



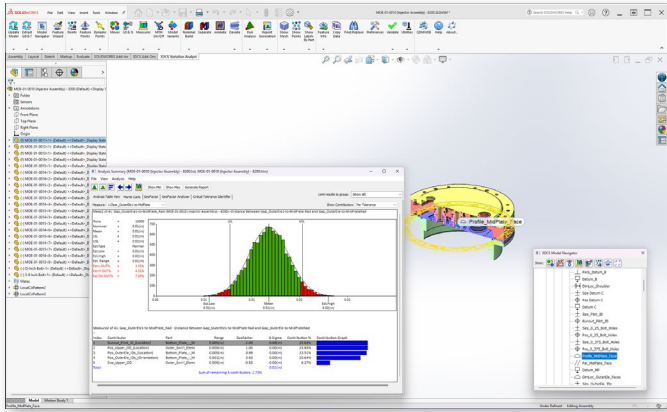
**3DCS**  
VARIATION ANALYST

# Advanced Tolerance Analysis Software

Fully integrated into your CAD platform, 3DCS empowers engineers to get real insight into their designs.

**AS THE MOST ADVANCED TOLERANCE ANALYSIS TOOL IN THE MARKET,** 3DCS Variation Analyst offers users the ability to do more than just 3D stack-ups by analyzing the relationship between parts, while accounting for a multitude of sources of variation.

*This gives you the most accurate results to make important decisions about your design and manufacturing processes.*



## KEY BENEFITS

**Reduce quality costs** by anticipating variation and minimizing scrap and rework.

**Accelerate time-to-market** through virtual tolerance validation before prototyping.

**Improve product robustness** by optimizing GD&T and assembly processes early in design.

**Lower nonconformance risks** by simulating real assembly conditions.

**Make informed decisions** with precise analysis to prioritize critical tolerances.

**Root Cause Production Issues** using measured data from manufacturing in your model.

## KEY FEATURES



### CAD Integration

Works directly inside CATIA V5, 3DEXPERIENCE, NX, Creo, SOLIDWORKS or as a standalone tool for seamless PLM workflows.



### 3D Monte Carlo Simulation

Runs thousands of build scenarios to predict variation and calculate statistical metrics ( $\sigma$ , Cp, Cpk).



### Full GD&T Support

Imports PMI FTA tolerances from CAD and applies ASME Y14.5 or ISO standards for precise modeling.



### Assembly Process Simulation

Models real-world assembly sequences (clamps, welds, thermal effects) to capture true variation propagation.



### Sensitivity & Optimization Tools

Identifies critical tolerances and optimizes design using advanced analysis and optimization modules.



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