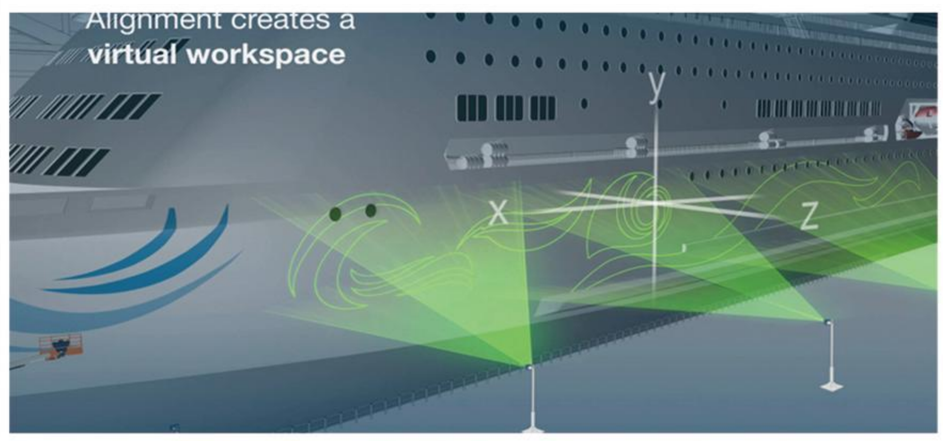
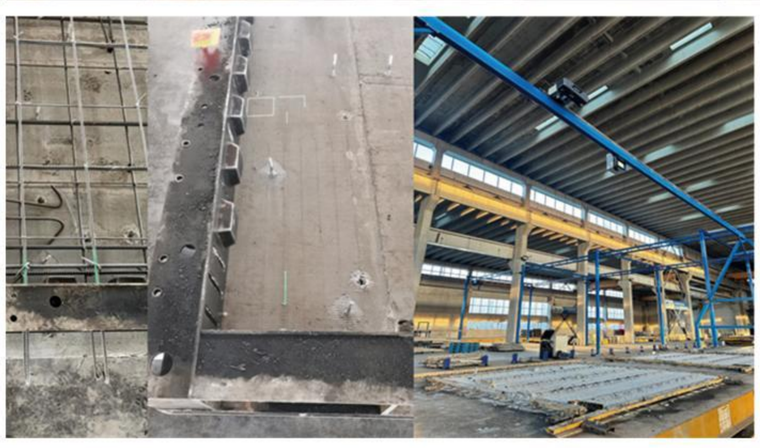
# Alpha-Projector

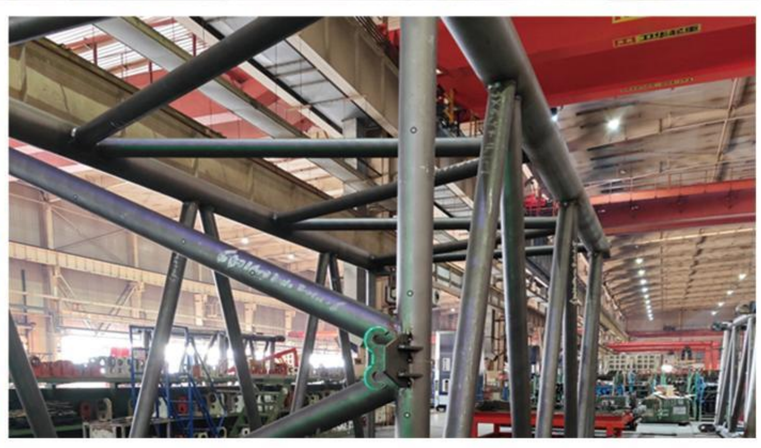
## Dynamic 3D Laser Projection Positioning System

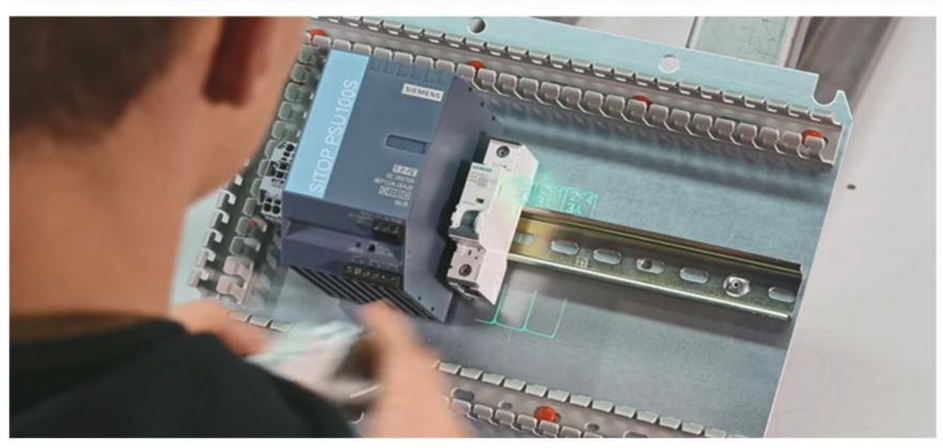
## TECHNICAL SPECIFICATIONS

| ALPHA-PROJECTOR | | | | |
|---|---|---|---|---|
| Technical Specifications | ALPHA-TI | ALPHA- TI I | ALPHA-T MAX | ALPHA-T PLUS |
| Dimensions | L×W×H: 580×185×170mm | | | |
| Weight | 9.5kg | | | |
| Sensor | Binocular Vision System | Binocular Vision System | High-Precision Binocular Vision System | High-Precision Binocular Vision System |
| Working Distance | 1.3-3.5m | 1.5-8m (Customizable) | 1.5-5.5m | 1.5-8m (Customizable) |
| Projection Accuracy | Up to 0.38 mm | Up to 0.5 mm | Up to 0.25 mm | Up to 0.25 mm |
| Maximum Projection Angle | 45°×45° | 60°×60° | 60°×60° | 60°×60° |
| Beam Focusing | N/A | Manual Focus | N/A | Auto Focus |
| Environmental Conditions | -5~40°C, 10-90% Relative Humidity (Non-condensing) | | | |
| Laser Class | 3R、<5mW (Do not stare into beam; can be customized) | | | |
| Laser Wavelength | 520nm | | | |
| Interface | USB 3.0 or Ethernet | | | |
| Voltage | 220V | | | |
| IP Rating | IP54 | | | |
| Supported Data Types | IGES, STP, DXF, DWG. Compatible with FiberSIM and CATIA CPD software formats (Format support is customizable) | | | |

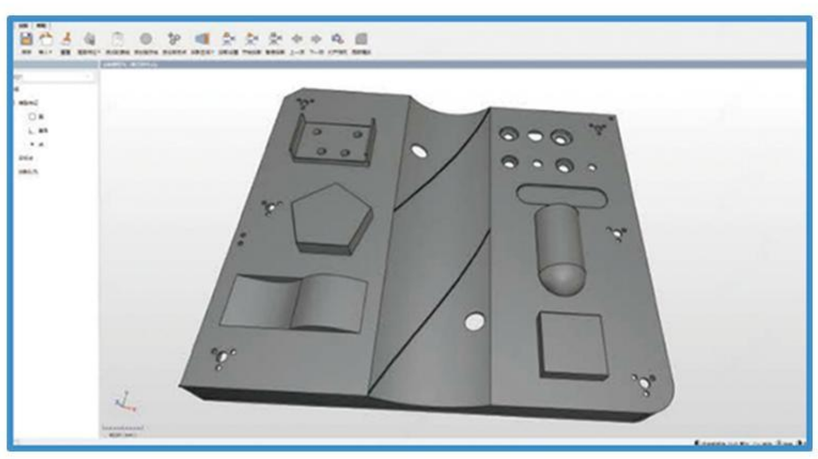





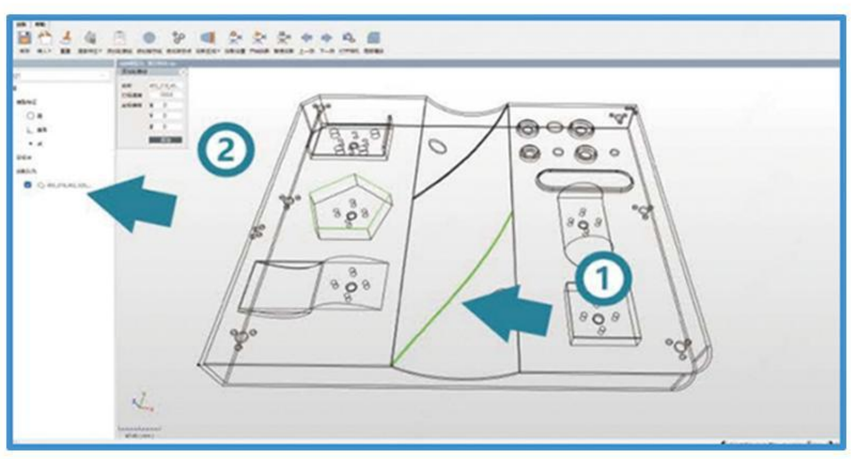



The Alpha-Projector Dynamic 3D Laser Projection and Positioning System utilizes a high-precision binocular machine vision system, achieving a maximum positioning accuracy of up to 0.25 mm. Additionally, the system features dynamic tracking capability, where the binocular vision system tracks the workpiece in real time. When relative movement occurs between the workpiece and the projector, the system continuously tracks and repositions, projecting the laser lines accurately onto the correct positions of the workpiece.

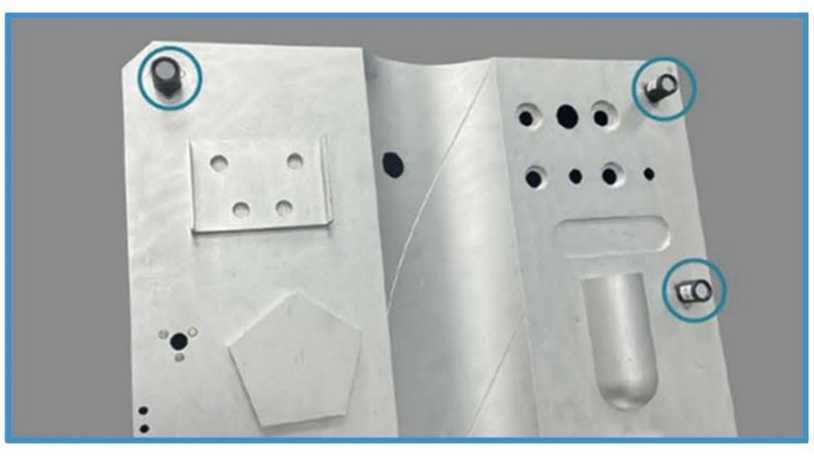
The Alpha-Projector software interface is clean and user-friendly, with an intuitive operation logic. Users can quickly select features or contours from CAD models (2D or 3D CAD) to create projection tasks, assisting in the efficient and highly accurate execution of complex positioning operations.



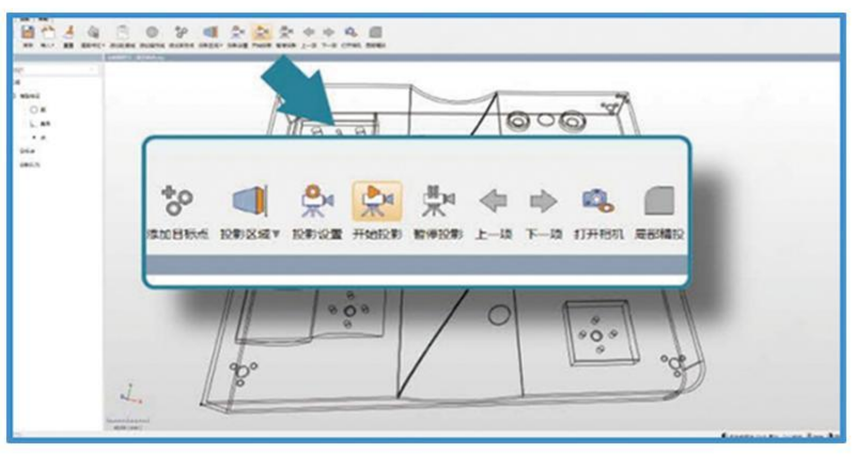
① Import CAD model or contour lines




②Generate a projection task



③Place target points on the workpiece (Optional)



④Start projection