



Make the most of additive manufacturing

| Model Import, Export & Mesh Repair | Netfabb Standard | Netfabb Premium | Netfabb Ultimate |
|---|------------------|-----------------|------------------|
| Import common file formats <i>Import mesh files, universal formats like STEP or IGES, or native files from commonly used CAD applications.</i> | ✓ | ✓ | ✓ |
| Batch import and repair <i>Add multiple files to your project simultaneously and perform automatic repair during import.</i> | ✓ | ✓ | ✓ |
| Solid model workflow <i>Load solid models of CAD files and retessellate as needed to the appropriate level of detail for the task at-hand.</i> | ✓ | ✓ | ✓ |
| Automatic mesh repair <i>Run pre-defined or custom repair scripts that correct the most common mesh errors.</i> | ✓ | ✓ | ✓ |
| Semi-automatic mesh repair <i>Perform specific repair operations to the entire part or to a selection of triangles, surfaces, shells, or edges.</i> | ✓ | ✓ | ✓ |
| Manual mesh repair <i>Use a variety of mesh repair tools to manually add, remove, or adjust mesh triangles, nodes, and edges.</i> | ✓ | ✓ | ✓ |
| Cloud project collaboration <i>Share Netfabb projects with stakeholders anywhere using A360 cloud-based project storage.</i> | ✓ | ✓ | ✓ |
| Mesh to CAD (B-rep) export <i>Convert organic, free-form mesh files to boundary representation models</i> | ✓ | ✓ | ✓ |

| Analysis Tools | Netfabb Standard | Netfabb Premium | Netfabb Ultimate |
|---|------------------|-----------------|------------------|
| Part and platform statistics <i>Easily access mesh statistics, part sizes and volumes, and platform capacity and utilization.</i> | ✓ | ✓ | ✓ |
| Part level analysis <i>Calculate and view upskins/downskins, center of gravity, wall thicknesses, shadow areas, and support volumes.</i> | ✓ | ✓ | ✓ |
| Measurement <i>Create measurements of lengths, thicknesses, and angles on and between parts that update with model changes.</i> | ✓ | ✓ | ✓ |
| Mesh compare <i>Compare distances between meshes to check models after remeshing, scaling, or corrective deformation.</i> | ✓ | ✓ | ✓ |
| Live collision detection <i>Check if two or more parts in the project touch each other and quickly identify where collisions are occurring.</i> | ✓ | ✓ | ✓ |
| Interlock detection <i>Identify where parts may be interlocked after manual and automatic packing steps.</i> | ✓ | ✓ | ✓ |
| Z-removability check <i>Ensure easy platform unloading by identifying where parts may obstruct each other vertically.</i> | ✓ | ✓ | ✓ |
| Report generation <i>Aggregate part and platform analysis information in customizable templates for use in estimates, quoting, or production planning</i> | ✓ | ✓ | ✓ |

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|--|------------------|-----------------|------------------|
| Model Editing | | | |
| Cutting tools <i>Cut parts using standard or custom planes or freeform polygon shapes with custom edge profiles.</i> | ✓ | ✓ | ✓ |
| Pins and holes <i>Add pins and holes or hooks while cutting to aid reassembly of split parts.</i> | ✓ | ✓ | ✓ |
| Mirror and scale <i>Create mirrored copies of parts or scale components using scale factor, scale percentage, or target sizing.</i> | ✓ | ✓ | ✓ |
| Split or extract shells <i>For parts that contain multiple shells, split them all into multiple parts or extract selected shells manually.</i> | ✓ | ✓ | ✓ |
| Mesh manipulation <i>Manipulate meshes directly with smoothing, extrusion, distortion, boolean or shearing operations.</i> | ✓ | ✓ | ✓ |
| Texture and colors <i>Mark parts for specific machines, to simulate painting, or to send parts to a printer that can produce the colors.</i> | ✓ | ✓ | ✓ |
| Labelling <i>Add text, shield, or image labels manually or automatically create multiple parts with labels at once.</i> | ✓ | ✓ | ✓ |
| Part hollowing <i>Create hollow parts using a variety of options to define the offset shell surface.</i> | ✓ | ✓ | ✓ |

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| Orientation and Packing | | | |
| Orientation analysis <i>Calculate the best orientation and preview supports with user-defined parameters and custom rankings.</i> | ✓ | ✓ | ✓ |
| Move, rotate, and align <i>Manually arrange the parts on the platform with simple move, rotate, and alignment tools.</i> | ✓ | ✓ | ✓ |
| Planar packing <i>Pack parts on the 2D platform, automatically grouped according to their shapes to avoid collisions.</i> | ✓ | ✓ | ✓ |
| Model packaging <i>Create packages of small parts to avoid losing them in the build space.</i> | ✓ | ✓ | ✓ |
| Automatic 3D packing <i>Densely pack parts within the entire build volume with the option to setup custom no-build zones.</i> | - | ✓ | ✓ |

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|---|------------------|-----------------|------------------|
| Latticing and Optimization | | | |
| Lattice Assistant <i>Hollow parts and add non-structural lattices in a single step to save material and processing time.</i> | - | ✓ | ✓ |
| Perforations <i>Add holes for material drainage with matching plugs during latticing or as a separate operation.</i> | - | ✓ | ✓ |
| Lattice Commander <i>Create complex lattices within a part or on its surface, or create designs combining multiple lattices and skins.</i> | - | ✓ | ✓ |
| Selective Space Structures (3S) <i>Create lattices that follow surface contours and complex lattices or lattice combinations via Lua script to achieve functional attributes such as stability, lightness, flexibility, and thermal conductivity.</i> | - | - | ✓ |
| Lattice Optimization (Netfabb Optimization Utility) <i>Using built-in optimization, generate non-uniform lattices that can withstand required loading conditions.</i> | - | - | ✓ |

| Support Generation | Netfabb Standard | Netfabb Premium | Netfabb Ultimate |
|--|------------------|-----------------|------------------|
| Fused filament fabrication supports <i>Toolpath level supports are integrated in G-Code export.</i> | ✓ | ✓ | ✓ |
| Multiple support types <i>Netfabb provides detailed control over the definition and creation of bar, polyline, and volume supports.</i> | - | ✓ | ✓ |
| Parametric supports <i>Automatically update supports with any changes in orientation, assembly, or geometry.</i> | - | ✓ | ✓ |
| Automated support scripts <i>Define and run custom scripts to automatically apply supports to one or multiple parts simultaneously.</i> | - | ✓ | ✓ |
| Semi-automatic support generation <i>Using clusters or face groups, add supports manually or apply a support script only to the selected area.</i> | - | ✓ | ✓ |
| Manual support creation <i>Add, move, or remove individual supports individually for detail work and fine-tuning of support structures.</i> | - | ✓ | ✓ |
| Angled volume supports <i>Project supports outside the part to the platform to avoid part-to-part supports and reduce finishing effort.</i> | - | ✓ | ✓ |

| Toolpathing | Netfabb Standard | Netfabb Premium | Netfabb Ultimate |
|--|------------------|-----------------|------------------|
| Slice Commander <i>Define hatching patterns, simple laser strategies and offsets. View simulation of contour and filling directions.</i> | ✓ | ✓ | ✓ |
| Visual programming interface <i>Create custom, elaborate scan strategies by combining pre-defined elements with a visual design tool.</i> | - | ✓ | ✓ |
| Advanced Toolpathing Utility <i>Scripting interface for all aspects of toolpathing, geometry prep, build strategy, and export format definition plus Slice Commander integration capability.</i> | - | - | ✓ |

| Machine Integration | Netfabb Standard | Netfabb Premium | Netfabb Ultimate |
|---|------------------|-----------------|------------------|
| Metal machine workspaces <i>Prepare metal parts with machine-specific settings for the build platform, materials, and build strategies.</i> | - | ✓ | ✓ |
| Non-metal machine workspaces <i>Configure parts for specific, non-metal machines from leading additive machine manufacturers.</i> | ✓ | ✓ | ✓ |
| Fused filament fabrication workspaces <i>Customize numerous process parameters and apply FFF-specific support generation scripts.</i> | ✓ | ✓ | ✓ |

| Automation | Netfabb Standard | Netfabb Premium | Netfabb Ultimate |
|---|------------------|-----------------|------------------|
| LUA scripting <i>Automate common preparation tasks including import, analysis, repair, packing, slicing, and toolpathing.</i> | - | - | ✓ |
| Netfabb Application Server | - | - | ✓ |

NETFABB SIMULATION

Netfabb metal additive process simulation is available through a local solver with the Netfabb Simulation product or through cloud-based simulation with Netfabb Premium, Netfabb Ultimate and with the Netfabb Simulation product. Cloud-based simulation uses cloud credits.

| Multiscale Process Simulation for Metal Powder Bed Fusion | Netfabb Standard | Netfabb Premium | Netfabb Ultimate | Netfabb Simulation |
|---|------------------|-----------------|------------------|--------------------|
| PRM generation <i>Generate PRM files based on chosen material and process parameters.</i> | - | - | - | Unlimited |
| Simulation of entire build plate <i>Import multiple models and supports to capture interactions between parts and the distortion of the build plate.</i> | - | - | Limited | Unlimited |
| Deformation prediction and compensated shape export <i>Predict how parts will deform and automatically compensate geometries based on simulation results.</i> | - | - | Limited | Unlimited |
| Support failure prediction <i>Identify locations where support failure is likely to occur to inform the support creation process.</i> | - | - | Limited | Unlimited |
| Recoater interference detection <i>Identify areas where the part may distort upwards that may cause interference with the recoater blade.</i> | - | - | Limited | Unlimited |
| Heat treatment <i>View stress results before and after annealing the part.</i> | - | - | Limited | Unlimited |
| Part and support parameters <i>Accurately reflect your build process by applying unique settings to supports and parts.</i> | - | - | Limited | Unlimited |
| Distortion and stress after removal from build plate <i>Predict and view results for distortion and stress after wire cutting.</i> | - | - | Limited | Unlimited |
| Hot spots and lack of fusion <i>Identify any areas of the part where hot spots will occur, or spots where there will be a lack of fusion.</i> | - | - | Limited | Unlimited |
| Directed energy deposition process simulation <i>Simulate full builds for both powder-fed and wire-fed DED processes.</i> | - | - | - | Unlimited |