**Awesome 3D Printing**

A curated list of awesome 3D printing resources.

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**3D Printer Brands**

* [3D Kreator](http://3dkreator.com) - Manufacturer of the "Kreator Motion" universal 3D printer.
* [3D Systems](http://www.3dsystems.com) - 3D printers, print materials, on-demand parts services and digital design tools.
* [Construction Zone](http://construction-zone.de)
* [CraftUnique](https://craftunique.com)
* [Cubify](http://cubify.com)
* [Dremel](https://digilab.dremel.com) - 3D printers and laser cutters.
* [Formlabs](http://formlabs.com)
* [Flashforge](http://ff3dp.com)
* [German RepRap](https://germanreprap.com)
* [Kentstrapper](http://kentstrapper.com/en)
* [Lumi Industries](http://lumindustries.com)
* [Lulzbot](https://www.lulzbot.com) - Open hardware 3D printers and accessories.
* [MakerBot](http://makerbot.com)
* [Makergear](https://www.makergear.com)
* [Monoprice](https://www.monoprice.com/pages/3d_printers) - Monoprice branded Wanhao printers.
* [Peachy Printer](http://peachyprinter.com) - The world's first 100$ 3D printer.
* [Printrbot](http://printrbot.com)
* [Prusa Research](http://www.prusa3d.com) - 3D printers from Josef Prusa.
* [RepRap](http://reprap.org) - Free desktop 3D printer.
* [Robo3d](https://robo3d.com) - Robo R1, R2 and C2 3D printers.
* [Sharebot](https://sharebot.it) - Innovative, easy to use 3D printers for professional results.
* [Sindoh](http://3dprinter.sindoh.com) - Enclosed xyz 3D printer "3DWOX".
* [Tractus3D](http://tractus3d.com) - Delta 3D printers in 3 sizes.
* [Trideo3D](http://trideo3d.com) - FDM 3D printers focusing on the experience in 3 sizes.
* [Ultimaker](https://ultimaker.com)
* [XYZprinting](https://xyzprinting.com) - Cost-effective 3D printers.
* [Up3d](https://up3d.com)
* [Wanhao](https://www.wanhao3dprinter.com)

**CAD Tools**

* [AutoCAD](http://autodesk.com/products/autocad/overview) [commercial]
* [FreeCAD](http://freecadweb.org)
* [OpenSCAD](http://openscad.org)
* [Solidworks](http://solidworks.com) [commercial]
* [Tinkercad](https://www.tinkercad.com) - Browser based free app for 3D design, electronics, and coding.

**Control Software**

* [Makerbot Desktop](http://www.makerbot.com/desktop) - Discover, manage and share your 3D prints.
* [OctoPrint](http://octoprint.org) - Web interface for 3D printer.
* [PrintRun](https://github.com/kliment/Printrun) - Pure Python 3d printing host software.
* [Repetier](http://repetier.com) - Place, slice, preview and print.
* [ReplicatorG](http://replicat.org) - Open source 3D printing program.

**File Formats**

| **Name** | **License** | **Encoding** | **Features** |
| --- | --- | --- | --- |
| [3MF](https://en.wikipedia.org/wiki/3D_Manufacturing_Format) | Open | Compressed XML | geometry, material, metadata, signature, texture, thumbnail |
| [ACIS](https://en.wikipedia.org/wiki/ACIS#File_format) |  | text or binary |  |
| [AMF](https://en.wikipedia.org/wiki/Additive_Manufacturing_File_Format) | Open | Zipped XML | color, constellations, curved triangles, formulas, geometry, material, metadata |
| [CKD](https://en.wikipedia.org/wiki/KeyCreator) | Proprietary |  |  |
| [DWG](https://en.wikipedia.org/wiki/.dwg) (Drawing) | Proprietary | OpenXPS |  |
| [DXF](https://en.wikipedia.org/wiki/AutoCAD_DXF) (Drawing Exchange Format) | Proprietary | text/binary |  |
| [DWF](https://en.wikipedia.org/wiki/Design_Web_Format) (Design Web Format) |  | OpenXPS | Communicate design information |
| [IGES](https://en.wikipedia.org/wiki/IGES) (Initial Graphics Exchange Specification) | Vendor-neutral | text |  |
| [OBJ](https://en.wikipedia.org/wiki/Wavefront_.obj_file) (Object) | Open | text | geometry |
| [PLY](https://en.wikipedia.org/wiki/PLY_(file_format)) (Polygon File Format) | Open | text or binary | color, geometry, normals, texture, transparency |
| [STL](https://en.wikipedia.org/wiki/STL_(file_format)) | Proprietary | text or binary | geometry, normals |
| [STEP](https://en.wikipedia.org/wiki/ISO_10303) | ISO |  |  |

**Slicers**

Convert 3D models into G-Code.

* [CraftWare](https://craftunique.com/craftware)
* [Cura](https://ultimaker.com/en/products/cura-software)
* [Katana](http://printr.com/katana)
* [KISSlicer](http://kisslicer.com)
* [MatterControl](http://mattercontrol.com)
* [Slic3r](http://slic3r.org)
* [Skeinforge](http://fabmetheus.crsndoo.com/wiki/index.php/Skeinforge) - Tool chain of Python scripts.

**Scanner**

* [123D Catch](http://www.123dapp.com/catch) - Free app to create 3D scans of virtually any object.
* [iSense 3D scanner](http://cubify.com/products/isense)
* [MakerBot Digitizer](http://makerbot.com/makerware-for-digitizer)
* [Matter and Form](https://matterandform.net/scanner) - Professional grade scanner.
* [Nextengine](http://nextengine.com)
* [Scanify](https://www.fuel-3d.com/scanify) - High-speed, high resolution, handheld 3D scanner.
* [Sense](http://cubify.com/products/sense) - 3D Scanner.

**Online 3D Model Repositories**

From 3D printer manufacturer:

* [123D Gallery](http://123dapp.com/Gallery) (from Autodesk)
* [Thingiverse](https://thingiverse.com) (from Makerbot)
* [Treasure Island](http://treasure.is) (from Pirate3D)
* [YouMagine](https://youmagine.com) (from Ultimaker)

Independent:

* [3D Model Free](http://3dmodelfree.com)
* [3D Via](http://3dvia.com)
* [3DAGOGO](https://3dagogo.com)
* [Bld3r](http://bld3r.com)
* [CGtrader](http://cgtrader.com)
* [Cuboyo](http://cuboyo.com)
* [Cults](http://en.cults3d.com)
* [FABFabbers](http://fabfabbers.com)
* [FabMe](http://fabme.it)
* [GrabCAD](http://grabcad.com)
* [MakerBot Digital Store](http://makerbot.com/digital-store)
* [MyMiniFactory](http://myminifactory.com)
* [Pinshape](https://pinshape.com) - Find, share and sell 3D print files.
* [Redpah](https://redpah.com)
* [Repables](http://repables.com)
* [Sculpteo](http://sculpteo.com)
* [Shapeways](https://shapeways.com)
* [SketchFab](https://sketchfab.com)
* [SproutForm](http://sproutform.com)
* [TF3DM](http://tf3dm.com)
* [Turbosquid](http://turbosquid.com)
* [Uformit](http://uformit.com)

**Online Tools**

* [BotQueue](https://github.com/Hoektronics/BotQueue) - Control your 3D printers over the internet.
* [Clara.io](https://clara.io) - Cloud-based 3D modeling, animation and rendering.
* [gcode.ws](http://gcode.ws) - Gcode analyzer.
* [GetAnywhere](https://www.getanywhere.io) - Remotely monitor your OctoPrint.
* [Lagoa](http://home.lagoa.com) - Create kinematic assemblies, renders and photoreal interactive 3D experiences in the browser.
* [Meshify](http://meshify.dk) - Convert a 3D model into a 3D printable mesh-like lattice structure.
* [WeDesign](http://wedesign.live) - Collaborative platform for 3D design.
* [Vectary](http://vectary.com) - Browser-based 3D modeling.

**On Demand 3D Printing Services**

* [3D Hubs](https://3dhubs.com)
* [Shapeways](https://shapeways.com)
* [Toybuilderlabs](http://toybuilderlabs.com)

From game assets:

* [Whispering Gibbon](http://whisperinggibbon.com) - 3D printing virtual content.
* [Fabzat](http://fabzat.com) - In app custom merchandising.
* [Toyze](http://toyze.com) - Bring game characters to life as customized toys.

**Marketplaces**

* [Zazzy](https://zazzy.co) - Create and sell 3D printed accessories.
* [Microscape](http://microscape.co) - Minature scale 3D printed architectural models.
* [iGo3D](https://igo3d.com) - 3D printing online store.

**On Demand 3D Printing Price Comparison**

* [3Dprintler](https://3dprintler.com)
* [3yourmind](https://3yourmind.com)

**Remote Control**

* [The Element](http://printr.com/the_element) - Streaming device you can connect to your 3D printer via USB.

**Search Engines**

* [3Dshap.es](http://3dshap.es) - Find 3D Printable Designs Using 3D shapes.
* [Yobi3d](https://yobi3d.com) - 3D model search engine with direct 3D printing support via [3D Hubs](https://3dhubs.com).

**Technologies**

* [NewPro3D](http://newpro3d.com) - Wettable membrane for high speed resin based 3D printing.
* [Carbon3D](http://carbon3d.com/) - Balancing the interaction of light and oxygen for fast resin based 3D printing.
* [iopscience.iop.org/article/10.1088](http://iopscience.iop.org/article/10.1088/0964-1726/25/2/02LT01) - 3D printed components with ultrasonically arranged microscale structure.

**Education**

* [Makerclub](http://makerclub.org) - Online courses for 3D printing and the internet of things.

**Accessories**

* [REVOcaster](http://magicmaker.ca/#revo11) - Desktop rotational casting machine.

**Filaments**

* [Protopasta](https://www.proto-pasta.com)