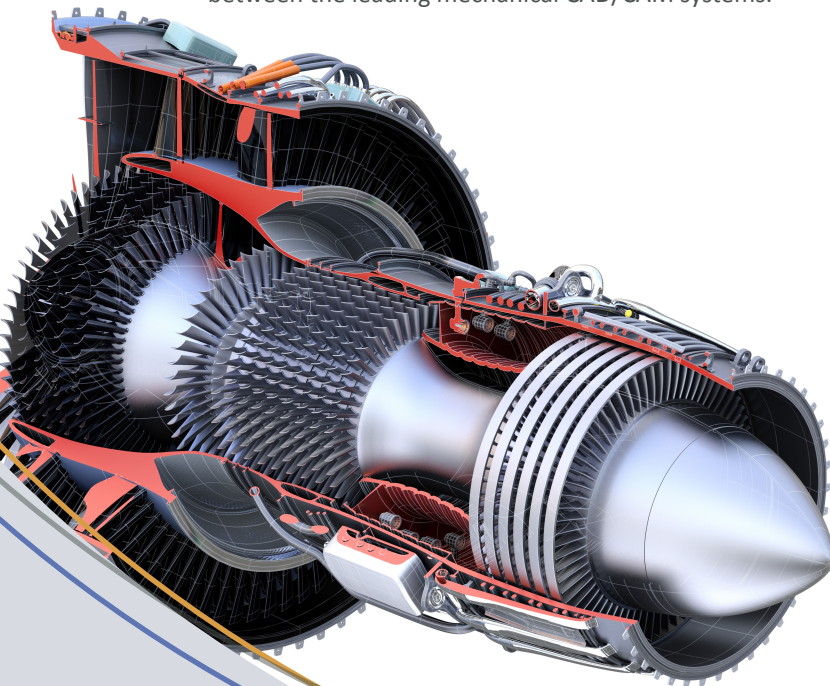# TRANSLATE

The Translate family of products support the translation of 3D Product Manufacturing Information (PMI), assembly structure, geometry, attributes and metadata between the worlds' leading mechanical CAD/CAM systems enabling Model-Based Engineering. There are three product variants. These are CADverter, Multi-CAD and Lightweight 3D.

CADverter

Theorem's high quality and cost effective CADverter solutions help to solve the issue of working with, and sharing, incompatible data formats.

The CADverter products enable the direct translation of 3D data to or from most mechanical CAD systems, as well as STEP. It enables translation of the assembly structure, geometry, attributes and, where available, 3D Product Manufacturing Information (PMI) and Metadata between the leading mechanical CAD/CAM systems.

Using CADverter Products

If you are working with suppliers on different design projects, or have a single partner with a specific but different CAD system to yourselves, then the CADverter products give you the edge and capability that you need to receive, create, or share CAD data that is not native in your own company.

- CADverter facilitates the re-use and sharing of 3D design data created in incompatible formats

- Provides ISO STEP solutions

- Integrated directly within vendor applications but can be used in batch

- Built with development tools and APIs supplied and supported by the CAD and Visualisation vendors

- Provides support for exchanging Product Manufacturing Information (PMI) data for downstream activities

- Options available to Publish data to 3D PDF format to create interactive documentation from source data

- The world's leading Automotive, Aerospace, Defence, Power Generation and Transportation companies and their supply chains use Theorem's products daily

Theorem Solutions

CADverter Key Features

- CADverter products are Direct Database Converters
- They support both interactive and batch processing
- Can be integrated with any workflow or PDM/PLM environment
- Support for 3D Product Manufacturing Information between systems
- Support for data filtering, optimises data and reduces conversion times
- Node locked and floating license options available dependent on requirement
- Available in Uni-Directional and Bi-Directional configurations dependent upon product and user requirement

Supporting Applications

- 3DXML
- CADDS
- CATIA 3DEXPERIENCE
- CATIA V4
- CATIA V5
- Creo Parametric
- Creo View
- ICEM Surf
- IDEAS NX
- Inventor
- JT
- NX
- Parasolid
- SolidWorks
- STEP

Multi-CAD

If you are a CATIA V5 or 3DEXPERIENCE user, you could benefit from Multi-CAD. This product enables CATIA V5 and 3DEXPERIENCE users to work interactively with Creo, NX and JT data inside of a design session without the need for external translation.

The Multi-CAD application is an interactive solution to the problems that can be encountered when a CATIA V5 or 3DEXPERIENCE user needs to work on projects where other CAD (Creo and NX) or Visualisation (JT) data needs to be regularly worked on during a design project.

Multi-CAD maintains the integrity and correct version of the imported data as it comes into CATIA V5 or 3DEXPERIENCE by keeping an associative link back to the source data.

Using Multi-CAD offers a greater level of security and protection as the link to the source data is a direct link, without the need to leave the application or use third party external applications. This also removes any errors that can occur from potentially working with old, out of date data.

Multi-CAD Key Features

- Provides seamless bi-directional exchange of data for CATIA users
- Provides support for exchanging FTA (PMI) data for downstream activities
- Maintains associativity between CATIA and native data files
- Automatic update of the CATIA representation when changes are undertaken.
- Uses standard CATIA commands
- Built upon the strategic Dassault XCAD platform, enables the import of data to CATIA with integrated control of quality
- Option to output data in 3DXML format enables its use in 3DVia and 3DLive
- Digital Mock-Up review (data imported with Faceted representation) supported.

Lightweight 3D

Lightweight 3D products enable the creation of visualisation data for users of digital mock-up or desktop viewing applications, and for data exchange.
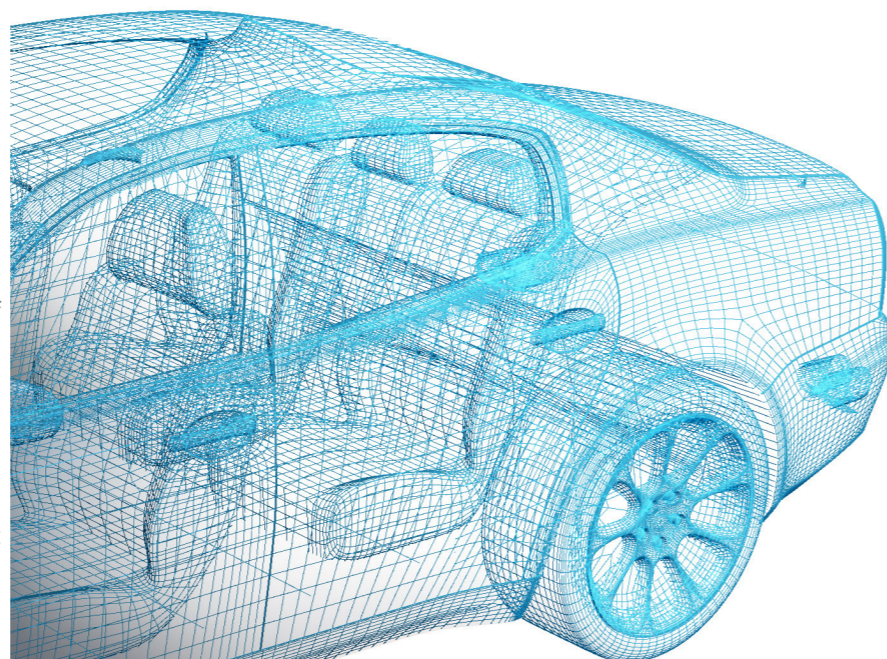
The Lightweight 3D solutions support the lightweight data formats; 3DXML, Creo View and JT for 3D design data re-use in downstream activities. With a product focus specifically on the direct translation of 3D CAD and 3D Visualisation data, Lightweight 3D enables users to work with, and share, data directly between different CAD and Visualisation applications.

Lightweight 3D Key Features

- Lightweight 3D products are Direct Database Converters
- Available in Uni-Directional and Bi-Directional configurations dependent upon the product
- Conversion processes can be run interactively or in batch
- Support for 3D Product Manufacturing Information between systems
- Support for data filtering optimises data and conversion times

Using Lightweight 3D Products

If you find that you need to work with, or share, visualisation data as part of your design and manufacturing process, Theorem's Lightweight 3D products offer direct translation of 3D data for the purpose of Visualisation. Collaboration between business partners, whether suppliers or customers, is increasingly being achieved today with the exchange of Visualisation data. More recently, and due to the increasing sophistication of Visualisation systems, the requirement to read Visualisation data back in to CAD systems is also being adopted. Visualisation formats help to secure Intellectual Property, whilst at the same time they support a rich enough set of design data that suppliers have all of the information required to complete their job.

Gain Competitive Advantage

Theorem's Translate products for CADverter, Lightweight 3D and Multi-CAD

- Facilitate cross-platform collaboration
- Built upon proven products and validation technology
- Help to improve the process of design collaboration between CAD and Visualisation users
- Seamless exchange of data
- Streamlines the product lifecycle management process
- Handle tessellated and precise data as well as PMI
- Facilitates the re-use of 3D design data in the visualisation format of choice
- The use of Lightweight formats help to protect IP
- Lightweight formats also help to future proof 3D design data
- Integrated directly within vendor applications but can be used in batch
- Built with development tools and APIs supplied and supported by the CAD and Visualisation vendors
- Provides support for exchanging PMI data for downstream activities
- Options available to publish data to 3D PDF format to create interactive documentation from source data
- Options available to visualise CAD and lightweight data assets in the latest Augmented, Mixed and Virtual Reality technologies.

Model-Based Engineering

Theorem's 'Translate' products support the translation of 3D Product Manufacturing Information (PMI), assembly structure, geometry, attributes and Metadata between the worlds' leading mechanical CAD/CAM systems enabling Model-Based Engineering.

About Theorem Solutions

Theorem Solutions have been helping engineering and manufacturing users leverage the value of their CAD and PLM assets for over 25 years. We help the world's leading Automotive, Aerospace, Defense, Power Generation, Transportation, and White Goods manufacturers and their end-to-end value chains to optimize the use of their Digital assets. Our solutions enable product development and manufacturing businesses to compress design and manufacturing lifecycles, whilst improving product quality. Our core strength is in the visualization and utilization of data across complex organizations to maximize efficiency.

Theorem Solutions offers a consultative approach to help customers get the most from technology. We advise on optimum use cases, deployment strategy, and custom development as required to maximize the Return on Investment.

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