With SharkCAD Pro-AP at your fingertips, professional 3D models can be created accurately and easily, at a fraction of the cost of comparable premiere CAD programs. The robust 3D modeling capabilities include Mesh Modeling, Solid Modeling and Surface Modeling, which allow you to easily render airplane prototypes and anything else that requires high-end visuals. SharkCAD Pro-AP is perfect for engineers, drafters, artists, scientists and hobbyists looking to turn a concept into reality.

SharkCAD Pro-AP combines AeroPack with SharkCAD Pro. AeroPack is a collection of unique drawing tools created specifically for airplane design.

**SharkCAD Pro Features**

- Powerful subdivision to NURB editing tools that allows the user to combine mesh and traditional solid modeling in one environment
- Flexible license that allows you to install the program on multiple machines
- Robust Architectural and Woodworking tools
- Supports 25 file formats including SAT, IGES, STEP, STL, OBJ, VRML, and DXF/DWG
- Advanced rendering capabilities to examine files and projects before sending them to a printer or fabricator
- Extensive drawing capabilities like the LogiCursor™ that thinks as you draw, precisely guiding your mouse and cursor in both the 2D and 3D space
- Powerful 2D and 3D editing tools for intuitive workflows
- Native Translators: SolidWorks, NX, ParaSolids, CATIA V5/V6, SolidEdge and Inventor Import (PC Only)
- Boolean Edge Treatments
- Cover, Skin, and Loft with Guides
- Tangent Cover with Guides
- Patterns
- Lofted Solid and Lofted Solid with Guides
- Rib, Lip
- Blend Three Faces, Continuous Curvature, Thumbweights
- Animation Tools

**3D Design Tools**

- Associative NURBS-based surface modeling
- History-based/Feature Tree for rapid iterations
- Constant and variable radius blending and chamfering
- Twist, bend, boss, hole, boolean, and shell features
- Mass properties and interference checking
- Rendering and animation
- 3D Printing tools to verify designs
- Mesh Modeling
- Solid Modeling
- Surface Modeling
AeroPack
AeroPack is a collection of unique drawing tools created specifically for airplane design. It is an add-on toolbar for SharkCAD Pro and can be bought pre-installed as SharkCAD Pro-AP. AeroPack tools such as Create Airfoil, Wing Planform and Polyconic Surfaces allow airplane components to be 3D modeled with a matter of clicks. The Import Airplane tool allows users to import geometry from Advanced Aircraft Analysis (AAA) into SharkCAD Pro-AP as a 3D model.

SharkCAD Pro-AP and AAA
Bundling SharkCAD Pro-AP with Advanced Aircraft Analysis (AAA) will save you hours on geometry input and allow you to quickly and easily visualize your airplane model in 3 dimensions. Once your geometry is defined you can export your completed airplane from AAA into AeroPack as a 3D model to review or create a high quality graphic. AeroPack Export Curve will locate and export the defining coordinates of a spline into a text file with just a few clicks. These coordinates can then be copied into Excel and directly imported into AAA. AeroPack Tools like Create Airfoil, Wing Planform and Polyconic Surface allow users to quickly draw an airfoil from a predefined database, define a wing planform and create smooth surfaces between the curves that characterize your airplane.

AeroPack Tools
Create Airfoil
Airfoils can be constructed from files (spline through digitized points) or from NACA/NASA equations.

Obscuration Plot
Using the Obscuration tool, the field of view of a pilot, sensor or antenna can be calculated and plotted.

Wing Planform
The wing planform tool creates half of a wing consisting of leading and trailing edges along with root and tip chords.

Area/CG Curve
Area/CG Curve calculates and displays the cross sectional area of a component or complete configuration.

Sum Curves
Sum Curves allows the user to add two or more curves together.

Mean Geometric Chord
Mean Geometric Chord calculates the length and location of the Mean Geometric Chord for lifting surfaces.

Perimeter Curve
Perimeter curve creates a plot of perimeter length as a function of body stations.

Polyconic Surfaces
A Polyconic Surface is a surface constructed along a path of smoothly changing conic sections.

Space Spline
Space Spline creates a combined projection between two existing curves.

Curve Integration
Curve Integration will numerically integrate a curve to find the area underneath it.

Import Airplane
Import Airplane allows the user to create files in AeroPack based on data from .geo files created by AAA.

Replace Curve
The Replace Curve tool updates geometry by replacing one curve with another.

Export Curve
Export Curve exports the coordinates of a curve to a .spl file.

Plot Curve
Plot Curve produces graphs of inflection points, curvature and first derivatives.