

SanjVIEW 7 for Infrared (IR) Camera

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Opening and initial setup:

1. Open SanjVIEW v7.0 from the Computer desktop.
2. Center the sample in Project Manager and focus on the desired device.

System Status:

1. Confirm all indicator lights are green for your connected system.
2. Select the camera to use, then uncheck "INT Vo 20mA Range" to bypass the 20 mA current limit.
3. Click "Temp Control" tab; toggle ON/OFF and view readings for Stage, Thermal Coupler (TC), and ROI. Set Point to 75, then click "Stage State" to turn on the stage.
4. Click "Auto Focus" tab; select objective magnification (example: 5X).
5. Click "Center Stage" ON to center the Piezo controller or other external autofocus controller (only if applicable). (Note: the microscope may need refocusing after centering.)
6. Click the file browser icon, choose the save folder, click "Current Folder."
7. Select the desired imaging operation.

Note: Transient Thermoreflectance is not available while using an Infrared camera.

Steady State: (Project Manager → "Steady State")

Hardware:

1. Enter the desired Base Temp (°C) (example: 75) and click "SET" next to Set Base Temp.
2. Turn Stage State "ON."
3. Set "Vo ON Voltage" to 10V.

Timing/Illumination:

1. Set Device On Time to 10.
2. Set Image Averages (#cycle) to 10.

3D Alignment — Focus ROI / Capture Reference: same procedure as the Visible-camera Steady State workflow above.

Start Measurement:

1. Click "START Measurement."
2. Progress shows in the System Status bar ("Turn OFF" after each cycle) with a Loop Iterations count. (If red indicator lights appear in System Status, adjust the Alignment Reference.)
3. Under Save Path, confirm directory/name; add a filename prefix (example: `C:\Data\Qualification\SS`, prefix "SS").
4. Click "Save Every Cycle," then "Save Data" when ready. (Save before stopping.)
5. Stop via "STOP MEASUREMENT," then "Return to Project Manager," or File → Quit.

Calibration: (Project Manager → "Calibration")

Hardware:

1. Set "Magnification" to match the objective (example: 5x).
2. Set "High Temp" to 120 °C and "Base Temp" to 75 °C.
3. Turn "Stage State" ON.
4. Click "Set Low Temp" to initialize the chuck to the base temperature.
5. Click "Use Chuck Sensor" to use the embedded sensor (off = external thermal probe).

Timing/Illumination:

1. Set Stage Heating Time to 40.
2. Set Image Averages (#cycle) to 50.

3D Alignment — Focus ROI / Capture Reference: same procedure as above.

Start Measurement:

1. Click "START Measurement." The system cycles through temperatures, showing "Calibration Done" after each cycle and a Loop Iterations count.
2. Select the region on Thermal Image View to get the Calibration Factor (shown in "Cal Fact").
3. Under Save Path, confirm directory/name (example: `C:\Data\Qualification\CAL`, prefix "CAL").
4. Click "Save Every Cycle," then "Save Data." (Save before stopping. If the thermal image is blurry, adjust Alignment Reference.)
5. Stop via "STOP MEASUREMENT," "Return to Project Manager," or File → Quit.

Movie Mode: (Project Manager → "Movie Mode")

Control Settings:

1. Set "Voltage Out" to 10V.
2. Click "Update V" to apply voltages.
3. Set "DUT Pulse (s)" (example: 1s); click "Update Timing."
4. Confirm "Save Whole Series" is on (default).
5. Click the "File Path" icon or type the desired path; select a name.
6. Click "Start Movie" on the "EZ500 Movie Mode Acquisition" panel.
7. Click "Save Image." (Note: Movie Mode saves a series of 105 files per cycle when you click "Save Image.")
8. To stop: click "Start Movie" to stop, then File → Exit.

SanjAnalyzer (IR path):

System Status:

1. Confirm camera is set to INFRARED.
2. Click "SanjAnalyzer" to open the "SanjVIEW Image Analyzer" window.

Process Data: same workflow as the Visible-camera SanjAnalyzer procedure above (Calibration tab → Point to Point method → load CTR map → select analysis file → draw ROI box(es) → adjust scale/averaging → Settings tab → save/process series).

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