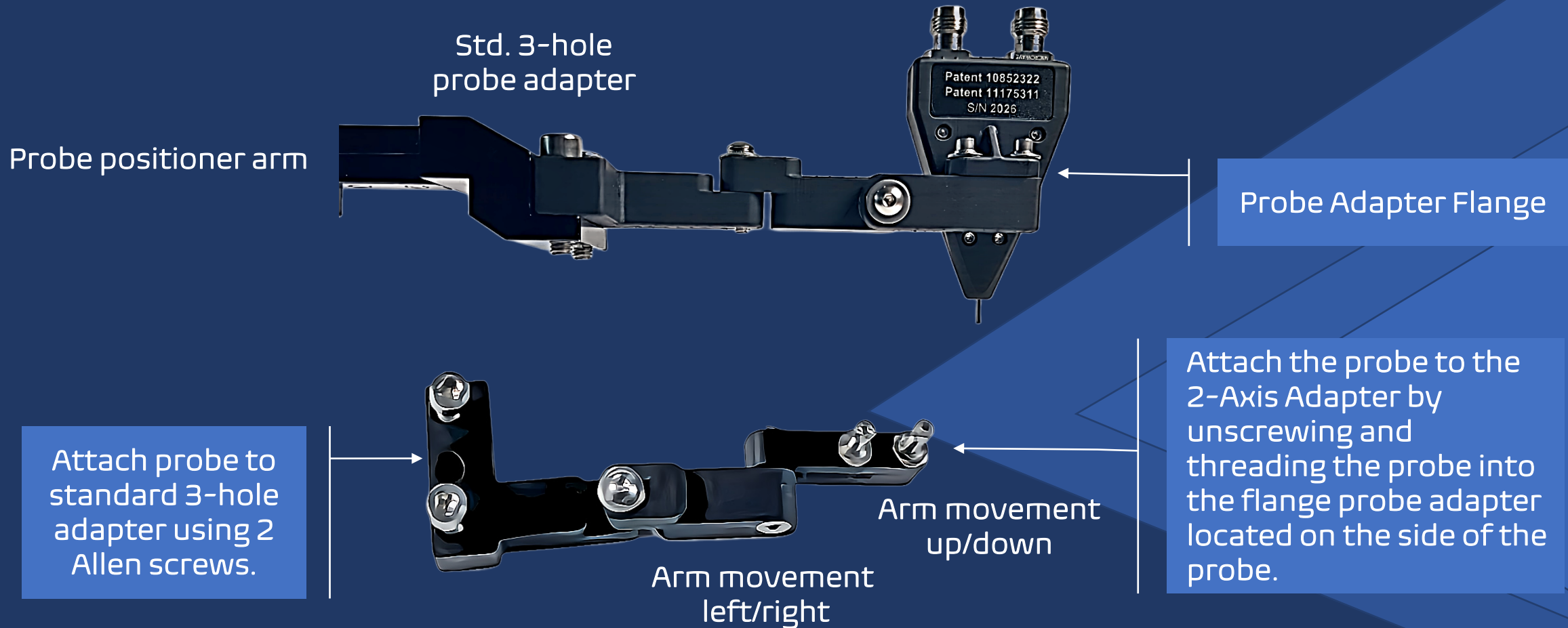


# 2-Axis Probe Adapter for DVT-FPPNN Differential Probes (40 GHz to 110 GHz)

## *Overview*

- Assembling the DVT-FPPNN Probe to the 2-Axis Adapter
- Configurations for Probing Vertical or Horizontal Mounted PCBs
- Probing Applications for the 2-Axis Probe Adapter
- Contact Information

# Assembling the DVT-FPPNN probe to the 2-Axis Adapter



# DVT-FPPNN Differential 2-Axis Probe Adapter

## 9 different configurations (top-down view)



Horizontal  
Side-by-side probing

- Arm is straight
- Probe on the right or left side
- Probe straight down



Vertical  
Vertically fixtured PCB

- Arm is straight, probe can be placed on the right or left side
- Probe is lifted to contact horizontally oriented test pads



Horizontal probing with  
45° oriented test pads on a  
horizontal fixtured PCB

- Probe can be on left/right side
- Probe straight down



Vertical probing with arm 90° to a vertically fixtured PCB

- Probe is lifted to contact vertically oriented test pads

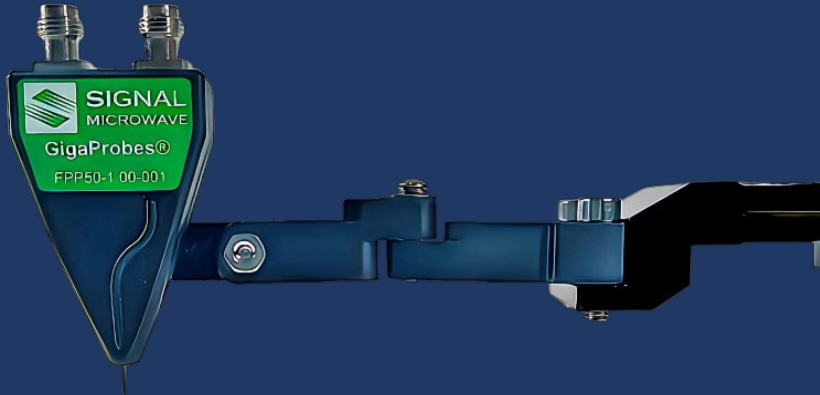


Horizontal probing: 90° oriented  
test pads on horizontal fixtured PCB

- Probe can be on left or right side
- Probe straight down

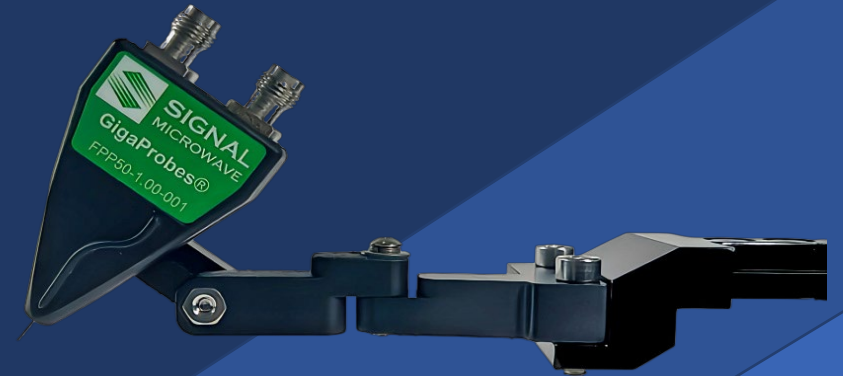
# DVT-FPPNN Differential 2-Axis Probe Adapter

## 3 different probing configurations (side view)



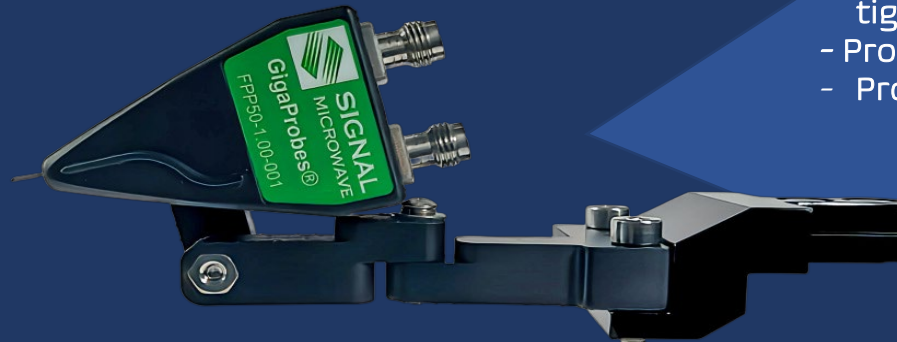
Horizontal Probing: Probe horizontal or Vertically oriented test pads on horizontal fixtured PCB

- Probe can be on left or right side
- Probe arm is in the straight position



Horizontal 45° probing: Horizontally fixtured PCB

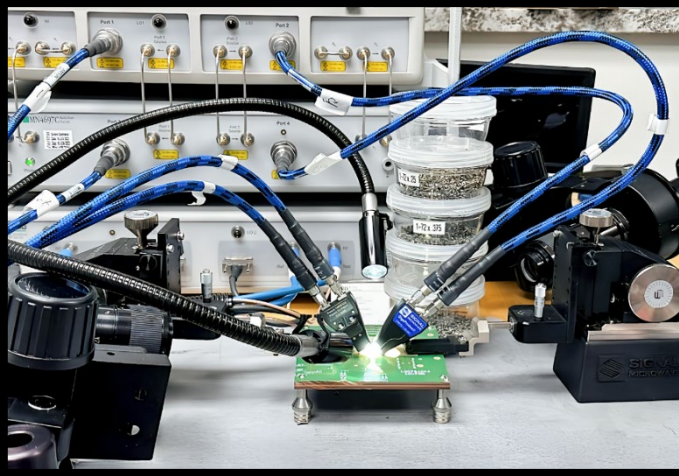
- Probe into deep test sockets or face-to-face tight-pitched test pads
- Probe can be on left or right side
- Probe arm is in the straight position



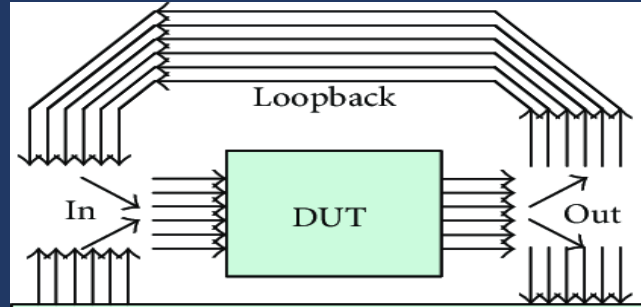
Vertical 90° Probing: Probe horizontal oriented test pads on vertical fixtured PCB

- Probe can be on left or right side
- Probe arm is lifted into position

# Application: Probe 1 mm pitch differential face-to-face PCI loopback coupons for 40 GHz to 110 GHz S-parameter analysis



Probes are placed face to face on test pads

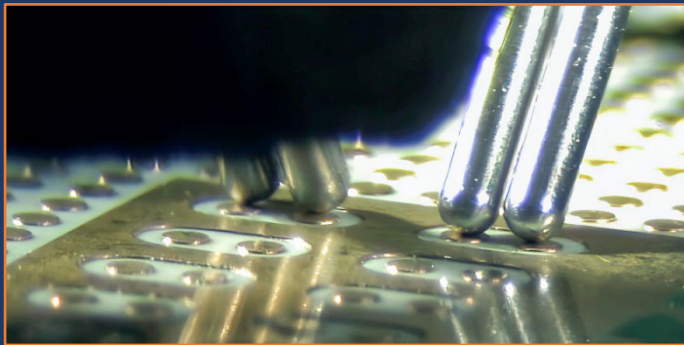


Insertion loss bandwidth measurements are made on differential traces simulating the connection from the input to the output of a semiconductor device.



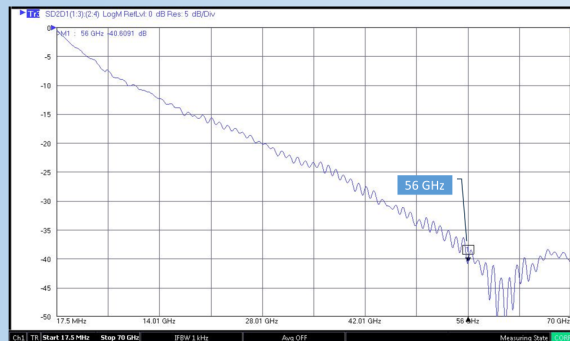
Horizontal 45° probing: Horizontally fixtured PCB

- Probe into deep test sockets or face-to-face tight-pitched test pads
- Probe can be on left or right side
- Probe arm is in the straight position



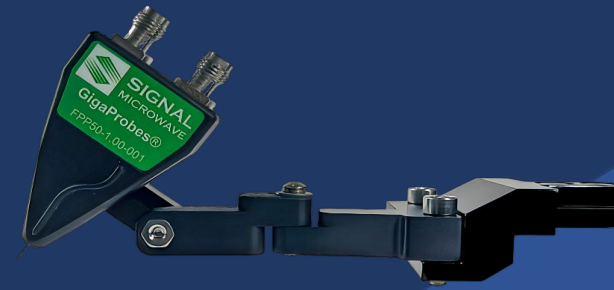
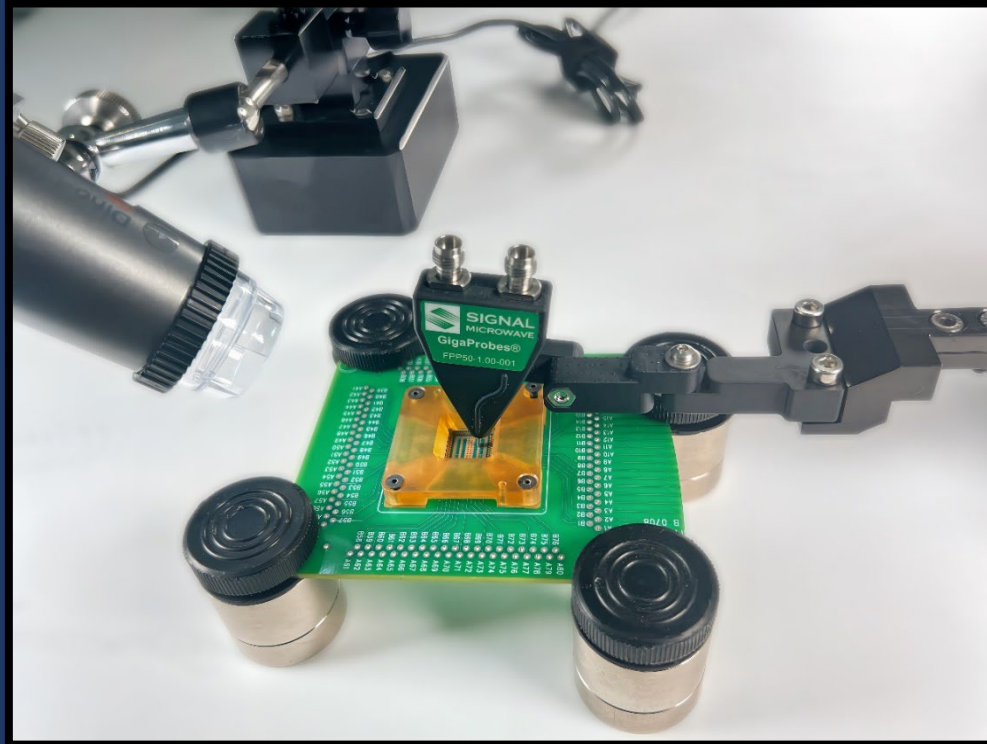
Probe tips placed with 1 mm spacing

Row 1 Insertion loss  
(Measurement Spec is 56 GHz)

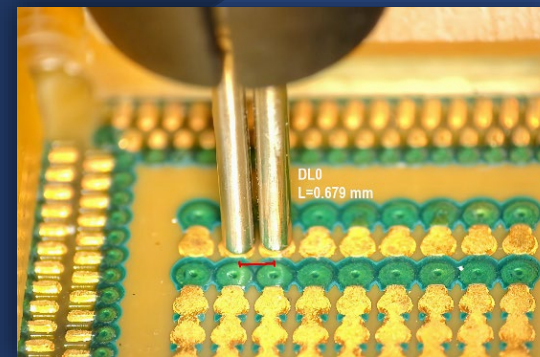


S-parameter measurement to 70 GHz

# Application: Probe into test sockets or board-to-board pogo pin interface to make 70 GHz S-parameter bandwidth measurements

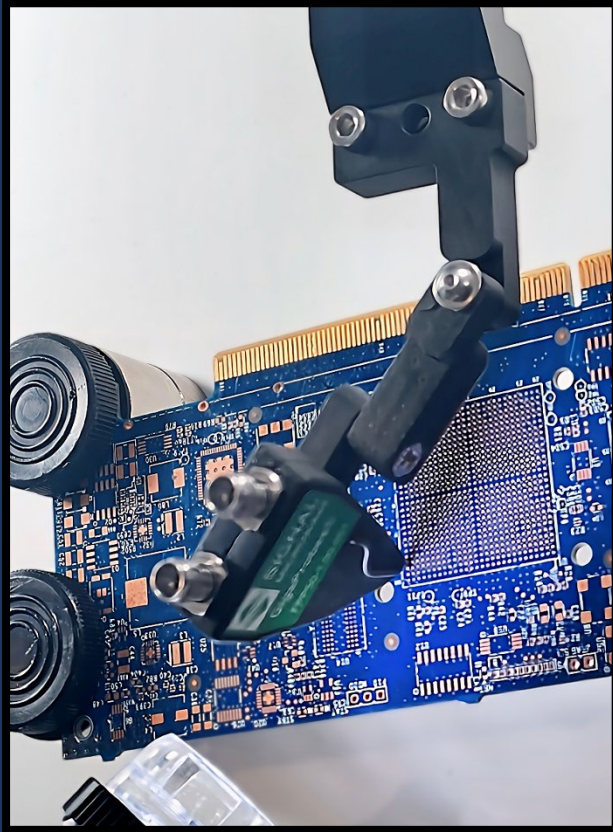


- Horizontal 45° probing: Horizontally fixtured PCB
- Probe into deep test sockets or face-to-face tight-pitched test pads
  - Probe can be on left or right side
  - Probe arm is in the straight position



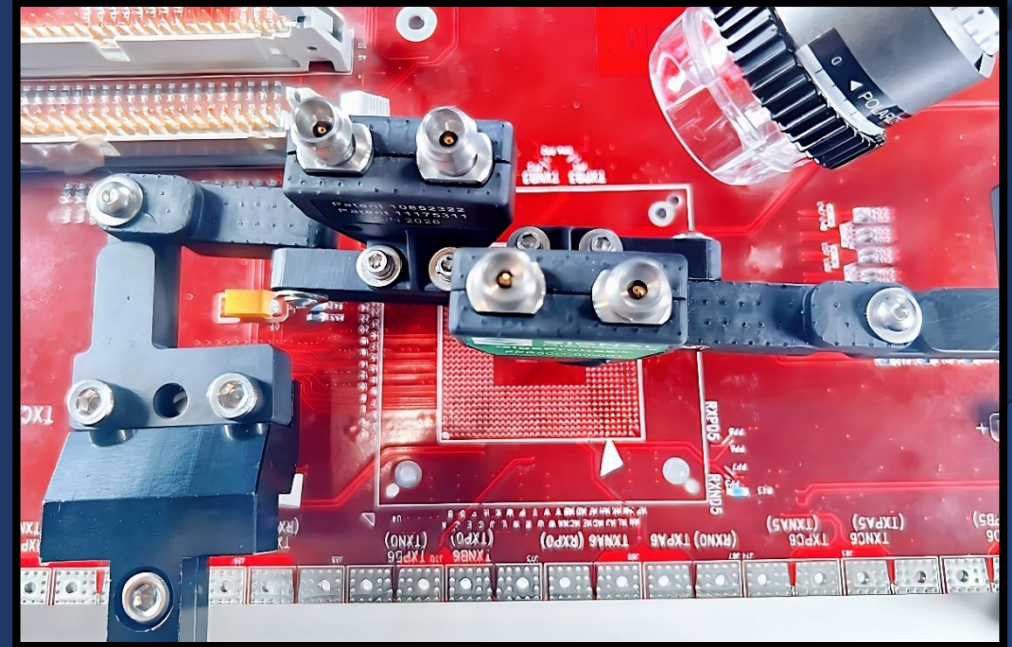
DVT-FPNN Differential rugged extends reach into test sockets or onto board-to-board interposers with force to make impedance and S-parameter bandwidth measurements to 70 GHz.

# Application: Probe Test Pads at 0° to 90° or Side by Side



Horizontal probing: 45° oriented test pads on horizontal fixtured PCB

- Probe can be on left/right side
- Probe straight down

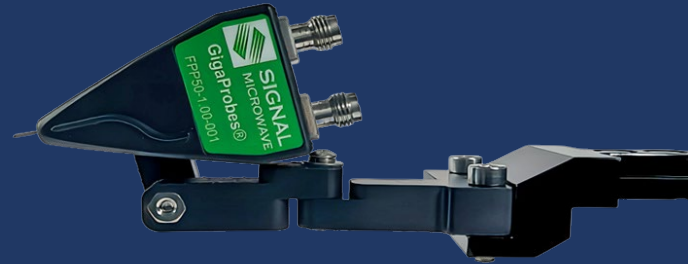


Horizontal probing: 90° oriented test pads on horizontal fixtured PCB

- Probe can be on left/right side
- Probe straight down

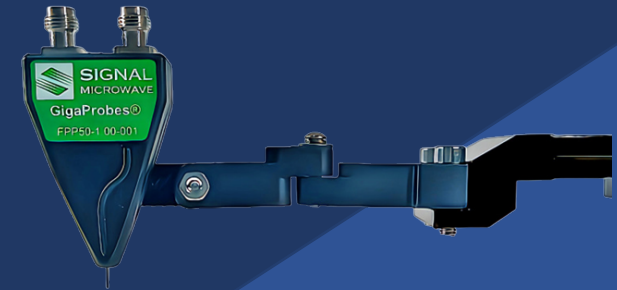


# Application: Two-sided Vertical probing of Horizontal or Vertical oriented test pads



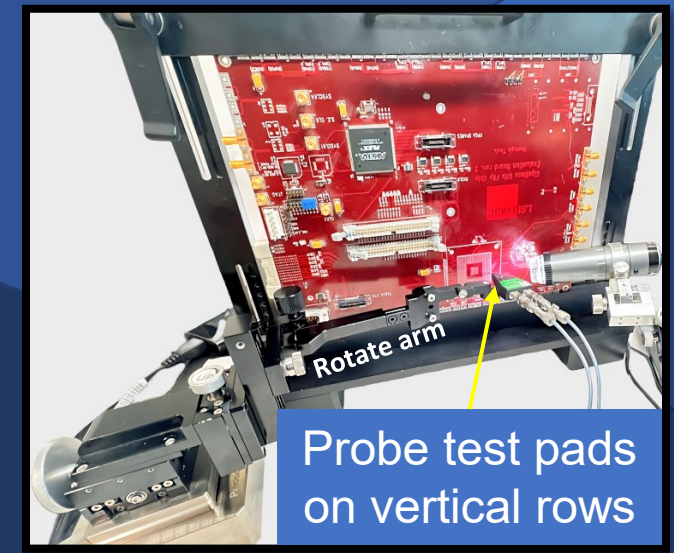
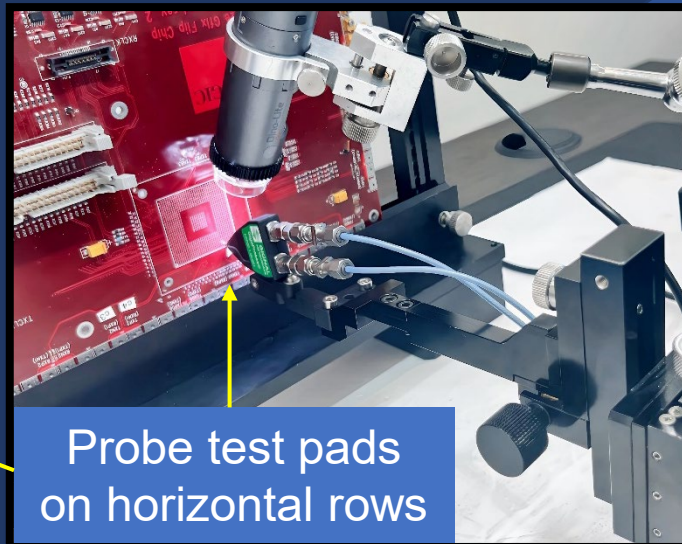
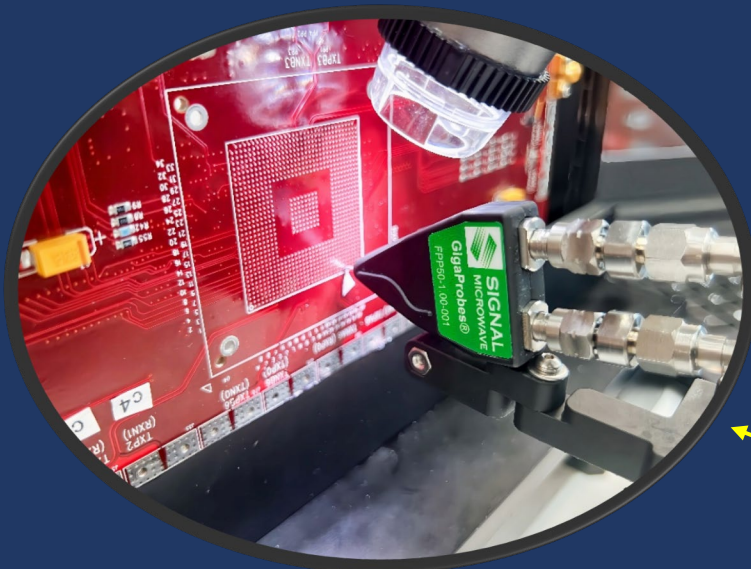
Vertical Probing: Probe horizontal oriented test pads on vertical fixtured PCB

- Probe can be on left/right side
- Probe arm is lifted into position



Horizontal probing: 45° oriented test pads on horizontal fixtured PCB

- Probe can be on left/right side
- Probe straight down

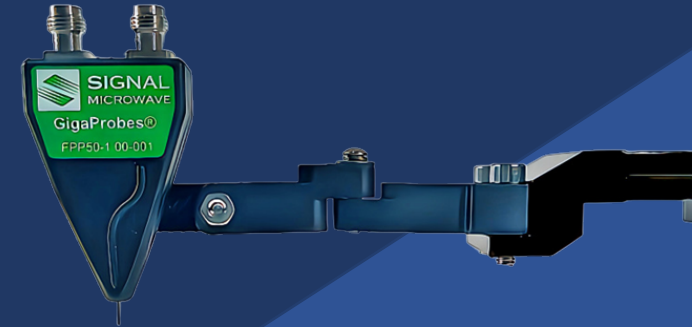




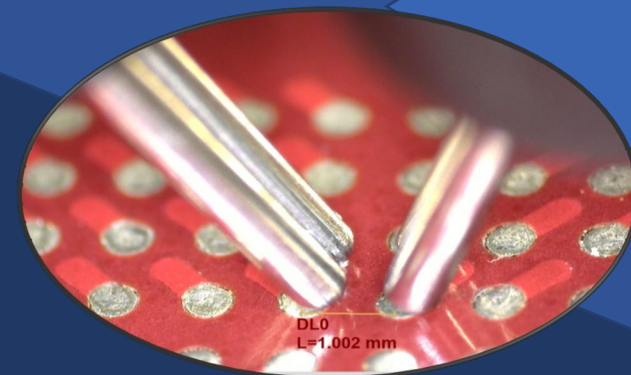
# Application: Make accurate camera distance measurements on Probe Pitch and Test Pads



- DVT-CS-3 or 1 camera system Dyno-Lite Edge Camera
- Includes software with calibration substrate
  - Calibrates line tools to measure probe tips and test pad pitches
  - Enables offset probing to probe small test pads with wider pitch probes



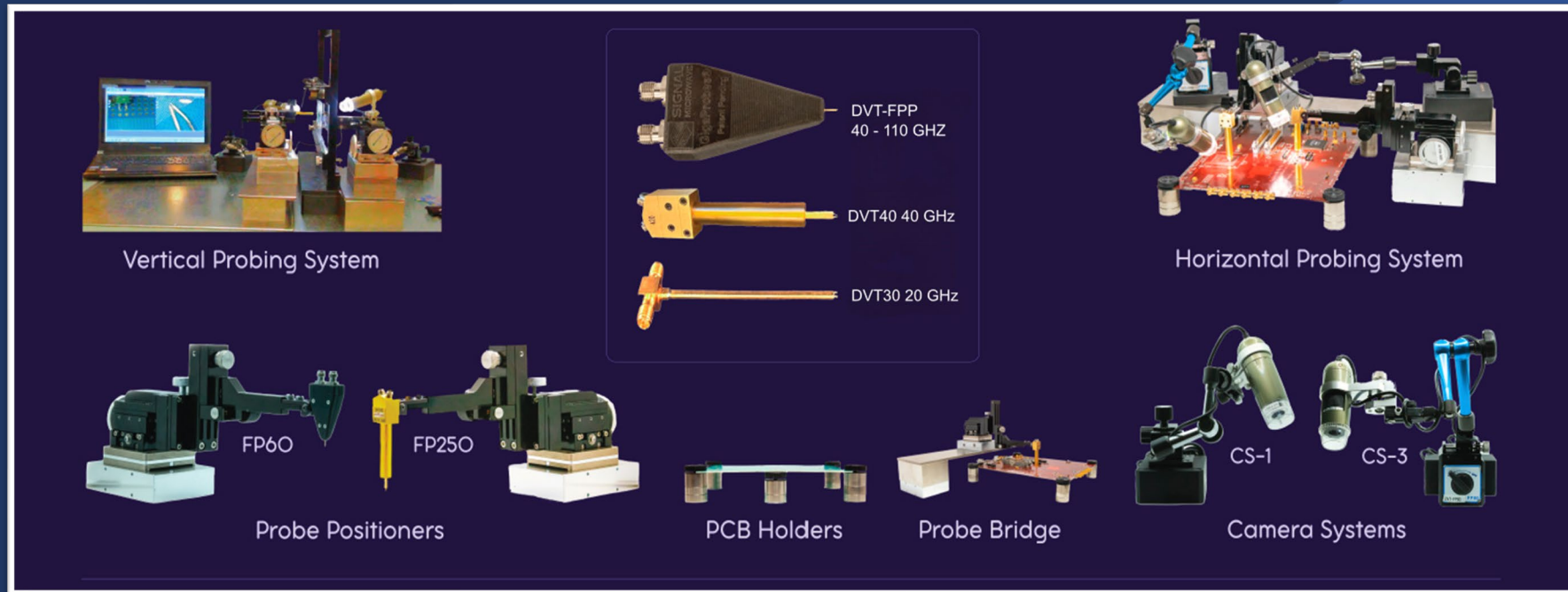
- Horizontal probing: 45° oriented test pads on horizontal fixtured PCBs
- Probe can be on left or right side
  - Probe straight down



# Probe System Components

## Create semi-custom desktop probe system

Select the appropriate probe bandwidth and system components to configure a probe system that meets your measurement and fixturing requirements.



For further information, contact:

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