

Probing Solution for Multi-Gbps Applications

The PV1 Active Probe is a signal measurement solution for high speed links carrying low-voltage, high bandwidth signals up to 5 Gbps. By providing a completely non-proprietary instrument interface, it facilitates the attachment of a wide range of instruments to any given device under test while minimizing circuit loading and maintaining signal integrity. Its miniature and light weight probe amplifier can be attached directly to optimized solder-in tips for accessing hard to reach signals.



Figure 1 Compact High Impedance Active Probe

Key Features:

- **High Bandwidth:** Capable of probing up to 5 Gbps signaling.
- **Non-Proprietary Interface:** Output cable has a male SMA connector for attachment to any instrument.
- **Optimized Voltage Range:** Linear performance is guaranteed for low-voltage applications such as MIPI.
- **Miniature and Lightweight:** Probe amplifier is housed in a compact enclosure, enabling attachment in confined spaces.

Key Benefits:

- **Maintain Signal Integrity:** Measure live multi-signal links such as those found in MIPI D-PHY, C-PHY, I3C, and other applications.
- **Deploy Widely:** Connect the probe to Introspect analyzers, or to oscilloscopes, logic analyzers, and spectrum analyzers.
- **Access Highly Integrated Buses:** Attach the lightweight probe amplifier directly to solder-in probe tips for optimized signal sniffing in hard to reach locations.

Typical Application:

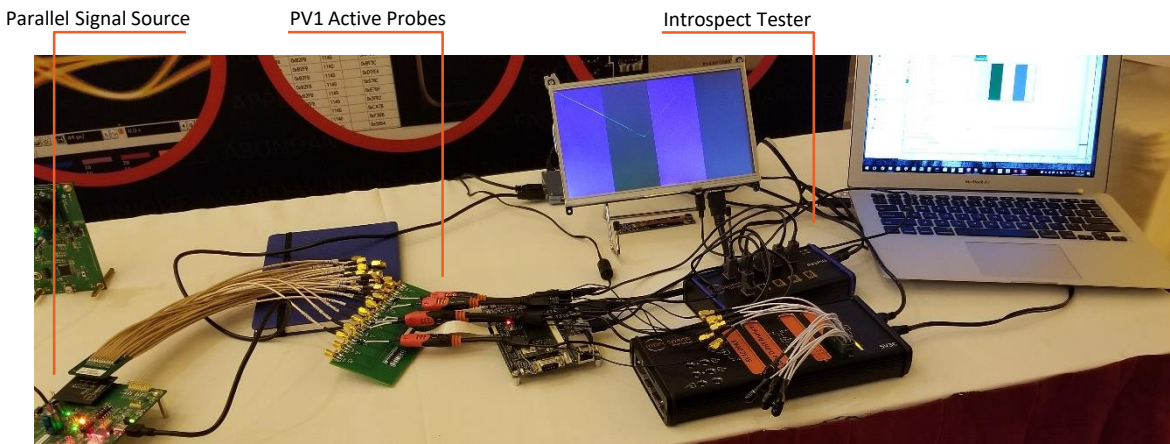


Figure 2 PV1 Sniffing a Live Multi-Channel Signal Transmission System

Key Performance Parameters

Parameter	Value	Description
Signal Gain	0.9 V/V	When observed using a 50 Ohm oscilloscope
Rise Time	62ps	
Linear Voltage Range	-0.4V to +0.6V -1.3V to +2.8V	Voltage range over which the signal gain is maintained without any clipping or significant distortion
Maximum Voltage Range	-1.5V to +1.8V -4V to 5.0V	Signal clipping will be observed when probing signal voltages outside of the linear range
Linearity	50 dB	Measured at 5 MHz and across entire voltage range. Linearity is defined as the spurious free dynamic range
Input Impedance	600 ohm 2 kohm	
Power Dissipation	0.8W	
Amplifier Receptacle	SMP(female)	
Probe Tip	Standard solder-in Tip (1V/V) or 4:1 Solder-in Tip (0.25V/V)	Solder-in tips are supplied as part of the PV1 Active Probe kit

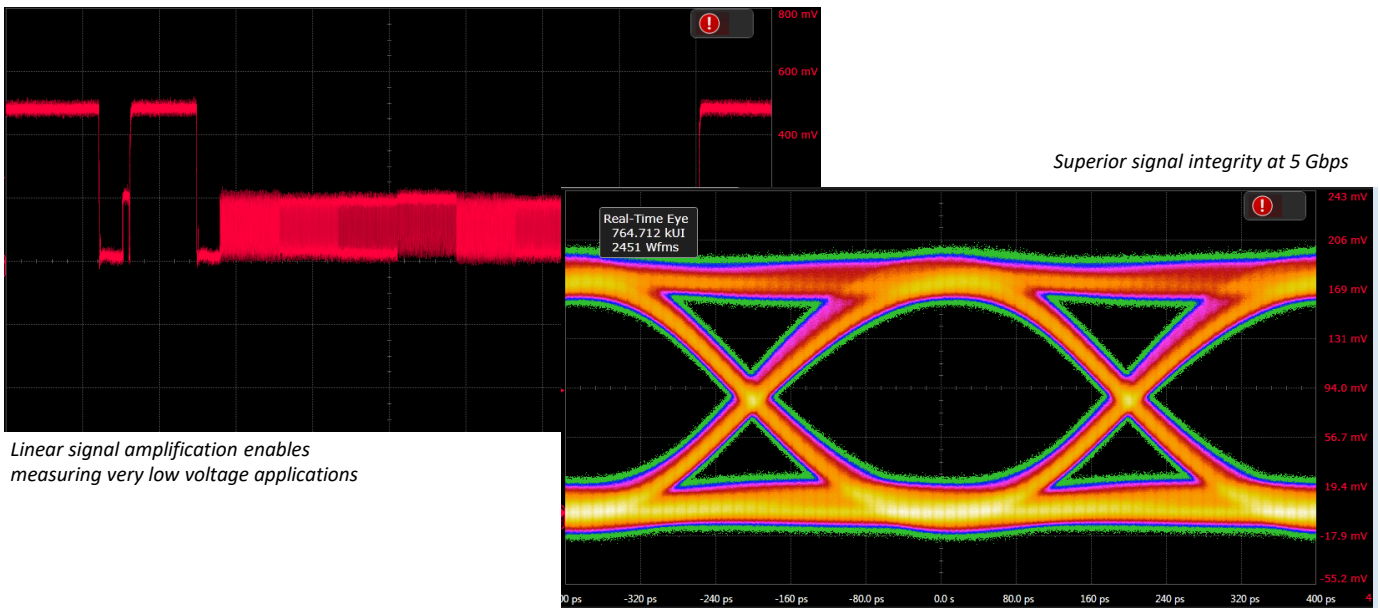


Figure 3 PV1 Active Probe Signal Waveform Illustrations