FEATURE COMPARISON

VXelements ™

FULLY INTEGRATED
3D SOFTWARE PLATFORM

VXelements ™	ACQUISITION MODULES[1] VXscan VXprobe VXshot	APPLICATION MODULES[2] VXmodel	VXinspect	VXinspect I Elite
MULTIPLE MEASUREMENT MODE	●			●
MESH EDITING		●		
ALIGNMENT	●	●	●	●
GEOMETRIC ENTITIES	●	●	●	●
NURBS SURFACE		●		
TRANSFER-TO-CAD SOFTWARE		●		
CAD IMPORT		●	●	●
GEOMETRIC DIMENSIONING AND TOLERANCING (GD&T)				●
REPORTING			●	●
MULTIPLE PART INSPECTION				●

/ ACQUISITION

/ REVERSE ENGINEERING

/ INSPECTION

(1) Acquisition modules are included with all Creaform technologies.

(2) Application modules are sold separately.

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CREAFORM

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Creaform VXelements™ is a simple, powerful, and fully integrated 3D software platform that works in complete synergy with all our 3D measurement technologies.
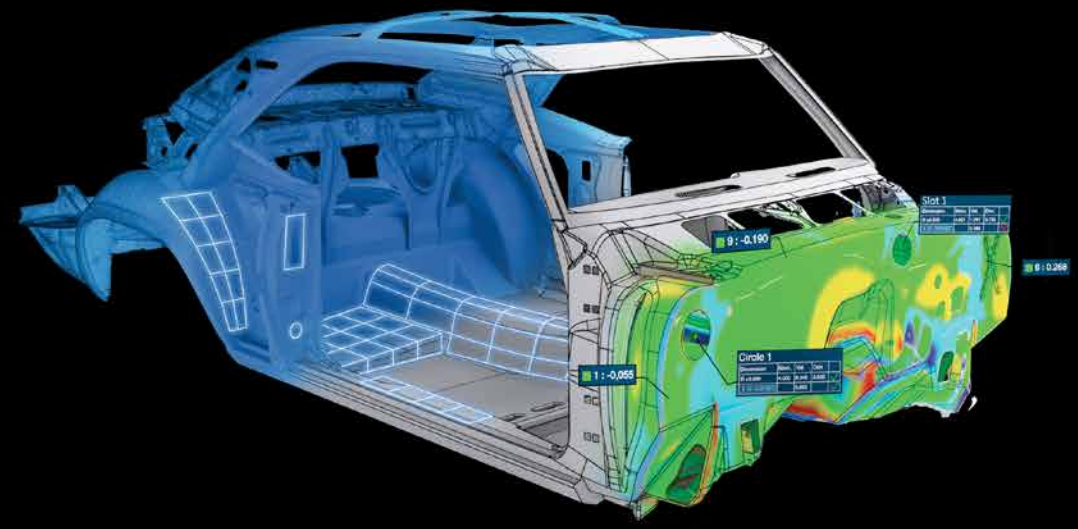
ACQUISITION   REVERSE ENGINEERING   INSPECTION

The following 3D acquisition modules are the core of VXelements and provide real-time visualization. They are included with any of our 3D measurement technologies.

VXscan™

A pared-down 3D scanning acquisition and optimization algorithms providing high performance while being easy-to-use for all users regardless of their experience level.

VXprobe™

A user-friendly touch probing module used for acquisition and compatible with all major metrology software.

VXshot™

A unique photogrammetry software that makes accuracy accessible to everyone through its unparalleled ease of use and user guidance.
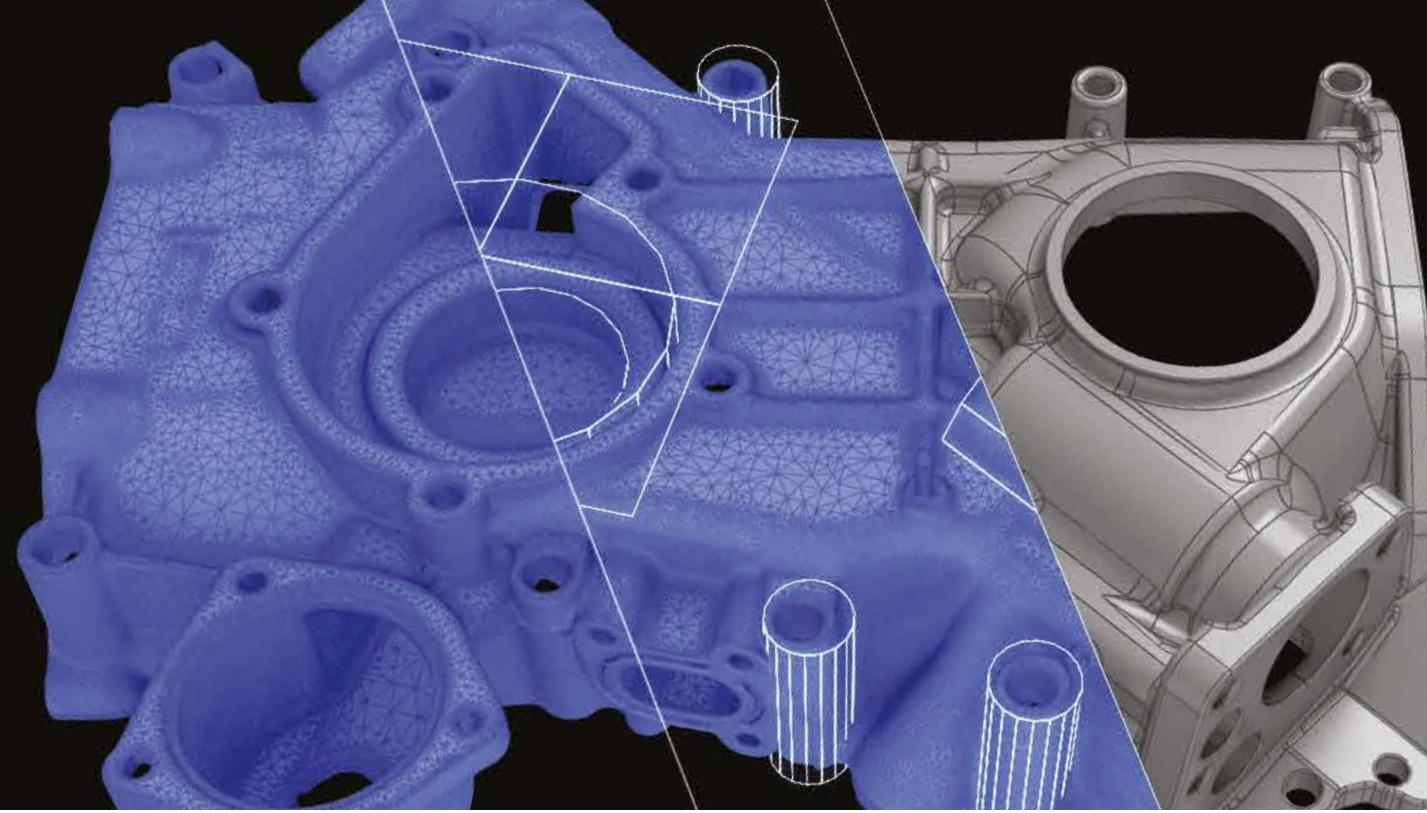
VXmodel
SCAN-TO-CAD
SOFTWARE MODULE

VXmodel™ is a post-treatment software directly integrated into VXelements. It provides the tools needed to finalize 3D scan data: the simplest and fastest transfer path from 3D scans to any 3D printing or CAD software. Simple, yet powerful, the software includes only the features necessary to complement your CAD software.

MESH EDITING

VXmodel provides simple, yet efficient tools required to prepare the 3D scan mesh for reverse engineering or 3D printing.

– Clean meshes
– Fill holes
– Merge meshes
– Decimate meshes
– Make meshes watertight

ALIGNMENT

Scans must be aligned to the coordinate system before exporting, which is a simple but crucial finalization step. The VXmodel alignment tool is highly flexible and straightforward.

– Entity based alignment
– Best fit alignment

NURBS SURFACE AND GEOMETRICAL ENTITIES

VXmodel enables to easily generate NURBS surfaces for characterizing freeform regions. Primitive entities can be easily extracted from the mesh to complete the design in a CAD software.

– Autosurface
– Manual surface
– 2D/3D entities
– Curves
– Cross-sections

TRANSFER-TO-CAD

Export to any CAD platform using standard format (.iges, .step, .dxf)

– Transfer parametric entities to the following software:

  – SOLIDWORKS
 – Autodesk® Inventor®
  – Solid Edge
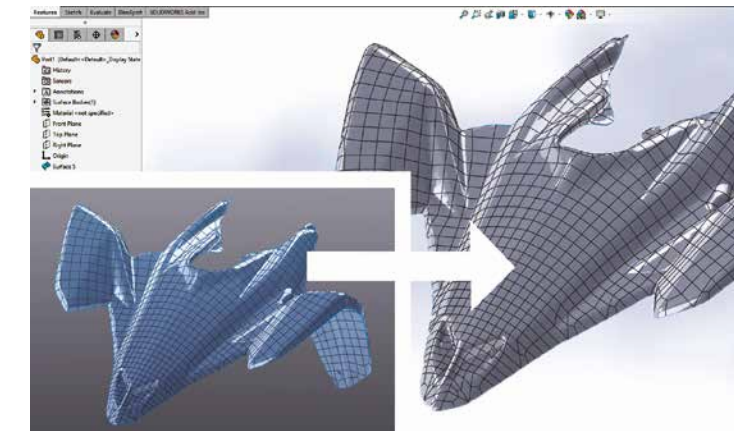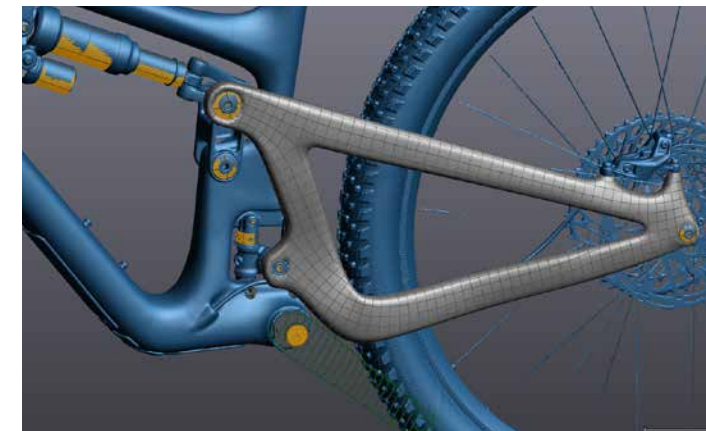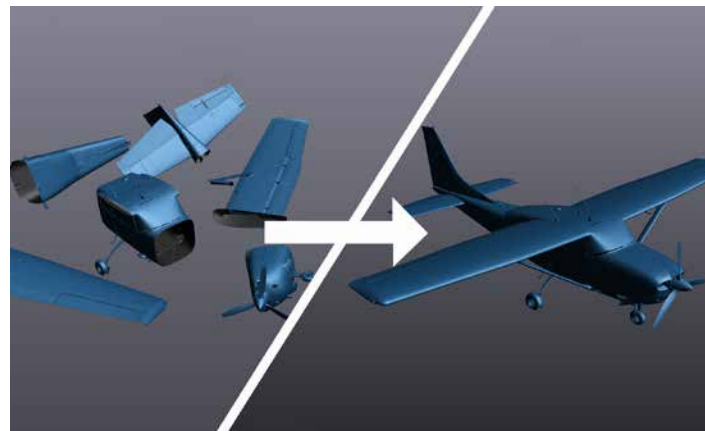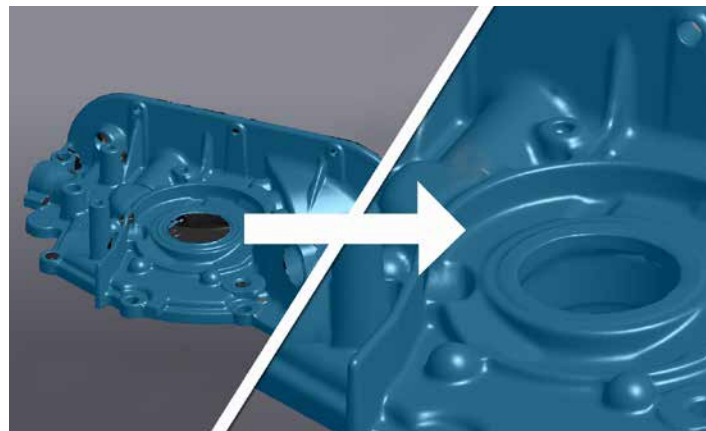
VXinspect

DIMENSIONAL INSPECTION SOFTWARE MODULE

VXinspect™ is an intuitive and powerful 3D inspection software designed for first article inspection (FAI) and production quality control. Directly integrated into VXelements, it provides the simplest integration of probing, 3D scanning and photogrammetry measurements into quality control workflows.

Whether for performing part-to-CAD inspection or to build an entire inspection program, its intuitive interface is the best solution for all inspection workflows, with no compromises made on measurement quality and GD&T requirements.

VXinspect is available in two versions, depending on your type of work and workflow. **VXinspect** is a user-friendly software for scan data inspections that streamlines single part root cause analyses. **VXinspect|Elite™** is a complete inspection and dimensional analysis software for advanced quality control applications.
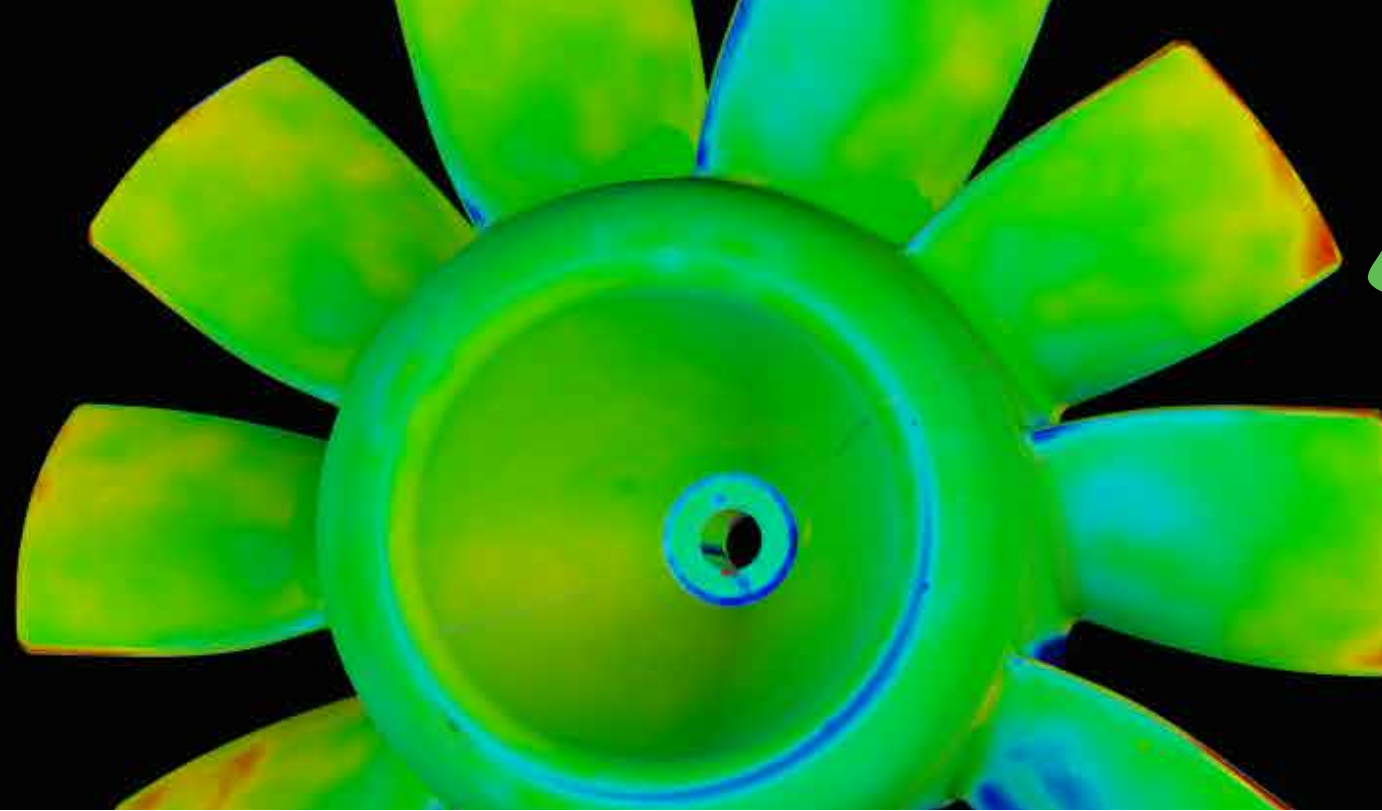
CAD IMPORT

VXinspect supports CAD import, allowing direct measurement comparisons with CAD models to better understand part manufacturing defects.

– .IGES
– .STEP

MULTIPLE MEASUREMENT MODE

VXinspect is the first software to seamlessly integrate photogrammetry, single-point touch probe and non-contact measurement (scan) into one unique and intuitive software interface.

– Photogrammetry
– Probing
– 3D scanning
– Mesh import

ALIGNMENT

Before starting the dimensional inspection process, the position and orientation of the object in space are of the utmost importance. Aligning the part leads to more accurate results throughout the process, from data acquisition up to the final inspection report.

– Entity selection
– Best fit
– Datum
– RPS (Reference Points System)

GD&T

VXinspect sophisticated algorithms and calculation methods offer an accessible way to apply GD&T practices and principles to the inspection project, even for users without extensive experience in GD&T notions.

– Form and orientation tolerance
– Profile and localization tolerance
– Datum Reference Frame (DRF) construction using geometric counterparts