TEKTRONIX

DPO4034

The Tektronix DPO4034 is a 350 MHz, 4-channel Digital Phosphor Oscilloscope from the DPO4000 Series, engineered to simplify and speed up the debugging of complex embedded designs. With standard 10 Mpoint record lengths on all channels, a 10.4-inch XGA color display, Wave Inspector controls, and TekVPI probe interface, it provides the powerful analysis capabilities needed for modern electronic design.

SPECIFICATIONS

General

Display	10.4 in. (264 mm) liquid crystal TFT color display, 1024 x 768 (XGA) resolution

Physical

Power Supply	100 to 240 V ±10% @ 47 to 66 Hz; 115 V ±10% @ 360 to 440 Hz; < 250 W power consumption
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	439 mm × 229 mm × 137 mm mm
Weight	5 kg kg

Key Performance Specifications

Analog Bandwidth	350 MHz
Calculated Rise Time (50 Ω)	1 ns
Number of Analog Channels	4
Real-time Sample Rate (One Channel)	2.5 GS/s
Real-time Sample Rate (All Channels)	2.5 GS/s
Record Length (One Channel)	10 M points
Record Length (All Channels)	10 M points
Maximum Waveform Capture Rate	50,000 wfm/s
Vertical Resolution	8 bits

Vertical System

Input Coupling	AC, DC, GND
Input Impedance	1 MΩ ±1%, 50 Ω ±1%
Input Sensitivity Range (1 MΩ)	1 mV/div to 10 V/div
Input Sensitivity Range (50 Ω)	1 mV/div to 1 V/div
Maximum Input Voltage (50 Ω)	5 V RMS with peaks ≤ ±20 V

Horizontal System

Time Base Range	1 ns/div to 1000 s/div
Time Base Delay Time Range	-10 divisions to 5000 s
Horizontal Zoom	Supported (via Wave Inspector controls)

Acquisition System

Acquisition Modes	Sample, Peak Detect, Averaging, Envelope, Hi Res, Roll
Averaging Mode	From 2 to 512 waveforms
Envelope Mode	Min/max envelope peak detect data over multiple acquisitions
Hi Res Mode	Real-time boxcar averaging reduces random noise and increases vertical resolution
Roll Mode	Scrolls waveforms right to left across screen at sweep speeds slower than or equal to 40 ms/div

Trigger System

Trigger Modes	Auto, Normal, Single
Trigger Coupling	DC, AC, HF Reject, LF Reject, Noise Reject
Trigger Holdoff Range	20 ns to 8 s
Trigger Level Range (Internal)	±8 divisions from center of screen
Edge Triggering	Positive or negative slope on any channel
Pulse Width Triggering	Trigger on width of positive or negative pulses that are >, <, =, or ≠ a specified period of time (4 ns to 8 s)
Runt Triggering	Trigger on a pulse that crosses one threshold but fails to cross a second threshold before crossing the first again
Timeout Triggering	Trigger on an event which remains high, low, or either, for a specified time period (4 ns to 8 s)
Logic Triggering	Trigger when any logical pattern of channels goes false or stays true for specified time
Setup and Hold Triggering	Trigger on violations of both setup time and hold time between clock and data
Rise/Fall Time Triggering	Trigger on pulse edge rates that are faster or slower than specified
Video Triggering	Trigger on all lines, odd, even, or all fields on NTSC, PAL, and SECAM video signals
Optional Bus Triggering Types	I2C, SPI, CAN, LIN, FlexRay, RS-232/422/485/UART (with correct application module options)
Trigger After Delay Range (Time)	4 ns to 8 s
Trigger After Delay Range (Events)	1 to 9,999,999 events

Waveform Measurements & Analysis

Automatic Measurements	29 automatic measurements
Measurement Statistics	Mean, Min, Max, Standard Deviation

Connectivity & Interfaces

Probe Compensation Output Voltage	0 V to 2.5 V
Probe Compensation Output Frequency	1 kHz

Power & Environmental

Non-operating Temperature Range	-20 °C to +60 °C
Operating Altitude	3,000 m (9,843 ft.)
Non-operating Altitude	12,192 m (40,000 ft.)

Physical Characteristics

Weight (Shipping)	10.7 kg (23.6 lbs)

Display

Display Size	10.4 in (264 mm)
Display Resolution	1024 × 768 pixels (XGA)
Display Type	Liquid-crystal TFT color

Connectivity

USB Device Port	1 × USB 2.0 (rear, supports PictBridge and USBTMC)
LAN Port	1 × RJ-45 (10/100Base-T Ethernet)
GPIB Interface	Optional (via TEK-USB-488 adapter)

Storage

Removable Storage	1 × CompactFlash slot (front panel, supports Type I cards)
Reference Waveform Storage	4 internal waveforms

Power

Power Consumption	250 W maximum
Input Voltage Range	100 to 240 V ±10% (47 to 66 Hz), 115 V ±10% (360 to 440 Hz)

Environmental

Operating Humidity	High: 40 °C to 50 °C, 10% to 60% RH; Low: 0 °C to 40 °C, 10% to 90% RH
Cooling Clearance	50 mm (2 in.) on left side and rear of instrument

Inputs & Outputs

Probe Interface Type	TekVPI Probe Interface

Standard Accessories

Standard Probe Model	P6139A (one per channel)

Physical & General

Kensington Lock Slot	Supported (rear-panel slot)

TECHNOLOGY

Digital Phosphor Oscilloscope (DPO)

APPLICATIONS

Embedded Design, Serial Debugging, Power Measurement, Automotive Design, Video Design