

S-1160 SERIES



General Purpose Analytical Probe Station

The Signatone S-1160 Series is designed to support a broad range of precision probing applications, including hybrids, MCM's, wafers, and packaged parts. With its comprehensive suite of optional accessories, and available 4", 6", and 8" wafer chucks and stages, the S-1160 is the ideal multi-purpose analytical platform, and the industry standard price and performance leader.



PERFORMANCE, QUALITY, VALUE

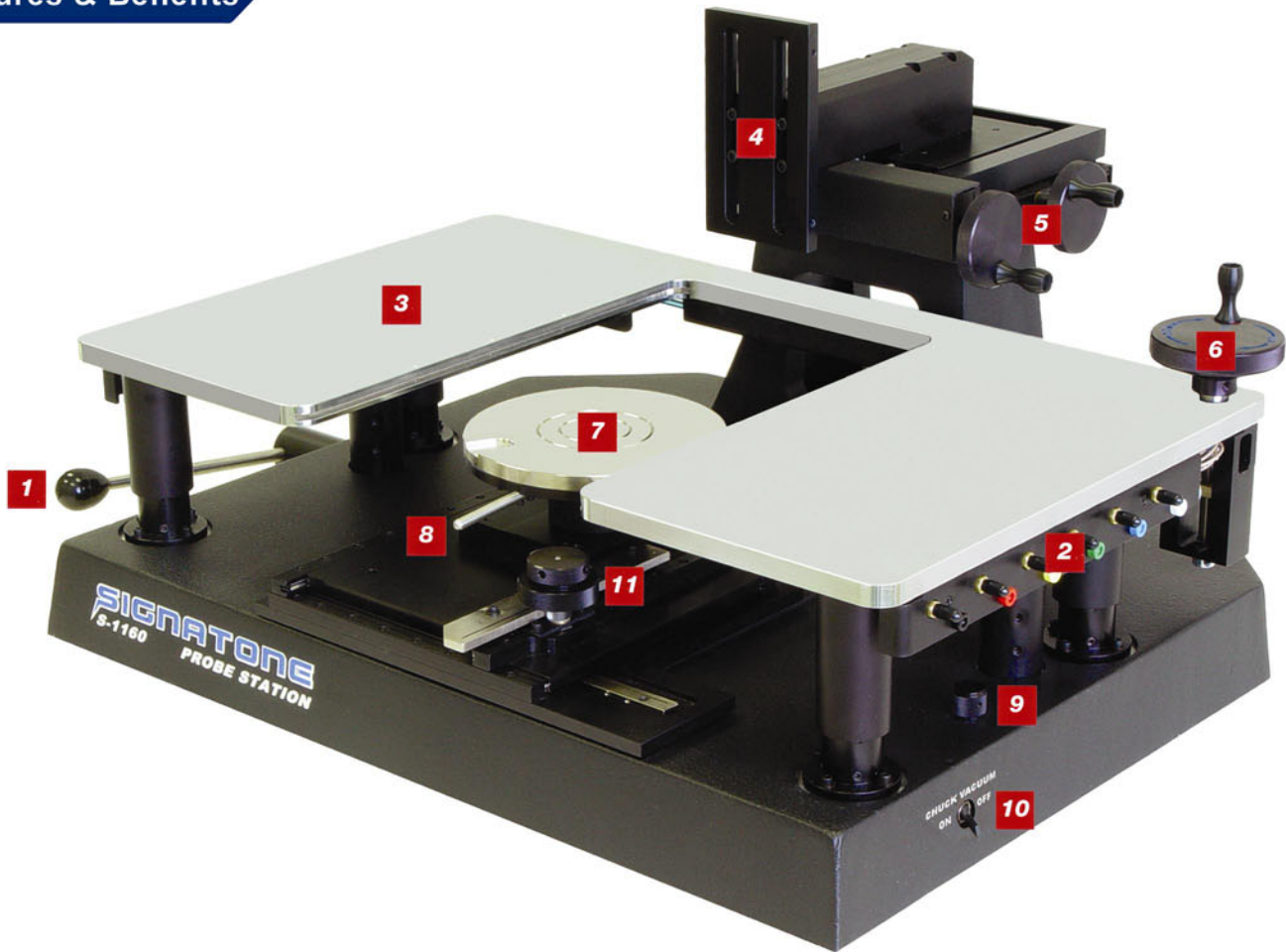
SIGNATONE®

Advanced Microprobing Solutions Since 1968

S-1160 SERIES



Features & Benefits



1 - Linear Platen Lift

Lifts the platen 3/8 inch in a linear motion avoiding wear on probe tips. The friction stop permits pausing the platen at any point in its travel, keeping the probe tips relatively in focus when moving the sample.

2 - Vacuum Ports and Signal Connections

Six vacuum ports on each side of the platen support vacuum based positioners. Color-coded signal jacks connect to the probes on the side of the platen and terminate at the rear of the station. Available with Triax, BNC, and banana terminations.

3 - Large Steel Platen

The large steel platen is ground flat, planarized to the chuck and will accept up to 10 vacuum or magnetic based micropositioners.

4 - Microscope Mount

The S-1160 offers three types of mounts. The 'A' style accepts both the Mitutoyo Finescope series and the A-zoom series of high-powered compound optics. The 'B' and 'C' styles accept StereoZoom microscopes.

5 - X-Y Microscope Stage

The X-Y microscope stage is easily moved with the control knobs. 2" of X-Y movement allows scanning of large circuits or hybrids without lifting the probe tips. (not included on S-1160C)

6 - Fine Platen Adjustment

This control knob allows the platen to be set to the desired fixture height, allowing for setting up for probing with probe cards, hot chucks, or packaged parts and hybrids.

7 - Vacuum Chuck

The standard vacuum chuck is flat to $\pm .0005$ inches and has two vacuum grooves plus a center hole. The grooves may be blocked off and the center hole used only when setting up with a small sample. Chucks are available in 4" (100 mm), 6" (150 mm) or 8" (200 mm) configurations. The chuck is electrically isolated from the base station and a binding screw allows electrical connections.

8 - Chuck Rotation Lever

The rotation lever will rotate the chuck 360° making it very easy to align with probe cards in place. An optional rotation lock (model SRL-160) is available for locking the sample in place once properly aligned. The SRL is required when used in conjunction with a temperature chuck. It is also strongly recommended for RF/Microwave probing applications (S-1160-MW).

9 - Vacuum Port Damper Knob

This knob allows the user to set the amount of vacuum being supplied to the micropositioners thus adjusting the drag on positioners to the user's desired feel.

10 - Chuck Vacuum Switch

This toggle switch toggles the chuck vacuum on and off for holding the sample/fixture to the chuck.

11 - X-Y Stage Control Knobs

The X-Y stage is a rack and pinion gear assembly with high resolution positioning. The compound knob permits easy chuck movement in both axes simultaneously. Available in 4", 6", and 8" versions. The optional fine-pitch drive assembly provides even greater precision for controlling the X-Y stage.

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ACCESSORIES

S-4710 Probe Card Adapter for 4.5-inch wide probe cards.

SRL-160 Rotation Lock, required when using a temperature chuck. This option locks the chuck rotation in place, allowing fine adjustment. Also recommended for use in RF/Microwave testing.

FS-160 An optional 0.5" high-resolution stage designed for ultra-fine chuck motion. Works in conjunction with the standard coaxial stage drive.

MY Mitutoyo Finescope microscope complete with 10X eyepieces, 2X, 10X, 20X objectives, 2:1 zoom, and fiber optic coaxial illumination. Allows 20X to 400X magnification.

A-zoom Videoscope Complete with built-in color CCD camera and 10:1 or 40:1 motorized zoom, the A-zoom videoscope also offers optional 10X eyepieces and Mitutoyo/A-Zoom objectives.

SZ-6045 Olympus StereoZoom microscope complete with 10X eyepieces, Fiber-optic illumination, 6.4:1 zoom and focus mount. Allows magnification of 10X to 64X.

SZ-1145 Olympus StereoZoom microscope complete with 10X eyepieces, fiber-optic illumination, 11:1 zoom and focus mount. Allows magnification of 18X to 110X.

Micropositioners Depending on the type of microscope and the magnification selected, Signatone offers a variety of micropositioners to choose from. Most popular for use with the high-powered microscopes are the S-926 and SP-150 Series. With StereoZoom microscopes, the S-725 series is the best choice.

PSDB-1160 Light-tight enclosure for isolating the entire probe station. A shock assisted lift door and utility feed-throughs for the S-1160 are provided. Removable connector panels allow users to configure their own signal jacks or Signatone offers a variety of pre-assembled panels as well.

Hot Chucks Signatone offers a wide range of thermal chucks and controllers. The 'T', 'F' and 'X' series are designed to work well with the S-1160.



PSDB-1160

SPECIFICATIONS

Width.....	27 inches
Depth	22 inches
Height (with microscope) ..	19.5-22 inches
Shipping Weight.....	125 pounds
Vacuum Chuck	4", 8", or 8" diameter - supports single die through 8" wafers
X-Y Stage Resolution.....	X motion @ 1.125" per knob revolution Y motion @ 1.6" per knob revolution
Coarse Platen Lift	3/8" linear with continuous friction stop
Fine Platen Lift.....	1 1/3" @ .025" per knob revolution
X-Y Microscope Stage	2" X motion @ .1" per knob revolution 1.8" Y motion @ .1" per knob revolution
Facilities Required.....	Vacuum 20" Hg @ .1 CFM Power for Microscope, 120V/60 Hz AC, 20 Watts

CONFIGURATIONS

ORDERING INFORMATION - Select the S-1160 best suited for your application

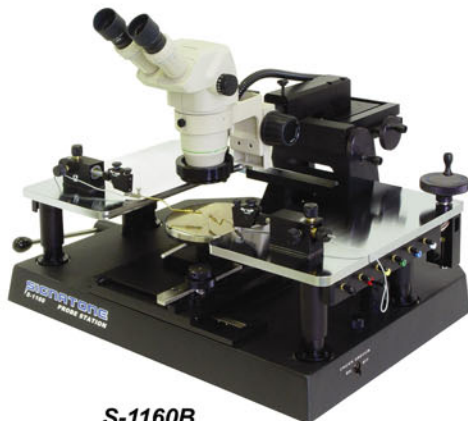
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Microscope Mount Type

- A = High-Powered Optics Mount
- B = StereoZoom Optics Mount
- C = StereoZoom Boom Stand

Chuck & Stage Range

- 4 = 4 inch (100mm)
- 6 = 6 inch (150mm)
- 8 = 8 inch (200mm)



S-1160B

SIGNATONE

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