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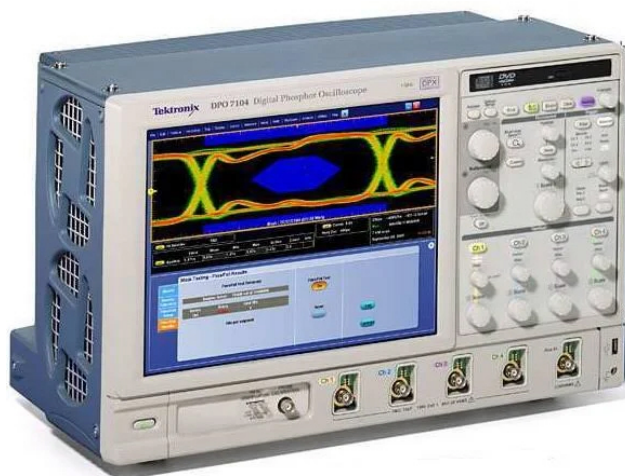
Data Sheet

July 30, 2026

TEKTRONIX

Tektronix DPO7104 1 GHz Digital Oscilloscope

Tektronix DPO7104 1 GHz Digital Oscilloscope The Tektronix DPO7104 is a 1 GHz, 4-channel Digital Phosphor Oscilloscope in the DPO7000 Series. Tektronix documentation describes the DPO7000 family as real-time digital phosphor oscilloscopes designed for verifying, characterizing, debugging, and testing sophisticated electronic designs, combining high sample-rate acquisition, deep memory, FastAcq capture, and Pinpoint triggering. The DPO7104 is intended for signal integrity, jitter and timing analysis; verification and debug of complex digital and mixed-signal designs; low-speed serial bus design (I2C, SPI, CAN, LIN, RS-232); investigation of transient phenomena; power measurements; and spectral analysis of acquired signals. The Tektronix DPO7104 is a 1 GHz, 4-channel Digital Phosphor Oscilloscope in the DPO7000 Series. Tektronix documentation describes the DPO7000 family as real-time digital phosphor oscilloscopes designed for verifying, characterizing, debugging, and testing sophisticated electronic designs, combining high sample-rate acquisition, deep memory, FastAcq capture, and Pinpoint triggering. The DPO7104 is intended for signal integrity, jitter and timing analysis; verification and debug of complex digital and mixed-signal designs; low-speed serial bus design (I2C, SPI, CAN, LIN, RS-232); investigation of transient phenomena; power measurements; and spectral analysis o



MODEL

Tektronix DPO7104

CALIBRATION

NIST-traceable

CONDITION

New

STATUS

In stock

RFQ / SKU

DPO7104

LISTING

<https://aumictechlabs.com/products/dpo7104-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Tektronix DPO7104 is a 4-channel 1GHz digital phosphor oscilloscope from the DPO7000 series. It runs 20GS/s on all four channels simultaneously, carries a 40M point record length, and puts all of it on a 12.1-inch XGA color touchscreen that was the largest display in its class when the instrument shipped. It is a serious bench scope for signal integrity work, serial bus debug, and high-speed design verification where record depth, capture rate, and trigger flexibility actually matter.

Key Specs	Parameter	Value	
Bandwidth	1GHz	Channels 4	
analog	Sample Rate	20GS/s (all channels)	
Record Length	40M points	Rise Time	350ps
Vertical Resolution	8-bit (11-bit with Hi-Res mode)	Input Impedance	50 ohm / 1 Mohm selectable
Vertical Range	1mV/div to 10V/div	Time Base	40ps/div to 1000s/div
Display	12.1-inch XGA color touchscreen	Waveform Capture Rate	Over 250,000 waveforms per second (FastAcq)
Trigger Types	Over 1,400 combinations via Pinpoint triggering	Serial Decode	I2C, SPI, RS-232, CAN
Interface	USB, LAN, GPIB	OS	Windows XP Embedded

Probe Interface TekVPI, TekConnect FastAcq captures over 250,000 waveforms per second. That capture rate is what lets the digital phosphor display build up a color-graded intensity map of signal activity over time, showing which signal states occur frequently and which are rare. Glitches, runt pulses, and intermittent timing violations that a lower capture rate scope misses between triggers show up in the intensity map within seconds of connecting to the signal. Pinpoint triggering gives over 1,400 trigger combinations. Beyond the standard edge, pulse width, and timeout triggers, the DPO7104 handles setup/hold violations, serial packet content triggers on I2C, SPI, RS-232, and CAN, and the A then B sequential trigger for capturing events that only occur in a specific sequence. The B trigger can be set to trigger only when the B event does not occur after A, which is useful for catching missing acknowledgments and protocol timeouts. User-selectable bandwidth limit filters are built in as standard. These preserve the instrument's bandwidth rolloff, flatness, and phase linearity within whatever frequency limit you select. Running a 1GHz scope on a 100MHz signal without a bandwidth limit means the instrument is adding out-of-band noise to every measurement. The selectable limits let you optimize the instrument for the actual signal frequency rather than the probe bandwidth. The 12.1-inch XGA touchscreen is not cosmetic. At 1GHz bandwidth with 40M record length, the amount of waveform data on screen at any one time requires display real estate to be useful. The Wave Inspector panel provides dedicated hardware controls for navigating, zooming, and searching through deep acquisitions without going through menus. Record search and mark lets the instrument automatically scan through a 40M point acquisition for user-defined criteria, tag each occurrence, and navigate between them with front panel controls. For serial bus debug work where a specific packet or error condition buried in a long acquisition needs to be found, that function saves significant time compared to manual scrolling.

Features & description

From manufacturer datasheet

Features

• 1 GHz analog bandwidth • 4 input channels • Up to 20 GS/s real-time sample rate standard (up to 40 GS/s with Opt. 2SR) • Deep record length with MultiView Zoom navigation • Greater than 250,000 wfms/s FastAcq waveform capture rate on all 4 channels • Pinpoint triggering with over 1400 trigger combinations • 12.1-inch XGA touch-screen display • MyScope custom control windows • OpenChoice software architecture with Windows OS • TekVPI probe interface • User-selectable bandwidth limit filters • Standard low-speed serial protocol triggering (I2C, SPI, RS-232; CAN optional)

DPO7104 Characteristics / Specifications

PARAMETER	VALUE
Model	DPO7104
Instrument Type	Digital Phosphor Oscilloscope
Input Channels	4
Bandwidth (DSP Bandwidth Enhance)	1 GHz
Rise Time 10% to 90% (Typical)	300 ps
Rise Time 20% to 80% (Typical)	200 ps
DC Gain Accuracy	+/-1% with offset/position set to 0
Input Coupling	AC, DC, GND
Input Impedance	1 MOhm +/-1% with 13 pF +/-2 pF, or 50 Ohm +/-1% (software selectable)
Input Sensitivity	1 MOhm: 1 mV/div to 10 V/div; 50 Ohm: 1 mV/div to 1 V/div
Vertical Resolution	8 bit (>11 bit with Hi Res) Acquisition
Equivalent Time Sample Rate (Max)	4 TS/s for repetitive signals
Standard Record Length	50 M (1 ch), 25 M (2 ch), 12.5 M (4 ch)
Record Length Opt. 2RL	125 M / 50 M / 25 M
Record Length Opt. 5RL	250 M / 125 M / 50 M
Time Resolution at 20 GS/s	50 ps
FastAcq Maximum Waveform Capture Rate	Greater than 250,000 wfms/s on all 4 channels simultaneously Timebase And Trigger
Time Base Range	50 ps/div to 1000 s/div (25 ps/div to 1000 s/div with Opt. 2SR)
Time Base Accuracy	+/-2.5 ppm + aging less than 1 ppm per year
Trigger Jitter	1.5 ps RMS typical with enhanced triggering OFF; less than 100 fs RMS with enhanced triggering ON
Pinpoint Triggering	Full advanced trigger suite onAandBtriggers with extensive combination coverage Display And Usability
Display	12.1-inch XGA touch screen
Horizontal Modes	Automatic, Constant Sample Rate, and Manual

PARAMETER	VALUE
Analysis Tools	Linked cursors, extensive automatic measurements, math/FFT/filtering, MultiView Zoom
Connectivity	Front USB, GPIB/LAN support via OpenChoice architecture Optional Capabilities
Bandwidth	4 input channels - Up to 20 GS/s real-time sample rate standard (up to 40 GS/s with Opt. 2SR) - Deep record length with MultiView Zoom navigation - Greater than 250,000 wfms/s FastAcq waveform capture rate on all 4 channels - Pinpoint triggering with
Rise Time	10% to 90% (Typical): 300 ps

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	DP07104
Instrument Type	Digital Phosphor Oscilloscope
Input Channels	4
Bandwidth (DSP Bandwidth Enhance)	1 GHz
Hardware Analog Bandwidth (-3 dB): 1 GHz Rise Time, DSP Enhance: 300 ps	
Specifications	
PARAMETER	VALUE
Rise Time 10% to 90% (Typical)	300 ps
Rise Time 20% to 80% (Typical)	200 ps
DC Gain Accuracy	+/-1% with offset/position set to 0
Input Coupling	AC, DC, GND
Input Impedance	1 MOhm +/-1% with 13 pF +/-2 pF, or 50 Ohm +/-1% (software selectable)
Input Sensitivity	1 MOhm: 1 mV/div to 10 V/div; 50 Ohm: 1 mV/div to 1 V/div
Vertical Resolution	8 bit (>11 bit with Hi Res)
Acquisition	
Real-time Sample Rate, 1 Channel: 20 GS/s (40 GS/s with Opt. 2SR)	
Real-time Sample Rate, 2 Channels: 10 GS/s (20 GS/s with Opt. 2SR)	
Real-time Sample Rate, 3-4 Channels: 5 GS/s (10 GS/s with Opt. 2SR)	
Specifications	
PARAMETER	VALUE
Equivalent Time Sample Rate (Max)	4 TS/s for repetitive signals
Standard Record Length	50 M (1 ch), 25 M (2 ch), 12.5 M (4 ch)
Record Length Opt. 2RL	125 M / 50 M / 25 M
Record Length Opt. 5RL	250 M / 125 M / 50 M
Time Resolution at 20 GS/s	50 ps

Max Duration at Highest Real-time Rate with Standard Memory: 2 ms (1 ch)
FastAcq Maximum Waveform Capture Rate: Greater than 250,000 wfms/s on all 4 channels simultaneously

Timebase And Trigger
Time Base Range: 50 ps/div to 1000 s/div (25 ps/div to 1000 s/div with Opt. 2SR)
Time Base Accuracy: +/-2.5 ppm + aging less than 1 ppm per year
Channel-to-Channel Deskew: +/-75 ns
Trigger Jitter: 1.5 ps RMS typical with enhanced triggering OFF; less than 100 fs RMS with enhanced triggering ON
Pinpoint Triggering: Full advanced trigger suite onAandBtriggers with extensive combination coverage

Display And Usability

Specifications

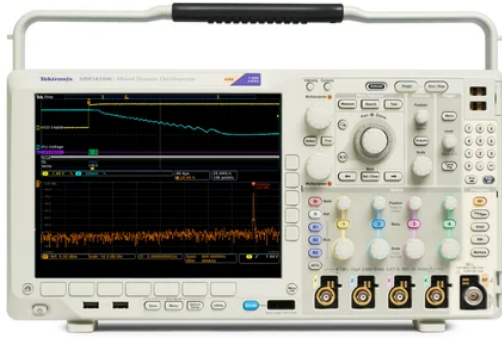
PARAMETER	VALUE
Display	12.1-inch XGA touch screen
Horizontal Modes	Automatic, Constant Sample Rate, and Manual
Analysis Tools	Linked cursors, extensive automatic measurements, math/FFT/filtering, MultiView Zoom
Connectivity	Front USB, GPIB/LAN support via OpenChoice architecture

Optional Capabilities
Opt. 2SR: Double maximum real-time sample rate (DP07104 only)
Record-length options 2RL and 5RL for deeper memory
Optional analysis packages for jitter/eye (DJA/DJE), power (PWR), mask testing (MTM), CAN/LIN (LSA), Ethernet/USB compliance, DDR analysis, and more

Operational Notes
User-selectable bandwidth-limit filters preserve roll-off, flatness, and phase linearity within the selected frequency range to optimize lower-frequency measurements onahigh-bandwidth instrument. Opt. 2SR isahardware option that must be ordered with the instrument and is not field-installable.

Notes
This manual OEM source was compiled from the official Tektronix DP07000 Series Digital Phosphor Oscilloscopes datasheet covering the DP07104.

Unit photos



Ordering Information

OPTION	DESCRIPTION
Opt. 2RL	125 M / 50 M / 25 M
Opt. 5RL	250 M / 125 M / 50 M
Opt. 2SR	Double maximum real-time sample rate (DPO7104 only)

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: NIST-traceable. New · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.