PCIe® 2.0 Mid-bus Probe

Key Features

- Supports PCI Express® 2.0
- Captures all bus traffic at data rates up to 5 GT/s
- Covers lane widths up to x16
- Supports half-size and full-size probe footprints
- Provide quick and easy probe attachment with minimal signal perturbation

The PCIe 2.0 Mid-bus Probe is shown here with a Summit T24 Analyzer, using a half-width probe head. This configuration can capture traffic at lane widths up to x4.

The PCIe 2.0 Mid-bus Probe is shown here with a Summit T28 Analyzer, using a full-width probe head. This configuration can capture traffic at lane widths up to x8. For x16 configurations, use a Summit T3-16 Analyzer (or two Summit T3-8 Analyzers) and two probe pods using full-width probe heads.

Specifications

Data Rates Supported	2.5 GT/s and 5.0 GT/s
Lane Width Supported	x1, x2, x4, x8 and x16 (x16 requires two probe kits using full-size probe heads)
Probe Footprints Supported	PCIe 2.0 Full-Size (up to x8 lane width) and PCIe 2.0 Half-Size (up to x4 lane width)
iPass Cable to Analyzer	For Summit T28, T3-8 and T3-16: 1m (39") iPass Y-Cable For Summit T24 & T34: 1m (39") x4-to-x8 straight iPass cable
PCIe 2.0 Probe Pod	151 x 90 x 28 mm (5.9" x 3.5" x 1.1")
iPass Cable to Analyzer	1.0 meter (39") (straight x4-to-x8)
Cable to Probe Head	500 mm (19.7")
Retention Module	Universal 2-piece fits either full-size or half-size footprints, supports thumbscrew retention pins

Teledyne LeCroy's PCIe 2.0 (Gen2) mid-bus probe for Summit analyzers supports quick and easy probing at data rates up to 5 GT/s and lane widths up to x16 through a simple probe footprint designed into the PCB.

Mid-bus probes are used by system designers to probe embedded bus signals (e.g., for serial data buses that run between chips on a single circuit board) or simply as a convenient means to access bus signals with a probe connector. The probe is easily attached to an anchor connector (such as Teledyne LeCroy's unique universal retention module) mounted on top of a mid-bus footprint that is laid out on the target test system board.

The Teledyne LeCroy PCIe 2.0 mid-bus probe uses either a half-size probe head that supports up to x4 and connects to a half-size mid-bus footprint designed into the PCB under test, or a full-size probe head that supports up to x8 (two probe pods and two full-size connectors are required for x16).

System Compatibility	
Summit T3-16	✓
Summit T3-8	✓
Summit T34	✓
Summit T28	✓
Summit T24	✓

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Notes on Configurations

1. For x1, x2 and x4 configurations, the recommended system is the Summit T24 Analyzer. When using the Summit T24 (or T34), the x4-to-x8 Straight iPass Cable (PE013UCA-X) must be used to connect the analyzer to the probe pod. Also, the external power supply for the pod must be used to provide power to the pod. The probe pod is connected to the PCB under test using a half-size probe head and cable assembly (PE075ACA-X).

2. For x8 configurations, the recommended system is the Summit T28 Analyzer. When using the Summit T28, the iPass Y-cable (PE010UCA-X) must be used to connect the analyzer to the probe pod. Power is supplied to the probe pod via the iPass Y-cable, so the external power supply need not be used. The probe pod is connected to the PCB under test using a full-size probe head and cable assembly (PE074ACA-X).

A full-size probe head (shown here) supports up to x8 lane width and attaches to universal 2-piece retention module via thumbscrews.

A half-size probe head (shown here) supports up to x4 lane width and attaches to universal 2-piece retention module via thumbscrews.

3. For x16 configurations, the recommended system is the Summit T3-16 Analyzer (alternatively, two Summit T3-8 Analyzers can be used when linked together). Two probe pods are required for x16. When using the Summit T3-16 (or T3-8), two iPass Y-cables (PE010UCA-X) must be used to connect the analyzer(s) to the probe pods. Power is supplied to the probe pods via the iPass Y-cables, so the external power supplies need not be used. The probe pods are connected to the PCB under test using full-size probe head and cable assemblies (PE074ACA-X).

Ordering Information

Product Description	Product Code
Gen2 x8 Mid-bus Probe Kit (for use with Summit T28, Summit T3-8 or Summit T3-16)	**PE072ACA-X**
Includes one mid-bus pod, one iPass Y-Cable, one Ref Clock cable, one full-size mid-bus probe cable, one universal retention module pair and one power supply. Two PE072ACA-X kits are required for x16 and link probe pods with Daisy Chain clock cable.	
Gen2 x4 Mid-bus Probe Kit (for use with Summit T28, Summit T3-8 or Summit T3-16)	**PE073ACA-X**
Includes one mid-bus pod, one iPass Y-Cable, one Ref Clock cable, one half-size mid-bus probe cable, one universal retention module pair and one power supply.	
Gen2 x4 Mid-bus Probe Kit (for use with Summit T24 or Summit T34)	**PE081ACA-X**
Includes one mid-bus pod, one iPass x4-to-x8 straight cable, one Ref Clock cable, one half-size mid-bus probe cable, one universal retention module pair and one power supply.	

Product Description	Product Code	Product Description	Product Code
Gen2 Mid-bus Probe Pod, including power supply	**PE082UIA-X**	x4-to-x8 Straight iPass Cable (for Summit T24 and T34)	**PE013UCA-X**
Gen2 x8 Mid-bus Probe Cable, with full-size probe head and universal retention module	**PE074ACA-X**	Universal Retention Module, 2 piece	**PE076ACA-X**
Gen2 x4 Mid-bus Probe Cable, with half-size probe head and universal retention module	**PE075ACA-X**	Reference Clock Cable, 1 meter	**PE014UCA-X**
iPass Y-Cable, 1 meter (use with T28, T3-8, T3-16)	**PE010UCA-X**	Daisy Chain Clock Cable, 1 meter	**PE009UCA-X**

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