

Setup and Installation

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Connecting the EZ-THERM System

(Source Section 4. Ensure all modules are powered off before making any connections. Complete all connections and power on all modules before running the SanjVIEW 7 software.)

4.1 Power up Eazy-THERM. Before powering on, confirm the Main Power Strip is connected to the proper outlet (110V or 220V). Power-up includes the SanjSCOPE, 2 Power Distribution Units (PDUs), and the optional battery backup power supply.

4.2 SanjSCOPE. SanjSCOPE includes the chiller power switch, the master power switch, and the Emergency Off (EMO) button.

4.3 Battery Backup Power Supply (Optional). Protects sensitive equipment during power surge events and allows the user to save data before shutdown.

4.4 Power Distribution Units.

- **Master DPU:** powers the monitor, SanjSOURCE, SanjCONTROLLER, and the 4D Nano.
- **Chiller DPU:** powers the chiller and the 4D Nano.

Power-on sequence (after confirming the Main Power Strip is plugged into a suitable outlet):

1. Ensure the Red Emergency Off (EMO) button is released (turn counterclockwise).
2. Flip the Master and Chiller switches to the ON position.
3. Press the 4D-Nano power button.
4. Press the SanjCONTROLLER+ power button.
5. Press the Chiller power button (may apply to external chiller models).

[diagram/image in source — not reproduced here: Figure 14, annotated power-up steps]

4.5 Chiller Connecting. Chiller (internal or external) cooling fluid hoses connect to the 4-inch or 6-inch thermal stage of the system.

4.6 Components for the Eazy-THERM system:

1. Visible Camera and USB 3.0 camera cable, connected in SanjCONTROLLER+.
2. Power (Master distributor) and Ethernet cable for the InGaAs camera.
3. Microscope with lenses.
4. Thermocouple TC-01, connects to SanjCONTROLLER+.
5. Thermal Electric Cable connecting the thermal stage to the 4D-Nano.
6. IR cable connecting the IR camera to SanjCONTROLLER+.
7. HDMI cable connecting the monitor to SanjCONTROLLER.
8. Piezo cable connecting the Piezo stage to the Piezo Controller located in the 4D-Nano.
9. Liquid Lightguide (visible or near-infrared LED) between the microscope and SanjController+.
10. Test sample.
11. Computers equipped with wireless network connectivity.

4.7 Connecting Eazy-THERM with AF200. [diagram/image in source — not reproduced here]

4.8 SanjSOURCE (rear panel), dedicated connectors. [diagram/image in source — not reproduced here]

4.9 Connecting SanjCONTROLLER+ (rear panel), dedicated port connections. [diagram/image in source — not reproduced here]

TEA Test Sample Setup

(Source Section 6)

The Microsanj TEA test kit includes: the Microsanj-TEA test sample, three 2 mm screws, a nonconductive thermal paste, and a bias cable connector with a BNC connector. The BNC connector is pre-wired to series resistors (D1) and a diode (D2) in the test sample.

[diagram/image in source — not reproduced here: TEA sample, BNC cable, screws, and thermal paste layout]

Prepare Hardware and Connections:

1. Apply a small amount of thermal paste evenly to the center of the thermal stage (or the back-side metal area of the sample) for good heat transfer.
2. Secure the Microsanj-TEA test sample to the thermal stage using screws or clamps.
3. Plug the BNC cable into the VO INT Output.
4. Plug the connector from the BNC cable into the test sample.
5. Plug the thermal sensor attached to the test sample into the thermal reader.

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