handle bar plug	<a href="https://www.thingiverse.com/thing:315544">https://www.thingiverse.com/thing:315544</a>
Key head	<a href="https://www.thingiverse.com/thing:2542174">https://www.thingiverse.com/thing:2542174</a>
Customizable Hole Plug	<a href="https://www.thingiverse.com/thing:5062324">https://www.thingiverse.com/thing:5062324</a>
31 Day Spiral Pill Box	<a href="https://www.thingiverse.com/thing:2533058">https://www.thingiverse.com/thing:2533058</a> <a href="https://www.thingiverse.com/thing:4929496">https://www.thingiverse.com/thing:4929496</a>
HexHolder - Butterfly	<a href="https://www.thingiverse.com/thing:4929701">https://www.thingiverse.com/thing:4929701</a>
Snack Box	<a href="https://www.thingiverse.com/thing:5156763">https://www.thingiverse.com/thing:5156763</a>

## 3D Modelling

<https://www.autodesk.co.uk/products/fusion-360/personal>  
<https://gist.github.com/probonopd/0fab254aa0b6fc371d8db641822bd530>

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