MELTIO

Meltio Space

Robot Slicer

Meltio Space is an innovative addition to the Meltio product lineup, offering a new perspective on 3D printing by breaking free from the limitations of traditional 3-axis systems. Meltio Space takes a step further and expands the possibilities by incorporating advanced robotic manipulation capabilities.

The proprietary robot slicer is a revolutionary software solution designed to bridge the gap between additive manufacturing users and robotics. With a strong focus on user experience, it offers a fully tailored customer journey centered around the seamless integration between the Meltio Engine and Meltio Space, a cutting-edge robotic system. This comprehensive product offers custom-developed Meltio print profiles for the extensive Meltio materials portfolio. Not only does the Meltio Space robot slicer provide exceptional functionality, but it also ensures low capital and running costs, which are further reflected in the software licensing model.

Value Proposition Main Features

Unparalleled ease of use

Powerful

High compatibility

Highest productivity

Best value for money

Investment protection

Unleash the full potential of Meltio LMD Engine

Main Features

Key Features:

The Software covers the entire workflow, right from importing the geometry to exporting the path planned as a robot programs.

- Robot kinematics and postprocessors for ABB, KUKA, FANUC and Yaskawa;

- Robot and Positioners Library;

- Open and Save projects as well as cell configurations

Allowed files:

- Import of STEP files and common mesh-based formats;

- Import trajectories *.gcode / .dat / .src / .json

Part transformations:

- Scale, rotate, translate, and snap a part surface to build area

- Edit Part(simple geometries)

- Align with other geometry,

Mesh tools :

- Automated hole filling and removing self intersections

- Offsetting of mesh surfaces

- Boolean operations – Union, subtraction and intersection

Multi-axis tool path planning

- Toolpath sequencer.

- Process parameters (deposition height, deposition width, base print speed, and base travel speed)

- Slicing strategies – Planar horizontal, planar angled, planar along curve, revolved surface, radial, non-planar surface, cladding and radial cladding, radial 360, Conical Fields ,and geodesic paths and sweep.

- Spiralize perimeters.

- External axis control and interpolation

- Advanced granular control in part building: Shell, infill, seam, speed and optimization

- **Shell:** you can choose the number of perimeters, overlap of perimeter, initial bottom layers on top of which the part will be printed, number of layers for the bottom side of the part, number of layers on the top side of the part, alternation of extra perimeters for better interlocking of layers, printing external perimeters first for better dimensional control and specification of inner wall width

- **Infill:** You can either enable a global infill type for filling the entire part with a particular type of infill. infill and perimeter overlap as percentage, alternation of print direction, advanced infill orientation where the angle of infill can be specified.

- Advanced infill mode

- Collision detection and notification

- Intelligent overlay of information on part geometry - Part overhang identification, travel moves, tool orientation and path as lines

- Provisions for Robotic Printer real-time monitoring and data capture (depending on hardware configurations)

- Offline robot programming

- Robotic program export

System Requirements:

The minimal system requirements to run Meltio Space are the following:

- Windows 10 or 11 (64-bit)

- 2.0 GHz or faster processor

- Minimum 8 GB of RAM

- Minimum 500 MB of available hard-disk space

- Dedicated GPU with a minimum 4 GB of memory