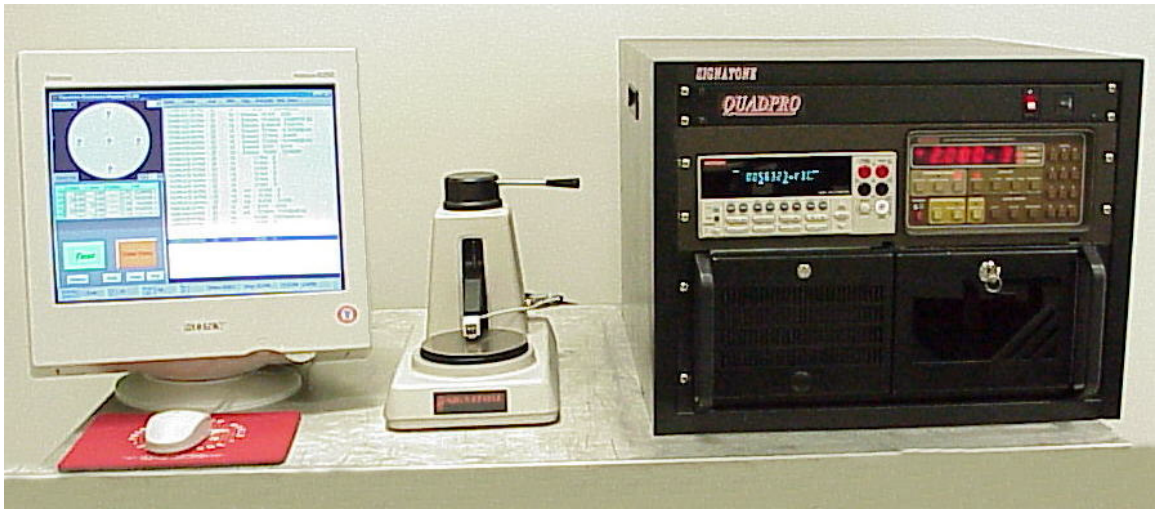
SIGNATONE QuadPro

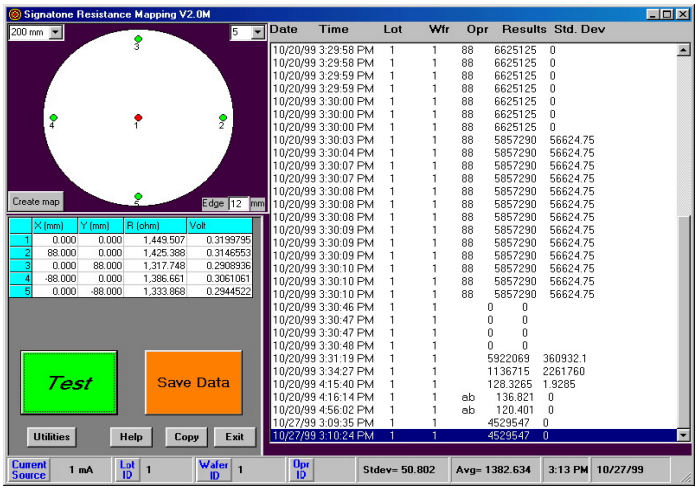
Computerized Four Point Resistivity System



The Signatone Quad-Pro controller system is used to measure Resistance, Thickness or Resistivity of layers of conducting material, calculate the average and standard deviation, log the data, and export the data to a host system or an Excel file.

The system uses a manual four point probe with a state of the art current source and electronic DVM combined with a dual configuration test procedure and test integration to obtain **an accuracy of better than 1% over the resistivity range from 1 milli-ohm to 2 Meg-ohms per square**. The accuracy and calibration are NIST traceable.

A live display of the current test point location and result is available. If any point is suspect, it may be re-tested by manually moving the stage to the appropriate point and clicking on the table entry. After retest, the system allows a choice of acceptance of the new test data. The results are stored in ASCII files and may be uploaded to a host system for trend analysis through an optional Local Area Network (LAN). Other options include the addition of temperature control and software for the measurement of the Temperature Coefficient of Resistance (TCR).



SYSTEM FEATURES:

- Shows a presentation of the locations on the wafer to be tested, (either 5 or 9 points)
- Takes the data at each point and automatically calculates sheet resistance or thickness.
- Any number of points up to 5 or 9 may be tested, and any point may be re-tested by a simple click on the "results" table.
- The summary data file includes:
    - Date
    - Time
    - Lot
    - Wafer
    - Operator
    - Average Result
    - Standard Deviation
- The data may be exported to a host computer through a Local Area Network (LAN) or to a spreadsheet for further analysis.
- The system may be upgraded to a full mapping system for 50mm to 300 mm wafers.
- Temperature control between -65oC and 400oC (200oC for 300mm) may be optionally added.
- Hardware:

SYSTEM INCLUDES:

- 4-point probe head & mounting stand w/ a 6" Teflon Isolation disc
- Rack mounted controller & Meters
- Data acquisition & Storage
- GPIB Interface, & NIST trace-ability
- 1 of the SP4-62.5-85-TC 4-point probe-head w/ 62.5 mil spacing,85 gram spring pressure, tungsten carbide tips w/1.6 mil tip dia
- DVM (Digital Volt Meter)
- Current Source
- Windows 98 OS
- 15" Monitor, Keyboard & Mouse
- GPIB Interface Board & Cables
- Documentation of NIST trace-ability
- Connection Instructions
- Manual 4-point probe head and mounting stand with a 100 mm, 150mm, 200mm, or 300mm isolated disc
- rack mounted controller with integrated meters.