

LECROY (TELEDYNE LECROY)

WaveRunner 64Xi

The Teledyne LeCroy WaveRunner 64Xi is a 600 MHz, 4-channel digital oscilloscope designed to provide powerful analysis capabilities in a compact benchtop form factor. Featuring a large touch screen, high sampling rates, and comprehensive triggering and analysis toolsets, it is optimized for efficient debugging and signal evaluation.

SPECIFICATIONS

General

Interfaces	10/100/1000Base-T Gigabit Ethernet (RJ-45), 5 x USB 2.0 Host ports, 1 x USB 2.0 Device port, External SVGA video output, RS-232, GPIB (via optional accessory)
Display	10.4" TFT-LCD Color Touch Screen, 800 x 600 SVGA resolution

Physical

Power Supply	90 to 264 VAC, 47 to 63 Hz (automatic AC selection), max power consumption 340 W
Operating Temperature	+5 °C to +40 °C °C
Dimensions (W×H×D)	340 mm x 260 mm x 152 mm mm

Vertical System

Analog Bandwidth	600 MHz
Number of Channels	4
Rise Time (10% to 90%)	< 583 ps
Input Impedance	1 MΩ 16 pF or 50 Ω
Input Coupling	AC, DC, GND (AC available only on 1 MΩ)
Vertical Resolution	8-bit (up to 11-bit with Enhanced Resolution / ERES)
Sensitivity Range	2 mV/div - 10 V/div (1 MΩ); 2 mV/div - 1 V/div (50 Ω)
DC Vertical Gain Accuracy	±1.5% (typical)
Maximum Input Voltage	50 Ω: 5 Vrms; 1 MΩ: 400 V max (DC + Peak AC ≤ 10 kHz)
Bandwidth Limiters	20 MHz, 200 MHz
Offset Range	±1 V (2 mV–194 mV/div, 50 Ω / 1 MΩ), ±10 V (196 mV–1 V/div, 50 Ω / 1 MΩ), ±100 V (1.02 V–10 V/div, 1 MΩ)
Probe Interface	Teledyne LeCroy ProBus
Enhanced Resolution (ERES)	Up to 11 bits
Channel-to-Channel Isolation	> 40 dB (100:1) up to 600 MHz
Input Capacitance	16 pF (typical) @ 1 MΩ
DC Vertical Offset Accuracy	±(1.5% of offset setting + 0.5% of full scale + 1 mV)

Horizontal System

Maximum Real-Time Sampling Rate	5 GS/s on all 4 channels, interleaved to 10 GS/s on 2 channels
Standard Record Length	10 Mpts per channel (all 4 channels), interleaved to 20 Mpts (2 channels)
Time Base Range	200 ps/div - 1000 s/div
Time Base Accuracy	≤ 5 ppm
Maximum Interleaved Sample Rate	10 GS/s (on 2 channels)
Maximum Interleaved Memory Length	20 Mpts (on 2 channels, standard)
Random Interleaved Sampling (RIS) Rate	200 GS/s

Trigger System

Trigger Sources	Ch 1, Ch 2, Ch 3, Ch 4, External, Line
Trigger Modes	Auto, Normal, Single, Stop
Trigger Coupling	AC, DC, LFRej, HFRej
Standard Trigger Types	Edge, Glitch, Width, Logic Pattern, TV-Trigger (NTSC, PAL, SECAM, HDTV)
External Trigger Input Impedance	1 MΩ 16 pF

Acquisition System

Acquisition Modes	Real-time, Roll, Sequence (segmented memory up to 10,000 segments)
Standard Memory - 4 Channels	10 Mpts/ch
Standard Memory - 2 Channels	20 Mpts/ch (interleaved)
Memory Option L - 4 Channels	25 Mpts/ch
Memory Option L - 2 Channels	50 Mpts/ch (interleaved)
Memory Option VL - 4 Channels	50 Mpts/ch
Memory Option VL - 2 Channels	100 Mpts/ch (interleaved)

Processor and Storage

Operating System	Windows XP Embedded
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Connectivity and Ports

Auxiliary Output	Trigger Enabled/Trigger Out (BNC)
Reference Clock I/O	10 MHz external reference input (BNC)
Calibration Output	1 kHz, 1 V square wave

Environmental Specifications

Storage Temperature Range	-20 °C to +60 °C
Operating Humidity Range	5% to 80% RH (non-condensing) up to +30 °C

Performance

Waveform Update Rate	Up to 1,000,000 waveforms/second (WaveStream mode)
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Computer System

Processor	Intel Celeron M 1.3 GHz
System Memory	1 GB RAM

Triggering

Trigger Level Range (Internal)	±4.1 divisions from center
Trigger Level Range (External)	±400 mV (EXT), ±4 V (EXT/10)
External Trigger Max Input Voltage	50 Ω: 5 Vrms; 1 MΩ: 400 V max (DC + Peak AC ≤ 10 kHz)

Interfaces

USB Ports	5 x USB 2.0 (1 front, 4 side)
LAN Port	1 x RJ-45 (10/100/1000Base-T Ethernet)
External Display Output	1 x D-Sub 15-pin (SVGA)
GPIO Port	Optional (via external GPIO-LAN-AUX adapter)

Power Requirements

Maximum Power Consumption	340 VA
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Display

Display Resolution	800 × 600 SVGA
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Math & Analysis

Standard Math Functions	Sum, Difference, Product, Ratio, FFT (up to 1 Mpts), Absolute Value, Averaging, Derivative, Envelope, Integral, Invert, Reciprocal, Rescale, Roof, Square, Square Root, Zoom
Standard Measurements	Amplitude, Area, Base, Delay, Duty Cycle, Fall Time, Frequency, Maximum, Mean, Minimum, Overshoot, Peak-to-Peak, Period, Phase, Rise Time, RMS, Std. Deviation, Top, Width

TECHNOLOGY

Digital Phosphor / DSO

APPLICATIONS

Electronic Design, Debugging, and Signal Integrity Analysis

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