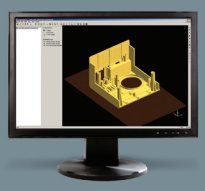
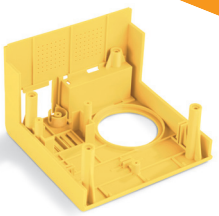
ACCURATE, HIGH-RESOLUTION PLASTIC PROTOTYPES





ZCORPORATION®

ZBuilder™ Ultra

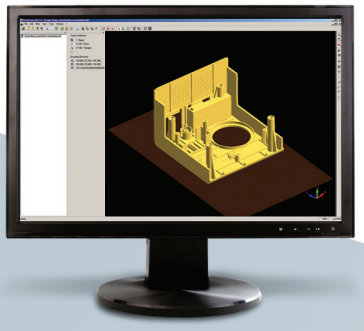
THE CAPABILITIES OF A HIGH-END RAPID PROTOTYPING SYSTEM AT A FRACTION OF THE COST

The ZBuilder Ultra builds durable plastic parts that rival injection molding's accuracy, material properties, detail and surface finish. It enables engineers to verify designs for form, fit and function prior to full-scale production, eliminating costly modifications to production tooling and shortening time to market.

- Evaluate product designs prior to full-scale production
- Verify designs for form, fit and function
- Create concept models to improve communication and refine designs

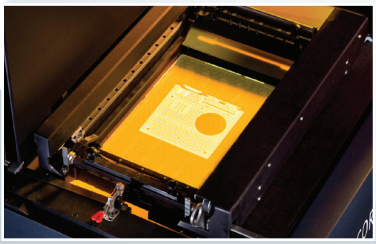
HOW ZBUILDER ULTRA TECHNOLOGY WORKS

The ZBuilder Ultra builds 3D parts additively using a high-resolution Digital Light Processor (DLP) projector to solidify a liquid photopolymer.



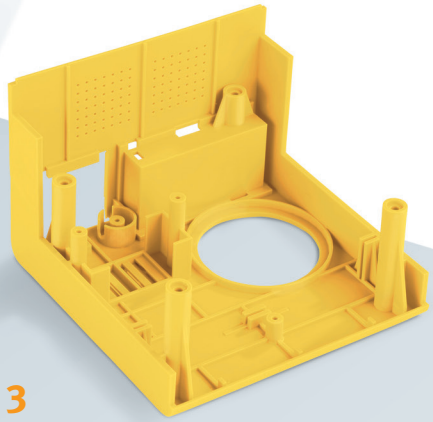
1

A 3D CAD file is imported into Perfectory® RP software. The software prepares the CAD file for prototyping on the ZBuilder Ultra.



2

The ZBuilder Ultra builds 3D parts additively using a high-resolution Digital Light Processor (DLP) projector to solidify liquid photopolymer into robust, solid plastic.



3

The process is repeated until the prototype is complete and ready to be removed.

ZBUILDER ULTRA ADVANTAGES

BUILD TRUE FUNCTIONAL PLASTIC PARTS

- Material properties mimic final parts
  - Strong and flexible
  - Consistent regardless of orientation
- Razor-thin walls & sharp detail
  - X/Y resolution from highest resolution DLP engine
  - Precise control of light source delivers sharp edges
- Ultra-smooth surface finish
  - Parts appear injection molded
  - Precise control of each voxel (3D pixel)
  - No “stair stepping”

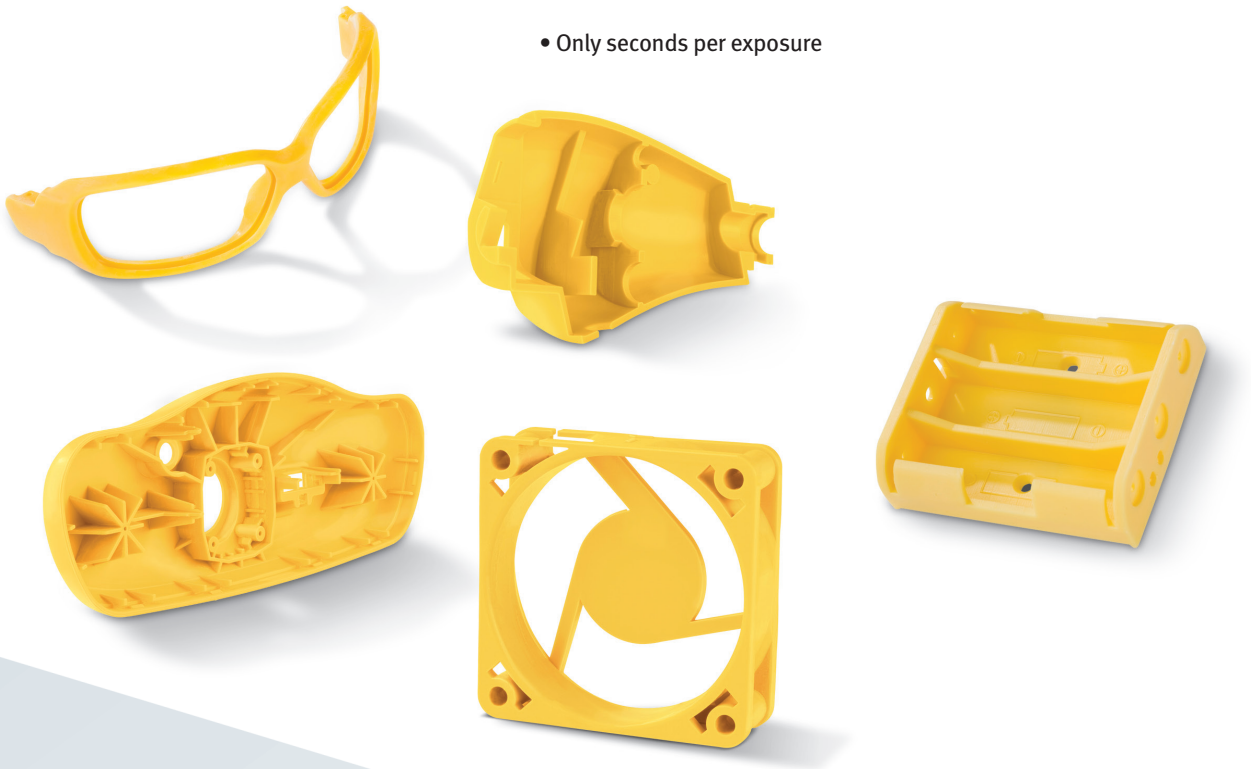
DUPLICATE DIGITAL CAD MODELS PRECISELY

- Accurate; part features within +/- 0.008 inches* (+/- 0.2 mm*)
- Precision optics and motion systems for repeatability
- Only movement in the Z-direction

SAVE TIME

- 2X faster than other rapid prototyping systems
- Verify designs the next day
- Speed independent of the number of parts in the build
- Only seconds per exposure

“When part accuracy and durability are required for design verification, the affordable ZBuilder delivers parts that rival injection molding.”



* Typical (may vary by geometry, part orientation, build parameters, and process)

ZBuilder™ uLTRA

MACHINE PERFORMANCE	
X/Y Resolution	0.005 inches (138 microns)
Z Resolution	50 – 100 microns (adjustable)
Minimum Feature Size	0.005 inches (138 microns)
Accuracy	+/- 0.008 inches* (+/- 0.2 mm*)
Vertical Build Speed	up to 0.5 inches/hour (12.7 mm/hour)
Build Size	10.2 x 6.3 x 7.5 inches (260 x 160 x 190 mm)
MATERIALS PERFORMANCE (SI500)	
Tensile Strength	6240 PSI (43.0 MPa)
Tensile Elongation at Break	4.50%
Flexural Strength	8740 PSI (60.2 MPa)
Flexural Modulus	263 kSI (1810 MPa)
Hardness	86D
HDT (0.45 MPa)	132.3 F (55.7 C)
HDT (1.82 MPa)	116.3 F (46.8 C)
MACHINE SPECIFICATIONS	
Input File Formats	stl, 3ds, dxf, obj, wrl, zpr
Dimensions	28 x 30.5 x 71 inches (71.1 x 77.5 x 180.3 cm), with optional stand
Weight	360 lbs (163 kg)
Power Requirement	115V, 10A; 230V, 6A
Regulatory Compliance	CE, CSA

* Typical (may vary by geometry, part orientation, build parameters, and process)

Z CORPORATION®

WORLDWIDE HEADQUARTERS
Z Corporation
32 Second Avenue
Burlington, MA 01803 USA
+1 781 852 5005

www.zcorp.com