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# Tektronix Logic Analyzer Probes

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



## ▶ 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

### 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 DDRII or Hypertransport 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 such as RapidIO and SPI4.2, the P6900 Series works with the TLA7Axx module and its 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.

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.

Tektronix

Enabling Innovation

## ► Characteristics

| | P6810 | P6860 | P6864 | P6880 | P6960 | P6962/P6964 | P6980 | P6982 |
|---|---|---|---|---|---|---|---|---|
| Probe Type | Differential Data Differential Clock (general purpose) | Single-ended Data Differential Clock (17-ch per probe head) | Single-ended Data Differential Clock 4X Demux (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) | Differential Data Differential Clock (34-ch per probe head) | Differential Data Differential Clock (17-ch per probe head) | Differential Data Differential Clock 2X Demux (17-ch in one probe head) |
| Number of Channels | 34 | 34 | 17 | 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 high data rate (>450 MHz) applications that require 4X demultiplexing and good signal density in a quick, reliable attachment | 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 applications requiring the best signal density with data rates in excess of 450 MHz. The LA is acquiring with either 2X demux (P6962) or 4X demux (P6964) requiring quick connect to a small footprint | 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 with data rates in excess of 450 MHz and the LA is acquiring with 2X demux requiring quick connect to a small footprint |
| Attachment to Target System | Fits both 0.100 in. 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 | | |
| Analog Bandwidth | 2 GHz through iCapture™ to analog out BNCs | | | | 2 GHz through iCapture to analog out BNCs (Less with flying lead set attached) | 2 GHz through iCapture to analog out BNCs | | |
| Input Range | –2.5 V to 5.0 V | | | | | | | |
| Max Voltage (non-destruct) | ±15 V | | | | | | | |
| Cable Length | 1.8 m (6 ft.) | | | | | | | |

## ► 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 PCBs), elastomer holder (thick PCBs), probe labels, probe instruction manual.

P6864

17-channel (optimized for 4X demux) High-density Compression Probe with Differential Clock, Single-ended Data and accessories.

Includes: Nut bars, elastomer holder (thin PCBs), elastomer holder (thick PCBs), 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 PCBs), elastomer holder (thick PCBs), 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.

Opt. 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 2X demux) 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 4X demux) 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 2X demux), 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.

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 | 335-0697-0 |
| (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 | – | – | – | – |

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

## ▶ P69xx Accessories

| Description | P6960 | | P6962/P6964 | | P6980 | | P6982 | |
|---|---|---|---|---|---|---|---|---|
| | Qty Per Probe | Part Number | 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 | 335-1209-00 | 1 | 335-1313-00 |
| Probe Attachment Kit for D-Max™ Probing Technology | 1 | 020-2539-00 | 1 | 020-2539-00 | 2 | 020-2539-00 | 1 | 020-2539-00 |
| Probe Adjustment Tool | 1 | 003-1890-00 | 1 | 003-1890-00 | 1 | 003-1890-00 | 1 | 003-1890-00 |
| Velcro Cable Manager (Bag of 2) | 1 | 346-0300-00 | 1 | 346-0300-00 | 1 | 346-0300-00 | 1 | 346-0300-00 |
| 34-ch Leadset, Single-ended | 1 | 196-3494-00 | – | – | – | – | – | – |

# Tektronix Logic Analyzer Probes

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► TLAHRA Adapter.

Service Options

Opt. C3 – Calibration Service 3 years.

Opt. C5 – Calibration Service 5 years.

Opt. R3 – Repair Service 3 years (including Warranty).

Opt. R5 – Repair Service 5 years (including Warranty).

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

Opt. R1PW – Repair Service Coverage 1 year 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 (including Product Warranty Period). 3-year period starts at time of instrument purchase (not available for P6982).

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


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