

LECROY (TELEDYNE LECROY)

WaveSurfer 24MXs-A

The Teledyne LeCroy WaveSurfer 24MXs-A is a high-performance 200 MHz, 4-channel digital oscilloscope designed for fast debug and efficient embedded system troubleshooting. Featuring a standard 10 Mpts/channel acquisition memory, a bright 10.4-inch touchscreen display, and a space-saving 15 cm deep form factor, the 24MXs-A balances advanced capabilities like WaveScan, WaveStream, and LabNotebook with an intuitive, responsive user interface. This datasheet outlines the comprehensive electrical, physical, and performance specifications of the WaveSurfer 24MXs-A.

SPECIFICATIONS

General

Interfaces	4 x USB 2.0 Host (2 front, 2 rear), 1 x USB 2.0 Device, 1 x 10/100/1000Base-T RJ-45 LAN, 1 x SVGA Out, GPIB (optional)
Display	10.4-inch touchscreen TFT-LCD, SVGA (800 x 600) resolution

Physical

Operating Temperature	5 °C to 40 °C °C
Dimensions (W×H×D)	340 mm × 260 mm × 152 mm mm
Weight	7.2 kg kg

Vertical System

Analog Bandwidth (-3 dB)	200 MHz
Number of Input Channels	4
Input Impedance	1 MΩ 16 pF (selectable to 50 Ω)
Input Coupling	GND, AC 1MΩ, DC 1MΩ, DC 50Ω
Vertical Resolution	8 bits (up to 11 bits with ERES)
Input Sensitivity Range (1 MΩ)	2 mV/div to 10 V/div
Input Sensitivity Range (50 Ω)	2 mV/div to 1 V/div
DC Gain Accuracy	±1.5% of full scale
Maximum Input Voltage (1 MΩ)	400 V max (DC + Peak AC < 10 kHz)
Maximum Input Voltage (50 Ω)	5 Vrms
Calculated Rise Time (10% to 90%)	1.75 ns
Hardware Bandwidth Limits	20 MHz
Probing Interface	Teledyne LeCroy ProBus
Vertical Resolution with ERES	Up to 11 bits

Horizontal System

Maximum Real-Time Sampling Rate	2.5 GS/s per channel (5 GS/s interleaved)
Maximum Record Length	10 Mpts/Ch (20 Mpts interleaved)
Time Base Accuracy	±10 ppm

Trigger System

Trigger Modes	Auto, Normal, Single, Stop
Trigger Coupling	DC, AC, HFRej, LFRej
Trigger Sources	Ch 1, Ch 2, Ch 3, Ch 4, EXT, EXT/10, Line
Edge Triggering	Rising, Falling, Both
SMART Triggers	Edge, Glitch, Width, Logic (Pattern), TV (NTSC, PAL, SECAM, HDTV), Runt, Slew Rate, Interval, Dropout
Optional Serial Triggers	I2C, SPI, UART, RS-232, LIN, CAN
External Trigger Input Impedance	1 M Ω 16 pF

Acquisition System

Acquisition Modes	Real-time, Roll, Sequence (Segmented Memory), WaveStream (Fast Viewing)
Digital Channel Bandwidth	Up to 500 MHz
Interleaved Max Sampling Rate	5 GS/s
Interleaved Max Record Length	20 Mpts

Waveform Measurements and Analysis

Automatic Measurements Displayed	Up to 6 measurements simultaneously with statistics
Waveform Math	1 math function
FFT Windows	Rectangular, Von Hann, Hamming, Flat Top, Blackman-Harris
WaveScan Search Modes	More than 20 modes including Rise, Fall, Period, Frequency, Width, Duty Cycle, Amplitude

Display and User Interface

Display Type	Vibrant TFT-LCD touchscreen
Display Size	10.4 inches (26.4 cm) diagonal
Display Resolution	800 x 600 pixels (SVGA)
Waveform Display Formats	YT, XY, Grid-on-Top
Color Grading / Intensity Modulation	256 levels (in WaveStream mode)
Local Language Support	Select from 10 languages

Connectivity and Ports

USB Host Ports	5 x USB 2.0 (1 front, 4 rear)
USB Device Ports	1 x USB 2.0
LAN Port (Ethernet)	10/100/1000Base-T (RJ-45)
External Video Output Port	SVGA DB-15
Auxiliary Output	Trigger Out, Pass/Fail
Probe Calibration / Demo Output	1 kHz, 1 V p-p square wave

Processor and Storage

Internal Operating System	Windows Embedded
LabNotebook Features	Saves waveforms, screen captures, and panel setups in a single file

Environmental Specifications

Operating Temperature Range	5 °C to 40 °C
Storage Temperature Range	-20 °C to 60 °C
Operating Humidity Range	5% to 80% RH (non-condensing) up to 30 °C, derating to 45% RH at 40 °C
Operating Altitude	Up to 3,000 m (10,000 ft) at 25 °C
Non-Operating Altitude	Up to 12,192 m (40,000 ft)

Physical Characteristics

Form Factor	Benchtop
Width	340 mm
Height	260 mm
Depth	152 mm

Compliance and Standards

LXI Compliance	LXI Class C Compliant
Safety Certifications	UL 61010-1, CAN/CSA-C22.2 No. 61010-1, EN 61010-1
Electromagnetic Compatibility (EMC)	EN 61326-1, EN 55011 Class A, EN 61000-3-2, EN 61000-3-3

Processor & Memory

Processor	Intel Celeron M 1.5 GHz
Standard RAM	1 GB
Hard Drive Capacity	≥ 160 GB (2.5" SATA)

Power Requirements

Maximum Power Consumption	340 VA
AC Input Voltage and Frequency	90 to 264 VAC (47 to 63 Hz), 90 to 132 VAC (380 to 420 Hz)

Acquisition

Equivalent Time Sampling (ETS) Rate	50 GS/s
-------------------------------------	---------

Triggering

Trigger Level Range	±4.1 divisions (Internal), ±0.5 V (External), ±5 V (External / 10)
Trigger Sensitivity (Edge)	0.6 div @ < 10 MHz, 1.0 div @ < 200 MHz

Display

Touch Screen Type	Resistive
-------------------	-----------

Probes

Standard Passive Probes	PP009 (one per channel)
-------------------------	-------------------------

TECHNOLOGY

Digital Oscilloscope

APPLICATIONS

Electronic Test and Measurement, Embedded Systems Debugging, Serial Bus Decoding

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