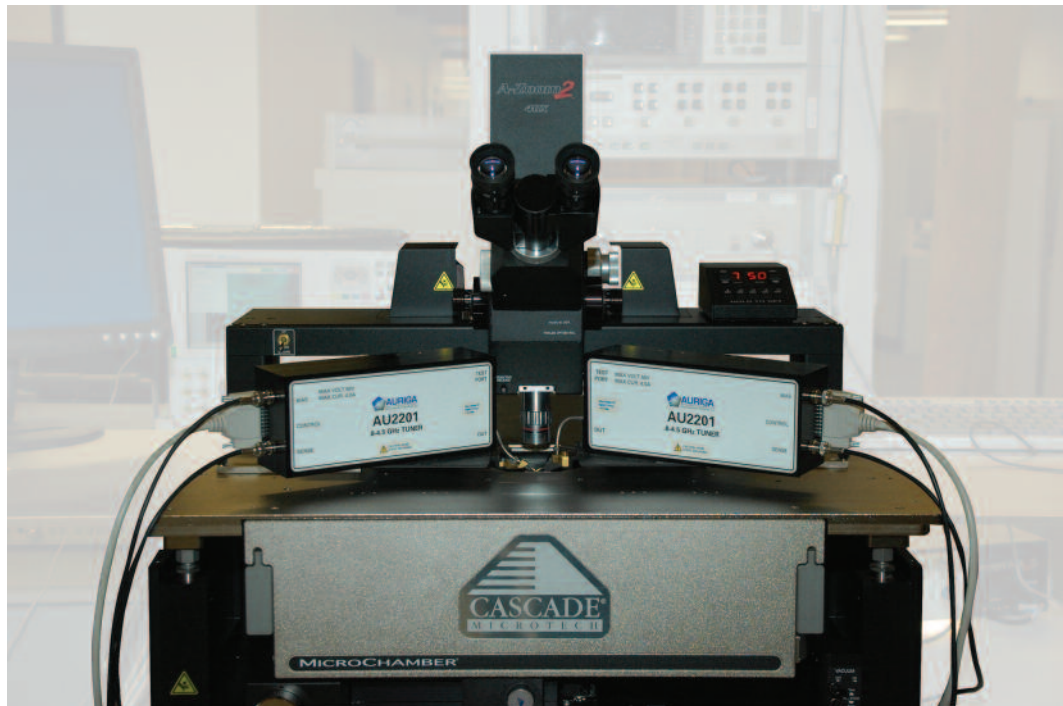


AU2000 Series

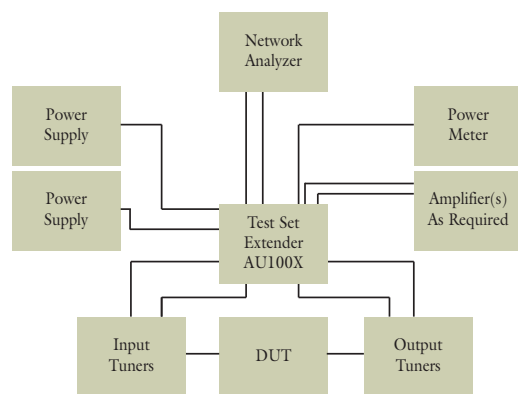
Precision Load Pull System

100MHz to 110GHz, up to 100W

Digitally controlled, precision electronic and mechanical tuner-based large signal characterization of semiconductor devices for the RF, Microwave and Millimeter Wave industry



- **Fast electronic tuners to 9GHz, greater than 25,000 programmable tuner states**
- **Precision mechanical tuners to 110GHz, millions of programmable tuner states**
- **Combination electronic and mechanical hybrid tuner-based systems**
- **Customizable on-wafer and fixture-based systems**



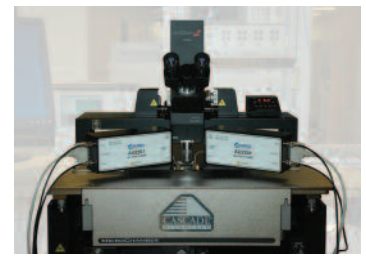
Block Diagram of the Precision Load Pull System



AU2000 Series

Precision Load Pull System

100MHz to 110GHz, up to 100W



I. Features:

- System integration expertise in providing automated, turn-key and customizable on-wafer and fixture systems up to 110GHz/100 Watts
- Electronic, mechanical and hybrid tuner-based systems
- Optional Auriga Synthetic Instrument Vector Network Analyzer receiver (300ns) for high-speed Pulsed RF
- Total system hardware control
- Customer-furnished tuners and test equipment integration welcomed
- DC bias control
- Wafer probe station control
- Report generation, graphical, tabular
- Data export into Electronic Design Automation (EDA) programs (Agilent IC-CAP)

II. Description:

Auriga Measurement Systems' hardware and software work together to optimize measurement results. The software allows the user to select mis-match points or let the system select optimal points at each frequency. Auriga's unique low-loss tuner design and system design enhancements minimize the loss between the tuner and the Device-Under-Test (DUT) by eliminating unnecessary switches. This, in conjunction with the highly stable and repeatable tuner design, significantly improves the repeatability of the impedance states.

Auriga's System Integration Team works with strategic partners including Focus Microwave for Precision Mechanical, Fundamental, Harmonic and Bi-harmonic programmable tuners; Cascade Microtech for manual and programmable wafer probe stations; and Agilent Technologies for Test and Measurement instrumentation. As a true system integrator, Auriga Measurement Systems provides Load Pull solutions up to 110GHz at up to 100 Watts of power. Custom, turn-key (manual or sub) systems are also available—all with upgradeable hardware, software, service and support.

III. System specifications:

Frequency Range: Electronic Tuners: 0.8GHz to 9GHz;
Mechanical Tuners: 100MHz to 110GHz

Accuracy: Achieving maximum accuracy relies on:

- Accuracy of the S-Parameter measurements
- Impedance spread of the mis-matches presented to the DUT
- The Number and Repeatability of the Impedance states

Resolution: 0.01dB

Tuner Ranges: 1:1:1 to 25:1

States: Electronic: >25,000, Mechanical: Millions of states

Tuner Repeatability: <-50dB residual error vector

Bias-Tee Current: Port1 and Port2, 4A fused. Higher current external units available.

System Power Handling: Up to 100 Watts

Software: System Software runs under Microsoft Windows 2000 and XP operating systems on a PC workstation

Measurement Speed: Typically limited by the Network Analyzer speed specifications. (S-Parameters etc.)

Operating Temperatures: 0-55 degrees C

Storage: -55 to 75 degrees C

Power Supply Line Voltage: 100 to 240 Volts, AC.

Line Frequency: 48 to 66Hz

Power Consumption: 450VA maximum

All Load Pull systems are quoted out of the factory to ensure system specifications, ordering accuracy and completeness.

IV. System Ordering Information

800MHz to 9GHz Electronic Tuner System:

Test Set Extender: AU100X

Electronic Tuner Modules: AU2201 800MHz to 4.5GHz, 10W module;
AU2202 1.8GHz to 9GHz, 10W module

System Software: AU2801

Recommended Test Equipment: Auriga will provide integration of the latest programmable network analyzers, power supplies etc., as well as customer-furnished qualified test equipment.

Recommended Agilent test equipment: Agilent E8362B

Calibration Kit: 85033E 3.5mm cal kit

Agilent DC Power Supply: 6625A dual-output programmable

100MHz to 110GHz Mechanical/Electronic Tuner-based Systems:

Auriga provides fully customized turn-key automatic system integration of our electronic tuners, Focus Microwave Mechanical tuners, and Cascade Microtech on-wafer probing systems.

Recommended Agilent Vector Network Analyzers:

Agilent E836XB PNA, 10MHz to 110GHz

Calibration Kits: Based on connectors

Power Supplies: Based on DC parameters