Digital Phosphor Oscilloscopes

TDS7000/B Series

Superior Measurement Fidelity • Unrivaled Analysis • Uncompromised Usability

The TDS7000/B Series' unique combination of superior measurement fidelity, unrivaled analysis, and uncompromised usability makes it the ultimate test machine to simplify and speed the design of high-speed, complex systems. This family offers the industry's best solution to the challenging signal integrity issues faced by designers verifying, characterizing and debugging sophisticated electronic designs.

They deliver up to 7.5 GHz (typical) true analog bandwidth, down to 43 ps rise time (20% – 80%) and 20 GS/s maximum real-time sample rate to capture critical events with fine detail. Exclusive DPX® acquisition technology enables waveform capture rates up to 400,000 wfms/s to quickly find rare glitches in seconds or minutes, instead of hours or days. Innovative software solutions deliver domain expertise for advanced analysis and compliance testing, while the OpenChoice™ architecture enables users to integrate their expertise through the ability to easily write custom programs or utilize popular commercial software. The intuitive graphical user interface delivers sophisticated capability to advanced users without intimidating occasional users.

Features & Benefits

Up to 7.5 GHz True Analog Bandwidth and Down to 43 ps Rise Time (20% – 80%)

> 400,000 wfms/s Waveform Capture Rate, Powered by Exclusive DPX® Acquisition Technology

20 GS/s Maximum Real-time Sample Rate

Exceptional Delta-time Accuracy for High-confidence in Critical Timing Measurements

Powerful Triggering Features for Fast Detection of Relevant Faults

Communications Mask Testing Up to 4.25 Gb/s Rates

Clock Recovery from Serial Data Streams up to 3.125 Gb/s

Up to 64 MB Record Length with MultiView Zoom™ for Quick Navigation of Long Records

TekConnect® Interface for High Fidelity Connection

Classic Direct Controls, Touch-sensitive Display, or Mouse Navigation

OpenChoice™ with Windows 2000 Delivers Built-in Networking and Analysis

XGA 1024x768 Display

Applications

Signal Integrity, Jitter and Timing Analysis

Verification, Debug and Characterization of Sophisticated Designs

Design Development and Compliance Testing of Serial Data Streams Up to 4.25 Gb/s Rates

Debug of Telecom, Datacom and Storage Area Network Equipment Designs and High-speed Backplanes

Spectral Analysis

Investigation of Transient Phenomena

Tektronix
Enabling Innovation

Characteristics

Vertical System

	TDS7054	TDS7104	TDS7154B	TDS7254B	TDS7404B	TDS7704B
Input Channels	4	4	4	4	4	4
Hardware Analog Bandwidth (–3 dB)	500 MHz	1 GHz	1.5 GHz	2.5 GHz	4 GHz	7.5 GHz (typical) 7 GHz guaranteed
Rise Time, 10% to 90% (Typical)	800 ps	400 ps	200 ps	130 ps	100 ps	62 ps
Rise Time, 20% to 80% (Typical)			135 ps	83 ps	72 ps	43 ps
DC Gain Accuracy	1%		±(2% + (2% x offset))			±2.5% + (2% x offset)
Hardware Bandwidth Limits	250 MHz or 20 MHz		Requires TCA-1 MEG			
Input Coupling	AC, DC, GND		DC, GND			
Input Impedance	1 MΩ ±0.5% or 50 Ω ±1%		50 Ω ±2.5%			
Input Sensitivity, 1 MΩ	1 mV/div to 10 V/div		—			
Input Sensitivity, 50 Ω	1 mV/div to 1 V/div		2 mV/div to 1 V/div			
Vertical Resolution	8-Bit (>11-Bit with averaging)		8-Bit (>11-Bit with averaging)			
Max Input Voltage, 1 MΩ	±150 V CAT I Derate at 20 dB/decade to 9 V_{RMS} above 200 kHz		—			
Max Input Voltage, 50 Ω	5 V_{RMS}, with peaks less than ±30 Volts		<1 V_{RMS} for <100 mV/div, <5 V_{RMS} for ≥100 mV/div settings, Also determined by TekConnect® accessory			
Offset Range	1 mV/div to 100 mV/div: ±1 V 101 mV/div to 1 V/div: ±10 V 1.01 V/div to 10 V/div: ±100 V		2 mV to 50 mV/div: ±0.5 V 50.5 mV to 99.5 mV: ±0.25 V 100 mV to 500 mV: ±5 V 505 mV to 1 V/div: ±2.5 V			
Channel-to-Channel Isolation Any Two Channels at Equal Vertical Scale Settings	≥100:1 at 100 MHz and ≥30:1 at the Rated Bandwidth		≥80:1 at 1.5 GHz and ≥15:1 at rated bandwidth			

Note: Typical system bandwidth of TDS7404B with P7240: 4 GHz.

Note: Typical system bandwidth of TDS7404B with P7330: 3.5 GHz.

Note: Typical system bandwidth of TDS7704B with P7260: 6 GHz.

Note: Typical system bandwidth of TDS7704B with P7350: 5 GHz.

Time Base System

	TDS7054/TDS7104	TDS7154B/TDS7254B/TDS7404B/TDS7704B
Time Base Range	200 ps/div to 40 s/div	50 ps to 10 s/div
Time Base Delay Time Range	16 ns to 250 s	5 ns to 250 s
Channel-to-Channel Deskew Range	±25 ns	±75 ns
Δ Time Measurement Accuracy	±((0.06/sample rate) + (15 ppm * reading)) RMS	±((0.06/sample rate) + (2.5 ppm * reading)) RMS
Trigger Jitter (RMS)	8 ps_{RMS} (typical)	2 ps_{RMS} RAS (7254B/7154B) 1.5 ps_{RMS} RAS (7404B) 1.2 ps_{RMS} RAS (typical) (7704B)
Long Term Sample Rate and Delay Time Accuracy	±15 ppm over ≥1 ms interval	2.5 ppm over any ≥100 ms interval

Acquisition System

	TDS7054	TDS7104	TDS7154B/TDS7254B/TDS7404B/TDS7704B
Real-time Sample Rates			
1 channel (max)	5 GS/s	10 GS/s	20 GS/s
2 channels (max)	5 GS/s	5 GS/s	10 GS/s
3 to 4 channels (max)	2.5 GS/s	2.5 GS/s	5 GS/s
Equivalent Time Sample Rate (max)	250 GS/s	250 GS/s	1 TS/s
Maximum Record Length per Channel with Standard Memory	2 M (1-CH.), 1 M (2-CH.), 500 k (4-CH.)		4 M (1-CH.), 2 M (2-CH.), 1 M (4-CH.)
With Memory Opt. 2M	8 M (1-CH.), 4 M (2-CH.), 2 M (4-CH.)		
With Memory Opt. 3M	16 M (1-CH.), 8 M (2-CH.), 4 M (4-CH.)		
With Memory Opt. 4M			32 M (1-CH.), 16 M (2-CH.), 8 M (4-CH.)
With Memory Opt. 5M			64 M (1-CH.), 32 M (2-CH.), 16 M (4-CH.)

Maximum Duration at Highest Real-time Resolution (1-CH)

	TDS7054	TDS7104	TDS7154B/TDS7254B/TDS7404B/TDS7704B
Time Resolution (Single-shot)	200 ps (5 GS/s)	100 ps (10 GS/s)	50 ps (20 GS/s)
Max Duration with Standard Memory	400 µs	200 µs	200 µs
Max Duration with Opt. 2M	1.6 ms	800 µs	400 µs
Max Duration with Opt. 3M	3.2 ms	1.6 ms	800 µs
Max Duration with Opt. 4M			1.6 ms
Max Duration with Opt. 5M			3.2 ms

Acquisition Modes

	TDS7054/TDS7104	TDS7154B/TDS7254B/TDS7404B/TDS7704B
FastAcq Acquisition	Powered by DPX® acquisition technology, FastAcq optimizes the instrument for analysis of dynamic signals and capture of infrequent events	
Maximum FastAcq Waveform Capture Rate	>200,000 wfms/sec	>400,000 wfms/sec
Waveform Database	Accumulate Waveform Database providing three-dimensional array of amplitude, time and counts	
Sample	Acquire sampled values	
Peak Detect	Captures narrow glitches at all real-time sampling rates	
Minimum Peak Detect Pulse Width	≤1 ns	400 ps
Averaging	From 2 to 10,000 waveforms included in average	
Envelope	From 2 to $2x10^9$ waveforms included in min-max envelope	
Hi-res	Real-time boxcar averaging reduces random noise and increases resolution	
FastFrame™ Acquisition	Acquisition memory divided into segments; maximum trigger rate >265,000 waveforms per second. Time of arrival recorded with each event	

Trigger System

	TDS7054	TDS7104	TDS7154B/TDS7254B/TDS7404B/TDS7704B
Sensitivity			
Internal DC Coupled	0.35 div DC to 50 MHz increasing to 1 div at 500 MHz	0.35 div DC to 50 MHz increasing to 1 div at 1 GHz	0.5 div DC to 50 MHz increasing to 1.5 div at 3 GHz TDS7404B/TDS7704B: 2.7 div at 4 GHz (typical)
External (Auxiliary Input)	400 mV from DC to 50 MHz increasing to 750 mV at 100 MHz	250 mV from DC to 50 MHz increasing to 500 mV at 100 MHz	100 mV from DC to 50 MHz increasing to 200 mV at 2.5 GHz
Main Trigger Modes	Auto, Normal and Single		
Trigger Sequences	Main, Delayed by Time, Delayed by Events. All sequences can include separate horizontal delay after the trigger event to position the acquisition window in time		
Trigger Characteristics			
Standard Trigger Types	Edge, Glitch, Runt, Width, Transition Time, Timeout, Pattern, State, Setup/Hold		Edge, Glitch, Runt, Width, Transition Time, Timeout, Pattern, State, Setup/Hold, Window – all except Edge, Pattern and State can be logic qualified
Communications-related Triggers (requires Option SM)	Support for AMI, HDB3, BnZS, CMI, MLT3 and NRZ encoded communications signals. Select among isolated positive or negative one, zero pulse form or eye patterns as applicable to standard		
Serial Pattern Trigger (requires Option ST)			64-Bit serial word recognizer, bits specified in binary (high, low, don't care) or hex format. Trigger on NRZ-encoded data up to 1.25 GBaud
Trigger Level Range			
Internal	±12 divisions from center of screen		
External (Auxiliary In)	±8 V		±5 V
Line	fixed at 0 V		
Trigger Coupling	DC, AC (attenuates <60 Hz), HF Rej (attenuates >30 kHz), LF Rej (attenuates <80 kHz), Noise Reject (reduces sensitivity)		
Trigger Holdoff Range	250 ns minimum to 12 s maximum		

Clock Recovery System

	TDS7154B/TDS7254B/TDS7404B/TDS7704B
Channel Type	Electrical, Multimode Optical, SIngle Mode Optical
Clock Recovery Phase Locked Loop Bandwidth	Fbaud/1600 typical
Tracking/Acquisition Range	±2% of requested baud
Clock Recovery Jitter (Typical)	0.25% period +5 ps_{RMS} for PRBS data pattern or 4ps_{RMS} for repeating "011" data patterns
Input Sensitivity for Clock Recovery	1 division pk-pk displayed signal
Input Data Rates	1.5 Mbaud to 3.125 Gbaud

Trigger Modes

Edge – Positive and/or negative slope on any channel or front panel auxiliary input. Coupling includes DC, AC, noise reject, HF reject and LF reject.

Glitch – Trigger on or reject glitches of positive, negative or either polarity. Minimum glitch width is 1.0 ns with 200 ps resolution (TDS7104/TDS7054). Minimum glitch width is 170 ps with rearm time of 250 ps (B models).

Width – Trigger on width of positive or negative pulse (down to 170 ps on B models) either within or out of selectable time limits – 1 ns (TDS7104/TDS7054) or 340 ps (B models) to 1 s.

Runt – Trigger on a pulse that crosses one threshold but fails to cross a second threshold before crossing the first again. Optional time qualification.

Timeout – Trigger on an event which remains high, low or either, for a specified time period, selectable from 1 ns (TDS7104/TDS7054) or 340 ps (B models) to 1 s with 200 ps (TDS7104/TDS7054) or 100 ps (B models).

Transition – Trigger on pulse edge rates that are faster or slower than specified. Slope may be positive, negative or either.

Setup/Hold – Trigger on violations of both setup time and hold time between clock and data present on any two input channels.

Pattern – Trigger when pattern goes false or stays true for specified period of time. Pattern (AND, OR, NAND, NOR) specified for four input channels defined as HIGH, LOW or Don't Care.

State – Any logical pattern of channels (1, 2, 3) clocked by edge on channel 4. Trigger on rising or falling clock edge.

Window – Trigger on an event that enters or exits a window defined by two user-adjustable thresholds. Event can be time or logic qualified (B models only).

Logic Qualified Trigger Applicable to Glitch, Width, Runt, Timeout, Transition, Setup/Hold, Window Triggers – Trigger on the specified event only if the logic state defined with the remaining unused channels occurs (B models only).

Trigger Delay by Time – 16 ns (5 ns for B models) to 250 seconds.

Trigger Delay by Events – 1 to 10,000,000 Events.

Waveform Measurements

Amplitude – Amplitude, High, Low, Maximum, Minimum, Peak to Peak, Mean, Cycle Mean, RMS, Cycle RMS, Positive Overshoot, Negative Overshoot.

Time – Rise time, Fall time, Positive Width, Negative Width, Positive Duty Cycle, Negative Duty Cycle, Period, Frequency, Delay.

Combination – Area, Cycle Area, Phase, Burst Width.

Histogram-related – Waveform count, Hits in box, Peak hits, Median, Maximum, Minimum, Peak to Peak, Mean (μ), Standard Deviation (σ), μ+1σ, μ+2σ, μ+3σ.

Eye Pattern-related (B models only) – Extinction Ratio (absolute, %, and dB), Eye Height, Eye Top, Eye Base, Eye Width, Crossing %, Jitter (peak-peak, RMS and 6σ), Noise (peak-peak and RMS), S/N ratio, Cycle Distortion, Q-factor.

Waveform Processing/Math

Algebraic Expressions – Define extensive algebraic expressions including waveforms, scalars and results of parametric measurements e.g., (Integral (CH.1-Mean(CH.1))*1.414).

Arithmetic – Add, subtract, multiply, divide waveforms and scalars.

Relational – Boolean result of comparison >, <, >=, <=, ==, !=.

Calculus – Integrate, differentiate.

Frequency Domain Functions – Spectral magnitude and phase, real and imaginary spectra.

Vertical Units – Magnitude: Linear, dB, dBm; Phase: Degrees, radians.

Window Functions – Rectangular, Hamming, Hanning, Kaiser-Bessel, Blackman-Harris, Gaussian, Flattop2, Tek Exponential.

Waveform Definition – As arbitrary math expression.

Display Characteristics

Display Type – Liquid crystal active-matrix color display.

Display Size – Diagonal: 264 mm (10.4 in.).

Display Resolution –
TDS7104/TDS7054: 640 horizontal x 480 vertical pixels.
TDS7154B/TDS7254B/TDS7404B/TDS7704B: 1024 horizontal x 768 vertical pixels.

Waveform Styles – Vectors, Dots, Variable Persistence, Infinite Persistence.

Computer System and Peripherals

CPU –
TDS7104/TDS7054: Intel Celeron processor, 850 MHz.
TDS7154B/TDS7254B/TDS7404B/TDS7704B: Intel Pentium 4 processor, 2.0 GHz

PC System Memory – 512 MB.

Hard Disk Drive – 40 GB removable hard disk drive: rear-panel or (B models only) front-panel, (Option FHD).

Floppy Disk Drive – 1.44 MB 3.5 in. floppy disk drive: front-panel, or (B models only) rear-panel (Option FHD).

CD-R/W Drive – Rear-panel CD-R/W drive with CD creation software application.

Mouse – Thumb wheel model included, USB interface.

Keyboard – Order 118-9402-00 for small keyboard (fits in pouch); PS-2 interface. Order 119-6633-00 for full-size keyboard; USB interface and hub.

Input/Output Ports

Probe Compensator Output – Front-panel BNC connector, requires Probe Cal-Deskew Fixture (included) for probe attachment. Amplitude 200 mV (TDS7104/TDS7054) or 500 mV (B models) ±20% into a 50 Ω load, frequency 1 kHz ±5%.

Analog Signal Output Amplitude – Front-panel BNC connector, provides a buffered version of the signal that is attached to the Ch 3 input when Ch 3 is selected as trigger source. 20 mV/div ±20% into a 1.8 MΩ load, 10 mV/div ±20% into a 50 Ω load.

Analog Signal Output Bandwidth, Typical – TDS7054, TDS7104: 100 MHz into a 50 Ω load. TDS7154B/TDS7254B/TDS7404B/TDS7704B: 1 GHz into a 50 Ω load.

External Time Base Reference In – Rear-panel BNC connector, time base system can phase-lock to external 10 MHz reference.

Time Base Reference Out – Rear-panel BNC connector, accepts TTL-compatible output of internal 10 MHz reference oscillator.

Auxiliary Output Levels – Front-panel BNC connector, provides a TTL-compatible, polarity switchable pulse when the oscilloscope triggers.

Parallel Port – IEEE 1284, DB-25 connector.

Audio Ports – Miniature phone jacks for stereo microphone input and stereo line output.

USB Port – Allows connection or disconnection of USB keyboard and/or mouse while oscilloscope power is on. B models have 2 USB ports.

Keyboard Port – PS-2 compatible.

Mouse Port – PS-2 compatible.

LAN Port – RJ-45 connector, supports 10Base-T and 100Base-T.

Serial Port – DB-9 COM1 port.

Windows Video Port – 15 pin D-sub connector on the rear panel; connect a second monitor to use dual-monitor display mode. Video is DDC2B compliant.

GPIB Port – IEEE 488.2 standard.

Scope Video Port – 15 pin D-sub connector on the rear panel, video is IBM XGA compatible on B models. Connect to show the oscilloscope display, including live waveforms on an external monitor or projector. The primary Windows desktop can also be displayed on an external monitor using this port.

Power Source

Power – 100 to 240 V_{RMS}, ±10%, 50/60 Hz; 115 V_{RMS} ±10%, 400 Hz; CAT II, <300 W (450 VA).

Physical Characteristics

BENCHTOP CONFIGURATION

Dimensions	**mm**	**in.**
Height	277	10.9
Width	455	17.9
Depth	425	16.75
Weight	**kg**	**lbs.**
Net	17.6	41.0
Shipping	37	85

RACKMOUNT CONFIGURATION

Dimensions	**mm**	**in.**
Height	277	10.5
Width	502	19.75
Depth	486	19.125
Weight	**kg**	**lbs.**
Net	17.6	41.0
Kit	5.6	12.25

MECHANICAL

Cooling – Required Clearance	**mm**	**in.**
Top	0 or >76	0 or >3
Bottom	0	0
Left side	76	3
Right side	76	3
Front	0	0
Rear	0	0

Environmental

Temperature –
Operating: 0 ºC (TDS7104/TDS7054) or +5 ºC (B models) to +50 ºC, excluding floppy disk and CD-R/W drives; +10 ºC to +45 ºC, including floppy disk and CD-ROM drives.
Nonoperating: –22 ºC to +60 ºC.

Humidity –
Operating: 20% to 90% relative humidity with a maximum wet bulb temperature of +29 ºC at or below +50 ºC, noncondensing. Upper limit derated to 25% relative humidity at +50 ºC.
Nonoperating: With no diskette in floppy disk drive. 20% to 90% relative humidity with a maximum wet bulb temperature of +29 ºC at or below +60 ºC, noncondensing. Upper limit derated to 20% relative humidity at +60 ºC.

Altitude –
Operating: 10,000 ft. (3,048 m).
Nonoperating: 40,000 ft. (12,190 m).

Random Vibration –
Operating: 0.000125 G2/Hz from 5 to 350 Hz, –3 dB/octave from 350 to 500 Hz, 0.0000876 G2/Hz at 500 Hz. Overall level of 0.24 G_{RMS}.
Nonoperating: 0.0175 G2/Hz from 5 to 100 Hz, –3 dB/octave from 100 to 200 Hz, 0.00875 G2/Hz from 200 to 350 Hz, –3 dB/octave from 350 to 500 Hz, 0.006132 G2/Hz at 500 Hz. Overall level of 2.28 G_{RMS}.

Electromagnetic Compatibility – 89/336/EEC.

Safety – UL 3111-1, CSA1010.1, EN61010-1, IEC 61010-1.

Ordering Information

TDS7054

500 MHz Digital Phosphor Oscilloscope.

TDS7104

1 GHz Digital Phosphor Oscilloscope.

TDS7104 and TDS7054 Include: (4) P6139A 500 MHz, 10x Passive Probes, Accessory pouch, front cover, mouse, probe calibration and deskew fixture (067-0405-xx), quick reference kit (020-2404-xx), user manual (071-1035-xx), TDS7000 Series product software CD-ROM, TDS7000 Series operating system restoration CD-ROM, TDS7000 Series optional applications software CD-ROM, performance verification procedure PDF file, GPIB programmer's reference (on product software CD-ROM), calibration certificate documenting NIST traceability, 2 540-1 compliance and ISO9000, power cord, one year warranty.

TDS7154B

1.5 GHz Digital Phosphor Oscilloscope.

TDS7254B

2.5 GHz Digital Phosphor Oscilloscope.

TDS7404B

4 GHz Digital Phosphor Oscilloscope.

TDS7704B

7 GHz Digital Phosphor Oscilloscope.

TDS7154B, TDS7254B, TDS7404B, and TDS7704B Include: Accessory pouch, front cover, mouse, user manual (071-1226-xx), quick reference kit (020-2519-xx), TDS7000B Series product software CD-ROM 063-3632-00 (TDS7154/7254/7404B) 063-3633-00 (TDS7704B), TDS7000B Series operating system restoration CD-ROM, TDS7000B Series optional applications software CD-ROM, performance verification procedure PDF file, GPIB programmer's reference (on product software CD-ROM), calibration certificate documenting NIST traceability, 2 540-1 compliance and ISO9000, power cord, one year warranty.

TDS7154B and TDS7254B Only, Also Includes: (4) TekConnect® to BNC adapters (TCA-BNC), (2) TekConnect high-impedance buffer amplifiers (TCA-1MEG), and deskew fixture (067-0405-xx).

TDS7404B/TDS7704B Also Includes: (4) TekConnect to SMA adapters (TCA-SMA)

TDS7404B Also Includes: Deskew fixture (067-0405-xx)

TDS7704B Also Includes: Deskew fixture (067-0484-xx)

Please specify disk drive and power cord option when ordering.

Instrument Options

Power Plug Options

Opt. A0 – North America power.

Opt. A1 – Universal EURO power.

Opt. A2 – United Kingdom power.

Opt. A3 – Australia power.

Opt. A5 – Switzerland power.

Opt. A6 – Japan power.

Opt. A99 – No power cord or AC adapter.

Opt. A10 – China power.

Mounting Options

1K – K4000 Scope Cart.

1R – Rackmount Kit.

Disk Drive Options (for TDS7154B, TDS7254B, TDS7404B, and TDS7704B only)

Opt. FHD – Front-panel 40 GB removable hard disk drive, replaces floppy disk drive that goes on the rear-panel.

Service Options

Opt. C3 – Calibration Service 3 Years.

Opt. C5 – Calibration Service 5 Years.

Opt. D1 – Calibration Data Report.

Opt. D3 – Calibration Data Report 3 Years (with Option C3).

Opt. D5 – Calibration Data Report 5 Years (with Option C5).

Opt. R3 – Repair Service 3 Years.

Opt. R5 – Repair Service 5 Years.

Recommended Accessories

Probes

P7350 – 5 GHz differential probe recommended for TDS7404B/TSD7704B.

P7350SMA – 5 GHz SMA Input differential probe.

P7260 – 6 GHz active probe recommended for TDS7404B/TDS7704B.

P6158 – 3 GHz, 20x Low C probe.

P6247 – 1.0 GHz differential probe.

P6139A – 500 MHz, 10x passive probe.

P6245 – 1.5 GHz active probe.

P6248 – 1.7 GHz differential probe.

P7240 – 4 GHz active probe.

P7330 – 3.5 GHz differential probe.

Adapters

TCA-1MEG – TekConnect® high-impedance buffer amplifier.

TCA-SMA – TekConnect-to-SMA Adapter.

TCA-N – TekConnect-to-N Adapter.

TCA-BNC – TekConnect-to-BNC Adapter.

TCA75 – 4 GHz precision TekConnect 75 Ω to 50 Ω adapter with 75 Ω BNC input connector.

AFTDS – Telecom differential electrical interface adapter (for line rates <8 MB/s; requires TCA-BNC adapter for TDS7404B).

Cables

GPIB Cable (1 m) – Order 012-0991-01.

GPIB Cable (2 m) – Order 012-0991-00.

RS-232 Cable – Order 012-1298-00.

Centronics Cable – Order 012-1214-00.

Test Fixtures

TDSUSBF – TDSUSB test fixture for use with Opt. USB.

Software

WSTRO – WaveStar™ waveform capture and documentation software.

Miscellaneous

Keyboard (USB interface) – Order 119-6633-00.

Service Manual – TDS7054/TDS7104: Order 071-0711-xx.

TDS7154B/TDS7254B/TDS7404B/TDS7704B: Order 071-0898-xx.

Transit Case – Order 016-1522-00.

Options (available on models indicated by "x")

		TDS7054	TDS7104	TDS7154B	TDS7254B	TDS7404B	TDS7704B
Acquisition Memory Options							
2M	8 Msamples max, 2 Msamples/ch	x	x	x	x	x	x
3M	16 Msamples max, 4 Msamples/ch	x	x	x	x	x	x
4M	32 Msamples max, 8 Msamples/ch			x	x	x	x
5M	64 Msamples max, 16 Msamples/ch			x	x	x	x
Software Options							
DVI	TDSDVI DVI compliance test solution				x	x	x
DVD	TDSDVD Optical storage analysis	x	x	x	x	x	x
ET3	TDSET3 Ethernet compliance test software	x	x	x	x	x	x
JT3	TDSJIT3 Advanced jitter analysis software	x	x	x	x	x	x
J3E	TDSJIT3 Essentials	x	x	x	x	x	x
J2	TDSDDM2 Disk drive analysis software	x	x	x	x	x	x
CP2*[1]	TDSCPM2 ANSI/ITU Telecom pulse compliance testing software	x	x	x	x	x	x
USB*[2]	TDSUSBS USB2.0 Compliance test S/W only	x	x	x	x	x	x
SM	Serial communications mask testing	x	x	x	x	x	x
ST	Serial pattern trigger			x	x	x	x
PW3*[3]	TDSPWR3 Power measurement and analysis software	x	x	x	x	x	x
RTE	Serial Data Compliance and Analysis Software			x	x	x	x
PCE*[4]	PCI Express Compliance Module for Option RTE					x	x
IBA*[4]	InfiniBand Compliance Module for Option RTE					x	x

*[1] Requires Option SM.

*[2] Requires Option TDSUSBF (USB Test Fixture).

*[3] Option 3M and a TCA-1MEG TekConnect® 1 MΩ buffer amplifier are recommended for use with this software.

*[4] Requires Option RTE.

To view instrument upgrades for the TDS7000 and TDS7000B Series, please go to www.tektronix.com/tds7000b_upgrades.

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www.tektronix.com

Product(s) are manufactured in ISO registered facilities.

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