

**Salient Features of the Probe Station component of CPP authority "uWave Probing System"**

This capital purchase seeks to acquire an existing commercial off the shelf product and associated accessories. The probe station component of the "uWave Probing System" will provide a microwave probing environment for engineers and scientists to perform electrical test and analytical evaluation of semiconductor devices, planar passive components, and microwave assemblies. The probe station features a maneuverable 6.5" chuck, four magnetic RF probe positioners(2 left-handed, 2 right-handed), four needle mount holders & probes, vacuum clamping capable, an insert plate for true N,S,E,W probe placement. The unit is capable of holding up to seven microwave positioners, either magnetic or bolt down variety.

The probe station includes an optics package which features a moveable boom stand mounted trinocular stereo microscope and a gooseneck mounted variable intensity halogen illuminator. The microscope is vibration isolated from the workbench. The halogen light is mounted to the test fixture and is moveable over the complete working area. The standard objective is 1X, eyepieces are 10XWF and 25XWF with 0.67X to 4.5X body which results in 6.7X to 112.5X. Working distance is 3.8 inches. Optics will be enhanced with a USB compatible CCD camera and relay lens for capturing test sample images. The probe station includes a mezzanine shelf to place equipment within 4 inches of RF probe coaxial connection points.

Overall Size:	
Depth	11 inches
Width	10 inches
Weight	17 lbs
Top Plate Size	10 inches by 10 inches
Stage chuck size	6.5 inches
Stage travel	4 inches by 2.5 inches and +/- 180 degrees rotation
Positioner movements	
X	0.5 inch
Y	0.5 inch
Z	0.5 inch

**Table 1 – Probe Station, Additional Details and Features**

The optics are mounted to a swing arm bridge mount, details of which are listed in Table 2. This assembly is mechanically isolated from probe station, bench and also provides vibration isolation. This system is capable of use with optical systems providing less than 0.5mm field of view.

X-Y Movement, swing arm	>6" X-Y movement with Locking Swing Joints
Optics Rack mount, adjustable height	1 inch, 4 inch and 7 inch WD
Fine linear movement:	
X	Available for 2.5 inches of travel
Y	Available for 4 inches of travel

**Table 2 – Optics swing arm bridge mount features**

The stereo zoom microscope has all of the capabilities outlined above, but also noted here in Table 3.

Magnification range	6.7X to 168X, with 1.5X objective
Zoom range	0.67X-4.5X
C-mount interface for video/digital/film cameras	

Table 3 – Additional microscope features

The images shown below in Figure 1 are representative state of the art in personal probing systems and are provided here for reference only.

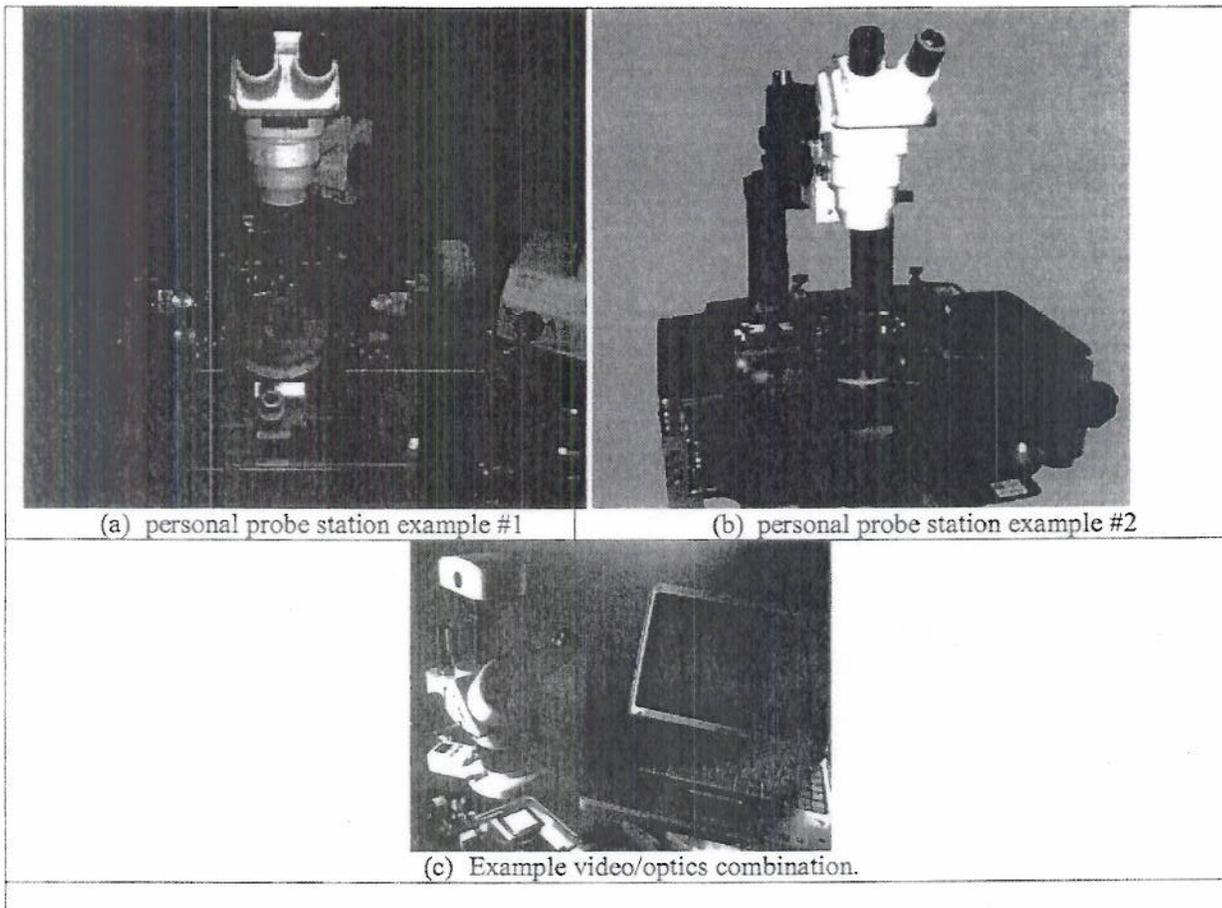


Figure 1 – Examples of state of the art in personal probing equipment for microwave components and assemblies.