# LeCroy

# WaveSurfer® MXs-B and MSO MXs-B Oscilloscopes
## 200 MHz – 1 GHz

## Engineered for Efficient Design and Debug

## WaveSurfer® MXs-B

- **200 MHz, 400 MHz, 600 MHz and 1 GHz Bandwidths**

- **Up to 10 GS/s Sample Rate**

- **12.5 Mpts/Ch Memory, 25 Mpts Interleaved**

- **Fast Processing of Long Memory and Math**

- **Responsive User Interface**

- **WaveStream™ Fast Viewing Mode**

- **WaveScan™ – Advanced Search and Find**

- **LabNotebook Documentation and Report Generation**

- **10.4" Touch Screen Display**

- **LXI Compliant**

## MSO MXs-B

**All the great features of the WaveSurfer MXs-B plus:**

- **18 Digital Channels**

- **Max. Digital Signal Speed of 250 MHz**

- **Analog and Digital Cross Pattern Triggering**

**The WaveSurfer® MXs-B and MSO MXs-B oscilloscopes pack high performance hardware, powerful waveform processing and advanced math, measurement and debug tools into a compact form factor with a large touch screen display and intuitive user interface.**

With up to 10 GS/s sample rate and 25 Mpts of memory WaveSurfer can capture large amounts of data at very high sample rates. Other oscilloscopes offer long memory but they bog down trying to process or display it. WaveSurfer handles large amounts of data quickly providing fast processing of long memory even when using math and measurement functions. The software responds immediately to the user inputs even while processing data.

System debug often requires more than analog channels the MSO MXs-B delivers 18 digital channels which can capture digital signals of up to 250 MHz.

The MSO MXs-B offer analog and digital cross-triggering plus measurement tools to help debug digital busses. LeCroy's WaveScan™ search and find tool will scan both analog and digital channels for anamolies plus scan multiple digital lines for a parallel bus pattern.
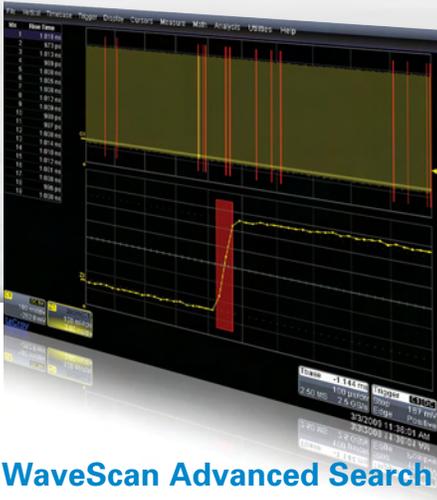
## WaveScan Advanced Search

WaveScan allows searching in a single acquisition using more than 20 different criteria. Or, set up a Scan condition and scan for an event over hours or even days. When using an MSO model WaveScan will search digital lines for parallel bus patterns.

## Advanced Math and Measure

With 18 math functions including averaging, enhanced rsolution and FFT plus 23 measurement parameters WaveSurfer can measure and analyze every aspect of a waveform. Beyond just measuring waveforms, WaveSurfer provides statistics and histicons to show how waveforms change over time.
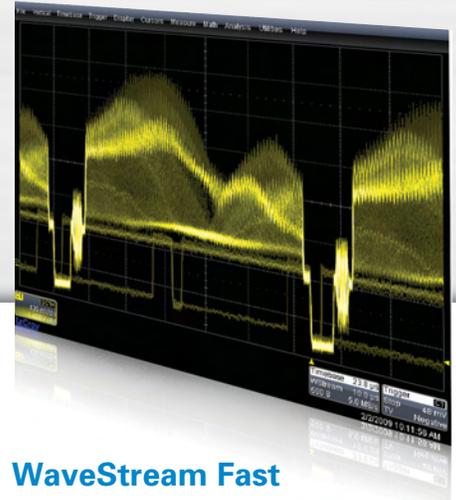
## WaveStream Fast Viewing Mode

WaveStream provides a vibrant, intensity graded (256 levels) display with a fast update to closely simulate the look and feel of an analog oscilloscope. Turn WaveStream ON or OFF, and adjust intensity, using the front panel knob. Use it only when you want to.
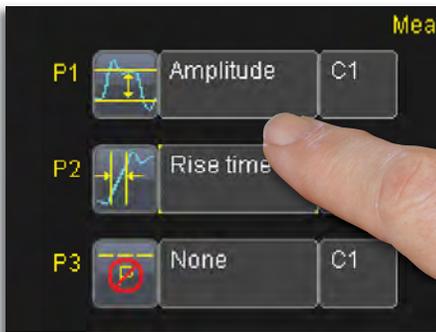






## Touch Screen Simplicity

Keep your testing efficient with a thoughtfully designed user interface that provides the busy engineer with a GUI that is smooth, transparent, and easy to use. Use the touch screen to quickly access all triggers, math functions and measurement parameters or to "draw a box" around the area of interest and zoom all channels to the desired area.
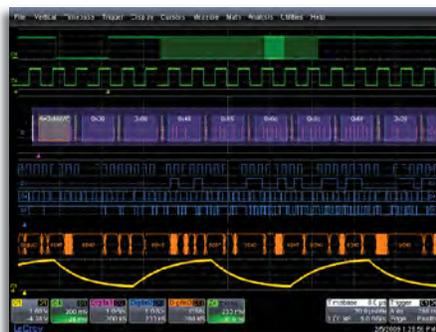
## Embedded Controller Design and Debug

Save time when working with embedded controllers by adding high-performance mixed signal capability to the with the MSO MXs-B. Capture digital signals up to 250 MHz with up to 10 Mpts/Ch memory, 1 GS/s and 18 channels. Quickly and easily isolate specific serial data events with optional $I^2C$, SPI, UART, RS-232, USB, Audio ($I^2S$, LJ, RJ, TDM), MIL-STD-1553, ARINC 429, MIPI D-PHY, DigRF, CAN, LIN and FlexRay™ trigger and decode options.

## LabNotebook Documentation and Report Generation Tool

LabNotebook provides a report generation tool to save and document all your work. Saving all displayed waveforms, settings, and screen images is all done through LabNotebook, eliminating the need to navigate multiple menus to save all these files independently.

**The WaveSurfer MXs-B and MSO MXs-B oscilloscopes makes everyday testing simpler and easier. The intuitive user interface and streamlined front panel make it easy to turn on the oscilloscope and start making measurements. The interface is designed so that all the common measurements and functions are just one touch away.**
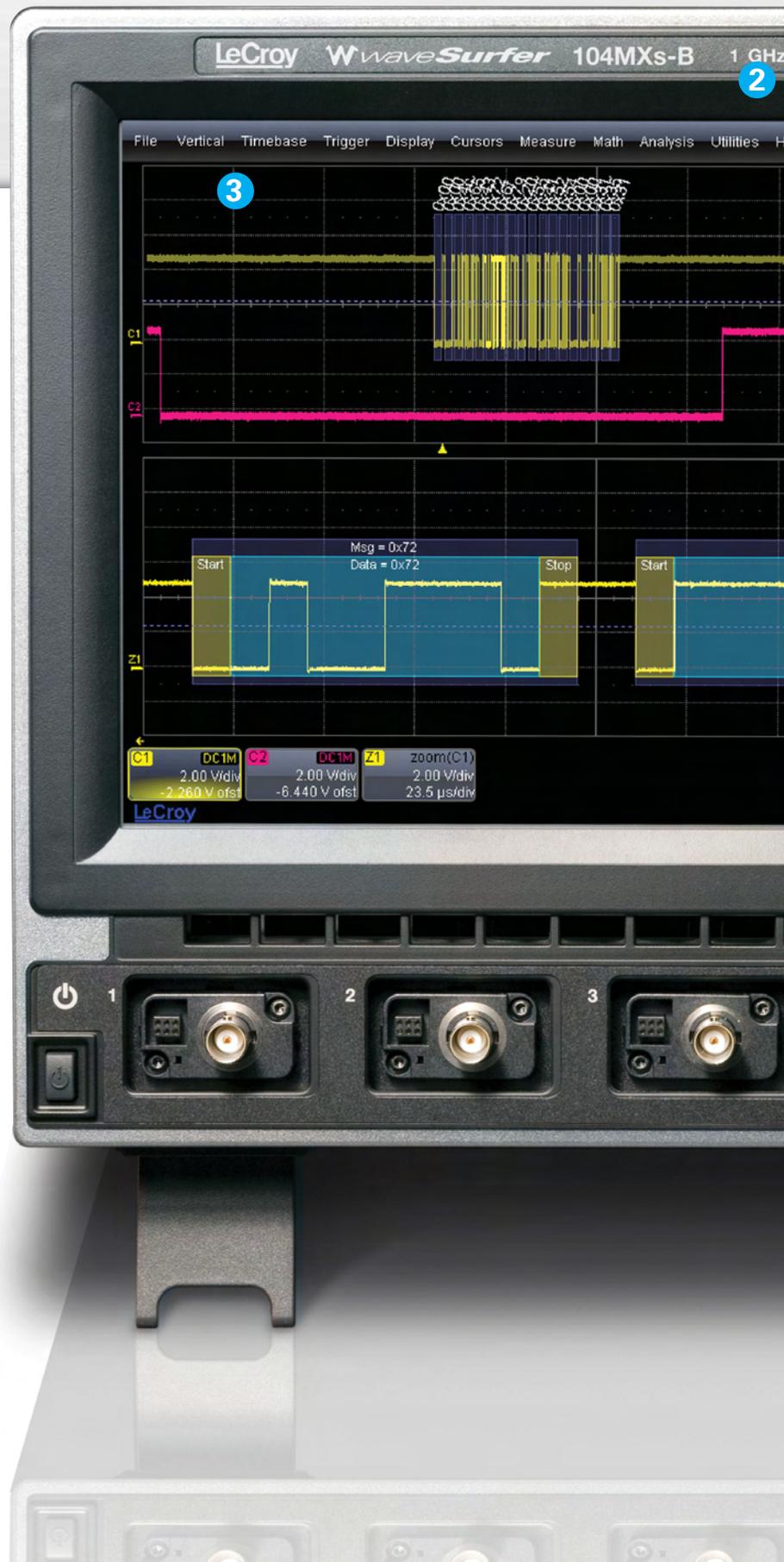
### 1. Only 15 cm (6") Deep
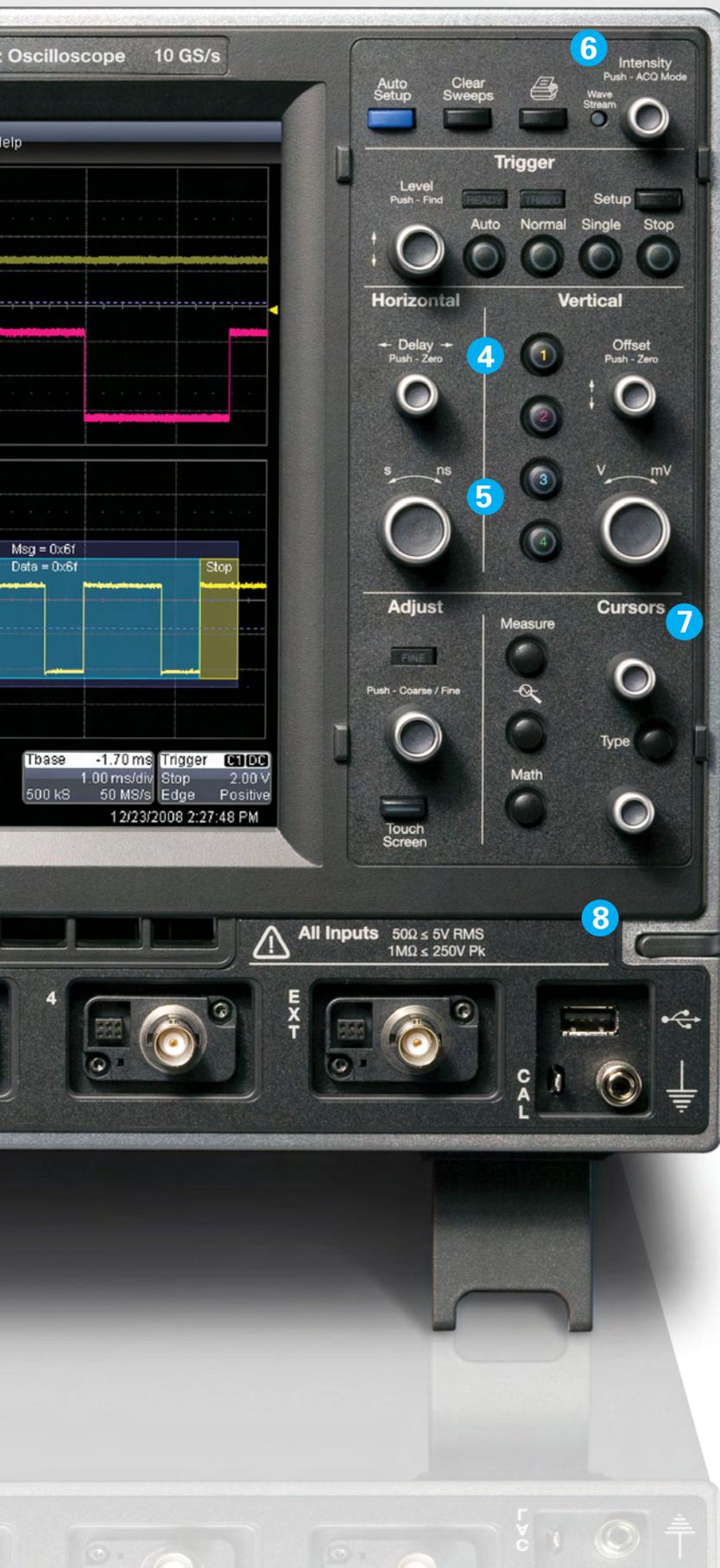The most space-efficient oscilloscope for your bench from 200 MHz to 1 GHz.

### 2. Local Language User Interface
Select from 10 language preferences. Add a front panel overlay with your local language.

### 3. Bright 10.4" Display
You'll never use a small display oscilloscope again. A fantastic viewing angle makes it easy to view.

### 4. "Push" Knobs

Trigger level, delay, and offset knobs all provide shortcuts to common actions when pushed.

### 5. Zoom Control Knobs

Navigate zoom or math traces with the multiplexed horizontal knobs.

### 6. LeCroy WaveStream Fast Viewing Mode

Provides a lively, analog-like feel similar to a phosphor trace. Adjust "trace" intensity with the front panel control, or toggle between LeCroy WaveStream and real-time modes.

### 7. Dedicated Cursor Knobs

Select type of cursor, position them on your signal, and read values without ever opening a menu.

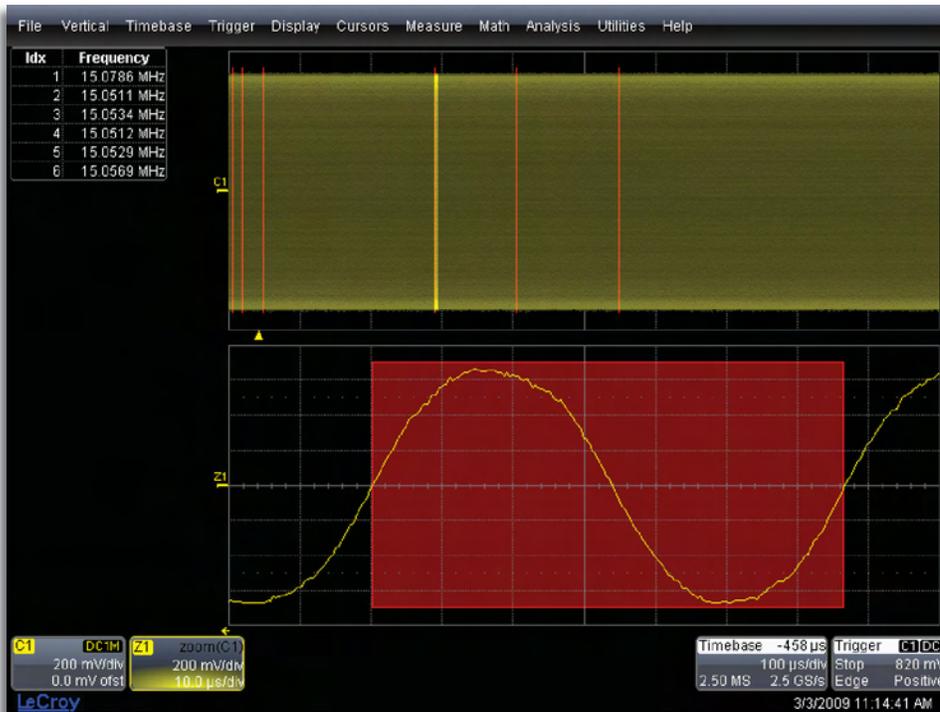### 8. Touch Screen with Built-in Stylus

The most time-efficient user interface is even easier to use with a built-in stylus.

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**Document and Share:**

- Quickly save all files with LabNotebook
- Create custom reports with LabNotebook
- Save to internal hard drive or network drive
- Print to a USB printer
- Save to USB memory stick
- Connect with LAN or GPIB
- View data on a PC with free WaveStudio utility

## Advanced Waveform Capture with Sequence Mode

Use Sequence mode to store up to 10,000 triggered events as "segments" into memory. This can be ideal when capturing many fast pulses in quick succession or when capturing events separated by long time periods. Sequence mode provides timestamps for each acquisition and minimizes dead-time between triggers to less than 800 ns. Combine Sequence mode with advanced triggers to isolate rare events over time and analyze afterwards.

## WaveScan Advanced Search

**WaveScan provides powerful isolation capabilities that hardware triggers can't provide. WaveScan provides the ability to locate unusual events in a single capture (i.e., capture and search), or "scan" for an event in many acquisitions over a long period of time. Select from more than 20 search modes to find events on any analog or digital channel or search for a pattern across multiple digital channels.**

## WaveStream Fast Viewing Mode

WaveStream provides a vibrant, intensity graded (256 levels) display with fast update rate to simulate the look and feel of an analog oscilloscope. WaveStream is helpful for seeing jitter or identifying unusual events. With sampling rate as high as 10 GS/s WaveStream is an excellent runt or glitch finder.

Since the scanning "modes" are not simply copies of the hardware triggers, the utility and capability is much higher. For instance, there is no "frequency" trigger in any oscilloscope, yet WaveScan allows for "frequency" to be quickly "scanned." This allows the user to accumulate a data 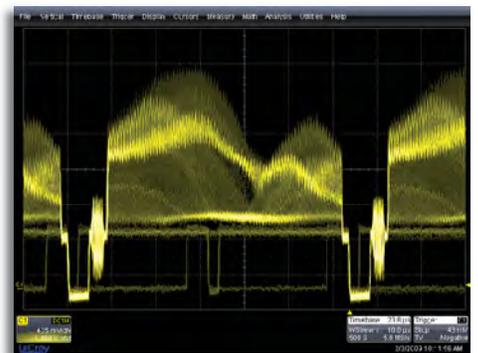set of unusual events that are separated by hours or days, enabling faster debugging. When used in multiple acquisitions, WaveScan builds on the traditional LeCroy strength of fast processing of data. A LeCroy X-Stream oscilloscope will quickly scan millions of events looking for unusual occurrences, and do it much faster and more efficiently than other oscilloscopes can.

# EMBEDDED SYSTEM DESIGN AND DEBUG

## High-performance MSO

The MSO MXs-B models provide an easy way to capture and display analog and digital signals side by side. With the ability to capture 250 MHz signals at 1 GS/s sample rate on 18 lines simultaneously the MSO MXs-B delivers performance that other MSOs cannot. Memory and sample rate are never shared with analog channels and special modes are required to get full performance. The MSO MXs-B deliver uncompromised performance in all situations.

## Serial Data Trigger and Decode

Debugging serial data busses can be confusing and time consuming. The serial data trigger and decode options for WaveSurfer MXs-B and MSO MXs-B provide time saving tools for serial bus debug and validation.



The serial data trigger will quickly isolate events on a bus eliminating the need to set manual triggers and hoping to catch the right information. Trigger conditions can be entered in binary or hexadecimal formats and conditional trigger capabilities even allow triggering on a range of different events.

Protocol decoding is shown directly on the waveform with an intuitive, color-coded overlay and presented in binary, hex or ASCII. Decoding on the WaveSurfer is fast even with long memory and zooming in to the waveform shows precise byte by byte decoding.

To further simplify the debug process all decoded data can be displayed in a table below the waveform grid. Selecting an entry in the table with the touch screen will display just that event. Additionally, built-in search functionally will find specific decoded values.
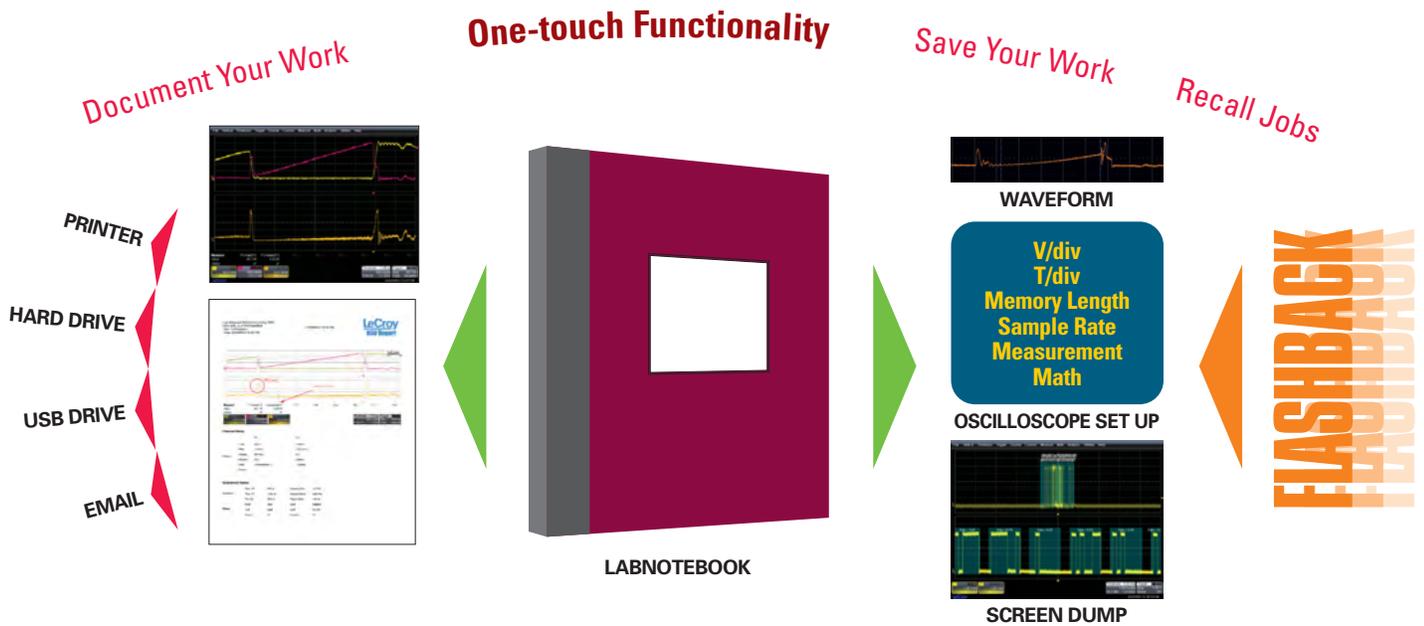
### Supported Serial Data Protocols

- I²C, SPI, UART
- CAN, LIN, FlexRay™
- USB
- Audio (I²S, LJ, RJ, TDM)
- MIL-STD-1553, ARINC 429
- MIPI D-PHY, DigRF 3G, DigRF v4

# LABNOTEBOOK™
## *A UNIQUE TOOL FOR DOCUMENTATION AND REPORT GENERATION*

**The LabNotebook feature of WaveSurfer MXs-B and MSO MXs-B provides a report generation tool to save and document all your work. Saving all displayed waveforms, relevant settings, and screen images is all done through LabNotebook, eliminating the need to navigate multiple menus to save all these files independently.**



*Document Your Work*

**One-touch Functionality**

*Save Your Work*

*Recall Jobs*

PRINTER

HARD DRIVE

USB DRIVE

EMAIL

WAVEFORM

V/div
T/div
Memory Length
Sample Rate
Measurement
Math

OSCILLOSCOPE SET UP

LABNOTEBOOK

SCREEN DUMP

FLASHBACK

*Easy report generation helps you share your findings and communicate important results.*

*LabNotebook adds a simple way to report your work and save all essential waveforms, settings, and screen images.*

*Quickly save all the necessary files with LabNotebook in a single button press.*

*Recall your settings from any report by using the Flashback capability.*

*The touch screen and stylus allow for easy annotation of the screen. LabNotebook allows you to add freehand text and graphics in multiple colors along with printed text and arrows to help identify important parts of your waveforms and measurements. Annotated screen captures can be included in custom reports.*
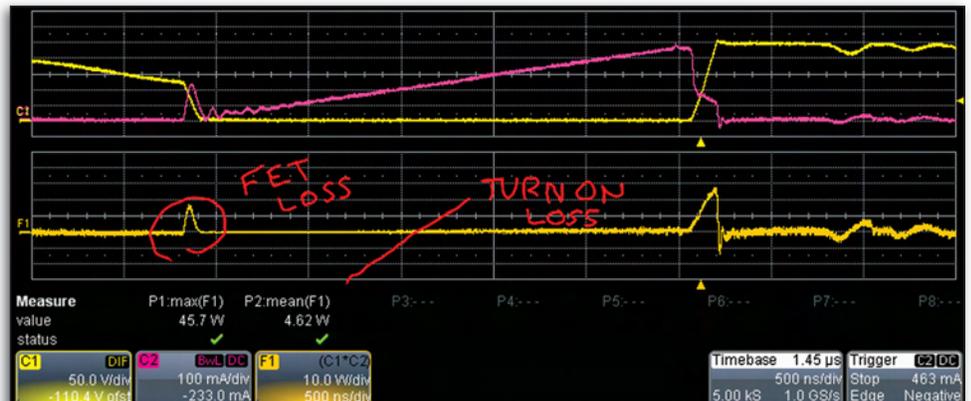
# BROAD RANGE OF PROBING SOLUTIONS

**WaveSurfer MXs-B and MSO MXs-B support a broad range of probes for a variety of applications.**

## ZS Series High Impedance Active Probes

- 1 GHz (ZS1000) and 1.5 GHz (ZS1500) bandwidths
- High Impedance (0.9 pF, 1 MΩ)
- Extensive standard and available probe tip and ground connection accessories
- ±12 Vdc offset (ZS1500)
- LeCroy ProBus system

## High-Voltage Passive Probes

- Suitable for safe, accurate high-voltage measurements
- 1.2 kV to 20 kV
- Works with any 1 MΩ input oscilloscope

## Current Probes

- Range of probes from 30 $A_{rms}$ (50 $A_{peak}$) to 500 $A_{rms}$ (700 $A_{peak}$)
- 2 MHz to 100 MHz bandwidths
- Small form factor accommodates large conductors with small jaw size
- LeCroy ProBus system

## ZD Series Differential Probes

- 200 MHz, 500 MHz, 1 GHz and 1.5 GHz bandwidths
- Wide range of probing accessories
- LeCroy ProBus system

## High-Voltage Differential Probes

- 20 MHz and 100 MHz bandwidth
- 1,000 $V_{rms}$ common mode voltage
- 1,400 $V_{peak}$ differential voltage
- EN 61010 CAT III
- 80 dB CMRR at 50/60 Hz
- LeCroy ProBus system

## AP031

- Lowest priced differential probe
- 15 MHz bandwidth
- 700 V maximum input voltage
- Works with any 1 MΩ input oscilloscope

# SPECIFICATIONS

## Analog Channels – Vertical

| Analog Channels – Vertical | WaveSurfer 24MXs-B | WaveSurfer 44MXs-B MSO 44MXs-B | WaveSurfer 42MXs-B | WaveSurfer 64MXs-B MSO 64MXs-B | WaveSurfer 62MXs-B | WaveSurfer 104MXs-B MSO 104MXs-B |
|---|---|---|---|---|---|---|
| Bandwidth (@ 50 Ω) | 200 MHz | 400 MHz | 400 MHz | 600 MHz | 600 MHz | 1 GHz |
| Rise Time | 1.75 ns | 875 ps | 875 ps | 500 ps | 500 ps | 300 ps |
| Input Channels | 4 | 4 | 2 | 4 | 2 | 4 |
| Vertical Resolution | 8 bits | | | | | |
| Vertical Sensitivity (V/div) | 2 mV/div–10 V/div (1 MΩ); 2 mV/div–1 V/div (50 Ω) | | | | | |
| Vertical (DC Gain) Accuracy | ±1.0% of full scale (typical); ±1.5% of full scale ≥ 10 mV/div (warranted) | | | | | |
| BW Limit | 20 MHz | 20 MHz, 200 MHz | | | | |
| Maximum Input Voltage | 50 Ω: 5 V$_{rms}$, 1 MΩ: 400 V max. (DC + Peak AC ≤ 5 kHz) | | | | | 50 Ω: 5 Vrms 1 MΩ: 250 V max. (DC + Peak AC ≤10 kHz) |
| Input Coupling | AC, DC, GND (DC and GND for 50 Ω) | | | | | |
| Input Impedance | 1 MΩ ∥ 16 pF, or 50 Ω | | | | | 1 MΩ ∥ 20 pF, or 50 Ω |

## Analog Channels – Acquisition

| Analog Channels – Acquisition | | | | | | |
|---|---|---|---|---|---|---|
| Sample Rate (Single-shot) | 2.5 GS/s | 5 GS/s | | 5 GS/s (10 GS/s Interleaved) | | |
| Sample Rate (Repetitive) | 50 GS/s | | | | | |
| Record Length | 12.5 Mpts/Ch (all channels), 25 Mpts (interleaved) | | | | | |
| Capture Time | Up to 2.5 ms at full sample rate on all four channels | | | | | |
| Acquisition Modes | Real Time, Roll, RIS (Random Interleaved Sampling), WaveStream (Fast Viewing Mode), Sequence (Segmented Memory up to 10,000 segments) | | | | | |
| Time Base Range | 200 ps/div–1000 s/div (roll mode from 500 ms/div–1000 s/div) | | | | | |
| Time Base Accuracy | ≤ 5 ppm @ 25 °C (typical) (≤ 10 ppm @ 5–40 °C) | | | | | |

## Digital Channels – Vertical

| Digital Channels – Vertical | | | | | | |
|---|---|---|---|---|---|---|
| Input Channels | 18 (D0–D17) | | 18 (D0–D17) | | 18 (D0–D17) | |
| Input Impedance | 100 kΩ ∥ 5.0 pF | | 100 kΩ ∥ 5.0 pF | | 100 kΩ ∥ 5.0 pF | |
| Maximum Input Voltage | ±30 V non-destruct | | ±30 V non-destruct | | ±30 V non-destruct | |
| Threshold Groupings | D0–D8, D9–D17 | | D0–D8, D9–D17 | | D0–D8, D9–D17 | |
| Threshold Selections | TTL, ECL, CMOS, PECL, LVDS, User Defined | | TTL, ECL, CMOS, PECL, LVDS, User Defined | | TTL, ECL, CMOS, PECL, LVDS, User Defined | |

## Digital Channels – Acquisition

| Digital Channels – Acquisition | | | | | | |
|---|---|---|---|---|---|---|
| Sample Rate | 1 GS/s | | 1 GS/s | | 1 GS/s | |
| Record Length | 10 Mpts/Ch | | 10 Mpts/Ch | | 10 Mpts/Ch | |
| Minimum Detectable Pulse Width | 2 ns | | 2 ns | | 2 ns | |
| Maximum Input Frequency | 250 MHz | | 250 MHz | | 250 MHz | |

| Trigger System | WaveSurfer 24MXs-B | WaveSurfer 44MXs-B MSO 44MXs-B | WaveSurfer 42MXs-B | WaveSurfer 64MXs-B MSO 64MXs-B | WaveSurfer 62MXs-B | WaveSurfer 104MXs-B MSO 104MXs-B |
|---|---|---|---|---|---|---|
| Trigger Modes | Normal, Auto, Single, and Stop | | | | | |
| Trigger Sources | Any input channel, External, Ext/10, or line; slope and level unique to each source (except for line trigger) | | | | | |
| Trigger Coupling | DC, AC, HFRej, LFRej | | | | | |
| Pre-trigger Delay | 0–100% of full scale | | | | | |
| Post-trigger Delay | 0–10,000 divisions | | | | | |
| Trigger Hold-off | 1 ns to 20 s or 1 to 1,000,000,000 events | | | | | |
| Internal Trigger Level Range | ±4.1 div from center | | | | | |
| External Trigger Range | EXT/10 ±4V; EXT ±400 mV | | | | | |
| Trigger Modes | Edge, Glitch, Width, Logic (Pattern), TV (NTSC, PAL, SECAM, HDTV–720p, 1080i, 1080p), Runt, Slew Rate, Interval (signal or Pattern), Dropout, Qualified (State or Edge) | | | | | |

### Probes

| | | | |
|---|---|---|---|
| Standard Probes | One PP009 (5 mm) per channel | | One PP011 (5 mm) per channel |
| Probing System | BNC and LeCroy ProBus for Active voltage, current and differential probes | | |

### Measure, Zoom, and Math Tools

| | |
|---|---|
| Measurement Parameters | Up to 6 of the following parameters can be calculated at one time on any waveform: Amplitude, Area, Base (Low), Delay, Duty, Fall Time (90%–10%), Fall Time (80%–20%), Frequency, Maximum, Mean, Minimum, Overshoot+, Overshoot-, Period, Peak-Peak, Phase, Rise Time (10%–90%), Rise Time (20%–80%), RMS, Skew, Standard Deviation, Top (High), Width+, Width-. Measurements can be gated. |
| Zooming | Use front panel QuickZoom button, or use touch screen or mouse to draw a box around the zoom area. |
| Math Functions | Functions include Sum, Difference, Product, Ratio, Absolute Value, Averaging (summed and continuous), Derivative, Envelope, Enhanced Resolution (to 11-bits), Floor, Integral, Invert, Reciprocal, Rescale (change scale and units), Roof, Square, Square Root and FFT (up to 1 Mpts with power spectrum output and rectangular, VonHann, and FlatTop windows). 1 math function may be defined at a time, 2 functions may be chained together. |

### Display System

| | |
|---|---|
| Display Type | Color, 10.4" TFT-LCD Touch Screen |
| Display Resolution | SVGA: 800 x 600 pixels |

### Connectivity

| | |
|---|---|
| Ethernet Port | 10/100/1000Base-T Ethernet interface (RJ-45 connector) |
| USB Ports | (5) USB Ports |
| GPIB Port (Optional) | Supports IEEE – 488.2 |
| External Monitor Port | Standard 15-pin D-Type SVGA-compatible DB-15 connector |
| Remote Control | Via Windows Automation, or via LeCroy Remote Command Set |
| Network Communication Standard | VXI-11 or VICP, LXI Class C Compliant |

### Physical

| | |
|---|---|
| Dimensions (HWD) | 260 mm x 340 mm x 152 mm Excluding accessories and projections (10.25" x 13.4" x 6") |
| Net Weight | 7.26 kg. (16.0 lbs.) |

# ORDERING INFORMATION

| Product Description | Product Code |
|---|---|

### WaveSurfer MXs-B Oscilloscopes

| | |
|---|---|
| 200 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch DSO with 10.4" Color Touch Screen Display. 25 Mpts Interleaved | WaveSurfer 24MXs-B |
| 400 MHz, 5 GS/s, 2 Ch, 12.5 Mpts/Ch DSO with 10.4" Color Touch Screen Display. 25 Mpts Interleaved | WaveSurfer 42MXs-B |
| 400 MHz, 5 GS/s, 4 Ch, 12.5 Mpts/Ch DSO with 10.4" Color Touch Screen Display. 25 Mpts Interleaved | WaveSurfer 44MXs-B |
| 600 MHz, 5 GS/s, 2 Ch, 12.5 Mpts/Ch DSO with 10.4" Color Touch Screen Display. 10 GS/s, 25 Mpts Interleaved | WaveSurfer 62MXs-B |
| 600 MHz, 5 GS/s, 4 Ch, 12.5 Mpts/Ch DSO with 10.4" Color Touch Screen Display. 10 GS/s, 25 Mpts Interleaved | WaveSurfer 64MXs-B |
| 1 GHz, 5 GS/s, 4 Ch, 12.5 Mpts/Ch DSO with 10.4" Color Touch Screen Display. 10 GS/s, 25 Mpts Interleaved | WaveSurfer 104MXs-B |

### MSO MXs-B Mixed Signal Oscilloscopes

| | |
|---|---|
| 400 MHz, 5 GS/s, 4+18 Ch, 12.5 Mpts/Ch MSO with 10.4" Color Touch Screen Display. 25 Mpts Interleaved | MSO 44MXs-B |
| 600 MHz, 5 GS/s, 4+18 Ch, 12.5 Mpts/Ch MSO with 10.4" Color Touch Screen Display. 10 GS/s, 25 Mpts Interleaved | MSO 64MXs-B |
| 1 GHz, 5 GS/s, 4+18 Ch, 12.5 Mpts/Ch MSO with 10.4" Color Touch Screen Display. 10 GS/s, 25 Mpts Interleaved | MSO 104MXs-B |

### Included with Standard Configuration (WaveSurfer MXs-B and MSO MXs-B)

| |
|---|
| ÷10, 500 MHz, 10 MΩ Passive Probe (Total of 1 Per Channel) |
| Getting Started Manual and Quick Reference Guide |
| Standard Ports: Ethernet, USB 2.0 (5), SVGA Video Out, Audio In/Out |
| Protective Front Cover |
| Anti-virus Software (Trial Version) |
| Standard Commercial Calibration and Performance Certificate |
| 3-year Warranty |

### Included with MSO MXs-B

| |
|---|
| MS-250 Mixed Signal Oscilloscope Module |
| 18 Channel Digital Lead Set |
| LeCroy Bus and USB2.0 Cables (1.3 m) |
| Ground Extenders (Qty. 20) |
| Flexible Ground Leads (Qty. 5) |
| Carrying Case |
| Operator's Manual and Quick Reference Guide |

### General Accessories

| | |
|---|---|
| Keyboard Accessory | WSXs-KYBD |
| Optical Mouse Accessory | WSXs-MOUSE |
| External GPIB Accessory | WS-GPIB |
| Hard Carrying Case | WSXs-HARDCASE |
| Soft Carrying Case | WSXs-SOFTCASE |
| Rack Mount Accessory | WSXs-RACK |
| Accessory Pouch | WSXs-POUCH |

### Mounting Accessory

| | |
|---|---|
| Clamp Mounting Stand | WSXs-MS-CLAMP |

### Local Language Overlays

| | |
|---|---|
| German Front Panel Overlay | WSXs-A-FP-GERMAN |
| French Front Panel Overlay | WSXs-A-FP-FRENCH |
| Italian Front Panel Overlay | WSXs-A-FP-ITALIAN |

| Product Description | Product Code |
|---|---|

### Local Language Overlays (cont'd)

| | |
|---|---|
| Spanish Front Panel Overlay | WSXs-A-FP-SPANISH |
| Japanese Front Panel Overlay | WSXs-A-FP-JAPANESE |
| Korean Front Panel Overlay | WSXs-A-FP-KOREAN |
| Chinese (Tr) Front Panel Overlay | WSXs-A-FP-CHNES-TR |
| Chinese (Simp) Front Panel Overlay | WSXs-A-FP-CHNES-SI |
| Russian Front Panel Overlay | WSXs-A-FP-RUSSIAN |

### Serial Data Options

| | |
|---|---|
| I²C, SPI and UART Trigger and Decode Option | WSXs-EMB |
| I²C Bus Trigger and Decode Option | WSXs-I2Cbus TD |
| UART and RS-232 Trigger and Decode Option | WSXs-UART-RS232bus TD |
| CAN, LIN and FlexRay Trigger and Decode Option | WSXs-AUTO |
| SPI Bus Trigger and Decode Option | WSXs-SPIbus TD |
| LIN Trigger and Decode Option | WSXs-LINbus TD |
| CAN TD Trigger and Decode Option | WSXs-CANbus TD |
| FlexRay Trigger and Decode Option | WSXs-FlexRaybus TD |
| MIL-STD-1553 Trigger and Decode Option | WSXs-1553 TD |
| ARINC 429 Symbolic Decode Option | WSXs-ARINC429bus DSymbolic |
| USB 2.0 Decode Option | WSXs-USB2bus D |
| D-PHY Decode Option | WSXs-DPHYbus D |
| DigRF 3G Decode Option | WSXs-DigRF3Gbus D |
| DigRF v4 Decode Option | WSXs-DigRFv4bus D |
| Audiobus Trigger and Decode Option for I²S, LJ, RJ, and TDM | WSXs-Audiobus TD |

### MSO MXs-B Accessories

| | |
|---|---|
| Large Gripper Probe Set for 0.10 Inch (2.54 mm) Pin Pitch. Includes 10 Probes with Color-coded Leads | PK400-1 |
| Medium Gripper Probe Set for 0.04 Inch (1.0 mm) Pin Pitch. Includes 10 Probes with Color-coded Leads | PK400-2 |
| Small Gripper Probe Set for 0.008 Inch (0.2 mm) Pin Pitch. Includes 10 Probes with Color-coded Leads | PK400-3 |
| 18-pin 3M Interface Cable MSO-3M (Mates with 3M Part Number 2520-6002) | MSO-3M |
| 36 Channel Mictor Connector (Includes 1 MSO-MICTOR-SHROUD) | MSO-Mictor |

### Probes and Amplifiers*

| | |
|---|---|
| Set of 4 ZS1500, 1.5 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe | ZS1500-QUADPAK |
| Set of 4 ZS1000, 1 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe | ZS1000-QUADPAK |
| 200 MHz, 3.5 pF, 1 MΩ Active Differential Probe | ZD200 |
| 500 MHz, 1.0 pF, 1 MΩ Active Differential Probe | ZD500 |
| 1 GHz, 1.0 pF, 1 MΩ Active Differential Probe | ZD1000 |
| 1.5 GHz, 1.0 pF, 1 MΩ Active Differential Probe | ZD1500 |
| 30 A; 100 MHz Current Probe – AC/DC; 30 $A_{rms}$; 50 $A_{peak}$ Pulse | CP031 |
| 30 A; 50 MHz Current Probe – AC/DC; 30 $A_{rms}$; 50 $A_{peak}$ Pulse | CP030 |
| 30 A; 50 MHz Current Probe – AC/DC; 30 $A_{rms}$; 50 $A_{peak}$ Pulse | AP015 |
| 150 A; 10 MHz Current Probe – AC/DC; 150 $A_{rms}$; 500 $A_{peak}$ Pulse | CP150 |
| 500 A; 2 MHz Current Probe – AC/DC; 500 $A_{rms}$; 700 $A_{peak}$ Pulse | CP500 |
| 1,400 V, 100 MHz High-Voltage Differential Probe | ADP305 |
| 1,400 V, 20 MHz High-Voltage Differential Probe | ADP300 |
| 1 Ch, 100 MHz Differential Amplifier with Precision Voltage Source | DA1855A |

*A wide variety of other passive, active, and differential probes are also available. Consult LeCroy for more information.

### Customer Service

LeCroy oscilloscopes and probes are designed, built, and tested to ensure high reliability. In the unlikely event you experience difficulties, our digital oscilloscopes are fully warranted for three years, and our probes are warranted for one year.

This warranty includes: No charge for return shipping • Long-term 7-year support • Upgrade to latest software at no charge

**LeCroy**

1-800-5-LeCroy
www.lecroy.com

**Local sales offices are located throughout the world.
Visit our website to find the most convenient location.**

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