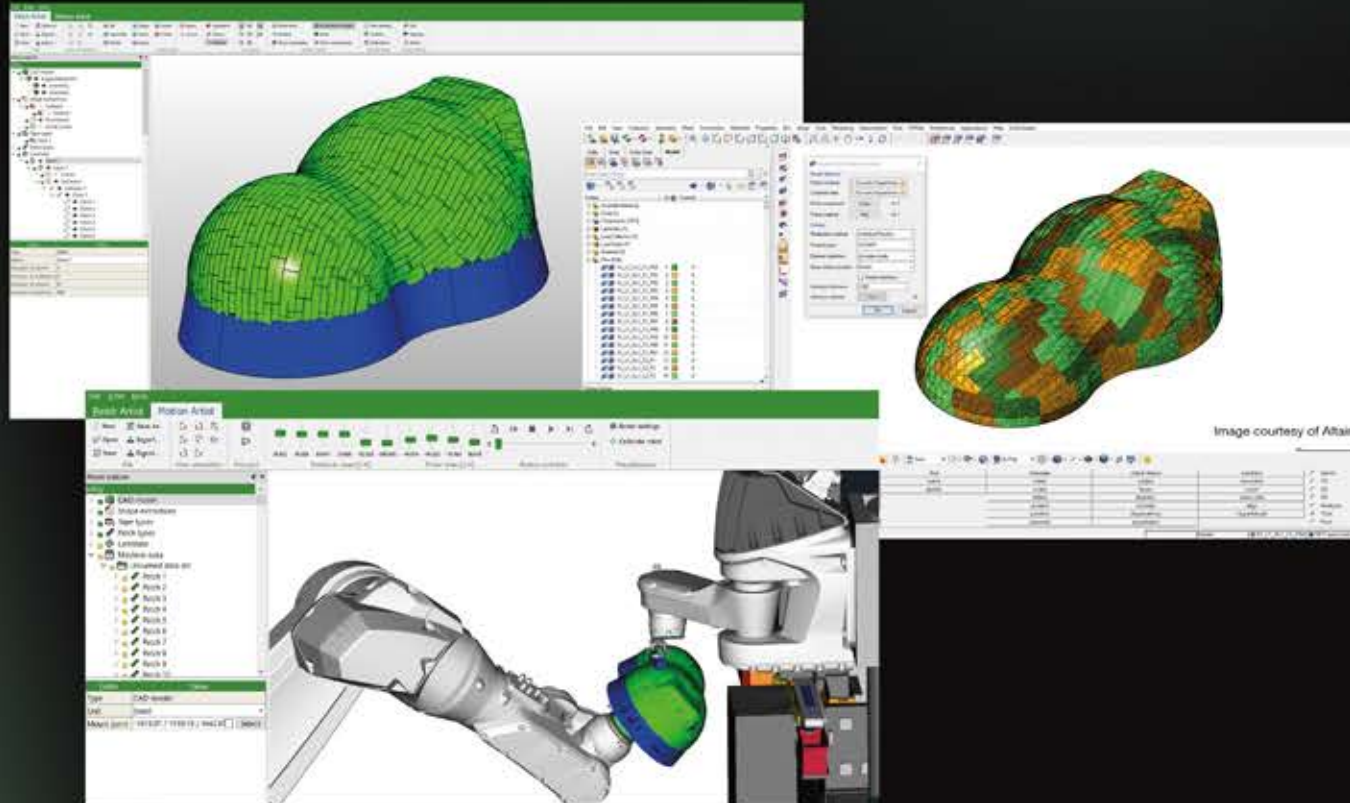


## ARTIST STUDIO – laminate design and robot programming software

### ARTIST STUDIO (CAD-FEM-CAM)

Your engineering team requires digital tools that reduce the time for product development and integrate smoothly with production planning. ARTIST STUDIO is the perfect tool for digital product development and robot offline programming with Fiber Patch Placement. The software creates optimized patch laminates and generates the machine programs for the SAMBA systems.

- Stand-alone CAD-CAM software with plug-in for commercial FEA-software
- Intuitive application and interface logic
- Import of all common CAD file formats



### PATCH ARTIST - laminate design (CAD)

- Interface: Import of STEP, IGES, STL, CATPart  
Laminate export for FE-modeling (STEP)
- Laminate: Layer definition with specific material properties and constraints
- Boundary: Different lay-up strategies at boundaries  
(reducing scrap, constant layer thickness)
- Curve planning: Parallel curves based on user defined master curve  
Curves along user-defined fiber orientation
- Optimization: Patch overlap optimization
- Visualization: Mold, laminate, SAMBA system, surface normals  
Curves, curve orientation and curvature (in-plane, out-of-plane)  
Patches and patch normals  
Individual patch overlap quality
- Documentation: Browser-based documentation with tutorials

### MOTION ARTIST - robot offline programming (CAM)

- Robot kinematics: 4 and 6 axis robots, robot on linear axis  
Robot-to-robot interaction logic
- Tool kinematics: Robot-assisted, linear axis, rotational axis
- Mold mount point: Coordinate-based position and orientation
- Calibration: Robot to robot positioning, tool positioning
- Robot movement: Point-to-Point (PTP), linear
- Optimization: Robot movements with consideration of axis limits, robot range, singularities, collision detection using multicore processing
- Visualization: Robot movements, collisions, laminate
- Analyses: Material consumption, production time
- Interface: Visualization and updates of changes in laminate design  
Export of machine program
- Documentation: Browser-based software documentation with tutorials

### ARTIST STUDIO plug-in for FE-modeling (FEA)

- Availability: FEA preprocessor HyperMesh Release-Version 2017 and up
- Accessibility: Menu-bar with subsequent dialogue-based process
- Interface: Import of laminate from ARTIST STUDIO platform
- Properties: Automated modeling of patches, fiber orientation, thickness, patch overlaps  
Different modeling methods (shell/solid) and strategies for patch laminates
- Documentation: Browser-based software documentation with tutorials