






Digital Manufacturing Laboratory – 118 Bonner Hall – Additive Manufacturing / 3D Printing Resources

Image	Item	Material	Build Volume (W/D/H) Layer Thickness / Resolution	File Formats	General Features
Fused Deposition Modeling: FDM Printers (desktop)					
	Original Prusa i3 MK3S+	Various (not all in stock): PLA, ABS, PET/PETG, HIPS, Flex PP, Ninjaflex, Laywood, Laybrick, Nylon, Bamboofill, Bronzefill, ASA, T-Glase, Carbon-fibers enhanced filaments, Polycarbonates	Build Volume: 9.84 x 8.3 x 8.3 inches (25 x 21 x 21 cm or) Layer Thickness: from 0.05 mm	STL, OBJ, 3MF	<ul style="list-style-type: none"> • Consistently produces precise, high-quality, high-resolution prints • Supports multiple filament types enabling printing in a variety of materials • Reliable for printing simple and complex parts • Software auto-generates supports; minimal support removal and sanding required
Fused Deposition Modeling: FDM Printers (professional grade)					
	Stratasys Mojo	Plastic: Acrylonitrile-Butadiene-Styrene+ (ABS+)	Build Volume: 5 x 5 x 5 inches (12.7 x 12.7 x 12.7 cm) Layer Thickness: 0.178 mm (0.007 in)	STL	<ul style="list-style-type: none"> • High-quality strength and resolution for realistic prototypes or finished parts • Support material washes away enabling a smooth, clean finish without sanding or filing
	Stratasys uPrint SE	Plastic: Acrylonitrile-Butadiene-Styrene+ (ABS+) Color: Ivory	Build Volume: 8 x 6 x 6 inches (203 x 152 x 152 mm) Layer Thickness: 0.254 mm (0.010 in)	STL	<ul style="list-style-type: none"> • High-quality strength and resolution for realistic prototypes or finished parts • Support material washes away enabling a smooth, clean finish without sanding or filing
Stereolithography: SLA Printer					
	FormLabs Form 2 <i>Laser-based: 405nm violet</i>	Liquid Resin: Methacrylate Photopolymer Resin Resin Types: Rigid, Castable, Tough, Flexible, High-temperature, etc.	Build Volume: 5.7 x 5.7 x 6.9 inches (145 x 145 x 175 mm) Layer Thickness: 25, 50, 100 microns (0.001, 0.002, 0.004 in) Laser Spot Size: 140 microns (0.0055 in)	STL, OBJ	<ul style="list-style-type: none"> • Smooth, clean finish on any part; solid parts and small intricate details • Variety of materials enable builds of rigid, flexible, and castable parts • Software auto-generates required supports; minimal post-processing, support removal and sanding required • UV lightbox enhances curing

PolyJet Printer					
	Stratasys Objet30 Prime	Multiple Materials: Rigid (Vero), Rubber-like (Tango), High-temperature, Simulated Polypropylene <ul style="list-style-type: none"> All materials not available at all times 	Build Volume: 11.57 x 7.55 x 5.85 inches (294 x 192 x 148.6 mm) Layer Thickness: 28 microns (0.0011 in) for Tango materials; 16 microns (0.0006 in) for all other materials Accuracy: 0.1mm (0.0039 in) Resolution: x, y: 600 dpi; z: 1600 dpi Three build modes: <ul style="list-style-type: none"> Draft (36 micron) High Speed (28 micron) High Quality (16 micron) 	STL	<ul style="list-style-type: none"> Prints precise consumer-product prototypes with smooth surfaces and flexible components Rubber material enables prototyping of gaskets, plugs and seals Offers rigid materials in multiple opaque shades as well as clear, for detail visualization and prototypes that include see-through components Rubberlike materials for soft-touch features and flexible components Capable of printing specialized materials such as High Temperature, Simulated Polypropylene and even Bio-compatible for medical device prototyping and production parts such as surgical guides
Composite Printers					
	Markforged Mark Two Professional <i>Fused Filament Fabrication (FFF); Composite Filament Fabrication (CFF)</i>	Base Material: Nylon (extruded) Composite Infill: Carbon Fiber, Fiberglass, Kevlar®	Build Volume: 12.6 x 5.2 x 6.06 inches (320 x 132 x 154 mm) Layer Thickness: FFF Printing: 100 Microns (0.1mm)	STL	<ul style="list-style-type: none"> Capable of producing tough, abrasion-resistant, composite-reinforced parts Carbon fiber material is 20x stiffer than ABS, making it useful for fixtures, jigs, and parts that need the highest strength-to-weight ratio Kevlar® filament is perfect for parts that need to be stiff and tough Fiberglass filament provides impressive strength, but at a lower cost than carbon
	Markforged Mark X <i>Fused Filament Fabrication (FFF); Composite Filament Fabrication (CFF)</i>	Base Material: Onyx (extruded) Composite Infill: Carbon Fiber, Fiberglass, Kevlar®	Build Volume: 12.9 x 9.8 x 7.8 inches (330 x 250 x 200 mm) Layer Thickness: FFF Printing: 50 Microns (0.05mm)	STL	<ul style="list-style-type: none"> Prints larger parts with the high-strength materials Onyx material combines nylon with micro-carbon reinforcement; 1.4 times stronger & stiffer than ABS Add carbon, Kevlar® and fiberglass filaments for additional strength High quality finish; high heat tolerance Laser displacement sensor enables in-process part inspection
Colorjet Printer					
	3D Systems ProJet CJP 260Plus	Material: VisiJet PXL Core VisiJet PXL Clear Binder Colors: Full color (CMY)	Build Volume: 9.3 x 7.3 x 5 inches (236 x 185 x 127 mm) Layer Thickness: 0.004 in (0.1 mm) Resolution: 300 x 450 dpi	STL, 3DS, VRML + more	<ul style="list-style-type: none"> Builds realistic, high definition, full-color concept models, assemblies and prototypes in full CMY color Well-suited for concept modeling of communication, sales and marketing models; rapid design iteration; display/art models Easy post-processing with no supports to remove Choose from a range of part finishing options to meet your application requirements

3D Scanner			Accuracy	Exports to:	General Features
	NextEngine 3D Scanner HD		0.005 inch accuracy	OBJ, STL, VRML + more	<ul style="list-style-type: none"> • Captures fine detail to 100 micron precision • Provides higher point throughput and much better data fidelity