



# PLM Express: Design and Simulation Product Matrix

## CATIA Design Bundles

3D Core Mechanical Engineering

Advanced Mechanical Functionalities

From Design to Manufacturing

Cloud Collaboration

Onboarding & Support

|   | ESSENTIAL    | MASTER       | ELITE         |
|---|--------------|--------------|---------------|
|   | \$7,080/year | \$9,037/year | \$14,598/year |
| Part and Assembly Design to Create Advanced Mechanical Products and Parts, from Conceptual to Detailed Phases | ✓            | ✓            | ✓             |
| Generative Sketch Constraints (AI)  | ✓            | ✓            | ✓             |
| Functional Design and Advanced Feature-based Approach   | ✓            | ✓            | ✓             |
| Direct Modeling Technology  | ✓            | ✓            | ✓             |
| Update Strategies at Part/Feature Levels  | ✓            | ✓            | ✓             |
| Quickly Design Generative Shapes with Wireframe or Surfacic Components  | ✓            | ✓            | ✓             |
| Design of complex mechanisms to manage their movement   | -            | -            | ✓             |
| AI-Driven Generative Functional Surfaces (Mechanical Interfaces)  | -            | -            | ✓             |



| 3D Core Mechanical Engineering   | Advanced Mechanical Functionalities | From Design to Manufacturing | Cloud Collaboration | Onboarding & Support |
|--|-------------------------------------|------------------------------|---------------------|----------------------|
| Planning Engine and Predictive AI capabilities   |                                     | ✓                            | ✓                   | -                    |
| Knowledge Design, Automation and Knowledge Assistance  |                                     | ✓                            | ✓                   | ✓                    |
| Full Definition of 3D Tolerances & Annotations, Filter and Review Dimensions, Tolerances and 3D Annotations and Associative Drawing Generation |                                     | -                            | ✓                   | ✓                    |
| Generative 3D Tolerancing  |                                     | -                            | ✓                   | ✓                    |
| Static Simulation to Predict the Structural Behavior of the Mechanical Assembly Under Loads  |                                     | -                            | ✓                   | ✓                    |
| Human-centric Design Approach  |                                     | -                            | ✓                   | ✓                    |
| Freestyle Shape for Complex Surface Design & Analysis  |                                     | -                            | -                   | ✓                    |
| Mechanical Surface Refinement for High-Quality Shapes  |                                     | -                            | -                   | ✓                    |
| Generative Shape Develop to Apply Text on a Shape  |                                     | -                            | -                   | ✓                    |
| Virtual-to-Real Shape Morphing to Optimize Shapes According to Load Conditions or Tooling  |                                     | -                            | -                   | ✓                    |
| Digitized Shape Preparation to Manage Point Cloud for Reverse Engineering  |                                     | -                            | -                   | ✓                    |
| Generative Shape Morphing to Accelerate Complex Tasks on Surface Models  |                                     | -                            | -                   | ✓                    |
| Clean CAD Models via Shape Healing   |                                     | -                            | -                   | ✓                    |

| 3D Core Mechanical Engineering  | Advanced Mechanical Functionalities | From Design to Manufacturing | Cloud Collaboration | Onboarding & Support |
|---|-------------------------------------|------------------------------|---------------------|----------------------|
| Multi-discipline Product Engineering Definition Management                    |                                     | ✓                            | ✓                   | ✓                    |
| Integrated CAD & BOM Management on a Single, Unified Product Structure        |                                     | ✓                            | ✓                   | ✓                    |
| Real-time Integrated Deliverable Based Planning with Product Development Data |                                     | ✓                            | ✓                   | ✓                    |
| 3D Mock-Up Review   |                                     | ✓                            | ✓                   | ✓                    |
| Streamline Sheet Metal Design & Manufacturing                                 |                                     | ✓                            | ✓                   | ✓                    |
| Multi-discipline Engineering Definition Lifecycle management                  |                                     | ✓                            | ✓                   | ✓                    |
| Product Structure Navigation & Cross Highlighting                             |                                     | ✓                            | ✓                   | ✓                    |



| 3D Core Mechanical Engineering                                      | Advanced Mechanical Functionalities | From Design to Manufacturing | <u>Cloud Collaboration</u> | Onboarding & Support |
|---|-------------------------------------|------------------------------|----------------------------|----------------------|
| 3DEXPERIENCE Platform Social & Structured Collaboration Foundations |                                     | ✓                            | ✓                          | ✓                    |
| Business Process Workflow Execution                                 |                                     | ✓                            | ✓                          | ✓                    |
| Web Based 3D Data Visualization                                     |                                     | ✓                            | ✓                          | ✓                    |
| Browser-based 3D Visualization and Geometric Analysis Tools         |                                     | ✓                            | ✓                          | ✓                    |

| 3D Core Mechanical Engineering                   | Advanced Mechanical Functionalities | From Design to Manufacturing | Cloud Collaboration | <u>Onboarding &amp; Support</u> |
|--|-------------------------------------|------------------------------|---------------------|---------------------------------|
| Select your onboarding partner at checkout       |                                     | ✓                            | ✓                   | ✓                               |
| Ongoing online learning and support              |                                     | ✓                            | ✓                   | ✓                               |
| Access to dedicated user and support communities |                                     | ✓                            | ✓                   | ✓                               |

## CATIA and SIMULIA Design and Simulation Bundles

| <u>3D Mechanical Engineering</u>  | From Design to Manufacturing | Simulation Capabilities | Productivity & Optimization | Cloud Collaboration & Compute |
|---|------------------------------|-------------------------|-----------------------------|-------------------------------|
|   | ESSENTIAL                    | MASTER                  | ELITE                       |                               |
|   | \$10,940 /year               | \$15,023/year           | \$30,227/year               |                               |
| Part and Assembly Design to Create Advanced Mechanical Products and Parts, from Conceptual to Detailed Phases | ✓                            | ✓                       | ✓                           |                               |
| Generative Sketch Constraints (AI)  | ✓                            | ✓                       | ✓                           |                               |
| Functional Design and Advanced Feature-based Approach   | ✓                            | ✓                       | ✓                           |                               |
| Direct Modeling Technology  | ✓                            | ✓                       | ✓                           |                               |
| Update Strategies at Part/Feature Levels  | ✓                            | ✓                       | ✓                           |                               |
| Quickly Design Generative Shapes with Wireframe or Surfacic Components  | ✓                            | ✓                       | ✓                           |                               |
| Design of complex mechanisms to manage their movement   | -                            | -                       | ✓                           |                               |
| AI-Driven Generative Functional Surfaces (Mechanical Interfaces)  | -                            | -                       | ✓                           |                               |



3D Mechanical Engineering    **From Design to Manufacturing**    Simulation Capabilities    Productivity & Optimization    Cloud Collaboration & Compute

|   |   |   |   |
|---|---|---|---|
| Multi-discipline Product Engineering Definition Management                    | ✓ | ✓ | ✓ |
| Integrated CAD & BOM Management on a Single, Unified Product Structure        | ✓ | ✓ | ✓ |
| Real-time Integrated Deliverable Based Planning with Product Development Data | ✓ | ✓ | ✓ |
| 3D Mock-Up Review   | ✓ | ✓ | ✓ |
| Streamline Sheet Metal Design & Manufacturing                                 | ✓ | ✓ | ✓ |
| Multi-discipline Engineering Definition Lifecycle management                  | ✓ | ✓ | ✓ |
| Product Structure Navigation & Cross Highlighting                             | ✓ | ✓ | ✓ |

3D Mechanical Engineering    From Design to Manufacturing    **Simulation Capabilities**    Productivity & Optimization    Cloud Collaboration & Compute

|   |   |   |   |
|---|---|---|---|
| Linear structural behavior analysis with Abaqus solvers                     | ✓ | ✓ | ✓ |
| Flexible parameterization & automation                                      | ✓ | ✓ | ✓ |
| Results analytics   | ✓ | ✓ | ✓ |
| Geometry idealization for advanced studies                                  | - | ✓ | ✓ |
| Real structural behavior analysis and test simulation                       | - | ✓ | ✓ |
| Material parameter calibration for accurate results                         | - | ✓ | ✓ |
| Real structural behavior analysis in multiphysics scenarios                 | - | - | ✓ |
| Fluid behavior and plastics injection molding investigation                 | - | - | ✓ |
| Computational fluid dynamics simulation                                     | - | - | ✓ |
| Analyze thermal behavior (e.g. peak temperatures)                           | - | - | ✓ |
| Plastic injection process optimization (filling, packing, cooling, warpage) | - | - | ✓ |



| 3D Mechanical Engineering                              | From Design to Manufacturing | Simulation Capabilities | Productivity & Optimization | Cloud Collaboration & Compute |
|--|------------------------------|-------------------------|-----------------------------|-------------------------------|
| Unified Modeling and Simulation (MODSIM)               |                              | ✓                       | ✓                           | ✓                             |
| Create simulation models from CAD                      |                              | ✓                       | ✓                           | ✓                             |
| Productivity boost with engineering templates          |                              | ✓                       | ✓                           | ✓                             |
| Flexible parametrization and automation                |                              | ✓                       | ✓                           | ✓                             |
| Parametric design studies                              |                              | ✓                       | ✓                           | ✓                             |
| Define constraints and targets                         |                              | ✓                       | ✓                           | ✓                             |
| Advanced parametric studies                            |                              | -                       | ✓                           | ✓                             |
| Requirements and test case management                  |                              | -                       | ✓                           | ✓                             |
| Design validation with minimal computational resources |                              | -                       | ✓                           | ✓                             |
| Synthetic view for V&V coverage                        |                              | -                       | ✓                           | ✓                             |
| Reusable test methods with linked evidence             |                              | -                       | ✓                           | ✓                             |
| Engineering templates for multiphysics studies         |                              | -                       | -                           | ✓                             |
| Automatic test scheduling and progress monitoring      |                              | -                       | -                           | ✓                             |

| 3D Mechanical Engineering  | From Design to Manufacturing | Simulation Capabilities | Productivity & Optimization | Cloud Collaboration & Compute |
|--|------------------------------|-------------------------|-----------------------------|-------------------------------|
| 3DEXPERIENCE Platform Social & Structured Collaboration Foundations        |                              | ✓                       | ✓                           | ✓                             |
| Business Process Workflow Execution  |                              | ✓                       | ✓                           | ✓                             |
| Web Based 3D Data Visualization  |                              | ✓                       | ✓                           | ✓                             |
| Browser-based 3D Visualization and Geometric Analysis Tools                |                              | ✓                       | ✓                           | ✓                             |
| Perform Linear Analysis with Abaqus-solvers on 4 Cores on Cloud or Locally |                              | ✓                       | -                           | -                             |
| Advanced simulations on up to 184 cores (using Sim credits)                |                              | -                       | ✓                           | ✓                             |
| SimUnit 1K credits included  |                              | -                       | ✓                           | ✓                             |
| Simulation scaling for complex structural behavior                         |                              | -                       | ✓                           | ✓                             |
| Cloud-based resources for high-performance computing                       |                              | -                       | ✓                           | ✓                             |
| CFD simulations on 16 cores (cloud or local)                               |                              | -                       | -                           | ✓                             |
| Multiphysics simulation scaling for comprehensive analysis                 |                              | -                       | -                           | ✓                             |
| Advanced computational power for fluid and structural studies              |                              | -                       | -                           | ✓                             |



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