Applications

Mechanical Engineering

ANSYS®

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The ANSYS® program is one of the most widely used, general-purpose finite element analysis programs in the world. The program provides design engineers and analysts with a full-range of engineering analysis capabilities, including linear and nonlinear structural, buckling, kinematic, thermal, electromagnetic, fluid flow, acoustic, piezoelectric and coupled-field analyses. This wide range of capabilities makes the program ideal for concurrent engineering. Functions comprise solid modeling, preprocessing, adaptive meshing, analysis, postprocessing and design optimization. This computer-aided engineering software integrates the design and analysis functions of the product development cycles for superior product design, early product verification and faster times to market.

IRIX version compatibility:

ANSYS/ProFEA™

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ANSYS/ProFEA™ is a component product of the full ANSYS program. It is configured to be fully compatible with Pro/ENGINEER and ProMESH, developed and marketed by Parametric Technology Corporation, providing structural and thermal analysis solution, postprocessing and feature-based design optimization of solid models constructed in Pro/ENGINEER.

ANSYS/ProFEA has been developed specifically for design engineers and is especially valuable for design analysis needs. An interface product, the ANSYS-Pro/ENGINEER Interface, is included with ANSYS/ProFEA. This seamless integration also works with the full ANSYS program, allowing automatic transfer of finite element models and feature-based parametric optimization of solid models constructed in Pro/ENGINEER.

IRIX version compatibility:

FRANC-XT™

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FRANC-XT™ is a specialized finite element-based fracture mechanics program. It allows modeling of arbitrary geometry and multiple crack initiation sites. The program has the unique capability of automatically regenerating the finite element mesh for each step of crack propagation. This allows the program to perform multiple steps of crack growth, without user intervention. Multiple techniques are available for calculating stress intensity factors, and the user is given a choice of different fatigue models (Paris, Forman-Newman-deKoning). Complete pre- and post-processing is available through a graphical user interface.

Two-way translators exist for interfacing with ANSYS®, COSMOS/M®, PATRAN®, and BLADE™.

IRIX version compatibility: