

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.



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
- 20 Mpts Memory
- 3 Powerful, Deep Toolbox



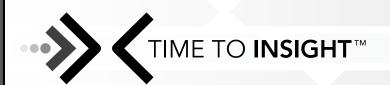
Faster Time to Insight

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
- 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.

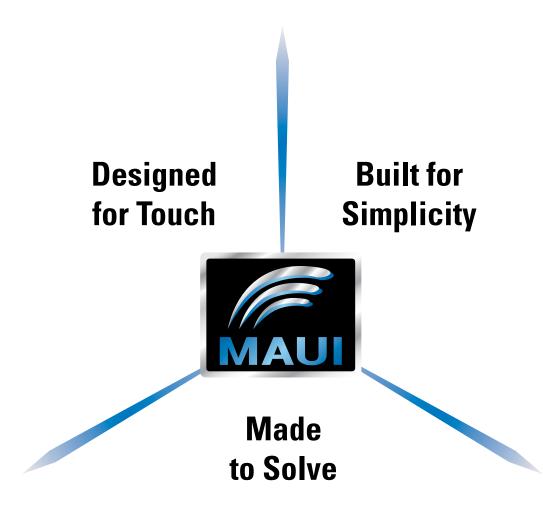
Biggest Touch Display

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



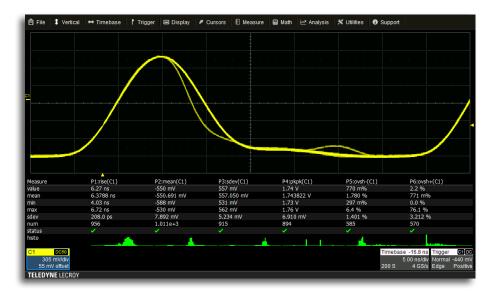
WaveScan Advanced Search

- 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



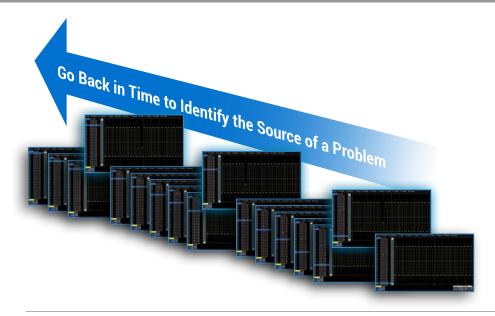
Pass/Fail Mask Testing

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



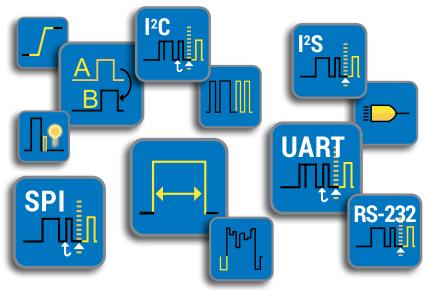
Fast Waveform Update

- 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



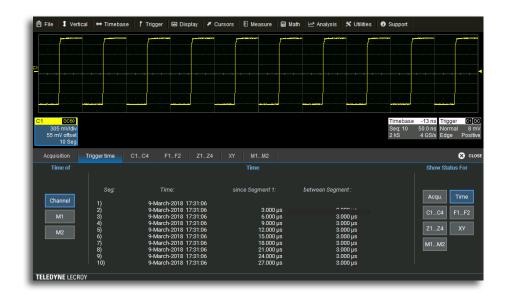
History Mode Waveform Playback

- 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

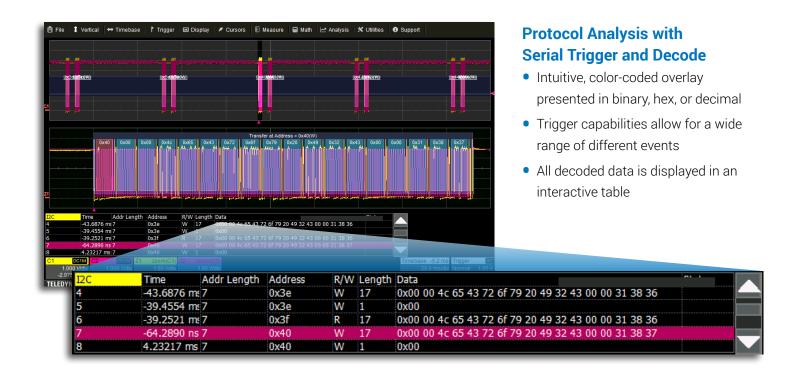
- Basic triggering such as edge or width can be used for everyday solutions
- Qualified triggering enables the ability to trigger across multiple channels
- Powerful logic triggering can be setup to catch a parallel pattern
- Smart triggers such as runt, dropout, or interval help isolate anomalies quickly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





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

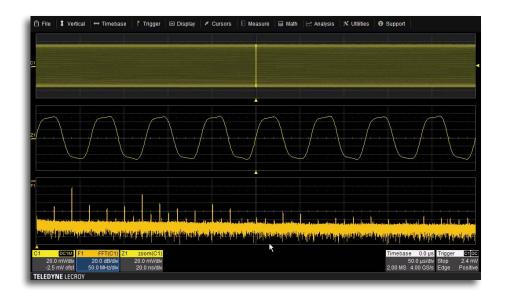




Waveform Generation with Built-in Function Generator

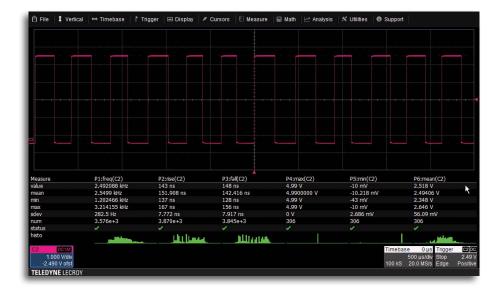
- Frequencies of up to 25 MHz
- Waveform Options: sine, square, pulse, ramp, triangle, noise and DC waveforms
- Rear panel BNC output
- Saved waveforms can be uploaded into the WaveSource to generate arbitrary waveforms

POWERFUL, DEEP TOOLBOX



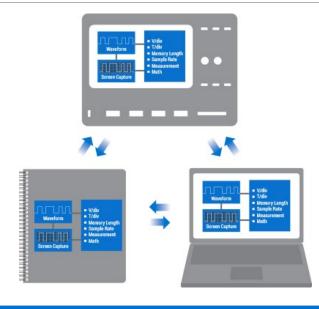
Advanced Math Capabilities

- 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



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

WaveSurfer 3014z	WaveSurfer 3024z	WaveSurfer 3034z	WaveSurfer 3054z	WaveSurfer 3104:
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	waveSurrer 3014Z	waveSurrer 3024z	waveSurrer 3034Z	waveSurrer 3054Z	waveSurter 3104Z	
Analog - Vertical	100 MH-	000 MH I-	0F0 MH-	F00 MI I-	1.011-	
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	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-DEO)			
Vertical Resolution		n enhanced resolution (E				
Sensitivity		; 1 MΩ: 1 mV/div - 10 V/				
DC Gain Accuracy		et at 0V, > 5mV/div; ±(2.5	5%) < 5 mV/diV	22141 222141		
BW Limit		MHz (D. A.C.)	2 2 1 40 10111	20 MHz, 200 MHz		
Maximum Input Voltage		ak; 1 MΩ: 400 V max (Do	C + Peak AC ≤ 10 kHz)			
Input Coupling	50 Ω: DC, GND; 1 MΩ: A					
Input Impedance	50 Ω ±2.0%, 1 MΩ ±2.0					
Offset Range	1 MΩ: 1 mV - 19.8 mV: :	±2 V, 20 mV - 100 mV: ±; ±2 V, 20 mV - 100 mV: ±; 200 V, 2 V - 10 V: ±400 V	5 V, 102 mV - 198 mV: ±2			
Offset Accuracy	±(1.0% of offset value +					
Analog - Acquisition						
Sample Rate (Single-shot)	1 GS/s (2 GS/s interleaved)			S/s terleaved)		
Cample Data (Depatitive)	50 GS/s		(+ 00/3 11)	icricavea)		
Sample Rate (Repetitive)						
Standard Memory (4 Ch / 2 Ch)	10 Mpts / 20 Mpts	1 1 1 1 10	P \			
Acquisition Modes		ndom Interleaved Samp				
Deal Times Times to a S		Memory up to 1,000 sec			F00 == /-1: 100 / !!	
Real Time Timebase Range	5 ns/div - 100 s/div	2 ns/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 -		1 ns/div - 10 ns/div	500 ps/div - 10 ns/div	
Roll Mode Timebase Range		de is user selectable at	≥ 50 ms/div)			
Timebase Accuracy	±10 ppm measured over	er > 1ms interval				
Digital - Vertical and Acquisit	ion (WS3K-MSO Ontio	n Only)				
Input Channels	16 Digital Channels	ii Oiliy)				
	Pod 2: D15 - D8, Pod 1: D	7 DO				
Threshold Groupings			Defined			
Threshold Selections		2.5V), ECL (-1.3V) or User	Detinea			
Maximum Input Voltage	±30V Peak					
Threshold Accuracy	±(3% of threshold setting	j + 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 inter	val)				
User defined threshold range	±10V in 20mV steps					
Trigger System						
Modes	Auto, Normal, Single, St	op				
Sources		rnal, Ext/5, or line; slope	and level unique to eac	h 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 1	100.000.000 events				
Internal Trigger Level Range	±4.1 Divisions	. 55,000,000 CVCIICO				
External Trigger Level Range	Ext: ±610mV, Ext/5: ±3.	05V				
Trigger Types		tern), TV (NTSC, PAL, SE	 CΔM_HDTV - 720n 100	Ni 1080n) Runt Slow D	ate	
ingger Types		ern), Dropout, Qualified (S				
Measure, Zoom and Math Too	ols					
Measurement Parameters		parameters can be calc	ulated at one time on a	ny waveform: Amplitude	Area Base Delay	
medearement arametere						
	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					
		Width Statistics and hi				
Zooming		oom button, or use touc				
Math Functions						
Watti Tunctions	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).					
	Square Root, Trend, Zo					
Probes	Square Root, Trend, Zo					
Probes Standard Probes	Square Root, Trend, Zowindows). One PP019 (5m		ts with power spectrum	output and rectangular PP020 (5mm) per cha	, VonHann, and FlatTop	

SPECIFICATIONS

	wavesurrer 30147 wave	Surfer 30247	WaveSurfer 303	4z WaveSurfer 3054z WaveSurfer 3104z		
Display System	Wavedurer 30142 Wave	Courter GOZ-42	Waveourier 505	72 Waveourier 505-12 Waveourier 516-12		
Display Size	10.1" widescreen capacitive to	uch screen				
Display Resolution	1024 x 600					
Connectivity Ethernet Port	10/100Raco T Ethornot interfa	100 (D I 45 00000	otor)			
Removable Storage		10/100Base-T Ethernet interface (RJ-45 connector) (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		pport resolution of	of 1024x600)			
Remote Control		Standard DB-15 connector (support resolution of 1024x600) Via Windows Automation, or via Teledyne LeCroy Remote Command Set				
Network Communicati			j Homote Commitan	000		
Standard	'					
Dawer Dawiness and	h-					
Power Requirement		LI= 1 / F0/, 100 1	20 \/\0 + 100/ -+ 40	Olley / Fox Automotic AO Voltage Calenting		
Voltage		HZ +/-5%; 100 - 1	20 VAC ± 10% at 40	0 Hz +/- 5%; Automatic AC Voltage Selection		
Power Consumption (N		rinharala digital l	and and antiva p	robes connected to 4 channels)		
Power Consumption (r	viax) 150 W / 150 VA (WILITAII PC pe	ripilerais, digitari	eauset and active pi	obes connected to 4 channels)		
Environmental						
Temperature	Operating: 0 °C to 50 °C; Non-0					
Humidity		numidity (non-cor	idensing) up to ≤ 30	°C, Upper limit derates to 50% relative humidity		
	(non-condensing) at +50 °C					
A letter of	Non-Operating: 5% to 95% rela	tive humidity (nor	n-condensing) as tes	sted per MIL-PRF-28800F		
Altitude	Operating: 3,048 m (10,000 ft)	max at ≤ 25C; No	on-Operating: Up to 1	12,192 meters (40,000 ft)		
Physical						
Dimensions (HWD)	10.63"H x 14.96"W x 4.92"D (2	70 mm x 380 mm	x 125 mm)			
Weight	4.81 kg (10.6 lbs)		,			
•	, , , , , , , , , , , , , , , , , , ,					
Regulatory	L Valta na Dinastina 0014/05	/FILE EN 61010 1	-0010 FN 61010 0 0	200.0010		
CE Certification	Low Voltage Directive 2014/35					
10 10 12 2	EMC Directive 2014/30/EU; EN UL 61010-1, UL 61010-2-030:2					
		0.10° 3rd Edition.	CV V V V V V V V V V V V V V V V V V V	61010-1-12		
UL and cUL Listing		2010, 3rd Edition;	CAN/CSA C22.2 No.	. 61010-1-12		
Digital Voltmeter (o	ptional)		CAN/CSA C22.2 No.	. 61010-1-12		
•			CAN/CSA C22.2 No.	. 61010-1-12		
Digital Voltmeter (o	AC _{rms} , DC, DC _{rms} , Frequency ACV/DCV: 4 digits, Frequency:	5 digits				
Digital Voltmeter (o Functions Resolution Measurement Rate	AC _{rms} , DC, DC _{rms} , Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem	5 digits ents update on th	ue display 5 times/se	econd		
Digital Voltmeter (o Functions Resolution	AC _{rms} , DC, DC _{rms} , Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem	5 digits ents update on th	ue display 5 times/se	econd		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor	AC _{rms} , DC, DC _{rms} , Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem ange Automatic adjustment of vertice	5 digits ents update on th	ue display 5 times/se	econd		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Function	AC _{rms} , DC, DC _{rms} , Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem	5 digits ents update on the	e display 5 times/se eximize the dynamic	econd		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Function	AC _{rms} , DC, DC _{rms} , Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice on Generator (optional)	5 digits ents update on the cal settings to ma	ne display 5 times/se eximize the dynamic	econd range of measurements		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency	AC _{rms} , DC, DC _{rms} , Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem ange Automatic adjustment of vertice	5 digits ents update on the cal settings to make the calculations and the calculations are calculated as the	ne display 5 times/se eximize the dynamic Offset nge (DC)	econd range of measurements ±3V (HiZ); ±1.5V (50 Ω)		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice on Generator (optional) 25 MHz 1	5 digits ents update on the cal settings to make the calculations and the calculations are calculated as the	ne display 5 times/se eximize the dynamic	econd range of measurements		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate	AC _{rms} , DC, DC _{rms} , Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice on Generator (optional)	5 digits ents update on the cal settings to make the calculation of th	oe display 5 times/se eximize the dynamic Offset nge (DC) iset Accuracy	econd range of measurements ±3V (HiZ); ±1.5V (50 Ω)		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s	5 digits ents update on the cal settings to make the calculation of th	offset nge (DC) set Accuracy	econd range of measurements ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV)		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice on Generator (optional) 25 MHz 1 125 MS/s 16 kpts	5 digits ents update on the cal settings to make the calculation of th	oe display 5 times/se eximize the dynamic offset one (DC) feet Accuracy overform Output pedance	econd range of measurements ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2%		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice on Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 µHz	5 digits ents update on the cal settings to make the calculation of th	offset nge (DC) set Accuracy	econd range of measurements ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV)		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Resolution	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice on Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 µHz 14-bit	5 digits ents update on the cal settings to make the call settings to make	offset Inge (DC) Set Accuracy	econd range of measurements ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2%		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Resolution Vertical Range	AC _{rms} , DC, DC _{rms} , Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice on Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω)	5 digits ents update on the cal settings to make the call settings to mak	oe display 5 times/se eximize the dynamic offset one (DC) feet Accuracy overform Output pedance	econd trange of measurements $\pm 3V \text{ (HiZ); } \pm 1.5V \text{ (50 }\Omega\text{)}$ $\pm (1\% \text{ of offset value + 3 mV)}$ $50 \Omega \pm 2\%$ Short-circuit protection		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Resolution	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice on Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 µHz 14-bit	5 digits ents update on the cal settings to made settings to make settings	offset Offset Inge (DC) Set Accuracy Oveform Output Dedance Detection The Spectrum Purity	econd trange of measurements $\pm 3V \text{ (HiZ); } \pm 1.5V \text{ (50 }\Omega\text{)}$ $\pm (1\% \text{ of offset value + 3 mV)}$ $50 \Omega \pm 2\%$ Short-circuit protection		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Range Waveform Types	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC	5 digits ents update on the cal settings to made settings	Offset Inge (DC) Isset Accuracy Inveform Output Inpedance Intection Intel Inte	econd ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Resolution Vertical Range	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC	5 digits ents update on the cal settings to make the call settings to make	offset Offset Inge (DC) Set Accuracy Oveform Output Dedance Detection The Spectrum Purity DR (Non Harmonic)	econd trange of measurements $\pm 3V \text{ (HiZ); } \pm 1.5V \text{ (50 } \Omega\text{)}$ $\pm (1\% \text{ of offset value } + 3 \text{ mV)}$ $50 \Omega \pm 2\%$ Short-circuit protection $\boxed{01.265\text{Vpp}}$		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Resolution Vertical Range Waveform Types Frequency Specificati	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem ange Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC on	5 digits ents update on the cal settings to made settings to make settings	Offset Inge (DC) Isset Accuracy Inveform Output Dedance Detection Intel Desired (Non Harmonic) In MHZ In MHZ Intel	econd ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc -55dBc -50dBc		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Range Waveform Types Frequency Specificati Sine	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem ange Automatic adjustment of vertice on Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC on 1 μHz - 25 MHz	5 digits ents update on the cal settings to make the call settings to make t	Offset Inge (DC) Iset Accuracy Inveform Output Inveform Output Invection Intelligence Intelligen	econd ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc -55dBc -50dBc		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Range Waveform Types Frequency Specificati Sine Square/Pulse Ramp/Triangular Noise	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem ange Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC on 1 μHz - 25 MHz 1 μHz - 10 MHz 1 μHz - 300 KHz 25 MHz (-3dB)	5 digits ents update on the cal settings to make the call settings to make t	Offset Inge (DC) Iset Accuracy Inveform Output Inveded ance Interest of the Spectrum Purity Index (Non Harmonic) In Index (MHz - 5 MHz Index (MHz - 25 MHz Interest of the Spectrum (@	econd ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc -55dBc -50dBc 11.265Vpp		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Range Waveform Types Frequency Specificati Sine Square/Pulse Ramp/Triangular Noise Resolution	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem ange Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC on 1 μHz - 25 MHz 1 μHz - 10 MHz 1 μHz - 300 KHz 25 MHz (-3dB) 1 μHz	5 digits ents update on the cal settings to make the call	offset Inge (DC)	econd ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc -55dBc -50dBc 11.265Vpp -50dBc		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Range Waveform Types Frequency Specificati Sine Square/Pulse Ramp/Triangular Noise Resolution Accuracy	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem ange Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC on 1 μHz - 10 MHz 1 μHz - 300 KHz 25 MHz (-3dB) 1 μHz ±50 ppm, over temperature	5 digits ents update on the cal settings to make the call settings to make t	offset Inge (DC)	±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc -55dBc -50dBc 01.265Vpp -50dBc -50dBc -45dBc		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Range Waveform Types Frequency Specificati Sine Square/Pulse Ramp/Triangular Noise Resolution	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem ange Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC on 1 μHz - 25 MHz 1 μHz - 10 MHz 1 μHz - 300 KHz 25 MHz (-3dB) 1 μHz	5 digits ents update on the cal settings to make the call	offset Inge (DC)	±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc -55dBc -50dBc 01.265Vpp -50dBc -45dBc -45dBc -45dBc		
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Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Resolution Vertical Range Waveform Types Frequency Specificati Sine Square/Pulse Ramp/Triangular Noise Resolution Accuracy Aging Output Specification Amplitude	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC con 1 μHz - 25 MHz 1 μHz - 10 MHz 1 μHz - 300 KHz 25 MHz (-3dB) 1 μHz ±50 ppm, over temperature ±3 ppm/year, first year	5 digits ents update on the cal settings to make the call settings to make the	Offset Inge (DC) Iset Accuracy Inveform Output	±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc -55dBc -50dBc 01.265Vpp -50dBc -45dBc -45dBc -45dBc -45dBc -45dBc -45dBc		
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Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Resolution Vertical Range Waveform Types Frequency Specificati Sine Square/Pulse Ramp/Triangular Noise Resolution Accuracy Aging Output Specification Amplitude	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC con 1 μHz - 25 MHz 1 μHz - 10 MHz 1 μHz - 300 KHz 25 MHz (-3dB) 1 μHz ±50 ppm, over temperature ±3 ppm/year, first year	5 digits ents update on the cal settings to make the call settings to make the	Offset Inge (DC) Iset Accuracy Inveform Output	econd ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc -55dBc -50dBc 01.265Vpp -50dBc -45dBc 24 ns (10% - 90%) 3% (typical - 1 kHz, 1 Vpp) 50 ns min. 500ps + 10ppm of period (RMS cycle to cycle) 0.1% of Peak value output (typical - 1 kHz, 1 Vpp)		
Digital Voltmeter (o Functions Resolution Measurement Rate Vertical Settings Autor WaveSource Functi General Max Frequency Channels Sample Rate Arbitrary Waveform Length Frequency Resolution Vertical Resolution Vertical Range Waveform Types Frequency Specificati Sine Square/Pulse Ramp/Triangular Noise Resolution Accuracy Aging Output Specification Amplitude Vertical Accuracy	ACrms, DC, DCrms, Frequency ACV/DCV: 4 digits, Frequency: 100 times/second, measurem range Automatic adjustment of vertice con Generator (optional) 25 MHz 1 125 MS/s 16 kpts 1 μHz 14-bit ±3V (HiZ); ±1.5V (50 Ω) Sine, Square, Pulse, Ramp, Noise, DC con 1 μHz - 25 MHz 1 μHz - 10 MHz 1 μHz - 300 KHz 25 MHz (-3dB) 1 μHz ±50 ppm, over temperature ±3 ppm/year, first year	5 digits ents update on the cal settings to make the cal setting to make the call setting the call setting to make the call setting	Offset Inge (DC) Iset Accuracy Inveform Output	econd ±3V (HiZ); ±1.5V (50 Ω) ±(1% of offset value + 3 mV) 50 Ω ± 2% Short-circuit protection @1.265Vpp -60dBc -55dBc -50dBc 01.265Vpp -50dBc -45dBc 24 ns (10% - 90%) 3% (typical - 1 kHz, 1 Vpp) 50 ns min. 500ps + 10ppm of period (RMS cycle to cycle)		

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 R	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			HVD3106A-NOACC
350 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with	WaveSurfer 3034z	without tip Accessories	
10.1" Capacitive Touch Screen Display		1,500 V, 25 MHz High-Voltage Differential Probe	HVD3102A
20 Mpts /Ch in interleaved mode		. 3 3	IVD3102A-NOACC
500 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with	WaveSurfer 3054z	tip Accessories	
10.1" Capacitive Touch Screen Display		2kV, 120 MHz High Voltage Differential Probe	HVD3206A
20 Mpts /Ch in interleaved mode		2kV, 80 MHz High Voltage Differential Probe with 6m cable	HVD3206A-6M
1 GHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with	WaveSurfer 3104z	6kV, 100 MHz High Voltage Differential Probe	HVD3605A
10.1" Capacitive Touch Screen Display		High Voltage Fiber Optic Probe, 60 MHz (requires accessory tip)	HVF0103
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 S	D card (Installed).		HVF0100-20X-TIP
Micro SD card adapter, Protective Front Cover, Gettin		30 A; 100 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pu	ulse CP031
Commercial NIST Traceable Calibration with Certificathe Destination Country, 3-year Warranty	ate, 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 Arms; 50 Apeak Puls	se CP030
External GPIB Accessory	USB2-GPIB	30 A; 50 MHz High Sensitivity Current Probe – AC/DC; 30 A	Arms; CP030A
Soft Carrying Case	WS3K-SOFTCASE	50 A _{peak} Pulse	D. I
Rack Mount Accessory	WS3K-RACK	150 A; 10 MHz Current Probe – AC/DC; 150 A _{rms} ; 500 A _{peak}	
Local Language Overlays		500 A; 2 MHz Current Probe – AC/DC; 500 A _{rms;} 700 A _{peak} F Deskew Calibration Source for CP031, CP030 and AP015	
German Front Panel Overlay	WS3K-FP-GERMAN	500 MHz Differential Probe	DCS025 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	20200
Spanish Front Panel Overlay	WS3K-FP-SPANISH	1 GHz, 1.0 pF, 1 MΩ Active Differential Probe, ±8 V,	ZD1000
Japanese Front Panel Overlay	WS3K-FP-JAPANESE	10V common-mode	
Korean Front Panel Overlay	WS3K-FP-KOREAN	$1.5~\text{GHz},1.0~\text{pF},1~\text{M}\Omega$ Active Differential Probe, ±8 V,	ZD1500
Chinese (Tr) Front Panel Overlay	WS3K-FP-CHNES-TR	10V common-mode	
Chinese (Simp) Front Panel Overlay	WS3K-FP-CHNES-SI	1 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe	ZS1000
Russian Front Panel Overlay	WS3K-FP-RUSSIAN		ZS1000-QUADPAK
Multi-Instrument Options		1.5 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe	ZS1500
MSO software option and 16 Channel Digital probe le	eadset WS3K-MS0		ZS1500-QUADPAK
MSO License (MS Probe Not Included)	WS3K-MSO-LICENSE	100:1 400 MHz 50 MΩ 1 kV High-voltage Probe	HVP120
Function Generator Option	WS3K-FG	100:1 400 MHz 50 MΩ 4 kV High-voltage Probe	PPE4KV
Audiobus Trigger and Decode Option for I ² S, LJ, RJ,	WS3K-Audiobus TD	1000:1 400 MHz 50 MΩ 5 kV High-voltage Probe 1000:1 400 MHz 50 MΩ 6 kV High-voltage Probe	PPE5KV PPE6KV
and TDM			TT ZORV
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			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		
500 MHz Passive Probe 10:1, 10 M Ω	PP020		
700 V, 15 MHz High-Voltage Differential Probe	AP031		

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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