RadCAD® is an optional module of CR Tech's Thermal Desktop®. RadCAD® calculates form factors or thermal radiation exchange factors ("RADKs"). It also calculates absorbed direct and indirect environment fluxes.

**FEATURES**

- Performs calculations using either Monte Carlo ray tracing or advanced radiosity methods with extensive customization of control parameters.
- Fast calculations due to advanced in ray-tracing methods and parallel processing.
- Enables concurrent engineering for thermal analysts by providing full access to CAD-based geometry and CAD model building without sacrificing good thermal modeling practices.
- Imports and exports IGES and STEP CAD geometry.
- Meshes CAD geometry directly, or snap primitive geometric objects to CAD surfaces.
- Stretch and reshape surfaces directly on the screen in addition to traditional form-based inputs.
- Facilitates model verification by graphically displaying active side and surface property information.
- Provides true curved geometric surfaces for speed and accuracy: spheres, cones, curved finite elements, and others, avoiding thousands of tiny facets.
- Handles specular and diffuse transmissive and reflective surfaces.
- Supports both grey and non-grey radiation calculations.
- Accepts angle-dependent and wavelength-optical properties.

RadCAD® custom surfaces stretch with the mouse, accurately represent the true geometry, snap on to CAD drawings, and are rapidly solved.

Full orbit definition and viewing
• Easy incorporation of variable model geometry and rotating parts via the use of programmable articulators and trackers.

• Fast techniques for spinning surfaces.

• Arbitrary symmetries using mirrors.

• Full orbit plotting package includes definition and visualization of: basic (beta orientation) • Keplerian orbit • vector-based trajectory.

• Planetary surface environment with direct solar, diffuse solar, and sky IR heating.

• Parallel Processing and Batch Mode without requiring additional licenses.

• Automatic restart determination.

• Postprocesses RADKs, heat rates and fluxes, and temperatures for fast interpretation and impressive presentations including animations.

• Innovative analysis groups offer speed savings and easy model manipulation.

• Optical property aliases help in database management and design comparisons.

• User-defined symbols and expressions for spreadsheet-like parametric modeling.

• Dynamic link to SINDA/FLUINT for on-the-fly recalculations and access to logic, parametrics, optimization, statistical design.

• Extensive CAD functions make model building fast and effective: • Boolean, revolved, extruded surfaces • layer management • multiple port views with store/recall • snap-on entity building • drag and drop model editing • user-defined light sources • wireframe, hidden, and rendered views.

• Also available: FloCAD® for convection and flow network models.

Easily model thermal radiation-dominated systems.

Planetary surface heating for ground based systems and solar energy applications.