

LECROY (TELEDYNE LECROY)

HDO4104

The Teledyne LeCroy HDO4104 is a 4-channel, 1 GHz High Definition Oscilloscope from the HDO4000 series. It features HD4096 technology with a 12-bit ADC, delivering 16 times more resolution than standard 8-bit oscilloscopes (up to 15-bit with enhanced resolution software). Combined with a 2.5 GS/s sample rate, up to 50 Mpts interleaved memory, and a 12.1-inch multi-touch display, it is designed for precise waveform capture, serial data decode, and complex power analysis applications.

SPECIFICATIONS

General

Display	12.1-inch Color TFT LCD Touch Screen, 1280 x 800 (WXGA)
Operating System	Windows Embedded Standard 7
Calibration Interval	1 year

Physical

Power Supply	90 to 264 Vrms (47 to 63 Hz); 90 to 132 Vrms (380 to 420 Hz); 200 W max (150 W typical)
Operating Temperature	5 to 40 °C
Dimensions (W×H×D)	399 x 292 x 131 mm
Weight	5.86 kg

Vertical System

Bandwidth	1 GHz
Number of Input Channels	4
Hardware Vertical Resolution	12 bits
Enhanced Vertical Resolution (Software)	Up to 15 bits (with ERES)
Bandwidth Limits	20 MHz, 200 MHz
Input Coupling	1 MΩ: AC, DC, GND; 50 Ω: DC, GND
Maximum Input Voltage	1 MΩ: 400 V max (DC + Peak AC ≤ 10 kHz); 50 Ω: 5 Vrms
Vertical Sensitivity (50 Ω)	1 mV/div to 1 V/div
Vertical Sensitivity (1 MΩ)	1 mV/div to 10 V/div
DC Vertical Gain Accuracy	±0.5% of full scale

Acquisition System

Maximum Sample Rate	2.5 GS/s
Maximum Record Length (Standard)	12.5 Mpts/Ch (25 Mpts/Ch interleaved)
Maximum Record Length (Optional)	25 Mpts/Ch (50 Mpts/Ch interleaved)

Triggering System

Trigger Modes	Normal, Auto, Single, Stop
Trigger Sources	Ch 1 - Ch 4, EXT, EXT/10, AC Line
Trigger Coupling	AC, DC, LF Rej, HF Rej
Trigger Holdoff Range	2 ns up to 20 s or 1 to 1,000,000,000 events
Basic Trigger Types	Edge, Glitch, Width, Logic (Pattern), TV (NTSC, PAL, SECAM, HDTV-720p, 1080i, 1080p), Runt, Slew Rate, Interval, Dropout, Qualified

Math & Analysis

Standard Math Functions	Add, Subtract, Multiply, Divide, FFT, Absolute Value, Averaging (summed and continuous), Derivative, Envelope, Enhanced Resolution, Floor, Integral, Invert, Reciprocal, Rescale, Roof, Square, Square Root, Trend, Zoom
Math Traces	2 traces
Automatic Measurements	8 displayed simultaneously; includes Amplitude, Area, Delay, Duty Cycle, Frequency, Rise/Fall Time, Phase, RMS, Skew, etc.

Display System

Touchscreen Interface	Multi-touch
-----------------------	-------------

Data Storage & Software

Internal Storage	Internal Solid State Drive (SSD)
Waveform Storage Capacity	4 memory waveforms
Setup Storage Capacity	6 setups
Remote Control Protocols	Windows automation, Teledyne LeCroy Remote Command Set

Horizontal System

Timebase Range	200 ps/div to 10,000 s/div
Timebase Accuracy	±2.5 ppm + 1.0 ppm/year aging

Trigger System

Trigger Level Range	±4.1 divisions from center
---------------------	----------------------------

Environmental

Operating Humidity	5% to 90% RH (non-condensing) up to 31 °C
Operating Altitude	Up to 3,000 m (9,842 ft) at or below 30 °C
Storage Temperature	-20 °C to +60 °C

Acquisition

Acquisition Modes	Real-time, Roll, RIS (Random Interleaved Sampling), Sequence
Maximum Equivalent Time Sample Rate (RIS)	125 GS/s
Sequence Mode Maximum Segments	10,000
Data Interpolation	Linear, Sin(x)/x

Inputs

Input Connectors	ProBus (BNC)
------------------	--------------

Power Requirements

Maximum Power Consumption	200 W (200 VA)
---------------------------	----------------

TECHNOLOGY

High Definition Digital Storage Oscilloscope (HD-DSO)

APPLICATIONS

General purpose electronics testing, power analysis, serial data debug, and waveform documentation

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.