TELEDYNE LECROY
Everywhereyoulook™

# BIGGEST TOUCH. BEST VALUE.


## WaveSurfer 3000z

100 MHz – 1 GHz
Oscilloscopes

MAUI

- 10.1" Capacitive Touch Screen
- 20 Mpts Memory
- Powerful, Deep Toolbox

**The WaveSurfer 3000z has a 10.1" capacitive touch display, the longest memory, and the deepest toolbox – all at an affordable price.**

# BIGGEST TOUCH.
# BEST VALUE.

WaveSurfer 3000z

## Biggest Touch

## 30% Larger


## Best Value

Digital Voltmeter

Logic Analysis with 16 Mixed Signal Capabilities

**20 Mpts**

**Powerful Triggering**

Superior Measurement Tools

History Mode

**Anomaly Detection**

WaveScan

LabNotebook

Waveform Generator (AFG)

**Multi-Instrument Capabilities**

**Powerful,**

Protocol Analysis with Serial Trigger and Decode

Pass/Fail Mask Testing

**Deep Toolbox**

**Advanced Math**

Fast Waveform Update

**The WaveSurfer 3000z has a 10.1" capacitive touch display, the longest memory, and the deepest toolbox – all at an affordable price.**

1. 10.1" Capacitive Touch Screen
2. 20 Mpts Memory
3. Powerful, Deep Toolbox

# Faster Time to Insight

**Insight** alone is not enough. Markets and **technologies** change too rapidly. The **timing** of **critical design decisions** is significant.

**Faster Time to Insight is what matters.**

TIME TO **INSIGHT**™



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# THE WAVESURFER 3000Z ATTRIBUTES

**The WaveSurfer 3000z provides the Most Advanced User Interface (MAUI) through a 10.1" capacitive touch screen. It promotes true versatility with 20 Mpts of memory, multi-instrument capabilities, a powerful, deep toolbox, and 100 MHz - 1 GHz of bandwidth.**


## Key Attributes

1. 10.1" widescreen capacitive touch screen display
2. MAUI - Most Advanced User Interface
3. Waveform Control Knobs for channel, zoom, math and memory traces
4. "Push" Knobs - push functionality provides shortcuts to common actions
5. Dedicated buttons to quickly access popular debug tools.
6. Mixed Signal Capability - 16 channel mixed signal capability
7. Easy connectivity with an ethernet and four USB 2.0 Ports
8. Rotating and tilting feet for four different viewing positions



9. WaveSource Ouput for Built-in Function Generator
10. Micro SD Port - 16 GB (or larger) micro SD card installed standard
11. External Monitor DB-15 connector (Support resolution of 1024 x 600)
12. USBTMC (Test and Measurement Class) over USB 2.0 for remote connectivity
13. Small Footprint

# WAVESURFER 3000z AT A GLANCE

## Key Features

**100 MHz, 200 MHz, 350 MHz, 500 MHz and 1 GHz bandwidths**

**Up to 4 GS/s sample rate**

**Long Memory – up to 20 Mpts**

**10.1" capacitive touch screen display**

**16 Digital Channel MSO option**

**MAUI - Most Advanced User Interface**
- Designed for Touch
- Built for Simplicity
- Made to Solve

**Advanced Anomaly Detection**
- Fast Waveform Update
- History Mode - Waveform Playback
- WaveScan - Search and Find

**Multi-Instrument Capabilities**
- Protocol Analysis - Serial Trigger and Decode
- Waveform Generation - Built-in Function Generator
- Digital Voltmeter and Frequency Counter

**Future Proof**
- Upgradeable Bandwidth
- Field Upgradable Software and Hardware Options


### Superior User Experience

MAUI is the most advanced oscilloscope user interface. It is designed for touch, built for simplicity, and made to solve.

### Advanced Anomaly Detection

A fast waveform update rate, used in conjunction with history mode, WaveScan, sequence mode, and mask testing facilitates outstanding waveform anomaly detection.

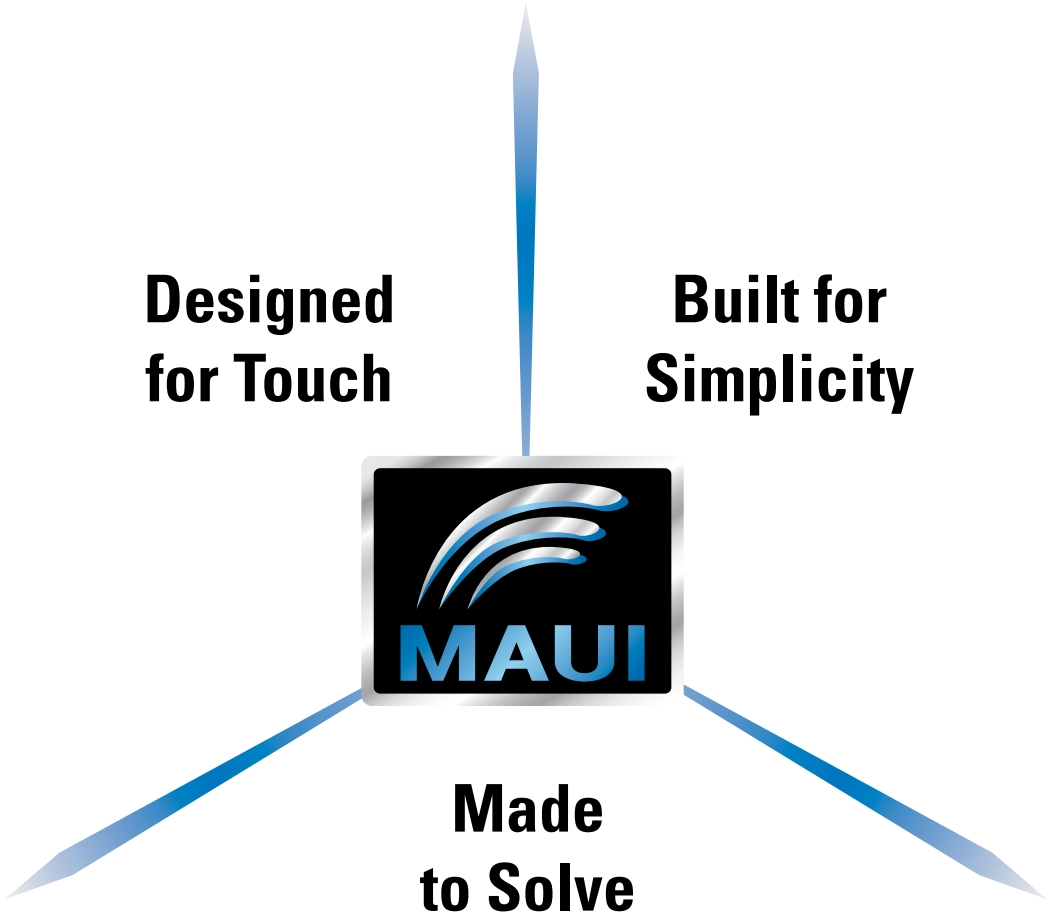
### Biggest Touch Display

A large capacitive touch screen enables accessible and responsive touch operation. The 10.1" display is 30% larger than competitive offerings, providing more waveform viewing area.

### Powerful, Deep Toolbox

The standard collection of math, measurement, debug, and documentation tools provides unsurpassed analysis capabilities.

# MAUI – SUPERIOR USER EXPERIENCE




## Designed for Touch

MAUI is designed for touch. Operate the oscilloscope just like a phone or tablet with the most unique touch screen features on any oscilloscope. All important controls are always one touch away. Touch the waveform to position or zoom in for more details using intuitive actions.

## Built for Simplicity

MAUI is built for simplicity. Basic waveform viewing and measurement tools as well as advanced math and analysis capabilities are seamlessly integrated in a single user interface. Time saving shortcuts and intuitive dialogs simplify setup and shorten debug time.

## Made to Solve

MAUI is made to solve. A deep set of integrated debug and analysis tools help identify problems and find solutions quickly. Unsurpassed integration provides critical flexibility when debugging. Solve problems fast with powerful analysis tools.

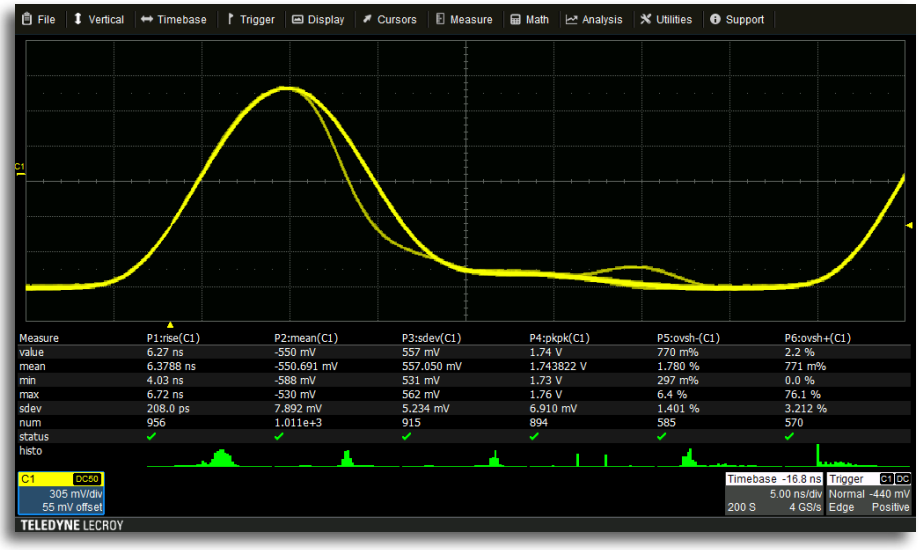
# ADVANCED ANOMALY DETECTION


## WaveScan Advanced Search

- Locate unusual events in a single capture or scan for an anomalies across many acquisitions
- More than 20 modes can be applied to analog or digital channels

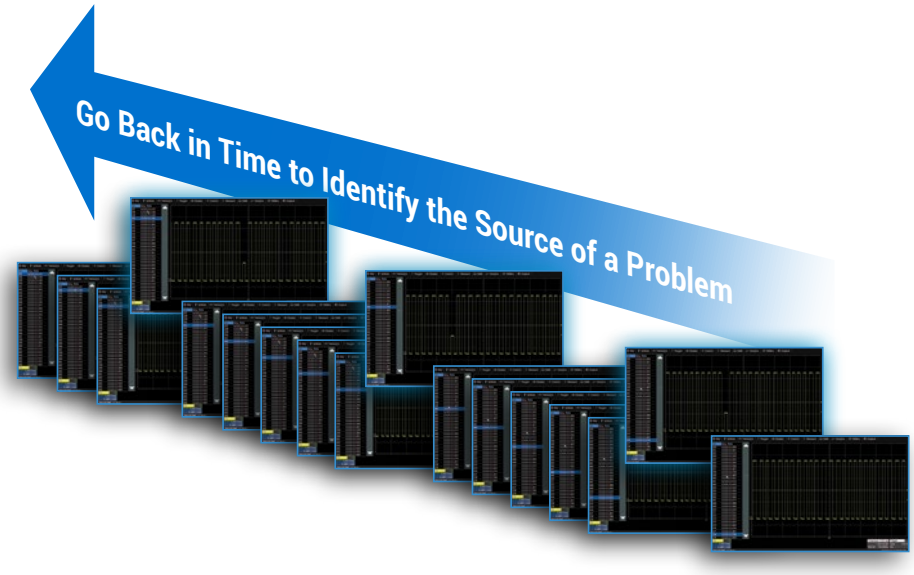

## Pass/Fail Mask Testing

- Mask testing to quickly identify anomalies and mark their location.
- A history of these pass/fail results can be displayed



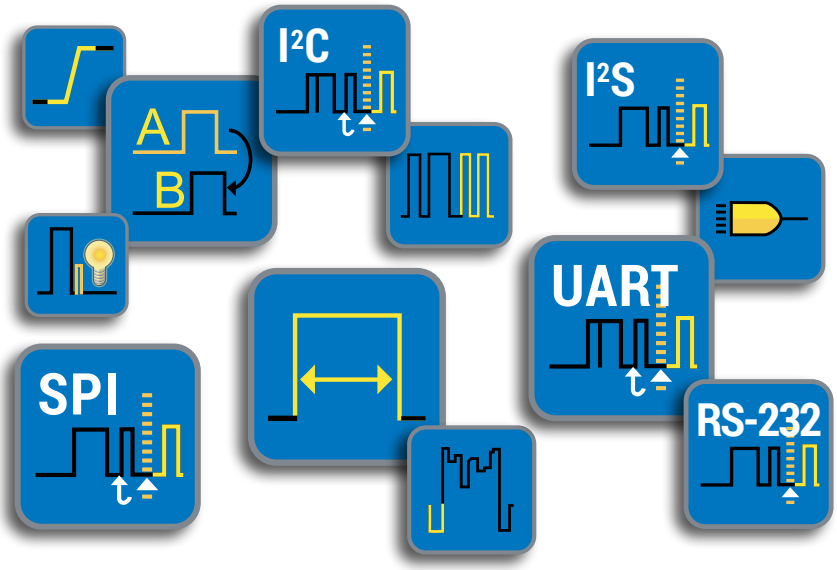

## Fast Waveform Update

- An update rate of over 130,000 waveforms per second will easily display random or infrequent events
- Changes over time can be seen with the intensity graded persistence display



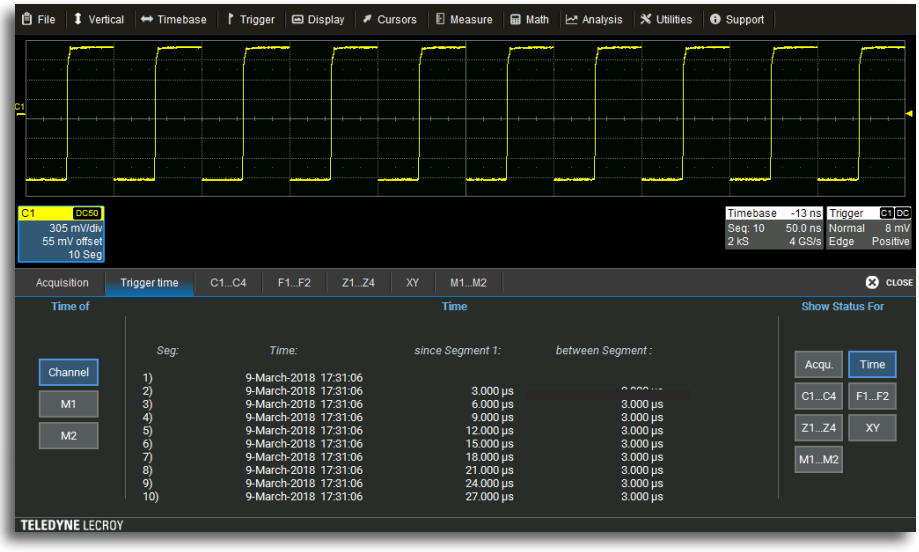

## History Mode Waveform Playback

- View previous waveforms to discover past anomalies
- Use cursors and measurement parameters to quickly identify the source of problems
- History mode is always enabled and accessible through the click of a button




## Powerful Triggering

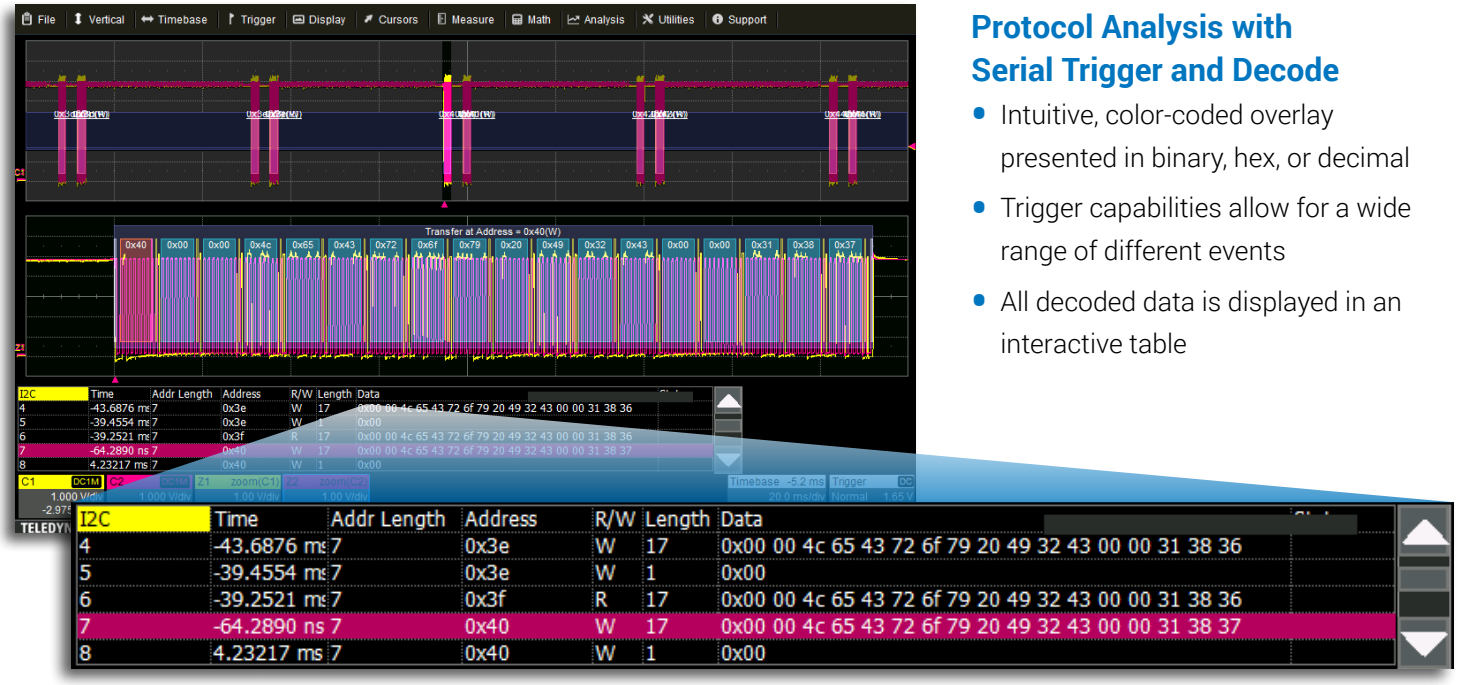
- Basic triggering such as edge or width can be used for everyday solutions
- Qualified triggering enables the ability to trigger across multiple channels
- Powerful logic triggering can be setup to catch a parallel pattern
- Smart triggers such as runt, dropout, or interval help isolate anomalies quickly
- Serial data triggering adds protocol specific triggers




## Advanced Waveform Capture with Segmented Memory

- Save waveforms into segmented memory
- Capture fast pulses in quick succession or events separated by long time intervals
- Combine Sequence mode with advanced triggers to isolate rare events

# MULTI-INSTRUMENT CAPABILITIES




## Protocol Analysis with Serial Trigger and Decode

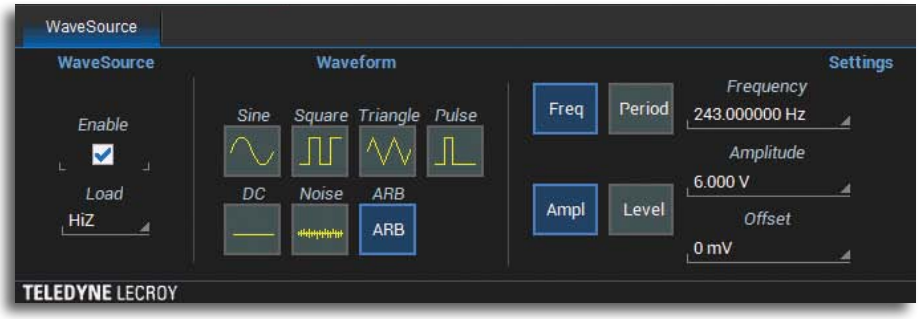
- Intuitive, color-coded overlay presented in binary, hex, or decimal
- Trigger capabilities allow for a wide range of different events
- All decoded data is displayed in an interactive table


## Precise Measurements with Digital Voltmeter

- 4-digit digital voltmeter
- 5-digit frequency counter
- Any channel can be selected as a source
- Voltage readings can be set to DC, DC RMS, or AC RMS
- Measurements will continue to be updated even when triggering is stopped


## Logic Analysis with 16 Channel Mixed Signal Capability

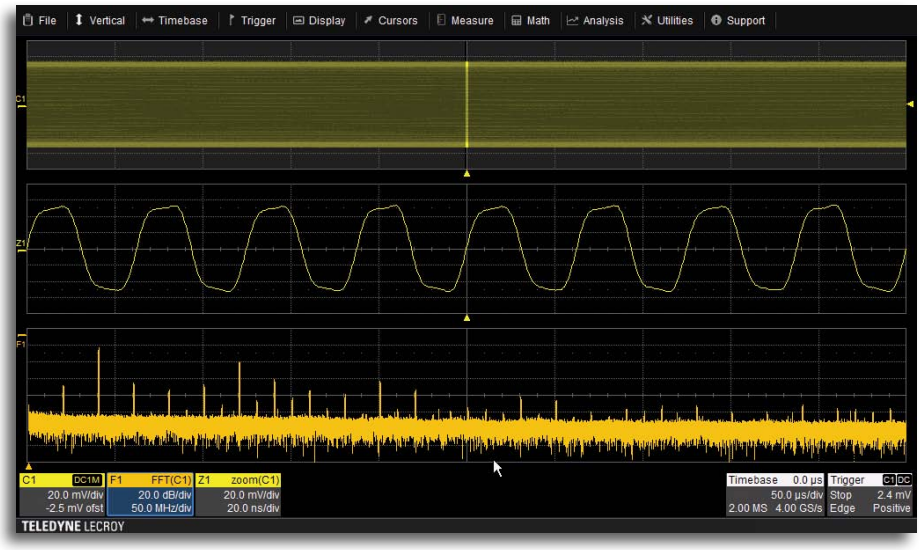
- Simultaneously view, measure, and analyze both analog and 16 digital signals
- Analog and digital channels can be incorporated into a single pattern trigger
- WaveScan, trends, statistics, and histicons provide insight to find anomalies in digital waveforms




## Waveform Generation with Built-in Function Generator

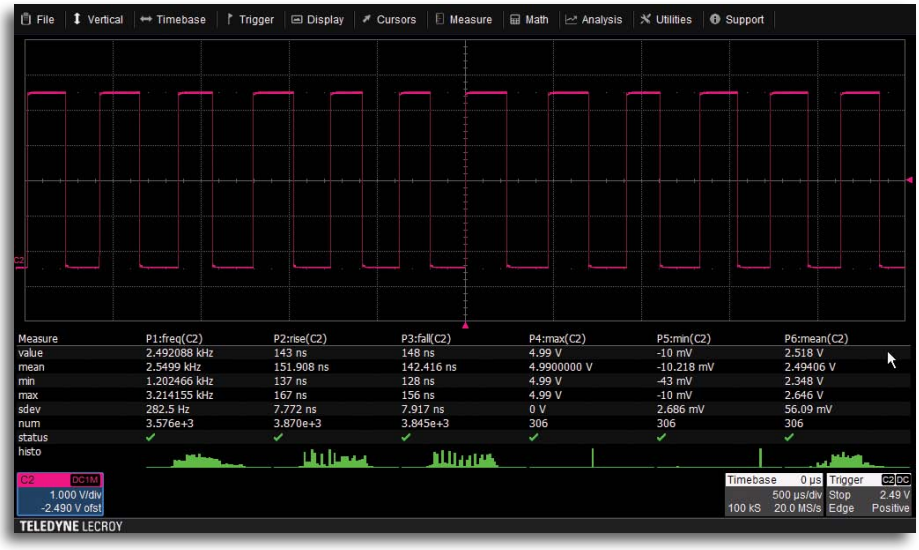
- Frequencies of up to 25 MHz
- Waveform Options: sine, square, pulse, ramp, triangle, noise and DC waveforms
- Rear panel BNC output
- Saved waveforms can be uploaded into the WaveSource to generate arbitrary waveforms

# POWERFUL, DEEP TOOLBOX



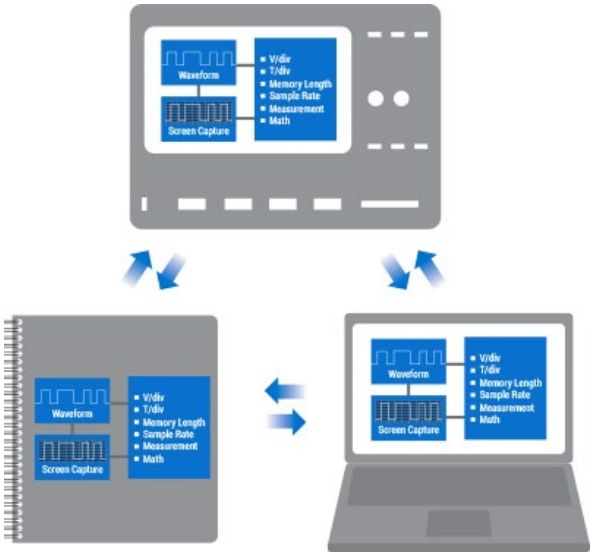

## Advanced Math Capabilities

- A deep set of 20 math functions provide quick insight into waveforms
- Dedicated Grid for Math Traces
- Any Channel, Measurement, or Analysis Package can have a math function applied




## Superior Measurement Tools

- 24 measurement parameters
- Additional statistics and histicons can be applied to each parameter
- Trends can be displayed for any measurement




## LabNotebook Documentation Tool

- Save all displayed waveforms, oscilloscope setup file, and a screen image with a single button press
- Recall LabNotebook files onto the oscilloscope
- View the LabNotebook files on a PC using WaveStudio

# PROBES

**Teledyne LeCroy offers an extensive range of probes to meet virtually every probing need.**

| | | |
|---|---|---|
| **ZS Series High Impedance Active Probes (1 GHz - 1.5 GHz)**<br>ZS1000, ZS1000-QUADPAK<br>ZS1500, ZS1500-QUADPAK |  | The active voltage probe can become the everyday probe for all different types of signals and connection points. |
| **Differential Probes (200 MHz – 1.5 GHz)**<br>ZD200, ZD500, ZD1000, ZD1500,<br>AP033 |  | These active differential probes are ideal for applications such as automotive electronics and data communications. |
| **Active Voltage/Power Rail Probe (4 GHz)**<br>RP4030 |  | The Active Rail Probe is specifically designed to probe a low impedance power/voltage rail. |
| **High Voltage Fiber Optically-isolated Probe (60 MHz)**<br>HVFO103 |  | The HVFO103 is ideal for measurement of small signals floating on an HV bus in power electronics designs or for EMC, EFT, ESD, and RF immunity testing sensor monitoring. |
| **HVD Series High Voltage Differential Probes (120 MHz)**<br>HVD3102A, HVD3106A (1 kV)<br>HVD3206A (2 kV)<br>HVD3605A (6 kV) |  | HVDs are rated for wide differential voltage swings - ideal for power electronics circuits. |
| **High Voltage Passive Probes**<br>HVP120 (1 kV),<br>PPE4KV, PPE5KV, PPE6KV |  | High Voltage Single-ended passive probes that are ideal for lightning/surge or EFT testing, or for probing in-circuit beyond the range of a LV-rate passive probe. |
| **Current Probes (100 MHz)**<br>CP030, CP030-3M, CP030A<br>CP031, CP031A<br>CP150, CP150-6M<br>CP500, DCS015 |  | Current probes with peak currents of 700 A and sensitivities to 1 mA/div. Ideal for component or power conversion system input/output measurements. |
| **Probe Adapters**<br>TPA10, TPA10-QUADPAK |  | TPA10 adapts supported Tektronix TekProbe-compatible probes to Teledyne LeCroy ProBus interface. |

# SPECIFICATIONS

| | WaveSurfer 3014z | WaveSurfer 3024z | WaveSurfer 3034z | WaveSurfer 3054z | WaveSurfer 3104z |
|---|---|---|---|---|---|
| **Analog - Vertical** | | | | | |
| Analog Bandwidth @ 50Ω (-3dB) | 100 MHz | 200 MHz | 350 MHz | 500 MHz | 1 GHz |
| Rise time | 3.5 ns (typical) | 1.75 ns (typical) | 1 ns (typical) | 800 ps (typical) | 430 ps (typical) |
| Input Channels | 4 | | | | |
| Vertical Resolution | 8-bits; up to 11-bits with enhanced resolution (ERES) | | | | |
| Sensitivity | 50 Ω: 1mV/div - 1 V/div; 1 MΩ: 1 mV/div - 10 V/div | | | | |
| DC Gain Accuracy | ±(1.5%) Full Scale, Offset at 0V, > 5mV/div; ±(2.5%) < 5 mV/div | | | | |
| BW Limit | 20 MHz | | 20 MHz, 200 MHz | | |
| Maximum Input Voltage | 50 Ω: 5 Vrms, ±10 V Peak; 1 MΩ: 400 V max (DC + Peak AC ≤ 10 kHz) | | | | |
| Input Coupling | 50 Ω: DC, GND; 1 MΩ: AC, DC, GND | | | | |
| Input Impedance | 50 Ω ±2.0%, 1 MΩ ±2.0% \|\| 16 pF | | | | |
| Offset Range | 50 Ω: 1 mV - 19.8 mV: ±2 V, 20 mV - 100 mV: ±5 V, 102 mV - 198 mV: ±20 V, 200 mV - 1 V: ±50 V<br>1 MΩ: 1 mV - 19.8 mV: ±2 V, 20 mV - 100 mV: ±5 V, 102 mV - 198 mV: ±20 V, 200 mV - 1 V: ±50 V,<br>1.02 V - 1.98 V: ±200 V, 2 V - 10 V: ±400 V | | | | |
| Offset Accuracy | ±(1.0% of offset value + 1.5%FS + 1 mV) | | | | |
| **Analog - Acquisition** | | | | | |
| Sample Rate (Single-shot) | 1 GS/s<br>(2 GS/s interleaved) | 2 GS/s<br>(4 GS/s interleaved) | | | |
| Sample Rate (Repetitive) | 50 GS/s | | | | |
| Standard Memory ( 4 Ch / 2 Ch) | 10 Mpts / 20 Mpts | | | | |
| Acquisition Modes | Real Time, Roll, RIS (Random Interleaved Sampling),<br>Sequence (Segmented Memory up to 1,000 segments with 1µs minimum intersegment time) | | | | |
| Real Time Timebase Range | 5 ns/div - 100 s/div | 2 ns/div - 100 s/div | | 1 ns/div - 100 s/div | 500 ps/div - 100 s/div |
| RIS Mode Timebase Range | 5 ns/div - 10 ns/div | 2 ns/div - 10 ns/div | | 1 ns/div - 10 ns/div | 500 ps/div - 10 ns/div |
| Roll Mode Timebase Range | Up to 100 s/div (roll mode is user selectable at ≥ 50 ms/div) | | | | |
| Timebase Accuracy | ±10 ppm measured over > 1ms interval | | | | |
| **Digital - Vertical and Acquisition (WS3K-MSO Option Only)** | | | | | |
| Input Channels | 16 Digital Channels | | | | |
| Threshold Groupings | Pod 2: D15 - D8, Pod 1: D7 - D0 | | | | |
| Threshold Selections | TTL(+1.4V), 5V CMOS (+2.5V), ECL (-1.3V) or User Defined | | | | |
| Maximum Input Voltage | ±30V Peak | | | | |
| Threshold Accuracy | ±(3% of threshold setting + 100mV) | | | | |
| Input Dynamic Range | ±20V | | | | |
| Minimum Input Voltage Swing | 500mVpp | | | | |
| Input Impedance (Flying Leads) | 100 kΩ \|\| 5 pF | | | | |
| Maximum Input Frequency | 125 MHz | | | | |
| Sample Rate | 500 MS/s | | | | |
| Record Length | 10MS - 16 Channels | | | | |
| Minimum Detectable Pulse Width | 4 ns | | | | |
| Channel-to-Channel Skew | ± (1 digital sample interval) | | | | |
| User defined threshold range | ±10V in 20mV steps | | | | |
| **Trigger System** | | | | | |
| Modes | Auto, Normal, Single, Stop | | | | |
| Sources | Any input channel, External, Ext/5, or line; slope and level unique to each source (except for line trigger) | | | | |
| Coupling | DC, AC, HFREJ, LFREJ | | | | |
| Pre-trigger Delay | 0-100% of full scale | | | | |
| Post-trigger Delay | 0-10,000 Divisions | | | | |
| Hold-off | 10ns up to 20s or 1 to 100,000,000 events | | | | |
| Internal Trigger Level Range | ±4.1 Divisions | | | | |
| External Trigger Level Range | Ext: ±610mV, Ext/5: ±3.05V | | | | |
| Trigger Types | Edge, Width, Logic (Pattern), TV (NTSC, PAL, SECAM, HDTV - 720p, 1080i, 1080p), Runt, Slew Rate,<br>Interval (Signal or Pattern), Dropout, Qualified (State or Edge); External and Ext/5 support edge trigger only. | | | | |
| **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, Delay, Duty Cycle, Fall Time (90%–10%), Fall Time (80%–20%), Frequency, Maximum, Mean, Minimum, Overshoot+, Overshoot-, Peak-Peak, Period, Phase, Rise Time (10%–90%), Rise Time (20%–80%), RMS, Skew, Standard Deviation, Top, Width+, Width-. Statistics and histicons can be added to measurements. 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 | Up to 2 of the following functions can be calculated at one time: Sum, Difference, Product, Ratio, Absolute Value, Average, Derivative, Enhanced Resolution, Envelope, Floor, Integral, Invert, Reciprocal, Rescale, Roof, SinX/x, Square, Square Root, Trend, Zoom and FFT (up to 1 Mpts with power spectrum output and rectangular, VonHann, and FlatTop windows). | | | | |
| **Probes** | | | | | |
| Standard Probes | One PP019 (5mm) per channel | | One PP020 (5mm) per channel | | |
| Probing System | BNC and Teledyne LeCroy ProBus for Active voltage, current and differential probes | | | | |

# SPECIFICATIONS

| | WaveSurfer 3014z | WaveSurfer 3024z | WaveSurfer 3034z | WaveSurfer 3054z | WaveSurfer 3104z |
|---|---|---|---|---|---|

## Display System

| | |
|---|---|
| Display Size | 10.1" widescreen capacitive touch screen |
| Display Resolution | 1024 x 600 |

## Connectivity

| | |
|---|---|
| Ethernet Port | 10/100Base-T Ethernet interface (RJ-45 connector) |
| Removable Storage | (1) MicroSD Port - 16 GB micro SD card installed standard |
| USB Host Ports | (4) USB 2.0 Ports Total – (2) Front USB 2.0 Ports |
| USB Device Port | (1) USBTMC |
| GPIB Port (Optional) | Supports IEEE – 488.2 |
| External Monitor Port | Standard DB-15 connector (support resolution of 1024x600) |
| Remote Control | Via Windows Automation, or via Teledyne LeCroy Remote Command Set |
| Network Communication Standard | VICP and LXI compatible |

## Power Requirements

| | |
|---|---|
| Voltage | 100 - 240 VAC ± 10% at 50-60 Hz +/-5%; 100 - 120 VAC ± 10% at 400 Hz +/- 5%; Automatic AC Voltage Selection |
| Power Consumption (Nominal) | 80 W / 80 VA |
| Power Consumption (Max) | 150 W / 150 VA (with all PC peripherals, digital leadset and active probes connected to 4 channels) |

## Environmental

| | |
|---|---|
| Temperature | Operating: 0 °C to 50 °C; Non-Operating: -30 °C to 70 °C |
| Humidity | Operating: 5% to 90% relative humidity (non-condensing) up to ≤ 30 °C, Upper limit derates to 50% relative humidity (non-condensing) at +50 °C<br>Non-Operating: 5% to 95% relative humidity (non-condensing) as tested per MIL-PRF-28800F |
| Altitude | Operating: 3,048 m (10,000 ft) max at ≤ 25C; Non-Operating: Up to 12,192 meters (40,000 ft) |

## Physical

| | |
|---|---|
| Dimensions (HWD) | 10.63"H x 14.96"W x 4.92"D (270 mm x 380 mm x 125 mm) |
| Weight | 4.81 kg (10.6 lbs) |

## Regulatory

| | |
|---|---|
| CE Certification | Low Voltage Directive 2014/35/EU; EN 61010-1:2010, EN 61010-2-030:2010<br>EMC Directive 2014/30/EU; EN 61326-1:2013, EN61326-2-1:2013; RoHS2 Directive 2011/65/EU |
| UL and cUL Listing | UL 61010-1, UL 61010-2-030:2010, 3rd Edition; CAN/CSA C22.2 No. 61010-1-12 |

## Digital Voltmeter (optional)

| | |
|---|---|
| Functions | $AC_{rms}$, DC, $DC_{rms}$, Frequency |
| Resolution | ACV/DCV: 4 digits, Frequency: 5 digits |
| Measurement Rate | 100 times/second, measurements update on the display 5 times/second |
| Vertical Settings Autorange | Automatic adjustment of vertical settings to maximize the dynamic range of measurements |

## WaveSource Function Generator (optional)

### General

| | |
|---|---|
| Max Frequency | 25 MHz |
| Channels | 1 |
| Sample Rate | 125 MS/s |
| Arbitrary Waveform Length | 16 kpts |
| Frequency Resolution | 1 µHz |
| Vertical Resolution | 14-bit |
| Vertical Range | ±3V (HiZ); ±1.5V (50 Ω) |
| Waveform Types | Sine, Square, Pulse, Ramp, Noise, DC |

### Frequency Specification

| | |
|---|---|
| Sine | 1 µHz - 25 MHz |
| Square/Pulse | 1 µHz - 10 MHz |
| Ramp/Triangular | 1 µHz - 300 KHz |
| Noise | 25 MHz (-3dB) |
| Resolution | 1 µHz |
| Accuracy | ±50 ppm, over temperature |
| Aging | ±3 ppm/year, first year |

### Output Specification

| | |
|---|---|
| Amplitude | 4 mVpp - 6 Vpp (HiZ); 2 mVpp - 3 Vpp(50 Ω) |
| Vertical Accuracy | ±(0.3dB + 1 mV) |
| Amplitude Flatness | ±0.5dB |

### DC Offset

| | |
|---|---|
| Range (DC) | ±3V (HiZ); ±1.5V (50 Ω) |
| Offset Accuracy | ±(1% of offset value + 3 mV) |

### Waveform Output

| | |
|---|---|
| Impedance | 50 Ω ± 2% |
| Protection | Short-circuit protection |

### Sine Spectrum Purity

| | |
|---|---|
| SFDR (Non Harmonic) @1.265Vpp | |
| DC-1 MHz | -60dBc |
| 1 MHz - 5 MHz | -55dBc |
| 5 MHz - 25 MHz | -50dBc |
| Harmonic Distortion @1.265Vpp | |
| DC - 5 MHz | -50dBc |
| 5 MHz - 25 MHz | -45dBc |

### Square/Pulse

| | |
|---|---|
| Rise/fall time | 24 ns (10% - 90%) |
| Overshoot | 3% (typical - 1 kHz, 1 Vpp) |
| Pulse Width | 50 ns min. |
| Jitter | 500ps + 10ppm of period (RMS cycle to cycle) |

### Ramp/Triangle

| | |
|---|---|
| Linearity | 0.1% of Peak value output (typical - 1 kHz, 1 Vpp, 100% symmetric) |
| Symmetry | 0% to 100% |

# ORDERING INFORMATION

| Product Description | Product Code |
|---|---|
| **WaveSurfer 3000z Oscilloscopes** | |
| 100 MHz, 2 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode | WaveSurfer 3014z |
| 200 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode | WaveSurfer 3024z |
| 350 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode | WaveSurfer 3034z |
| 500 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode | WaveSurfer 3054z |
| 1 GHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode | WaveSurfer 3104z |
| **Included with Standard Configurations** | |
| ÷10 Passive Probe (Total of 1 Per Channel), 1 Micro SD card (Installed), Micro SD card adapter, Protective Front Cover, Getting Started Guide, Commercial NIST Traceable Calibration with Certificate, Power Cable for the Destination Country, 3-year Warranty | |
| **General Accessories** | |
| External GPIB Accessory | USB2-GPIB |
| Soft Carrying Case | WS3K-SOFTCASE |
| Rack Mount Accessory | WS3K-RACK |
| **Local Language Overlays** | |
| German Front Panel Overlay | WS3K-FP-GERMAN |
| French Front Panel Overlay | WS3K-FP-FRENCH |
| Italian Front Panel Overlay | WS3K-FP-ITALIAN |
| Spanish Front Panel Overlay | WS3K-FP-SPANISH |
| Japanese Front Panel Overlay | WS3K-FP-JAPANESE |
| Korean Front Panel Overlay | WS3K-FP-KOREAN |
| Chinese (Tr) Front Panel Overlay | WS3K-FP-CHNES-TR |
| Chinese (Simp) Front Panel Overlay | WS3K-FP-CHNES-SI |
| Russian Front Panel Overlay | WS3K-FP-RUSSIAN |
| **Multi-Instrument Options** | |
| MSO software option and 16 Channel Digital probe leadset | WS3K-MSO |
| MSO License (MS Probe Not Included) | WS3K-MSO-LICENSE |
| Function Generator Option | WS3K-FG |
| Audiobus Trigger and Decode Option for I²S, LJ, RJ, and TDM | WS3K-Audiobus TD |
| CAN and LIN Trigger and Decode Option | WS3K-AUTO |
| CAN FD Trigger and Decode Option | WS3K-CAN FDbus TD |
| I²C, SPI, UART and RS-232 Trigger and Decode Option | WS3K-EMB |
| FlexRay Trigger and Decode Option | WS3K-FlexRaybus TD |
| Power Analysis Option | WS3K-PWR |
| **Probes** | |
| 250 MHz Passive Probe 10:1, 10 MΩ | PP019 |
| 500 MHz Passive Probe 10:1, 10 MΩ | PP020 |
| 700 V, 15 MHz High-Voltage Differential Probe | AP031 |

| Product Description | Product Code |
|---|---|
| **Probes (Cont'd)** | |
| Power/Voltage Rail Probe. 4 GHz bandwidth, 1.2x attenuation, ±30V offset, ±800mV | RP4030 |
| Browser for use with RP4030 | RP4000-BROWSER |
| 1,500 V, 120 MHz High-Voltage Differential Probe | HVD3106A |
| 1kV, 80 MHz High Voltage Differential Probe with 6m cable | HVD3106A-6M |
| 1kV, 120 MHz High Voltage Differential Probe without tip Accessories | HVD3106A-NOACC |
| 1,500 V, 25 MHz High-Voltage Differential Probe | HVD3102A |
| 1kV, 25 MHz High Voltage Differential Probe without tip Accessories | HVD3102A-NOACC |
| 2kV, 120 MHz High Voltage Differential Probe | HVD3206A |
| 2kV, 80 MHz High Voltage Differential Probe with 6m cable | HVD3206A-6M |
| 6kV, 100 MHz High Voltage Differential Probe | HVD3605A |
| High Voltage Fiber Optic Probe, 60 MHz (requires accessory tip) | HVFO103 |
| ±1V (1x) Tip Accessory for HVFO103 | HVFO100-1X-TIP |
| ±5V (5x) Tip Accessory for HVFO103 | HVFO100-5X-TIP |
| ±20V (20x) Tip Accessory for HVFO103 | HVFO100-20X-TIP |
| 30 A; 100 MHz Current Probe – AC/DC; 30 $A_{rms}$; 50 $A_{peak}$ Pulse | CP031 |
| 30 A; 100 MHz High Sensitivity Current Probe – AC/DC; 30 $A_{rms}$; 50 $A_{peak}$ Pulse | CP031A |
| 30 A; 50 MHz Current Probe – AC/DC; 30 $A_{rms}$; 50 $A_{peak}$ Pulse | CP030 |
| 30 A; 50 MHz High Sensitivity Current Probe – AC/DC; 30 $A_{rms}$; 50 $A_{peak}$ Pulse | CP030A |
| 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 |
| Deskew Calibration Source for CP031, CP030 and AP015 | DCS025 |
| 500 MHz Differential Probe | AP033 |
| 200 MHz, 3.5 pF, 1 MΩ Active Differential Probe, ±20 V, 60V common-mode | ZD200 |
| 1 GHz, 1.0 pF, 1 MΩ Active Differential Probe, ±8 V, 10V common-mode | ZD1000 |
| 1.5 GHz, 1.0 pF, 1 MΩ Active Differential Probe, ±8 V, 10V common-mode | ZD1500 |
| 1 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe | ZS1000 |
| Set of 4 ZS1000 | ZS1000-QUADPAK |
| 1.5 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe | ZS1500 |
| Set of 4 ZS1500 | ZS1500-QUADPAK |
| 100:1 400 MHz 50 MΩ 1 kV High-voltage Probe | HVP120 |
| 100:1 400 MHz 50 MΩ 4 kV High-voltage Probe | PPE4KV |
| 1000:1 400 MHz 50 MΩ 5 kV High-voltage Probe | PPE5KV |
| 1000:1 400 MHz 50 MΩ 6 kV High-voltage Probe | PPE6KV |
| **Probe Adapters** | |
| TekProbe to ProBus Probe Adapter | TPA10 |
| Set of 4 TPA10 TekProbe to ProBus Probe Adapters. Includes soft carrying case. | TPA10-QUADPAK |

Teledyne 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

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