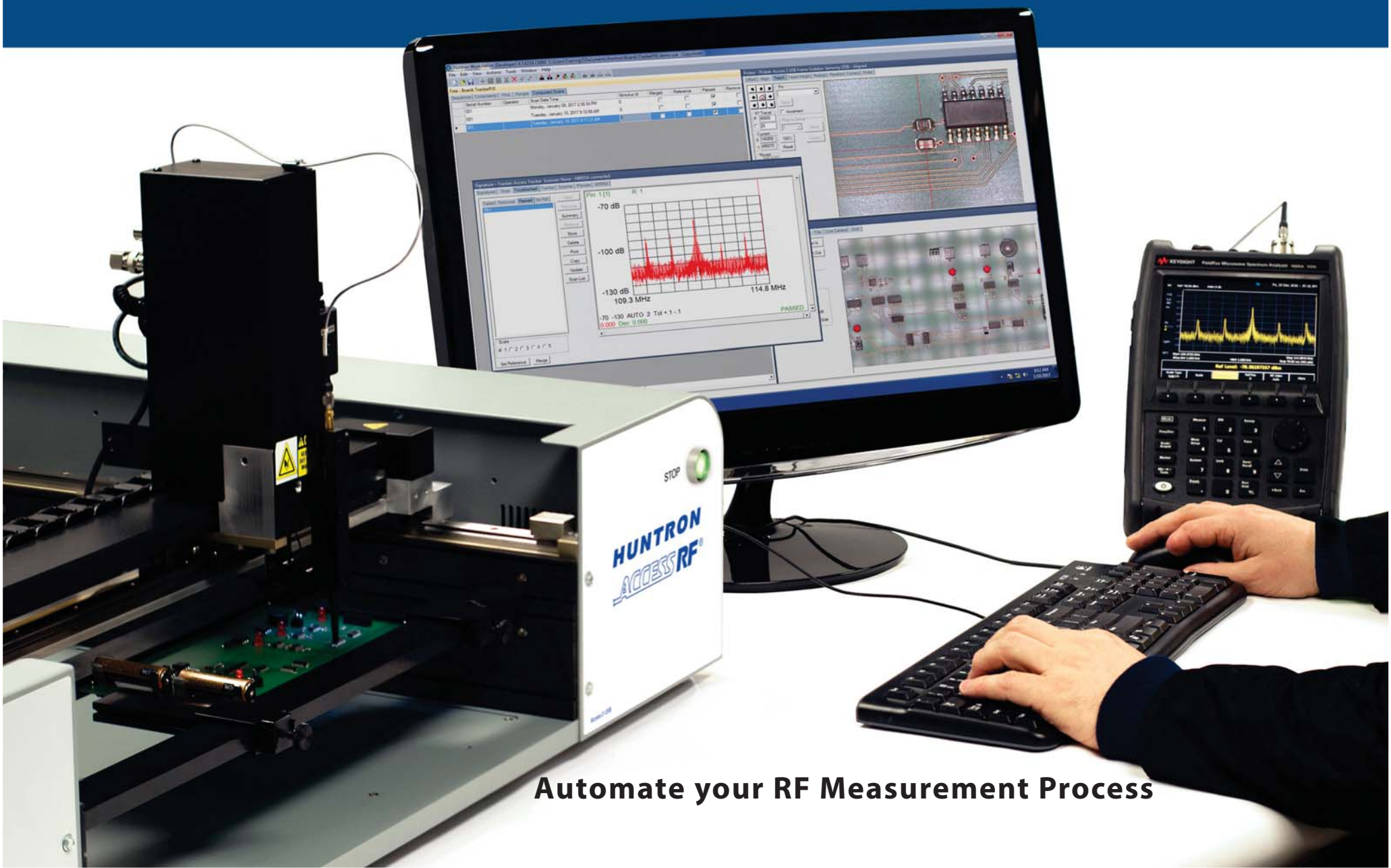
HUNTRON

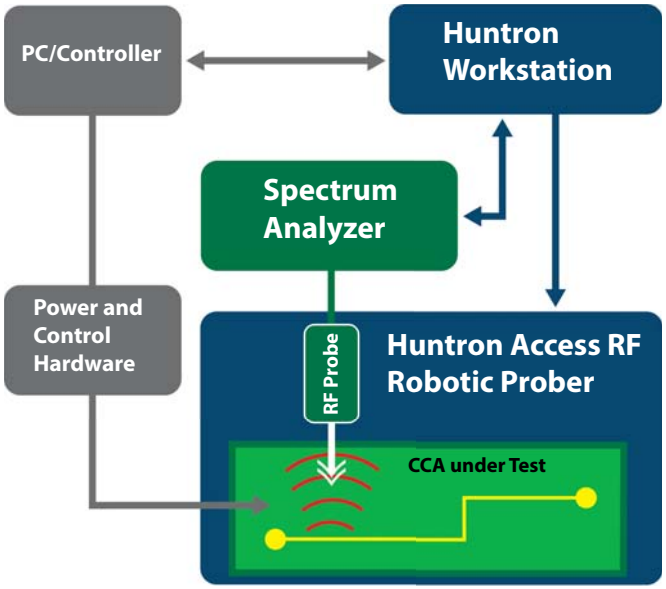
Huntron Access RF Automated Probing Station



Automate your RF Measurement Process

Access RF Prober improves the "sniffer probe" approach

The Huntron Access RF system provides reliable and repeatable near field measurements of RF signals. The system integrates a Huntron Access 2 Prober, Keysight spectrum analyzer and Langer RF near field probes under the control of Huntron Workstation. This combination delivers an automated method to place a "sniffer probe" precisely where it is needed.



In a typical application, single point measurements in RF circuits are dependent on the manual dexterity and interpretation of the operator. The position of the RF probes must be duplicated to achieve repeatable measurements. The Huntron Access RF eliminates errors in probe placement and the need for documentation that identifies the physical location of the probe points. When measuring a number of points on your circuit card assembly (CCA), the Huntron Access RF will provide a minimum 10:1 improvement in probing time.

Non-contact, non-invasive

Huntron Workstation software is used to create a test plan where each test position is a X,Y, Z location or Virtual Test Point™ (VTP). When the CCA is scanned the Access RF Prober precisely places the RF probe at each VTP capturing a non-contact, non-invasive measurement. Power and spectrum measurements from known good boards are saved using Workstation software for comparison when unknown CCAs are scanned. Deviation from stored measurements indicate areas of concern that can be investigated further. The Access RF system makes the process much easier through software and hardware automation.

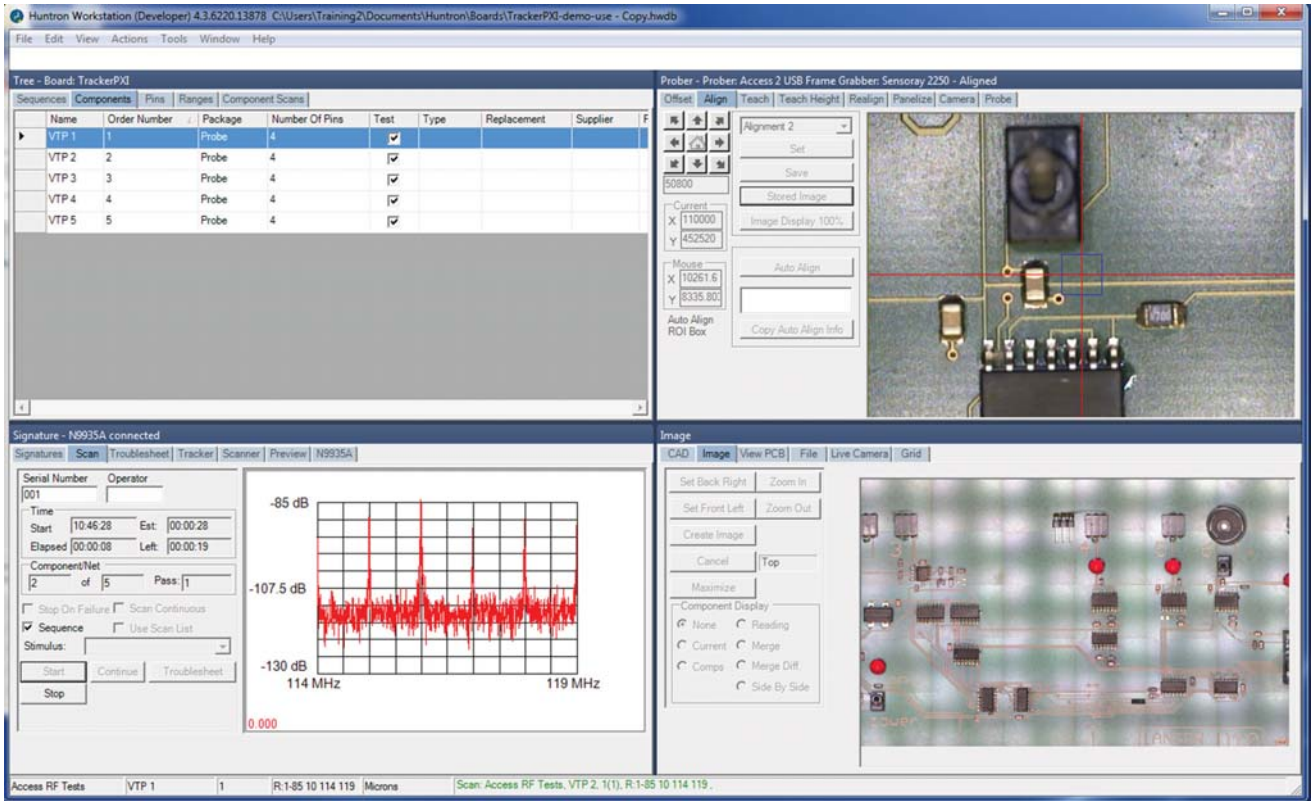
Benefits of Automation with the Huntron Access RF

- Replace manual "sniffer probe" testing with automated Virtual Test Points
- A significant decrease in test times when compared to manual methods
- More accurate measurements resulting from repeatable RF probe placement
- More effective use of valuable technical and engineering resources
- Handle turnover more effectively by retaining test knowledge in-house

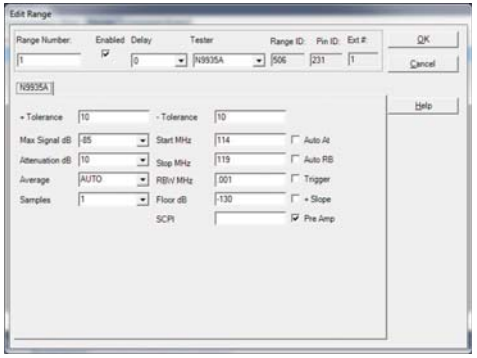
Langer RF-B 3-2 RF Probe fitted to the Access RF Prober. The RF probe is connected to a Keysight N9935A Spectrum Analyzer and is used to measure near field signals on a circuit board.

Developing a RF Test Solution

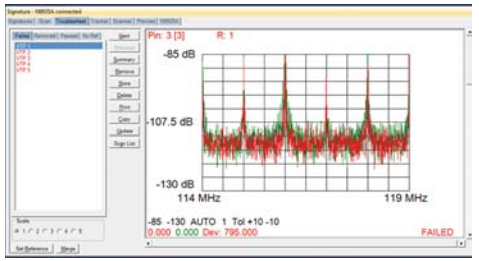
The Huntron Workstation workflow starts with creating a test plan that includes the VTPs on the circuit board where measurements are taken. Once the test plan is created, the Access RF Prober is utilized to set the location the VTPs using a camera based Teach system. When the VTPs are located the test plan is executed on a functional CCA where the Access RF places the RF probe at each test point and captures a measurement. These measurements are then stored into the test database to be used as reference for comparison. From this point, the test plan can be executed on suspect CCAs where the captured measurements are automatically compared to the stored reference measurements. A Troublesheet displays the measurements that fail the comparison to stored references. This information can be saved to a report and exported to popular formats such as PDF, XLS and CVS.



The Huntron Workstation main interface is designed with multiple panes that can be undocked and rearranged. Each pane controls a specific function within the software. The Tree pane (top left) lists all of the test data, the Signature pane (bottom left) displays captured measurements and comparisons, the Prober pane (top right) controls the Prober functions and the Image pane (bottom right) displays support images.



The Edit Range window in Huntron Workstation sets the measurement parameters used by the spectrum analyzer for each component pin (VTP).



Failed test points are listed in order of severity in the Workstation Troublesheet view. The stored and current measurements are overlaid in contrasting colors for easier analysis.

Power and Control

Testing with the Access RF system requires the CCA under test to be powered and in a functional state so measurements can be taken. The end user provides the PC, power supplies and control hardware based on their knowledge of the CCA and the measurements that need to be captured. The size of the Access RF provides plenty of space to allow for cabling and connections to be made to the CCA. The Prober has a base plate cover that can be removed to allow for easy access to the probing area from below.

Access RF Test Development Workflow

Identify CCA to test, the required measurements, power and control needs → **Construct any needed CCA support fixtures and cable management systems for CCA control** → **Develop test plan in Huntron Workstation; identify and teach VTP XY locations** → **Execute test plan, capture RF measurements and debug test to achieve required coverage**

Features of the Huntron Access RF

- Precision probe placement to within 20 microns
- Solid construction for years of dependable, automated testing
- Top quality system components are used for best performance
- Remote Control software integration module provides you the option to customize measurement capture
- One year parts and labor warranty on the Access RF Prober
- Experienced Technical Support provided to help make your test process successful

Access RF Specifications

Maximum Board Size:	22″ x 23″ (56cm x 58cm)
Maximum Probing Area:	18.2″ x 22.4″ (46.2cm x 56.9cm)
Max. Component Height	4″ (10cm)
Dimensions:	36″ W x 15.7″ H x 29″ D
	(91.4cm W x 39.8cm H x 73.6cm D)
Accuracy:	0.0007874″ (±20 microns)
Resolution:	0.0003937″ (10 microns) minimum
Speed:	40 points per minute @ 1 measurement/point
Camera system:	High resolution CCD camera

Keysight N9935A SA Specifications

Frequency:	5 kHz to 9 GHz
Dynamic Range:	103 dB
Standard Attenuator Range:	30 dB
Overall Amplitude Accuracy:	±0.5 dB
N9935A-235 Preamplifier	
DANL @1 GHz:	-155 dBm
Gain:	20db

Langer RF Probe Set Specifications

RF-B 3-2 Probe	
Frequency range	30 MHz ... 3 GHz
Resolution	≈ 2 mm
Max. forward power	1 W
LF-B 3 Probe	
Frequency range	100 kHz ... 50 MHz
Resolution	≈ 2 mm
Max. forward power	5 W

Recommended PC specifications: Intel i7 processor; Windows 7, 8 or 10 (64 bit); solid state hard drive; 16Gb RAM or more; 1920 x 1080 video resolution; available USB (for Access RF Prober) and Ethernet (for Keysight N9935A) ports; DVD drive, keyboard, mouse

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