

File Formats from GKS' 5-Star 3D Scanning

There are many different types of formats you can receive from 3D Scanning. Each format provides something a bit different and is ranked based on edit ability, usability and performance to help you choose the right format for your project.

Basic Scan Data Outputs	
	<p>Point Cloud (.asc, .txt): Point Cloud data is often the most basic scan data output, and mostly used for downstream applications. This data is not easily imported into most CAD/CAM packages.</p>
	<p>Polymesh (.stl) A conversion from the point cloud into a triangulated surface mesh. In special cases a polymesh file can be used directly for 3D printing or machining of organic shapes.</p>
Standard CAD Modeling Outputs	
	<p>Surface (NURBS) Model (.igs, .stp) A freeform CAD model defined by spline-based surfaces (NURBS). These models only match the as-built state of the part and are ideal for curvature, but not sharp features.</p>
	<p>Solid Model (.igs, .stp, .x_t, .x_b) A feature-based CAD model without a design history. These models can either incorporate or fix manufacturing defects and are ideal for prismatic shapes and sharp edges.</p>
	<p>Hybrid Model (.igs, .stp) A combination of imported surfaces and CAD features. These models are ideal for parts with a mixture of prismatic features and complex curvature or organic geometry.</p>
	<p>Parametric Model (Solidworks, Pro/E, Catia, etc.) The ultimate CAD model that maximizes editability and performance by incorporating a design history tree and dimensioning. Ideal for when changes to the model are needed.</p>
	<p>Organized Polymesh (.stl, .obj, .ply) A conversion from a CAD model to a polymesh. The size and spacing of the triangles are organized, resulting in a higher quality mesh that is ideal for rendering and animation.</p>
	<p>Class A Surface Model (.igs, .stp) Typically a Surface Model whose surfaces are all curvature-continuous and tangent. This is important to allow for an ideal aesthetic look and feel, especially in reflections.</p>
	<p>Block Model (.igs, .stp) A block model can be created in situations where the level of detail is not a high priority. For example, the wheels in a car assembly can be cylinders for location and reference.</p>

5★ Star Scanning

GKS' 5-Star Process includes in-depth communication with our customers plus the advanced preparation techniques and double-checks employed by GKS engineers in gathering, processing, and modeling the scan data mean that we meet and exceed our customers' expectations for speed, quality, and usability of the model as delivered. Because, after 30 years in the business, we know "it's all about good data."