

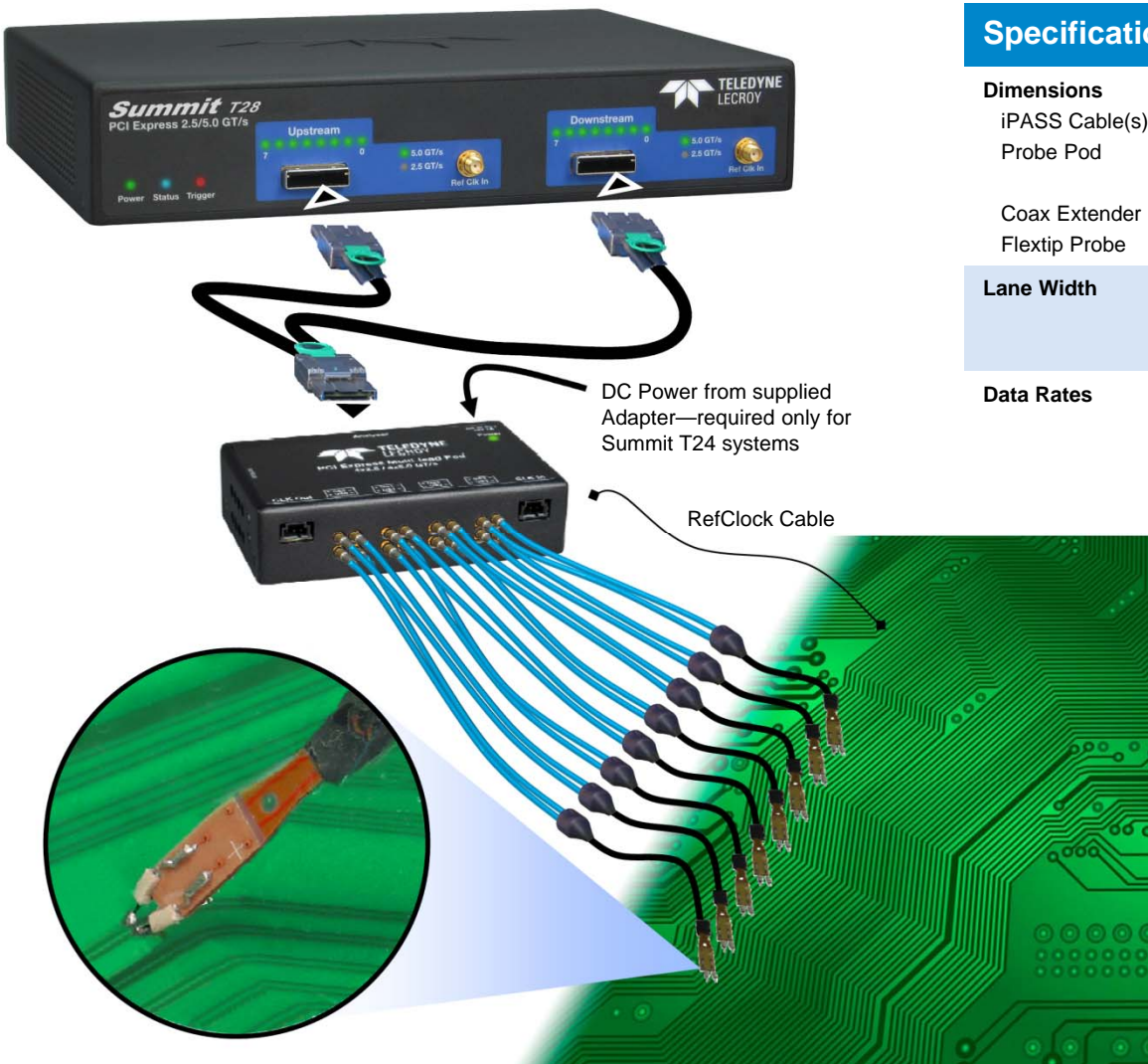
Multi-lead Probe for PCI Express® 2.0

Multi-lead Probe Allows Direct Connect to PCB Traces to Tap into PCI Express Bus Signals!

The Gen2 Teledyne LeCroy Multi-lead Probe allows developers using an embedded PCI Express bus in their PCB designs to tap into the signal traces directly and capture bus traffic for protocol analysis and debugging.

The probe allows for individual connection to each separate transmit-pair and receive-pair of each serial lane, allowing flexibility to connect to any accessible points on the surface of the PCB. Each connection uses a high-impedance electrical probe to minimize perturbation of the PCI Express bus signals, while providing reliable capture of all PCI Express traffic.

The probe will connect to a Teledyne LeCroy Summit T24, T28, T34, T3-8 or T3-16 Protocol Analyzer via a Multi-lead Probe Pod. Support is provided for PCI Express designs including 2.5 GT/s (PCIe® 1.0a) and 5.0 GT/s (PCIe 2.0), at lane widths from x1 to x16. Each pod supports up to four lanes (eight pairs); x8 support can be achieved by using two pods; and x16 support can be achieved using four pods with the Summit T3-16 Analyzer. Each individual lane connection is made by using two 30 cm (12") extender coax cables connecting into a 17 cm (6.75") flextip connector which is attached to an individual transmit-pair or receive-pair on the surface of the PCB.



Specifications

Dimensions

iPASS Cable(s)	1 m (39")
Probe Pod	117 x 30 x 68 mm (4.6" x 1.2" x 2.7")
Coax Extender	30 cm (12")
Flextip Probe	17 cm (6.75")

Lane Width

x1, x2, x4, x8 or x16 (x8 requires two pods, x16 requires four pods)
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Data Rates

2.5 GT/s (Gen1) and 5.0 GT/s (Gen2)
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System Compatibility

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

x4 configuration shown here with Summit T28 Analyzer. Expandable to x8 with two pods, or x16 with four pods and Summit T3-16 Analyzer. See next page for configuration details.

PCIe 2.0 Multi-lead Probe Kits Overview

Lane Width				Data Rate		Probe Pods (PE083UIA-X)	Coax Cables (PE036ACA-X)	Flex Tips (PE037ACA-X)	Reference Clock Cables ⁽¹⁾	Analyzer Connection Cables	Compatible Summit Systems					Order Part Number
x1	x4	x8	x16	2.5 GT/s	5.0 GT/s						T24	T28	T34	T3-8	T3-16	
✓				✓	✓	1	4	2	1 Ref Clk (PE014UCA-X) 1 Daisy Chain (PE009UCA-X)	(2)	✓	✓	✓	✓	✓	PE085ACA-X (4)
✓	✓			✓	✓	1	16	8	1 Ref Clk (PE014UCA-X) 1 Daisy Chain (PE009UCA-X)	(2)	✓	✓	✓	✓	✓	PE084ACA-X (4)
✓	✓	✓		✓	✓	2	32	16	2 Ref Clk (PE014UCA-X) 3 Daisy Chain (PE009UCA-X)	2 ea. x4-to-x8 iPass Cables (PE013UCA-X)		✓	✓(3)	✓	✓	PE083ACA-X (4)
✓	✓	✓	✓	✓	✓	4	64	32	4 Ref Clk (PE014UCA-X) 3 Daisy Chain (PE009UCA-X)	4 ea. x4-to-x8 iPass Cables (PE013UCA-X)				✓(3)	✓	PE078ACA-X (4)

- Notes:
- (1) When using multiple pods, one Reference Clock (Ref Clk) cable (PE014UCA-X) is connected to the device under test, and the other pods are connected via Daisy Chain cables (PE009UCA-X) between the pods. The Ref Clock and Daisy Chain cables are included in the kits (see parts list for each kit below).
 - (2) These kits do not include a cable to connect the analyzer to the pod. If using with a Summit T24 or T34, use a x4-to-x8 straight iPass cable (PE013UCA-X). If using a Summit T28, T3-8 or T3-16, use an iPass Y-Cable (PE010UCA-X).
 - (3) Requires two systems connected together with an expansion kit (PE093ACA-X for Summit T34, PE060ACA-X for Summit T3-8).
 - (4) Probe Kits will contain all items needed for specified function, and may contain additional items (e.g., extra clock cables) to support other functions.

Ordering Information

Product Description

Multi-lead G2x1 Probe Set, includes one (1) x4 Multi-lead Pod, four (4) coax probe cables, two (2) flex tips (standard 470 ohm), one (1) ref clock cable, one (1) daisy chain clock cable and one (1) power supply (for use with Summit T24, T28, T34, T3-8 and T3-16)

Product Code

PE085ACA-X

Multi-lead G2x4 Probe Set, includes one (1) x4 Multi-lead Pod, sixteen (16) coax probe cables, eight (8) flex tips (standard 470 ohm), one (1) ref clock cable, one (1) daisy chain clock cable and one (1) power supply (for use with Summit T24, T28, T34, T3-8 and T3-16)

PE084ACA-X

Multi-lead G2x8 Probe Kit, includes two (2) x4 Multi-lead Pods, two (2) x4-to-x8 straight iPass cables, thirty two (32) coax probe cables, sixteen (16) flex tips (standard 470 ohm), two (2) ref clock cables, three (3) daisy chain clock cables and two (2) power supplies (for use with Summit T28, T34, T3-8 and T3-16)

PE083ACA-X

Multi-lead G2x16 Probe Kit, includes four (4) x4 Multi-lead Pods, four (4) x4-to-x8 straight iPass cables, sixty-four (64) coax probe cables, thirty-two (32) flex tips (standard 470 ohm), four (4) ref clock cables, three (3) daisy chain clock cables and four (4) power supplies (for use with Summit T28, T3-8 and T3-16)

PE078ACA-X

x4-to-x8 Straight iPass Cable, 1 meter (for use with Summit T24, T28, T34, T3-8 or T3-16)

PE013UCA-X

iPass Y-Cable, 1 meter (for use with Summit T28, T3-8 or T3-16)

PE010UCA-X



1-800-909-7211
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Visit our website to find the most convenient location.