

LECROY (TELEDYNE LECROY)

LT342

The Teledyne LeCroy WaveRunner LT342 is a legacy 2-channel digital oscilloscope featuring a 500 MHz analog bandwidth, 500 MS/s sampling rate per channel, and an 8.4-inch color TFT display. Designed for advanced waveform analysis, it combines robust triggering capabilities with LeCroy's signature measurement features in a compact benchtop form factor.

SPECIFICATIONS

General

Display	8.4 inch Color TFT-LCD, 640 × 480 (VGA)
---------	---

Physical

Power Supply	90 to 250 V AC, 45 to 66 Hz, 150 VA
Operating Temperature	5 to 40 °C °C
Dimensions (W×H×D)	355 mm × 211 mm × 363 mm mm
Weight	8 kg kg

Vertical System

Analog Bandwidth (-3 dB)	500 MHz at 50 Ω or 1 MΩ
Calculated Rise Time (10% to 90%)	700 ps
Number of Input Channels	2
Input Impedance	1 MΩ ± 1% 12 pF, or 50 Ω ± 1%
Input Coupling	AC, DC, GND (1 MΩ); DC, GND (50 Ω)
Input Sensitivity Range	2 mV/div to 10 V/div (1 MΩ); 2 mV/div to 1 V/div (50 Ω)
Vertical Resolution (ADC)	8 bits
DC Gain Accuracy	±1.5% of full scale
Maximum Input Voltage	400 V max (1 MΩ); 5 V rms (50 Ω)
Channel-to-Channel Isolation	> 250:1 (DC to 100 MHz)
Hardware Bandwidth Limits	20 MHz, 200 MHz
Maximum Input Voltage (50 Ω)	5 V rms
Offset Range (2 mV to 50 mV/div)	±0.5 V
Offset Range (100 mV to 500 mV/div)	±5 V
Offset Range (1 V to 10 V/div)	±50 V (into 1 MΩ)

Horizontal System

Maximum Real-Time Sampling Rate	500 MS/s per channel
Equivalent-Time Sampling Rate (ETS)	10 GS/s
Maximum Record Length (Points per Channel)	250 kpoints
Time Base Range	1 ns/div to 1000 s/div
Time Base Accuracy	±10 ppm

Trigger System

Trigger Sources	Ch 1, Ch 2, External, Line
Trigger Modes	Auto, Normal, Single, Stop
Trigger Coupling	AC, DC, HFRej, LFRej
Edge Triggering	Positive or negative slope on any source
Pulse Width Triggering	Yes (2 ns to 20 s)
Runt Triggering	Yes
Interval Triggering	Yes (2 ns to 20 s)
Pattern/State Triggering	Yes
External Trigger Input Impedance	1 MΩ 12 pF, or 50 Ω

Acquisition System

Acquisition Modes	Single-shot, RIS, Roll, Average, Envelope, Sequence
Segmented Memory / Sequence Mode	Up to 1,000 segments
Maximum Waveform Capture Rate	Up to 100,000 waveforms/sec (in Sequence mode)

Waveform Measurements and Analysis

Automatic Voltage Measurements	Amplitude, Base, Max, Mean, Min, Peak-to-Peak, RMS, Top, Overshoot+, Overshoot-
Automatic Time Measurements	Delay, Duty Cycle, Fall Time, Frequency, Period, Phase, Rise Time, Width
Basic Math Functions	Add, Subtract, Multiply, Divide, Negate, Identity
Fast Fourier Transform (FFT) Window Types	Von Hann, Hamming, Flat Top, Rectangular
FFT Vertical Scale Options	Linear, Decibel (dBm)

Display and User Interface

Display Type	Color TFT-LCD
Display Size	8.4 inch (213 mm) diagonal
Display Resolution	640 × 480 pixels
Color Grading / Intensity Modulation	Analog Persistence display mode

Connectivity and Ports

GPIO (IEEE-488) Interface	Standard (IEEE-488.2)
RS-232 Port	DB-9 male, up to 115.2 kbps
External Video Output Port	VGA, DB-15 female
Auxiliary Output (Trigger Out)	Yes (BNC connector)
Probe Calibration / Demo Output	1 kHz, 1 V square wave into 1 MΩ

Processor and Storage

Internal Operating System	VxWorks
Processor Type	Motorola PowerPC 603e (96 MHz)
Removable Storage Options	3.5 inch 1.44 MB floppy drive, PCMCIA Type I/II/III

Environmental Specifications

Storage Temperature Range	-20 to 60 °C
Operating Humidity Range	≤ 80% RH (non-condensing) at up to 30 °C
Operating Altitude	Up to 3,000 m (9,840 ft)
Cooling Method	Forced-air cooling (internal fan)

Physical Characteristics

Form Factor	Benchtop
Rackmount Options	Available via optional rackmount kit

Compliance and Standards

Safety Certifications	UL 3111-1, CSA C22.2 No. 1010.1, EN 61010-1
Electromagnetic Compatibility (EMC)	EN 50081-1, EN 50082-1, FCC Class A
Calibration Interval	1 year recommended

Inputs & Outputs

Probe Interface	ProBus (provides power and control for active probes)
-----------------	---

Interfaces

Parallel Port	Centronics DB-25
---------------	------------------

Accessories

Standard Passive Probe	PP006 (one per channel)
Internal Printer	Optional built-in thermal printer

Triggering

Dropout Triggering	Triggers if signal disappears for 2 ns to 20 s
Slew Rate Triggering	Triggers on rise/fall rate from 2 ns to 20 s
Trigger Holdoff by Events	1 to 99,999,999 events
Trigger Holdoff by Time	2 ns to 20 s
TV Trigger Standards	NTSC, PAL, SECAM
Internal Trigger Level Range	±5 divisions
External Trigger Level Range	±0.5 V (±5 V with Ext/10)

Display & Analysis

Multi-Zoom	Simultaneous display of up to 4 zoom waveforms
------------	--

Storage

Floppy Drive Format	3.5" 1.44 MB (MS-DOS compatible)
Non-volatile Waveform Memories	4 reference memories (M1, M2, M3, M4)

TECHNOLOGY

Digital Phosphor / DSO

APPLICATIONS

Electronic Design, Troubleshooting, and Analysis

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