

RF Testing with the Huntron Access DH



Introduction

The Huntron Access DH dual head probe was designed with open architecture to allow for automating testing with a variety of different test equipment including RF testing. Automating your test procedure can significantly decrease test times therefore increasing productivity.

The Huntron Access DH dual head probe provides the ability to accurately position two probes on or over a PCA/SRA allows for precision measurements. The exceptional accuracy achieved by micro-stepping and linear encoding ensures reliable probing of the surface mounted components. RG316 cable provides a signal path from the back panel to each head. The base of the cabinet contains a 19" rack for mounting equipment.

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Applications

There are many different ways a Huntron Access DH Prober can be used for testing RF PCAs/SRAs. Combining a wide range of test equipment, connection methods and automated probing can create powerful automated test systems.

RF Equipment

There are several types of equipment can be used to test RF PCAs/SRAs. The Huntron Access DH Prober provides a 19" rack and probe heads configured for mounting equipment. The following are some of the possibilities:

- VNA – Vector Network Analyzer
- Spectrum analyzer
- Power meter
- Synthesizer
- Attenuator
- Signal generator
- Digital I/O

Connections

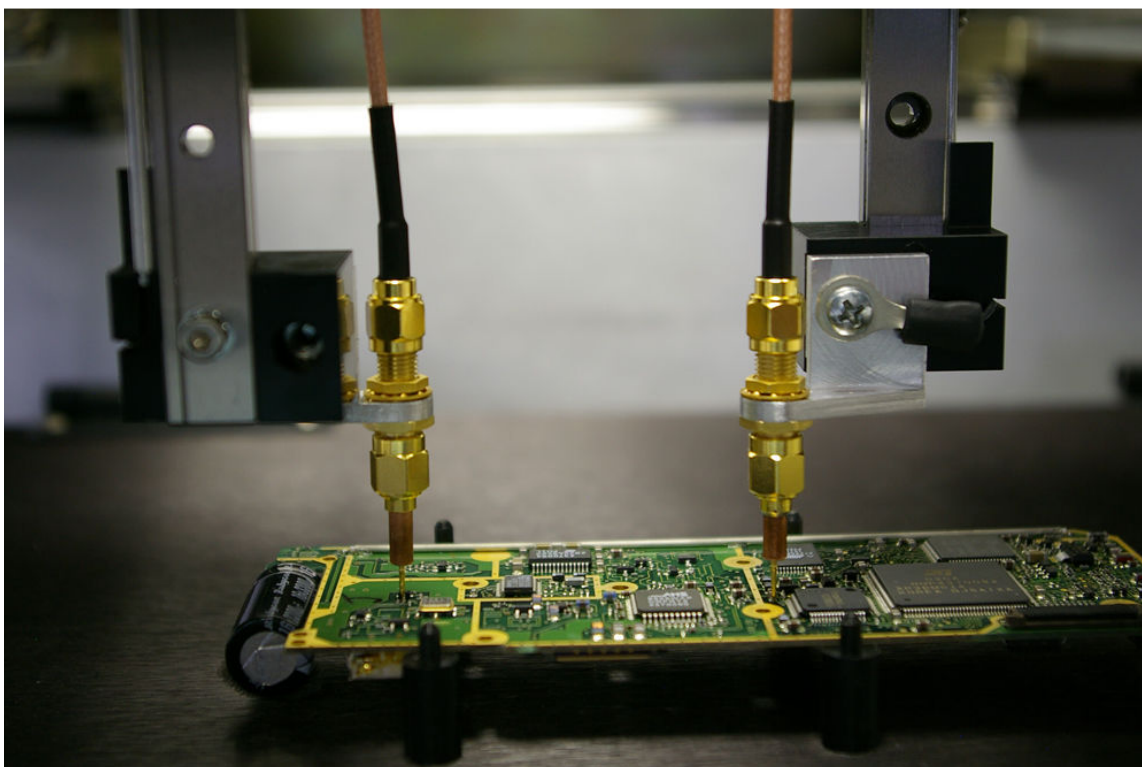
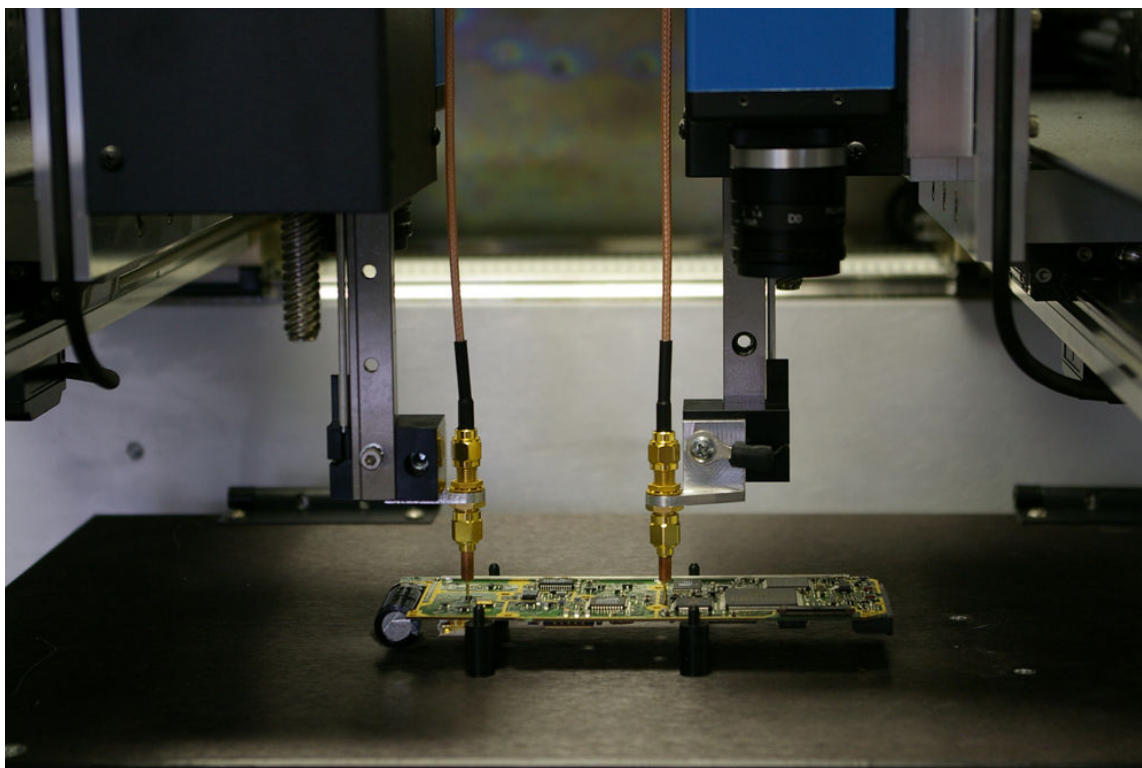
Connecting the equipment to the PCA / SRA can be static or dynamic. Some of the possible connections are list below:

- Coax probe tip on Huntron Access DH Probe
- Passive probe on Huntron Access DH Probe
- Active probe on Huntron Access DH Probe
- Virginia Panel S6 mass interconnect
- Cabling to PCA/SRA connectors
- Bed of nails under PCA/SRA

Systems

Building automated test systems based on the Huntron Access DH can provide a variety of test solutions. Some of which are identified below:

- Inject and measure with RF instruments
- Measure two points simultaneously



Two Probe tips wired with RG316 cable to the back panel

Hardware

Cabling

The Access DH provides RG316 cable from the back panel to each Z Head. Optional RG316 cable is connected to the head and down to an optional SMA connector mounted on a probe tip bracket. A spring probe is then connected to the connector to make contact with the board. The cable and probe tip connections are made with dual ended SMA connectors. The probe tip dual ended SMA connector can be changed to a SMA to SMB connector to allow the use of other probe tips.

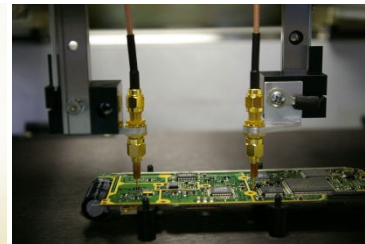
RG316 Cable Total of 13.5 – 15.5 feet (Probe tip to Z Head 2-3 feet, Z Head to Back Panel 7.5 feet, Back Panel to front of 19" Rack 4-5 feet)



Rear Panel



Head



Probe Tips

Equipment

A 19 inch rack is provided in the base of the Access DH for mounting test, control and power equipment. Optional rack mount PC and power strip are available. There is a 1 foot square hole in the back of the cabinet to run wires to the back panel.

The Access DH can also be placed next to a rack of equipment and have the cables run from the rack to the rear panel of the Access DH.

There is also a hole from the bottom up to the back of the banana jack panel/ Virginia panel S6 located at the back of the probing area. This can be used to route cables to power and control the board under test.



19" Rack



Virginia Panel S6

Software

There are three ways to control the Huntron Access DH for use with other equipment. The first option is a user created Huntron Remote Control program which controls the Huntron Workstation software and other equipment. The second is the Huntron Workstation SDK which allows other equipment to be controlled from Huntron Workstation by customizing a provided DLL to control other equipment. The third is the Huntron Hardware SDK which allows other programs to directly control the Access DH movement.

Huntron Remote Control

Huntron Remote control can be used to control the Access DH through Huntron Workstation and allow the control of other equipment.

The Huntron Workstation optional Remote Control feature allows control of the software from other programs. Probe locations are created and verified in Huntron Workstation and then “controlled” by other programs.

Huntron Workstation SDK

The Huntron Workstation SDK provides the facility for adapting other test equipment to work inside the Huntron Workstation environment.

The Huntron Workstation SDK provides a method for integrating control of instruments to the Huntron Workstation software and use with the Huntron Probers. This integration allows the Huntron Workstation software to move the prober to a location, control the instrument(s), display data, make comparisons and show results. The SDK supports numeric measurements, waveforms and images. The integration is performed creating/modifying a .NET DLL. The combination of Huntron Workstation software, Huntron Probers, other instruments and the customized DLL create a fast and easy way to create effective custom prober systems.

Huntron Hardware SDK

The Huntron Hardware SDK allows control of the Access DH from a DLL level. There is only a basic sample user interface provided.

The Huntron Hardware SDK allows creation of programs that implement control of Huntron hardware products. Using in-house programming or integration services, the SDK allows the creation of custom software systems. The SDK also allows existing programs to be modified. The SDK provides control of Huntron Access DH.



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