

SanjANALYZER™ — Thermal Image Analyzer

SanjANALYZER™ — Thermal Image Analyzer

A fully integrated analysis package for low-frequency and transient thermal imaging data.
Capabilities:

- View previously acquired thermal images
- Correct for thermorefectance coefficients
- Utilize point-by-point calibration maps
- Find area mean temperature values
- Create and save cross-section plots
- Output images in various formats
- Create .avi movies from an image series (SanjANALYZER Plus only)

Key features:

- **Load a Thermal Image** — low-frequency data uses `.fdi`; transient data uses `.tti`. Double-click a file in the file selection control to load the CCD and thermal images.
- **CCD Image Display** — grab, zoom (SHIFT-CLICK to zoom out), area select tools.
- **Primary Thermal Image Display** — viewing modes: Thermal Image VIEW, Merge VIEW, and optional 3D VIEW (SanjANALYZER PLUS).
 - **Thermal Image VIEW** — calculation using masking info or a single coefficient. ROI Mean/Statistics: select a shape or freehand region for mean temperature (selection also shows on the CCD image). Cross-Section Graph: draw a line to plot temperature vs. distance (masked/invalid points excluded); select the correct Objective for accurate scale; save in ASCII (tab-delimited). Limit Bars: coerce auto-scaled data to selected limits (also affects Merge and 3D views). Color Palette Selection: multiple palettes, saved with exported images. Software Binning (x2 or x4): spatial averaging to improve faint images or cross-section SNR, at the cost of spatial resolution.
 - **Merge VIEW** — for display/saving only (temperature values live only in the thermal image). Converts to RGB for compatibility with image output formats.

CCD/Thermal/Thermal Image slide bars: first slider overlays % of CCD image on the thermal image (to locate hotspots precisely); gain/offset sliders apply to the thermal image (100%/0% = unchanged).

- **Crop from CCD Image checkbox** — crop the thermal image away from the ROI, useful for reducing .avi movie file size.
- **Fix Temperature Scale checkbox** — keeps a previously set scale fixed across a loaded series (recommended workflow: find the hottest image in the series, set the desired scale, check "fix scale," return to the first image, and run "process series").
- **Show Voltage / Delay / Color bar checkboxes** — overlay acquisition conditions and the color-to-temperature mapping on the image.

Example procedure — analyzing a transient thermoreflectance image series:

1. Select the first image of the transient series.
2. Enter the "number of images in the series" (example: 51).
3. Select an ROI box on the area of interest (example: a 5 μm gold heater).
4. Select "Process Series." The software steps through the series and plots data in "ROI Mean Series" (bottom left); right-click the y-axis to autoscale.

Revision #1

Created 2026-08-26 18:16:52 UTC by Accounts

Updated 2026-08-26 18:16:52 UTC by Accounts