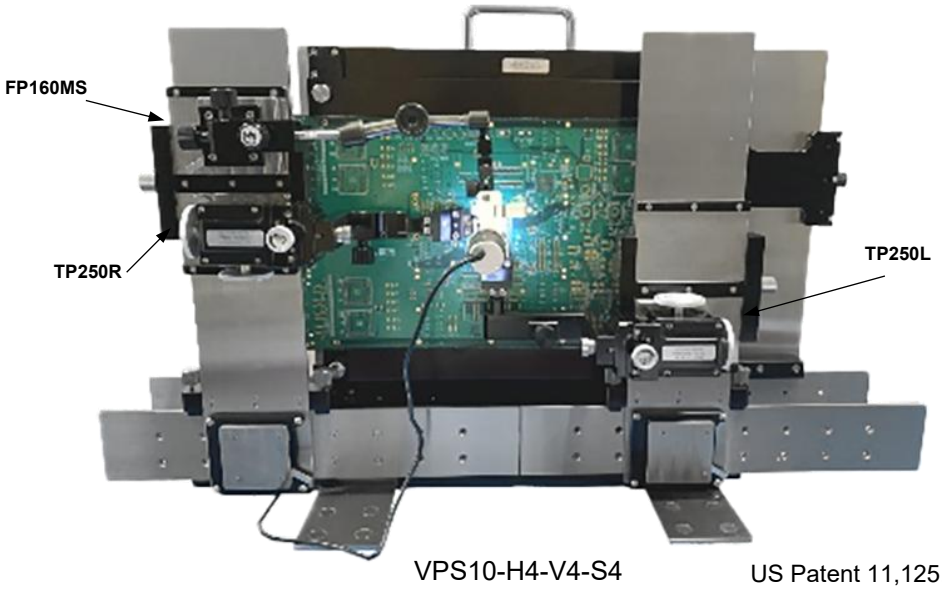
PACKETMICRO
Innovative Benchtop Probing Solutions

VERTICAL PROBE STATION VPS10

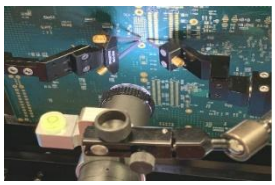
DIY PCB PROBE STATION FOR 1-SIDED & 2-SIDED PROBING



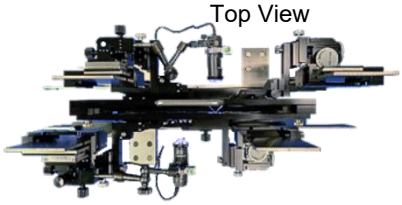
VPS10-H4-V4-S4
Configuration

US Patent 11,125,807

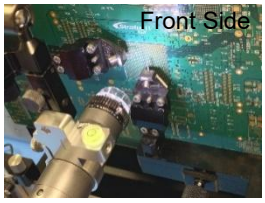
Back Side



Top View



Front Side



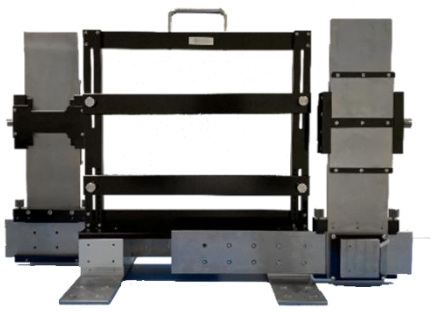
Video: https://packetmicro.com/videos/PacketMicro-VPS10_Vertical_Probe_Station.mp4

VPS10 is a do-it-yourself (DIY) benchtop probe station designed for vertical probing applications. Easy to setup and configure, its compact, lightweight characteristics make it ideal for making signal-integrity and RF measurements in laboratories with limited spaces.

VPS10 consists of a VPF10 fixture holding the printed-circuit board, TP250 positioners, Flex160MS positioners, and Dino-Lite microscopes. By mounting both TP250 and FP160MS on a slider and a slidable vertical platen, a user can quickly move the test probe and microscope close to the test points and then land the probe with the fine adjustment of TP250 accurately. This approach significantly reduces the probing time because the user does not

- Compact and lightweight
- Easy to set up and configure
- Fast lock and unlock with magnetic switches.
- Simultaneous movement of positioner and microscope with up/down sliders
- Fast, coarse horizontal movement with slidable platens

KEY COMPONENTS



Vertical Probe Fixture

VPF10-H2-V2-S2, comprising one VPF10-Main and two VPF10-Slider-Sets, is the typical setup for 2-sided probing.

SPECIFICATIONS	VPF10-H2-V2-S2
Dimensions HxWxD	48.3 mm x 813 mm x 330 mm (19"x 32" x 13")
Weight	15.2 kg (33.5 lb.)
Board Size	Height: 46 to 250 mm / 1.8 to 10 in. Thickness: 6.3 mm / 0.25 in Width: Unconstrained

VPF10-Slider-Set

PART NUMBERS	
VPF10-Main	VPF10 Fixture for holding PCB with max 10" (25 cm) height, Qty. 1 BP13 - 13" (33 cm) base plate, Qty. 2
VPF10-Silder-Set	SPH16 - 16" (40 cm) side plate, Qty. 1 VP17MS - 17" (43 cm) vertical platen with magnetic switch, Qty. 1 SL02 - Slider for VPF fixtures, Qty. 1

Precision Positioner (TP250)

TP250 fixed-arm positioner is designed for holding microprobes, scope probes, and PacketMicro probes. The XYZΘ knobs allows for effortless, high-precision turns. With a magnetic switch, TP250 can be used for both horizontal and vertical probing applications.

TP250R

TP250-ARM-AR

SPECIFICATIONS	
XYZ-axis travel	8
Resolution	5μm
Height coarse adjustment	5 mm/step (14 steps)
Θ (Planarity) control	±10° with 2.5°/turn and 0.025° resolution
Dimensions (LxWxH)/Weight	228 x 76 x 108 mm, 9”x 3”x 4.3” in./ 1.3kg (2.86 lb.)

PART NUMBERS	
TP250L	Precision Positioner with XYZθ control (left-handed)
TP250R	Precision Positioner with XYZθ control (right-handed)
TP250-ARM-AL	Left-handed TP250 arm with a 90-degree adapter head
TP250-ARM-AR	Right-handed TP250 arm with a 90-degree adapter head

Flexible Positioner (FP160MS)

FP160MS flex-arm positioner allows a user to move the articulated arm for coarse positioning first and then precisely land the probe tips with reliable contact by turning the XYZ stage and planarization knobs.

FP160MS

FP160MS-MA02

SPECIFICATIONS	
Articulated arm	4 links and 3 joints controlled by a single thumb knob
Arm Length	210 mm (8.3”)
XYZ-axis Travel	12 mm with 500 μm/turn (50 TPI)
Planarization Θ control	±7.5°
Dimensions / Weight (LxWxH)	320 (max) x 68 x 250 mm (max), (12.5” x 2.7” x9.8”) / 0.9 kg (2 lb.)
Base Plate	120 L x 90 W x 10.5 mm H (4.7”x 3.6” x 0.45”) / 0.82 kg (1.8 lb.)

PART NUMBERS	
FP160MS	Flex Positioner with precision XYZ adjustment, flex arm and magnetic switch with universal adapter (UA16)
FP160MS-MA02	Flex Positioner with precision XYZ adjustment, flex arm and magnetic switch with microscope adapter (MA02)

Microscope Adapter (MA02)

Built-in 360° Adjustable (90° step) bubble leveler helps a user to correctly orient the microscope at 90° to the PCB to avoid optical perspective distortion.

SPECIFICATIONS	
Dimensions (LxWxH)	68 x 55 x 25 mm (2.7” x 2.2” x 1”)
Diameter Adjustable	31.5 – 32.5 mm (1.24” – 1.28”)

Pull to adjust orientation

MA02 Adapter in vertical position

MA02 Adapter in horizontal position