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Tektronix Logic Analyzer Probes

▶ P6810 • P6860 • P6864 • P6880 • P6960 • P6962 • P6962DBL • P6964 • P6980 • P6982



Breakthrough Probing Solutions for Real-time Digital Systems Analysis

No test and measurement solution is complete without probing and considering its impact on your system and your measurement time. With the industry's lowest capacitance, the P6800 and P6900 Series logic analyzer probes protect the integrity of your signal–critical for connecting to fast buses like DDR2 and DDR3 where low intrusion is key to the proper operation of your design. Select from single-ended and differential probes and a variety of attachment mechanisms, including the "connectorless" compression connection that eliminates the need for on-board connectors.

For applications where circuit board space is at a premium, the high-density P6900 Series with D-Max® Probing Technology offers the industry's smallest available footprint.

For debugging the signal integrity glitches common on fast buses, the P6900 Series works with the TLA7Bxx and TLA7Axx modules and their iLink™ Tool Set capability to provide iCapture™ simultaneous digital-analog acquisition. This allows you to clearly see the time-correlated digital and analog behavior of your design, without the extra capacitance and setup time of double-probing.

For differential signaling applications where signal integrity is critical, the high-fidelity P6980 and P6982 are perfect for those applications where noise performance is critical. In addition, the P6980 and P6982 can support the small voltage swings that differential signaling often requires.

The P6962DBL when used with a TLA7000 logic analyzer with the TLA7Bxx module supports digital validation and debug of DDR3 memory with data rates up to 1600 mega transfers per second.

For board designs that do not include high-density probe footprints, the P6960 with its companion flying leadset provides the flexibility required to meet many different debug needs.

▶ Features & Benefits

7.5 V_{p-p} dynamic range supports a broad range of logic families

Connectorless probing system eliminates need for on-board connectors and is ideal for differential signal applications

0.5 pF input capacitance minimizes the intrusion on signals

▶ Applications

Hardware debug and verification

Processor/bus debug and verification

Embedded software integration, debug and verification

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► Characteristics

	P6810	P6860	P6864	P6880	P6960	P6962/P6964	P6962DBL	P6980	P6982
Probe Type	Differential Data Differential Clock (General Purpose)	Single-ended Data Data Differential (17-ch per probe head)	Single-ended Data Data Differential (17-ch per probe head)	Differential Data Differential Clock (8/9-ch per probe head)	Single-ended Data Differential Clock (34-ch per probe head)	Single-ended Data Data Differential (34-ch per probe head)	Single-ended Data Differential Clock (34-ch per probe head)	Differential Data Differential Clock (17-ch per probe head)	Differential Data Differential Clock 2X (17-ch per probe head)
Number of Channels	34	34	17	34	34	34	34	34	17
Recommended Use	Recommended for most general-purpose applications where signal integrity is critical	Recommended for applications requiring good signal density and quick reliable attachment	Recommended for data rates in excess of 750 MHz on the TLA7Bxx or 450 MHz on the TLA7Axx when the LA is acquiring in quarter channel mode. When good signal density in a quick, reliable attachment is needed	Recommended for applications requiring full differential probing with good signal density and a quick reliable attachment	Recommended for applications requiring the best signal density and quick reliable attachment or for general purpose probing with flying leads	Recommended for data rates in excess of 750 MHz (TLA7Bxx) or 450 MHz (TLA7Axx) when the LA is acquiring with channel (P6962) or quarter channel (P6964) mode. When a quick connect to a small footprint is needed	Recommended for highest performance applications, such as the fastest data rate DDR memory, with the best signal density and quick, reliable attachment requirements	Recommended for applications requiring full differential probing with the best signal density and a quick reliable attachment	Recommended for applications requiring full differential with the best signal density for data rates in excess of 750 MHz (TLA7Bxx) or 450 MHz (TLA7Axx) when the LA is acquiring in half channel mode and a quick connect to a small footprint is needed
Attachment to Target System	Fits both 0.100 inch and 2 mm square pin configurations	Compression Elastomer			D-Max® probing technology compression cLGA with optional flying lead set	D-Max® probing technology compression cLGA			
Probe Loading AC/DC	< 0.7 pF/20 kΩ to Ground				0.5 pF/20 kΩ to Ground, Typical		0.7 pF/11.7 kΩ to Ground, Typical	0.5 pF/20 kΩ to Ground, Typical	
Analog Bandwidth	Module Dependent								
TLA7Bxx module	3 GHz through iCapture™ to analog out BNCs*1								
TLA7Axx module	2 GHz through iCapture™ to analog out BNCs*1								
Input Range	–2.5 V to 5.0 V						–1.25 V to +2.5 V	–2.5 V to 5.0 V	
Max Voltage (non-destruct)	±15 V						±7.5 V	±15 V	
Cable Length	1.8 m (6 ft.)								

*1 Analog bandwidth of P6960 is less with flying lead set attached.

► Ordering Information

P6810
34-channel General-purpose Probe with Differential Clock, Differential Data and Accessories.

Includes: Podlet holders, 1-channel leadset, 8-channel single-ended leadset, 8-channel differential leadset, SMT KlipChip™ grabber tips, probe labels, TLA Documentation CD, probe instruction manual.

P6860
34-channel High-density Compression Probe, with Differential Clock, Single-ended Data and Accessories.

Includes: Nut bars, elastomer holder (thin PCB's), elastomer holder (thick PCB's), probe labels, probe instruction manual.

P6864
17-channel (Optimized for quarter channel mode) High-density Compression Probe, with Differential Clock, Single-ended Data and Accessories.

Includes: Nut bars, elastomer holder (thin PCB's), elastomer holder (thick PCB's), probe labels, probe instruction manual.

P6880
34-channel High-density Compression Probe with Differential Clock, Differential Data and Accessories.

Includes: Nut bars, elastomer holder (thin PCB's), elastomer holder (thick PCB's), probe labels, probe instruction manual.

P6960
34-channel Single-ended High-density Compression Probe with D-Max® Probing Technology, with Differential Clock, Single-ended Data and Accessories.

Option 01 – 34-channel general purpose flying lead set.

Includes: Probe attachment kit for D-Max Probing Technology, probe labels, Velcro cable manager, probe adjustment tool, TLA documentation CD, probe reference card.

P6962
34-channel (optimized for half channel mode) Single-ended High-Density Compression Probe with D-Max Probing Technology with Differential Clock, Single-ended Data and accessories.

Includes: Probe attachment kit for D-Max Probing Technology, probe labels, Velcro cable manager, probe adjustment tool, TLA documentation CD, probe reference card.

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P6962DBL
34-channel (optimized for half channel mode) Single-ended High-density Compression Probe with D-Max® Probing Technology with Differential Clock, Single-ended Data and accessories.

Includes: Probe attachment kit for D-Max Probing Technology, probe labels, Velcro cable manager, probe adjustment tool, TLA documentation CD, probe reference card.

P6964
34-channel (optimized for quarter channel mode) Single-ended High-Density compression Probe with D-Max Probing Technology with Differential Clock, Single-ended Data and Accessories.

Includes: Probe attachment kit for D-Max Probing Technology, probe labels, Velcro cable manager, probe adjustment tool, TLA documentation CD, probe reference card.

P6980
34-channel Differential High-density Compression Probe with D-Max Probing Technology, with Differential Clock, Differential Data and Accessories.

Includes: Probe attachment kit for D-Max Probing Technology, probe labels, Velcro cable manager, probe adjustment tool, TLA Documentation CD, probe reference card.

P6982
17-channel (Optimized for half channel mode) Differential High-density Compression Probe with D-Max Probing Technology, with Differential Clock, Differential Data and Accessories.

Includes: Probe attachment kit for D-Max Probing Technology, probe labels, Velcro cable manager, probe adjustment tool, TLA documentation CD, probe reference card.

Language Options

Opt. L0 – English Manuals.

Opt. L99 – No Manuals.

Service Options

Opt. C3 – Calibration Service 3 Years.

Opt. C5 – Calibration Service 5 Years.

Opt. R3 – Repair Service 3 Years (includes Warranty).

Opt. R5 – Repair Service 5 Years (includes Warranty).

Opt. CA1– Provides a single calibration event or coverage for the designated calibration interval, whichever comes first.



▶ TLAHRA adapter.

Opt. R1PW – Repair Service Coverage 1year Post Warranty (not available for P6982).

Opt. R2PW – Repair Service Coverage 2 Years Post Warranty (not available for P6982).

Opt. R3DW – Repair Service Coverage 3 Years (includes Product Warranty Period). 3-year period starts at time of instrument purchase (not available for P6982).

Opt. R5DW – Repair Service Coverage 5 Years (includes Product Warranty Period). 5-year period starts at time of instrument purchase (not available for P6982).

Accessories

▶ P68xx Accessories

Description	P6810		P6860*1		P6864*1		P6880*1	
	Qty Per Probe	Part Number	Qty Per Probe	Part Number	Qty Per Probe	Part Number	Qty Per Probe	Part Number
Podlet Holders, Bag of 4	1	352-1097-00	–	–	–	–	–	–
1-ch leadset, Single-ended and Differential	2	196-3471-01	–	–	–	–	–	–
8-ch leadset, Single-ended	4	196-3470-01	–	–	–	–	–	–
8-ch leadset, Differential	4	196-3472-01	–	–	–	–	–	–
SMT KlipChip grabber tips, Bag of 20	2	SMG50	–	–	–	–	–	–
High resistance adapter, 18 channel, for use with general purpose probes	1	TLAHRA	–	–	–	–	–	–
Nut bar (used on <0.093 in. thick PCB), Bag of 2	–	–	1	020-2453-00	1	020-2453-00	2	020-2453-00
Elastomer Holder Assembly, Thin (used on <0.093 in. thick PCB), Bag of 2	–	–	2	020-2451-00	1	020-2451-00	4	020-2451-00
Elastomer Holder Assembly, Thick (used on >0.093 in. thick PCB), Bag of 2	–	–	2	020-2452-00	1	020-2452-00	4	020-2452-00
Sheet of Probe Labels	1	335-0345-00	1	335-0346-00	1	335-1017-00	1	335-0697-00
(Optional) Mictor-on-PCB to P6860 Probe Adapter	–	–	1	020-2457-00	–	–	–	–
(Optional) Compression-on-PCB to Mictor Adapter, 17 channel	–	–	1	020-2455-00	–	–	–	–
(Optional) Compression-on-PCB to Mictor Adapter, 34 channel	–	–	1	020-2456-00	–	–	–	–

*1Recommend PEM KFS-256 or equivalent for >0.093 in. thick PCB.

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► P69xx Accessories

Description	P6960		P6962 / P6964		P6962DBL	
	Qty Per Probe	Part Number	Qty Per Probe	Part Number	Qty Per Probe	Part Number
Sheet of Probe Labels	1	335-1208-00	1	P6962: 335-1772-00 P6964: 335-1315-00	1	335-1956-00
Probe Attachment Kit D-Max® Probing Technology	1	020-2908-00	1	020-2908-00	1	020-2908-00
Probe Adjustment Tool	1	003-1890-00	1	003-1890-00	1	
Velcro Cable Manager (Bag of 2)	1	346-0300-00	1	346-0300-00	1	
34-ch leadset, Single-ended	1	196-3494-00	–	–	–	–

Description	P6980		P6982	
	Qty Per Probe	Part Number	Qty Per Probe	Part Number
Sheet of Probe Labels	1	335-1209-00	1	335-1313-00
Probe Attachment Kit D-Max® Probing Technology	2	020-2908-00	1	020-2908-00
Probe Adjustment Tool	1	003-1890-00	1	003-1890-00
Velcro Cable Manager (Bag of 2)	1	346-0300-00	1	346-0300-00
34-ch leadset, Single-ended	–	–	–	–

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Updated 12 November 2007

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03/08 HB/WOW 52W-17702-4

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