

BIGGEST TOUCH. BEST VALUE.



WaveSurfer 3000z

100 MHz – 1 GHz Oscilloscopes



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.

teledynelecroy.com/oscilloscope/wavesurfer-3000z-oscilloscopes



BIGGEST TOUCH. BEST VALUE.

WaveSurfer 3000z

Biggest Touch



Best Value 30% Larger



Digital Voltmeter Logic Analysis with 16 Mixed Signal Capabilities

20 Mpts Powerful Triggering Superior Measurement Tools

History Mode Anomaly Detection

WaveScan LabNotebook Waveform Generator

Multi-Instrument Capabilities (AFG)

Protocol Analysis with Serial Trigger and Decode

Pass/Fail Deep Toolbox

Mask Testing 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.

- 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.



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
- 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







- 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.

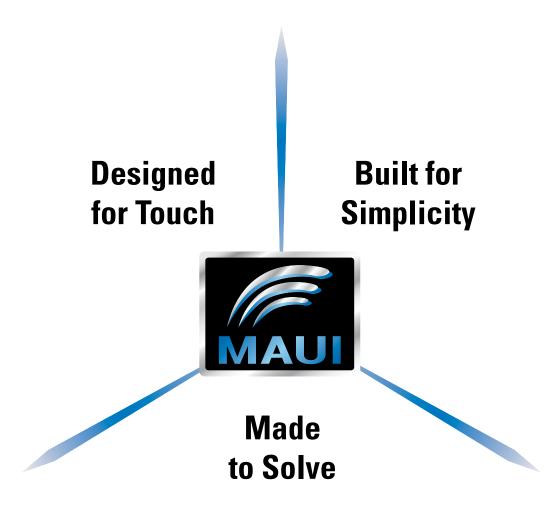
Biggest Touch Display

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.

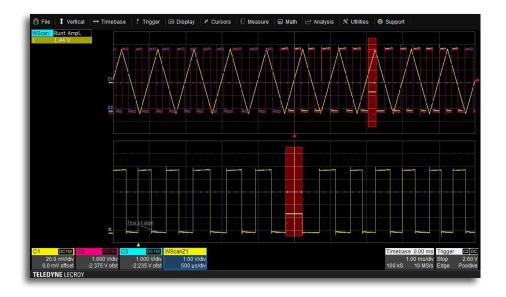
Built for Simplicity

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



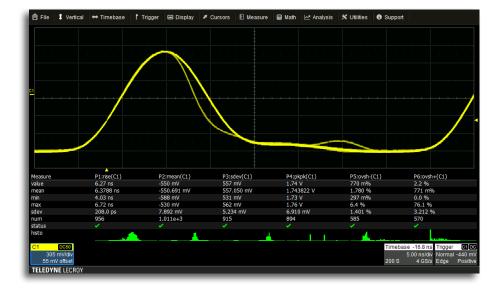
WaveScan Advanced Search

- 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



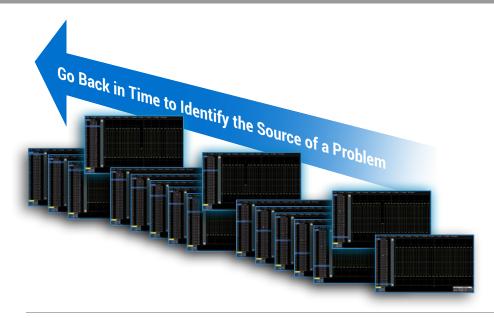
Pass/Fail Mask Testing

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



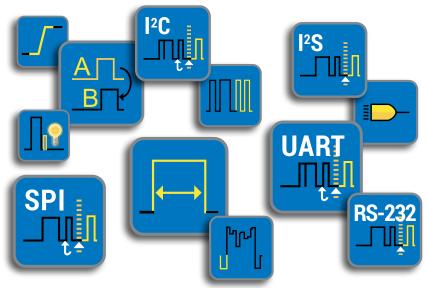
Fast Waveform Update

- 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



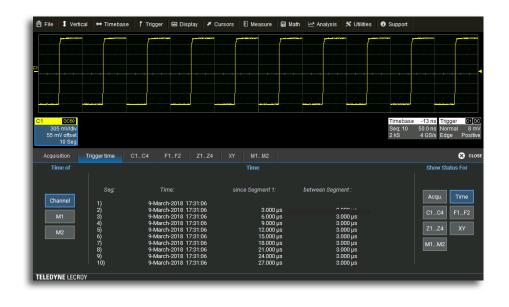
History Mode Waveform Playback

- 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

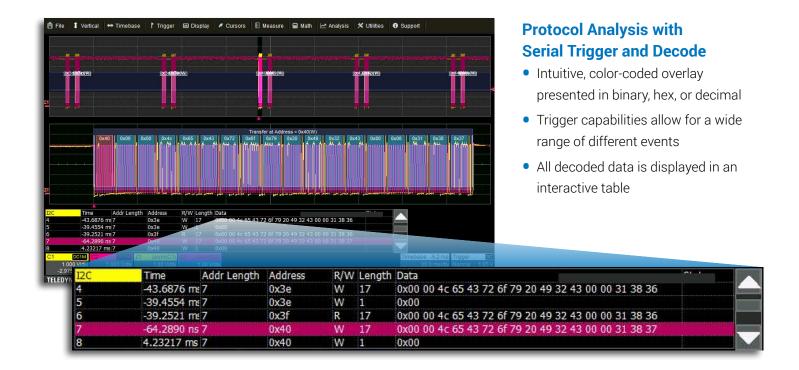
- Basic triggering such as edge or width can be used for everyday solutions
- Qualified triggering enables the ability to trigger across multiple channels
- Powerful logic triggering can be setup to catch a parallel pattern
- Smart triggers such as runt, dropout, or interval help isolate anomalies quickly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

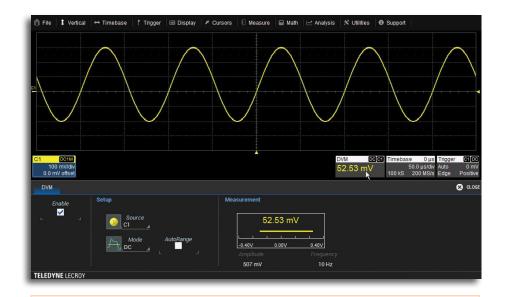


Advanced Waveform Capture with Segmented Memory

- 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





The DVM license key can be downloaded at no charge from *teledynelecroy.com/redeem/dvm*.

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

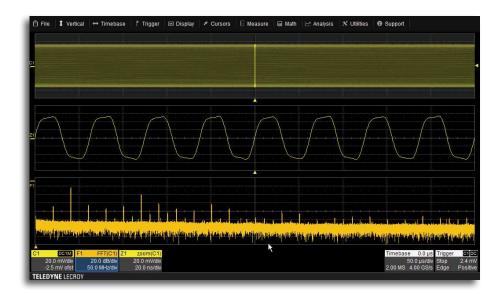




Waveform Generation with Built-in Function Generator

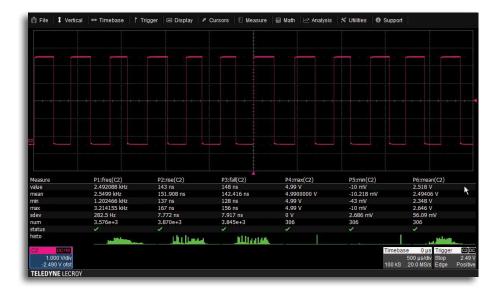
- Frequencies of up to 25 MHz
- Waveform Options: sine, square, pulse, ramp, triangle, noise and DC waveforms
- Rear panel BNC output
- Saved waveforms can be uploaded into the WaveSource to generate arbitrary waveforms

POWERFUL, DEEP TOOLBOX



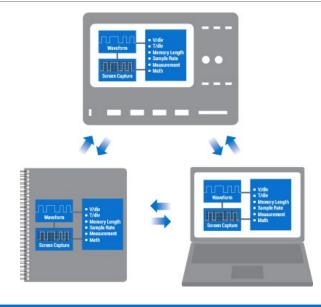
Advanced Math Capabilities

- 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) ZS1000, ZS1000-QUADPAK 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)
ZD200, ZD500, ZD1000, ZD1500, AP033



These active differential probes are ideal for applications such as automotive electronics and data communications.

Active Voltage/Power Rail Probe (4 GHz)

RP4030



The Active Rail Probe is specifically designed to probe a low impedance power/voltage rail.

High Voltage Fiber Optically-isolated Probe (60 MHz) HVF0103

IIVD Cories High Voltage



The HVF0103 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) HVD3102A, HVD3106A (1 kV) HVD3206A (2 kV) HVD3605A (6 kV)



HVDs are rated for wide differential voltage swings - ideal for power electronics circuits.

High Voltage Passive Probes

HVP120 (1 kV), 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)CP030, CP030-3M, CP030A

CP031, CP031A CP150, CP150-6M 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

TPA10, TPA10-QUADPAK



TPA10 adapts supported Tektronix TekProbe-compatible probes to Teledyne LeCroy ProBus interface.

SPECIFICATIONS

SPECIFICATION	ONS					
	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					
Sensitivity	50 Ω: 1mV/div - 1 V/div					
DC Gain Accuracy	±(1.5%) Full Scale, Offse		5%) < 5 mV/diV	00 MI I- 000 MI I-		
BW Limit	50 Ω: 5 Vrms, ±10 V Pe	MHz	C + Dook AC + 10 kHz)	20 MHz, 200 MHz		
Maximum Input Voltage Input Coupling	50 Ω: DC, GND; 1 MΩ: A		C + PEAK AC S TU KHZ)			
Input Impedance	$50 \Omega \pm 2.0\%$, $1 M\Omega \pm 2.0\%$					
Offset Range	50 Ω : 1 mV - 19.8 mV: :		5 V. 102 mV - 198 mV: ±	20 V. 200 mV - 1 V: ±50	V	
	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, 1.02 V - 1.98 V: ±200 V, 2 V - 1.0 V: ±400 V					
Offset Accuracy	±(1.0% of offset value +					
Analog - Acquisition						
Sample Rate (Single-shot)	1 GS/s			SS/s		
	(2 GS/s interleaved)		(4 GS/s ir	nterleaved)		
Sample Rate (Repetitive)	50 GS/s					
Standard Memory (4 Ch / 2 Ch)	10 Mpts / 20 Mpts					
Acquisition Modes	Real Time, Roll, RIS (Ra					
	Sequence (Segmented					
Real Time Timebase Range	5 ns/div - 100 s/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		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 mo		≥ 50 ms/div)			
Timebase Accuracy	±10 ppm measured ove					
Digital - Vertical and Acquisit		<u>n Only)</u>				
Input Channels	16 Digital Channels					
Threshold Groupings	Pod 2: D15 - D8, Pod 1: D					
Threshold Selections	TTL(+1.4V), 5V CMOS (+:	2.5V), ECL (-1.3V) or User	Defined			
Maximum Input Voltage	±30V Peak	. 100 \ \				
Threshold Accuracy	±(3% of threshold setting	j + 100mV)				
Input Dynamic Range Minimum Input Voltage Swing	±20V 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 inter	val)				
User defined threshold range	±10V in 20mV steps					
Trigger System						
Modes	Auto, Normal, Single, St	COD				
Sources	Any input channel, Exte	rnal, Ext/5, or line; slope	and level unique to eac	h source (except for line	e 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 1	100,000,000 events				
Internal Trigger Level Range	±4.1 Divisions					
External Trigger Level Range	Ext: ±610mV, Ext/5: ±3.0			0' 1000) 5 . 0' . 5		
Trigger Types	Edge, Width, Logic (Pati					
	Interval (Signal or Patte	ern), Dropout, Quaimed (State of Euge), External	and Ext/5 Support edge	trigger only.	
Measure, Zoom and Math To						
Measurement Parameters	Up to 6 of the following Duty Cycle, Fall Time (9 Overshoot-, Peak-Peak, Deviation, Top, Width+,	0%–10%), Fall Time (80 Period, Phase, Rise Tim Width Statistics and h	%–20%), Frequency, Ma le (10%–90%), Rise Time isticons can be added to	aximum, Mean, Minimur e (20%–80%), RMS, Ske o measurements. Measi	n, Overshoot+, w, Standard urements can be gated.	
Zooming	Use front panel QuickZo					
Math Functions	Up to 2 of the following Average, Derivative, Enh Square Root, Trend, Zoo windows).	nanced Resolution, Enve	elope, Floor, Integral, Inve	ert, Reciprocal, Rescale,	Roof, SinX/x, Square,	
Probes						
Standard Probes	One PP019 (5m	m) ner channel	One	e PP020 (5mm) per cha	nnel	

One PP019 (5mm) per channel

BNC and Teledyne LeCroy ProBus for Active voltage, current and differential probes

One PP020 (5mm) per channel

Standard Probes

Probing System

SPECIFICATIONS

Display System		WayeSurfer 3014z	WayeSurfer 3024z	WayeSurfer 303/	4z WaveSurfer 3054z WaveSurfer 3104z		
Display Size	Display System	WaveSurier 30142	WaveSurier 30242	WaveSurier 3034	WaveSurier 30342 WaveSurier 31042		
Deplay Resolution		10.1" widescreen capa	citive touch screen				
Contenting			01.110 100011 0010011				
Elbernet Port							
Removable Storage		10/100Daga T Ftharps	tintarface (D.I. AF conno	o+o*/			
USB Device Port (1) USB TAVE Device Total = (2) Print USB 20 Perts USB Device Common Comm							
USB Device Port							
Girls Port Copitional Support Street = 4887	Q		(2) 110111 030 2.01 01	13			
External Mentior Port							
Remote Control Vis Windows Automation, arvia Teledyne LeCroy Remote Command Set Vistoria Communication				of 1024x600)			
Network Communication					d Set		
Power Requirements				oj memore commune	3 000		
Voltage	Standard	·					
Voltage	Dower Peguirement	•					
Power Consumption (Max)			+ FO 60 Hz + / F0/ · 100	120 VAC ± 10% at 400	2117 1 / E%: Automotic AC Voltage Colontion		
Power Consumption (Max) 150 W / 150 V A (with all PC peripherals, digital leadset and active probes connected to 4 channels)			1 50-00 HZ +/-5%, 100 -	120 VAC ± 10% at 400	J HZ +/- 5%, Automatic AC Voltage Selection		
Environmental							
Temperature	1 ower oonsumption (ii	100 W / 100 V / (With a	iii i o periprieraio, aigitar	icadoct and dotive pro	obes connected to 4 charmets)		
Humidity			2.11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	70.00			
(non-condensing) at +50 °C Non-Operating: 5% to 95% kelative humidity (non-condensing) as tested per Mill-PRF-28800F Altitude					2011		
Non-Operating: 5% to 95% relative humidity (non-condensing) as tested per MIL-PRF-28800F	Humidity			ndensing) up to ≤ 30 °	°C, Upper limit derates to 50% relative humidity		
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 2011/430/EU; EN 61326-12.2013, EN61326-2-1.2013, RoHS2 Directive 2011/65/EU UL and cUL Listing UL 61010-1, UL 61010-2-030.2010 EMC Directive 2011/430/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) UL 61010-1, UL 61010-2-030.2010, 3rd Edition, CAN/CSA C22.2 No. 61010-1-12 Digital Voltmeter (optional) Digital Voltmeter (optional) ACV/DCV; 4 digits, Frequency 5 digits Digital Voltmeter (optional) Digit					tod man All DDE 20000E		
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 61326-12013, EN61326-2-12013; 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) ACmrs. DC, DCrms, Frequency Place Function 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) DC Offset Max Frequency 25 MHz Automatic adjustment of vertical settings to maximize the dynamic range of measurements WaveSource Function Generator (optional) DC Offset Max Frequency 25 MHz Automatic adjustment of vertical settings to maximize the dynamic range of measurements WaveSource Function Generator (optional) DC Offset Bange Rate 15 MS/s Automatic adjustment of vertical settings to maximize the dynamic range of measurements Vertical Range Rate 15 kgts	Altitudo						
Dimensions (HWD)		Operating, 3,046 m (10	1,000 It) IIIdX at ≤ 200, IV	on-operating, op to 1	2,192 meters (40,000 ft)		
Regulatory							
Regulatory			92"D (270 mm x 380 mn	n x 125 mm)			
CE Certification	Weight	4.81 kg (10.6 lbs)					
CE Certification	Regulatory						
EMC Directive 2014/30/EU; EN 61326-1.2013, EN61326-2-1.2013, RoHS2 Directive 2011/65/EU UL 61010-1, UL 61010-2-030-2010, 3rd Edition; CAN/CSA C22.2 No. 61010-1-12 Digital Voltmeter (optional)		Low Voltage Directive 2	2014/35/FU: FN 61010-1	1·2010 FN 61010-2-0	130·2010		
Digital Voltmeter (optional)	02 001 11110411011						
Functions ACrms. DC, DCrms. Frequency	UL and cUL Listing						
Functions ACrms. DC, DCrms. Frequency	Digital Valtmeter (a)	ational)					
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) DC Offset Max Frequency 25 MHz Range (DC) ±3V (HiZ); ±1.5V (50 Ω) Channels 1 May Frequency Passolution 16 kpts May Frequency Resolution 40 feet value + 3 mV) Arbitrary Waveform Length 16 kpts May Frequency Resolution 40 feet value + 3 mV) Vertical Range Length Sylvarian (Precision) 40 feet value + 3 mV) May Frequency Pussolution May Frequency Resolution May Frequency Sylvarian (Pulsa) May Frequency Sylvar (Pul							
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WaveSource Function Generator (optional) General DC Offset Max Frequency 25 MHz Range (DC) ±3V (HiZ); ±1.5V (50 Ω) Channels 1 Offset Accuracy ±(1% of offset value + 3 mV) Sample Rate 125 MS/s Waveform Output Impedance 50 Ω ± 2% Arbitrary Waveform Length 16 kpts Impedance 50 Ω ± 2% Frequency Resolution 1 μHz Protection Short-circuit protection Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity SFDR (Non Harmonic) @1.265Vpp Vertical Range ±3V (HiZ); ±1.5V (50 Ω) SFDR (Non Harmonic) @1.265Vpp DC-1 MHz -60dBc -60dBc Frequency Specification 1 μHz - 25 MHz -50dBc Sine Square/Pulse 1 μHz - 10 MHz -50dBc Square/Pulse 1 μHz - 300 KHz DC - 5 MHz -50dBc Noise 25 MHz (-3dB) 5 MHz - 25 MHz -50dBc Resolution 1 μHz -45dBc -45dBc Resolution 1 μHz -45dBc -45dBc							
General DC Offset Max Frequency 25 MHz Range (DC) ±3V (HiZ); ±1.5V (50 Ω) Channels 1 Offset Accuracy ±(1% of offset value + 3 mV) Sample Rate 125 MS/s Waveform Output Arbitrary Waveform Length 16 kpts Impedance 50 Ω ± 2% Frequency Resolution 1 μHz Protection Short-circuit protection Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity Sine Spectrum Purity SFDR (Non Harmonic) @1.265Vpp DC-1 MHz -60dBc Square/Pulse 1 μHz - 25 MHz 50dBc Square/Pulse 1 μHz - 300 KHz DC - 5 MHz -50dBc Noise 25 MHz (3dB) SMHz - 25 MHz -45dBc Resolution 1 μHz Square/Pulse Square/Pulse Accuracy ±50 ppm, over temperature Rise/fall	vertical octilings Autore	Automatic adjustment	or vertical settings to m	axiiiiize the dynamic	range of measurements		
General DC Offset Max Frequency 25 MHz Range (DC) ±3V (HiZ); ±1.5V (50 Ω) Channels 1 Offset Accuracy ±(1% of offset value + 3 mV) Sample Rate 125 MS/s Waveform Output Arbitrary Waveform Length 16 kpts Impedance 50 Ω ± 2% Frequency Resolution 1 μHz Protection Short-circuit protection Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity Sine Spectrum Purity SFDR (Non Harmonic) @1.265Vpp DC-1 MHz -60dBc Square/Pulse 1 μHz - 25 MHz 50dBc Square/Pulse 1 μHz - 300 KHz DC - 5 MHz -50dBc Noise 25 MHz (3dB) SMHz - 25 MHz -45dBc Resolution 1 μHz Square/Pulse Square/Pulse Accuracy ±50 ppm, over temperature Rise/fall	WayeSource Function	on Generator (ontional)					
Max Frequency 25 MHz 25 MHz 25 MHz 25 MHz 25 MHz 25 MHz 25 MS/s		on deficiator (optional)	DO	C Offset			
Channels1Sample Rate125 MS/sArbitrary Waveform Length16 kptsWaveform OutputFrequency Resolution1 μHzProtectionShort-circuit protectionVertical Resolution14-bitSine, Square, Pulse, Ramp, Noise, DCSine, Square, Pulse, Ramp, Noise, DCSine Spectrum PurityFrequency Specification1 μHz - 25 MHz-60dBcSine1 μHz - 25 MHz-55dBcSquare/Pulse1 μHz - 10 MHzHarmonic Distortion @1 .265VppRamp/Triangular1 μHz - 300 KHzHarmonic Distortion @1 .265VppResolution1 μHz5 MHz - 25 MHz-50dBcResolution1 μHzSMHz-50dBcResolution1 μHzSMHz-50dBcResolution1 μHz-80dBcAccuracy±50 ppm, over temperatureSquare/Pulse-45dBcAging±3 ppm/year, first yearSquare/PulseOutput SpecificationPulse Width50 ns min.Amplitude4 mVpp - 6 Vpp (HiZ); 2 mVpp - 3 Vpp(50 Ω)Jitter500ps + 10ppm of period (RMS cycle to cycle)Vertical Accuracy±(0.3dB + 1 mV)Jitter500ps + 10ppm of period (RMS cycle to cycle)Amplitude Flatness±0.5dBLinearity0.1% of Peak value output (typical - 1 kHz, 1 Vpp, 100% symmetric)		25 MHz			+3V (Hi7): +1 5V (50 Ω)		
Sample Rate 125 MS/s Arbitrary Waveform Length 16 kpts Waveform Output Impedance 50 Ω ± 2% Frequency Resolution 1 μHz Protection Short-circuit protection Vertical Range ±3V (HiZ); ±1.5V (50 Ω) Sine Spectrum Purity Waveform Types Sine, Square, Pulse, Ramp, Noise, DC SFDR (Non Harmonic) @1.265Vpp Frequency Specification 1 μHz - 25 MHz -60 dBc Sine 1 μHz - 25 MHz -55 dBc Square/Pulse 1 μHz - 10 MHz Harmonic Distortion @1.265Vpp Ramp/Triangular 1 μHz - 300 KHz DC - 5 MHz -50 dBc Noise 25 MHz (-3dB) 5 MHz - 25 MHz -50 dBc Resolution 1 μHz -80 MBc -45 dBc Aging ±50 ppm, over temperature Rise/fall time 24 ns (10% - 90%) Aging ±3 ppm/year, first year Quershoot 3% (typical - 1 kHz, 1 Vpp) Output Specification 4 mVpp - 6 Vpp (HiZ); 2 mVpp - 3 Vpp(50 Ω) Pulse Width 50 nps min. Amplitude 4 mVpp - 6 Vpp (HiZ); 2 mVpp - 3 Vpp(50 Ω) Pulse Width		1					
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Vertical Range±3V (HiZ); ±1.5V (50 Ω)Sine Spectrum PurityWaveform TypesSine, Square, Pulse, Ramp, Noise, DCDC - 1 MHz - 60dBcFrequency Specification1 MHz - 25 MHz - 55dBcSine1 μHz - 25 MHz55dBcSquare/Pulse1 μHz - 10 MHzHarmonic Distortion @1.265VppRamp/Triangular1 μHz - 300 KHzDC - 5 MHz - 50dBcNoise25 MHz (-3dB)5 MHz - 25 MHz - 50dBcResolution1 μHzC - 5 MHz - 25 MHz - 45dBcResolution1 μHzSquare/PulseAccuracy±50 ppm, over temperatureRise/fall time24 ns (10% - 90%)Aging±3 ppm/year, first yearOvershoot3% (typical - 1 kHz, 1 Vpp)Output SpecificationPulse Width50 ns min.Amplitude4 mVpp - 6 Vpp (HiZ); 2 mVpp - 3 Vpp(50 Ω)Jitter500ps + 10ppm of period (RMS cycle to cycle)Vertical Accuracy±(0.3dB + 1 mV)Amplitude FlatnessLinearity0.1% of Peak value output (typical - 1 kHz, 1 Vpp, 100% symmetric)							
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Frequency Specification DC-1 MHz -60dBc Sine 1 μHz -25 MHz -55dBc Square/Pulse 1 μHz -10 MHz 5 MHz -25 MHz -50dBc Ramp/Triangular 1 μHz -300 KHz DC - 5 MHz -50dBc Noise 25 MHz (-3dB) 5 MHz -25 MHz -45dBc Resolution 1 μHz -45dBc -45dBc Resolution 1 μHz -45dBc -45dBc Accuracy 450 ppm, over temperature Rise/fall time 24 ns (10% - 90%) Aging 43 ppm/year, first year Overshoot 3% (typical - 1 kHz, 1 Vpp) Output Specification Pulse Width 50 ns min. Amplitude 4 mVpp - 6 Vpp (HiZ); 2 mVpp - 3 Vpp (50 Ω) Jitter 500ps + 10ppm of period (RMS cycle to cycle) Vertical Accuracy ±(0.3dB + 1 mV) Ramp/Triangle					@1.265Vpp		
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Amplitude Flatness ±0.5dB			1-1-1-1-1		Joops + Toppiti of period (nivis Cycle to Cycle)		
Linearity U.1% of Peak value output (typical - 1 kHz, 1 vpp, 100% symmetric)							
	, amplicade i latilicas	_5.545	Lir	nearity			
Symmetry 0% to 100%			_				
			Sy	rmmetry	U% to IUU%		

ORDERING INFORMATION

Product Description	Product Code	Product Description	Product Code
WaveSurfer 3000z Oscilloscopes		Probes (Cont'd)	
100 MHz, 2 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display	WaveSurfer 3014z	Power/Voltage Rail Probe. 4 GHz bandwidth, 1.2x attenuation, ±30V offset, ±800mV	RP4030
20 Mpts /Ch in interleaved mode		Browser for use with RP4030	P4000-BROWSER
200 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with	WaveSurfer 3024z	1,500 V, 120 MHz High-Voltage Differential Probe	HVD3106A
10.1" Capacitive Touch Screen Display		1kV, 80 MHz High Voltage Differential Probe with 6m cable	HVD3106A-6M
20 Mpts /Ch in interleaved mode		1kV, 120 MHz High Voltage Differential Probe Hwithout tip Accessories	HVD3106A-NOACC
350 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with	WaveSurfer 3034z	1,500 V, 25 MHz High-Voltage Differential Probe	HVD3102A
10.1" Capacitive Touch Screen Display			HVD3102A-NOACC
20 Mpts /Ch in interleaved mode		tip Accessories	IVDS TOZA NOACO
500 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with	WaveSurfer 3054z	2kV, 120 MHz High Voltage Differential Probe	HVD3206A
10.1" Capacitive Touch Screen Display		2kV, 80 MHz High Voltage Differential Probe with 6m cable	
20 Mpts /Ch in interleaved mode	WaveSurfer 3104z	6kV, 100 MHz High Voltage Differential Probe	HVD3605A
1 GHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with	WaveSurfer 3104Z	High Voltage Fiber Optic Probe, 60 MHz	HVF0103
10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode		(requires accessory tip)	
20 Mpts /Ch in Interleaved mode		±1V (1x) Tip Accessory for HVF0103	HVF0100-1X-TIP
Included with Standard Configurations		±5V (5x) Tip Accessory for HVF0103	HVF0100-5X-TIP
÷10 Passive Probe (Total of 1 Per Channel), 1 Micro		±20V (20x) Tip Accessory for HVF0103	HVF0100-20X-TIP
Micro SD card adapter, Protective Front Cover, Getti		30 A; 100 MHz Current Probe – AC/DC; 30 Arms; 50 Apeak P	ulse CP031
Commercial NIST Traceable Calibration with Certification Country, 3-year Warranty	cate, Power Cable for	30 A; 100 MHz High Sensitivity Current Probe – AC/DC; 30 A _{rms;} 50 A _{peak} Pulse	CP031A
General Accessories		30 A; 50 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pul	lse CP030
External GPIB Accessory	USB2-GPIB	30 A; 50 MHz High Sensitivity Current Probe – AC/DC; 30 A	
Soft Carrying Case	WS3K-SOFTCASE	50 A _{peak} Pulse	
Rack Mount Accessory	WS3K-RACK	150 A; 10 MHz Current Probe – AC/DC; 150 A _{rms;} 500 A _{peal}	
•	***************************************	500 A; 2 MHz Current Probe – AC/DC; 500 A _{rms;} 700 A _{peak}	
Local Language Overlays		Deskew Calibration Source for CP031, CP030 and AP015	DCS025
German Front Panel Overlay	WS3K-FP-GERMAN	500 MHz Differential Probe	AP033
French Front Panel Overlay	WS3K-FP-FRENCH	200 MHz, 3.5 pF, 1 MΩ Active Differential Probe, ±20 V,	ZD200
Italian Front Panel Overlay	WS3K-FP-ITALIAN	60V common-mode	701000
Spanish Front Panel Overlay	WS3K-FP-SPANISH	1 GHz, 1.0 pF, 1 MΩ Active Differential Probe, ±8 V, 10V common-mode	ZD1000
Japanese Front Panel Overlay	WS3K-FP-JAPANESE	1.5 GHz, 1.0 pF, 1 MΩ Active Differential Probe, ±8 V,	ZD1500
Korean Front Panel Overlay	WS3K-FP-KOREAN	1.0 GHz, 1.0 pr, 1 Mtz Active Differential Probe, 10 v,	201300
Chinese (Tr) Front Panel Overlay	WS3K-FP-CHNES-TR	1 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe	ZS1000
Chinese (Simp) Front Panel Overlay	WS3K-FP-CHNES-SI		ZS1000-QUADPAK
Russian Front Panel Overlay	WS3K-FP-RUSSIAN	1.5 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe	ZS1500
Multi-Instrument Options			ZS1500-QUADPAK
MSO software option and 16 Channel Digital probe	leadset WS3K-MS0	100:1 400 MHz 50 MΩ 1 kV High-voltage Probe	HVP120
MSO License (MS Probe Not Included)	WS3K-MSO-LICENSE	100:1 400 MHz 50 MΩ 4 kV High-voltage Probe	PPE4KV
Function Generator Option	WS3K-FG	1000:1 400 MHz 50 MΩ 5 kV High-voltage Probe	PPE5KV
Audiobus Trigger and Decode Option for I^2S , LJ, RJ, and TDM	WS3K-Audiobus TD	1000:1 400 MHz 50 MΩ 6 kV High-voltage Probe	PPE6KV
CAN and LIN Trigger and Decode Option	WS3K-AUTO	Probe Adapters	
CAN FD Trigger and Decode Option	WS3K-CAN FDbus TD	TekProbe to ProBus Probe Adapter	TPA10
I ² C, SPI, UART and RS-232 Trigger and Decode Option	n WS3K-EMB	Set of 4 TPA10 TekProbe to ProBus Probe Adapters.	TPA10-QUADPAK
FlexRay Trigger and Decode Option	WS3K-FlexRaybus TD	Includes soft carrying case.	
Power Analysis Option	WS3K-PWR		
Probes			
250 MHz Passive Probe 10:1, 10 MΩ	PP019		
	DDOOO		
500 MHz Passive Probe 10:1, 10 MΩ 700 V, 15 MHz High-Voltage Differential Probe	PP020 AP031		

Customer Service

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



1-800-5-LeCroy teledynelecroy.com

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