



Advanced Test Equipment Corp.
www.atecorp.com 800-404-ATEC (2832)

TELEDYNE | LECROY

CAPTURE EVERY DETAIL



WaveRunner 8000HD

HD
4096

350 MHz - 2 GHz
High Definition Oscilloscopes

- Capture Every Detail with an 8 Ch Oscilloscope and More Memory
- Expand Your Vision with More Channels
- Advanced Oscilloscope Toolset Extends Your Capabilities

teledynelecroy.com/wr8000hd

Capture Every Detail



Expand Your Vision with **More Channels**

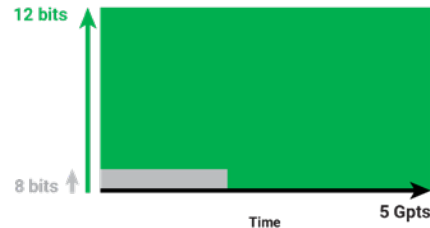


Advanced Oscilloscope Toolset

Extends Your Capabilities

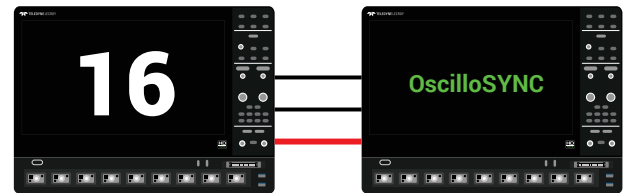
More resolution and accuracy combines with the longest acquisition records to see more detail for longer time.

- 12 bits all the time, 0.5% accuracy, low noise
- 10 GS/s sample rate on 8 channels (+16 digital)
- Up to 5 Gpts/ch acquisition and analysis memory – fast, responsive, simple to navigate



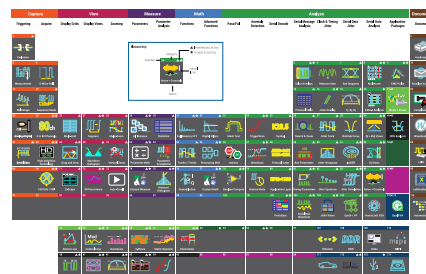
See more signals for longer periods of time compared to other 8 channel oscilloscopes.

- Full 8 analog + 16 digital channels – no loss of analog channels when using digital channels
- OscilloSYNC® seamlessly connects two oscilloscopes to create one 16 channel oscilloscope
- 5 times more visibility (channels x memory) than competition



Teledyne LeCroy oscilloscopes process long records to extract meaningful insight. Experience the difference.

- Widest range and fullest-featured set of serial data debug tools
- Unique validation and productivity tools
- Wide range of application packages





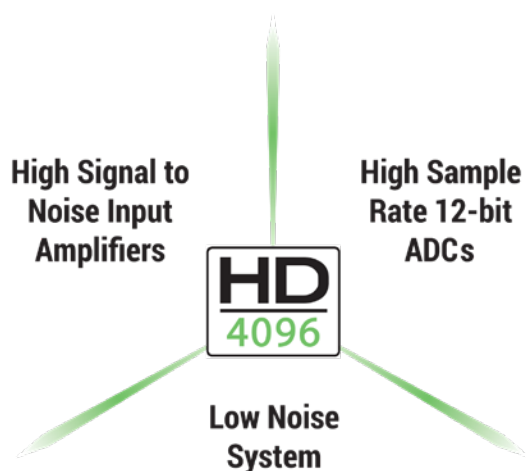
The Ultimate Professional-grade Bench Oscilloscope

More resolution,
more channels,
more memory,
more of everything
for faster and
better debug.

WaveRunner 8000HD



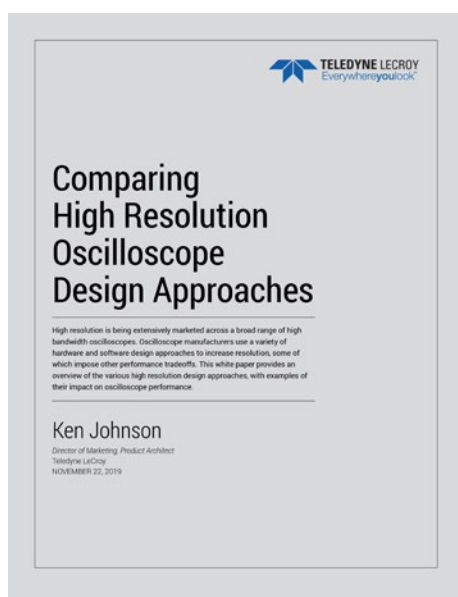
HD
4096



High Resolution Always at Full Oscilloscope Bandwidth and Sample Rate

Rated performance all the time – that's exactly what Teledyne LeCroy delivers.

- Optimized system architecture always delivers low-noise performance, by design
- 12-bit resolution ADC is combined with low-noise front-end amplifier for highest performance – 0.5% accuracy
- Never a reduction in bandwidth, sample rate or number of channels to achieve rated 12-bit resolution and low noise



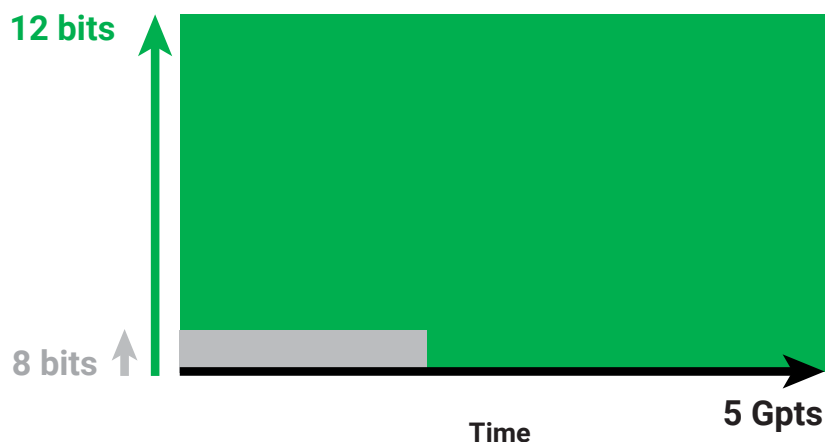
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Other Oscilloscopes Can't Compare to Teledyne LeCroy 12-bit System Performance

Teledyne LeCroy's optimized HD4096 system architecture always delivers low-noise performance, by design.

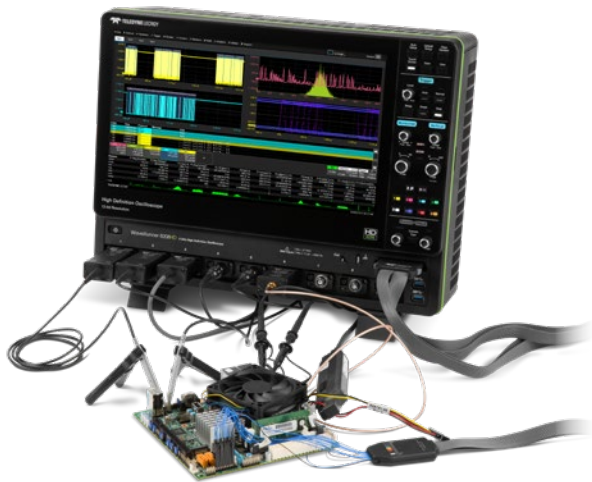
- Some competitive high-resolution oscilloscopes advertise a "12-bit ADC" but otherwise have the same noise as an 8-bit oscilloscope
- Other high-resolution oscilloscopes reduce sample rate and bandwidth to achieve >8-bit performance
- Teledyne LeCroy provides 12-bits all the time, at full sample rate and rated bandwidth, with low noise



More High Resolution Details for Longer Time

The oscilloscope vertical resolution multiplied by the oscilloscope capture time window defines the problem-solving window.

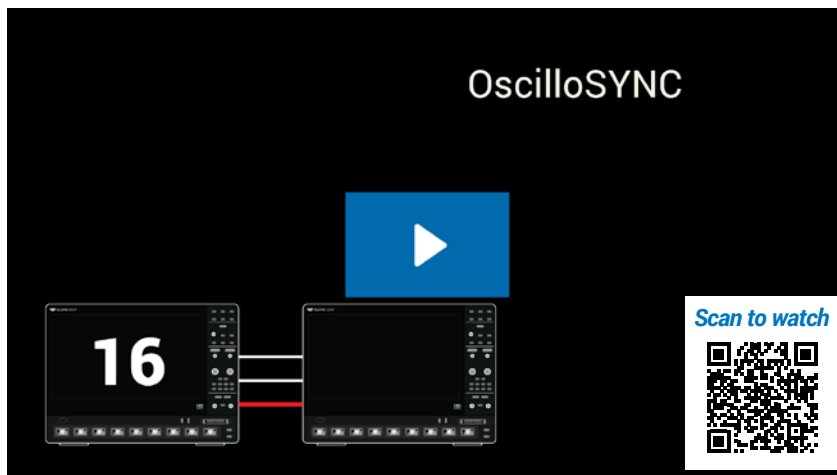
- WaveRunner 8000HD oscilloscopes provide much more problem-solving window compared to competitive oscilloscopes
- Fast processing architecture quickly brings your high-resolution, long-record captures to the oscilloscope display
- Capture every detail for the longest period of time – increase your problem-solving ability



Full 8 Analog + 16 Digital Channels

Full analog+digital capability all the time – no tradeoffs, and no sacrifice of expensive and useful analog channels to capture low-speed digital logic signals.

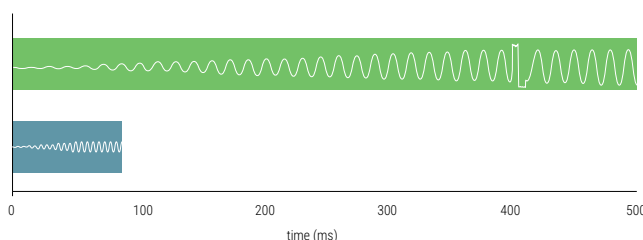
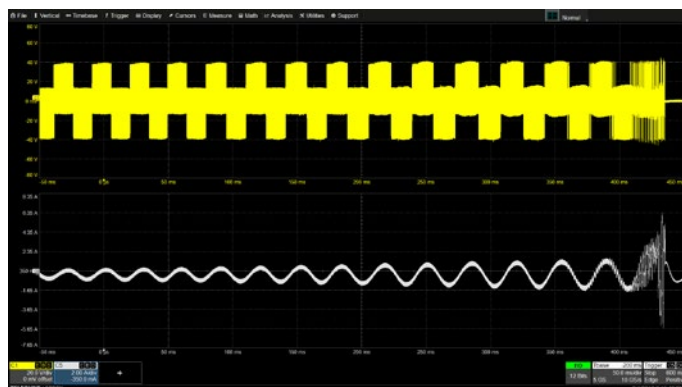
- All models MSO ready – just add digital lead set accessory
- No loss of analog channels when digital inputs are added
- Always 8 analog channels + 16 digital inputs



Connect Two 8 Channel Oscilloscopes using OscilloSYNC® – A 16 Channel Oscilloscope

Connect two Teledyne LeCroy 8 channel oscilloscopes with an OscilloSYNC connection to acquire 16 time-synchronized channels displayed on one oscilloscope. Setup is incredibly easy with just four simple steps:

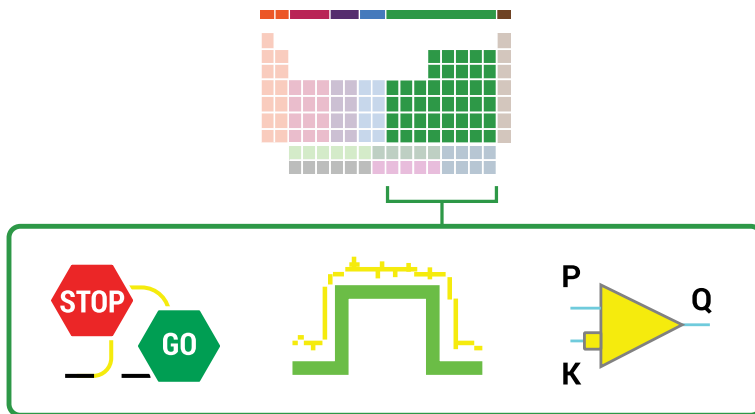
1. Connect Reference In/Out terminals
2. Connect AUX Out terminals
3. Connect Ethernet ports
4. Enter IP Address and press “connect”



Capture Long Time Periods with High Resolution Details

Up to 5 Gpts of acquisition memory in WaveRunner 8000HD oscilloscopes allows capture of long periods of time with 12-bit resolution and maximum sample rate for visibility into the smallest details.

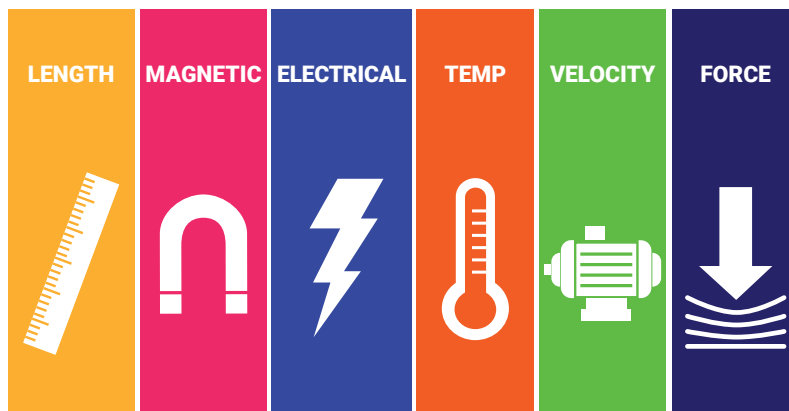
- Sophisticated acquisition and memory management architecture in the oscilloscope is fast and responsive
- Capture both millisecond-scale trends and picosecond-scale glitches
- Navigate directly using timebase scale and position knobs or set up a zoom trace – use whichever you prefer



Comprehensive Pass/Fail Testing and Analysis

The most comprehensive and capable pass/fail analysis of any oscilloscope.

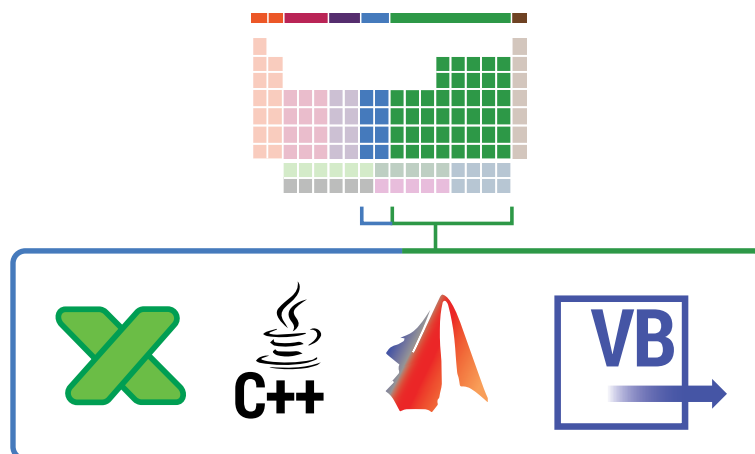
- Mask testing
- Measurement value acceptance
- Limit settings on multiple measurements with a single defined action
- Boolean and chained pass/fail expressions



Complete Unit Conversion and Rescaling

Support for >75 units in 14 different categories.

- Electrical, Magnetic, Energy
- Temperature, Angle
- Velocity, Acceleration, Force, Pressure
- Many more



Customized Math and Measurements

Support for MATLAB, C++, VBScript, Jscript (JavaScript) and Excel.

- Complete integration of calculation within the Teledyne LeCroy oscilloscope
- Results available for further processing within the oscilloscope
- Automation commands may be embedded within the customized code to invoke additional operations



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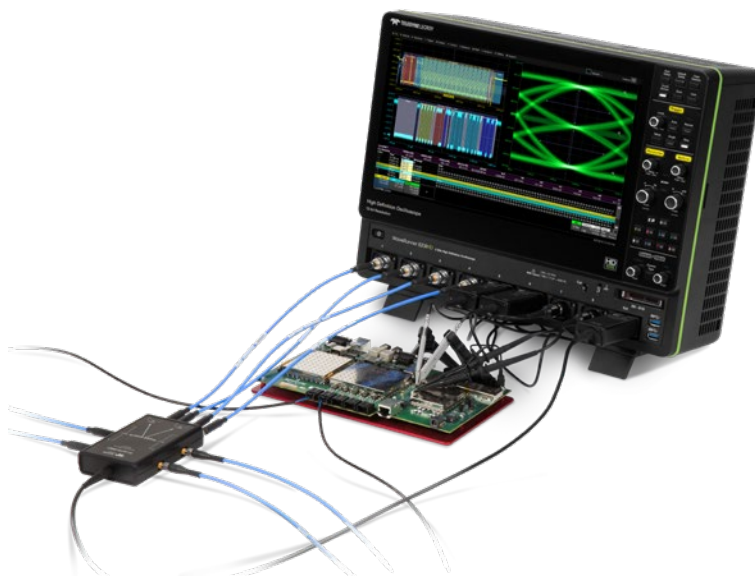


teledynelecroy.com/static-dynamic-complete

3-phase Power Analysis

Sophisticated 3-phase power analysis software option provide the ultimate in 3-phase power and control analysis. Purchase as an option or a Motor Drive Analyzer model. A variety of high-performance high voltage and other probes are available for inverter subsection, power system and control testing.

- Acquire any signal for short or long durations – everything on one display
- Calculate 3-phase electrical and mechanical power at your bench
- Correlate complex power, control and motor behaviors
- Accurate to within 1% of a dedicated power analyzer instrument



[Learn More](#)

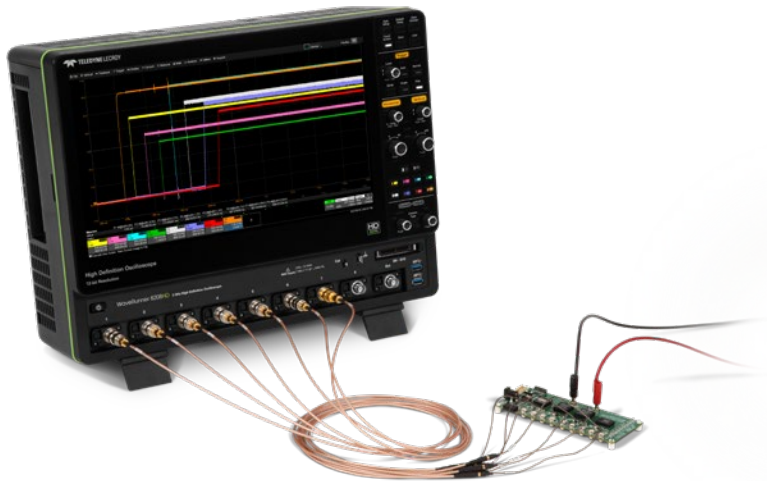


teledynelecroy.com/in-vehicle-networks

Automotive ECU and In-vehicle Network Testing

WaveRunner 8000HD 8 channel oscilloscopes combine high resolution, high channel count, long memory, and wide range of validation and debug software to best address the specific test needs of in-vehicle network and automotive ECU testing.

- Comprehensive, sophisticated tools for testing in-vehicle networks, from kb/s to Gb/s
- More channels at higher resolution for faster and more efficient vehicle ECU debug
- 12-bit resolution provides more insight for spectral analysis, easily connect and rescale non-linear sensors to electrical and magnetic field units, measure sub-1 Hz magnetic field strengths



[Learn More](#)

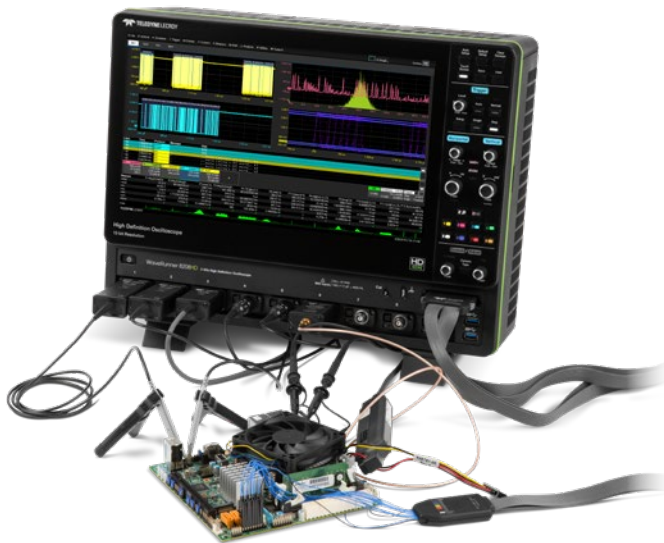


teledynelecroy.com/power-integrity

Power Integrity and Power Sequence Testing

WaveRunner 8000HD oscilloscopes have high resolution, long memory and high channel count for fast and accurate validation and debug of all aspects of power distribution networks (PDN) and power integrity.

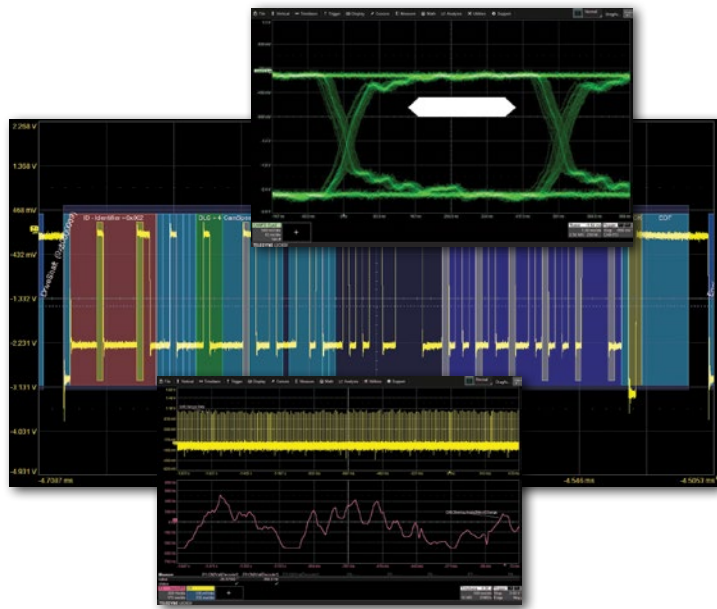
- Most accurate PDN measurements – 0.5% accuracy, low noise, high dynamic range
- Specialized power rail probes up to 4 GHz bandwidth and 60 V offset with solder-in tips - make probing easy and minimize disruption to the DUT
- 8 analog channels for capture of rail sequencing on very long records
- 16 digital inputs for capture and decode of low-speed power sequence triggering behaviors.



Embedded System Testing

WaveRunner 8000HD oscilloscopes acquire the longest records at the highest resolution for the most comprehensive deeply embedded computing system analysis (analog, digital, serial data and sensor signals).

- 12-bit resolution accurately captures sensor, power rail, and other analog signals
- Long acquisition memory options (up to 5 Gpts) and 8+16 channels is ideal for causal validation and debug, especially between signals of widely different speeds
- Comprehensive probe offering and simple integration, rescaling and unitizing of non-linear sensor and sniffer probes



Comprehensive and Powerful Serial Data Debugging Solutions

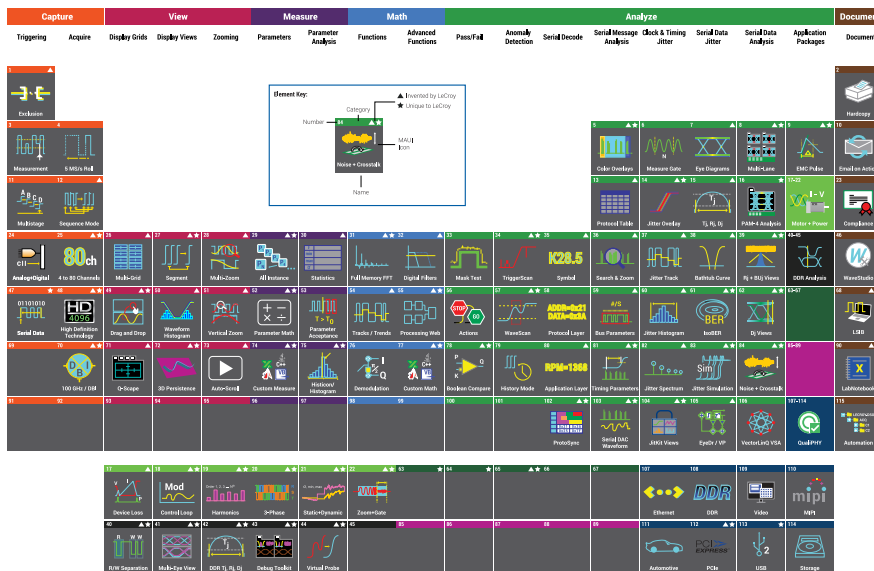
Teledyne LeCroy's Trigger (T), Decode (D), Measure (M) or Graph (G), and Eye Diagram (E) and Physical Layer (P) options are the best of their kind with support for more than 30 different standards.

- Highest performance triggers
- The most intuitive serial decoder
- Measure and graph tools for validation efficiency
- Eye diagrams and physical layer testing

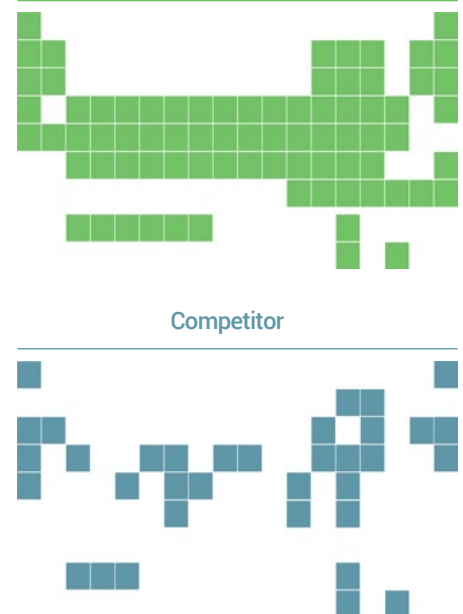
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teledynelecroy.com/tdme



WaveRunner 8000 HD



Our heritage

Teledyne LeCroy's 50+ year heritage is in processing long records to extract meaningful insight. We invented the digital oscilloscope and many of the additional waveshape analysis tools.

Our obsession

Our tools and operating philosophy are standardized across much of our product line. This deep toolbox inspires insight; and your moment of insight is our reward.

Our invitation

Our Periodic Table of Oscilloscope Tools explains the toolsets that Teledyne LeCroy has deployed in our oscilloscopes. Visit our interactive website to learn more about them.

teledynelecroy.com/tools



Key Attributes

1. 15.6" Full HD 1920 x 1080 capacitive touchscreen display
2. 8 analog input channels
3. ProBus input supports every Teledyne LeCroy probe
4. MAUI with OneTouch user interface for intuitive and efficient operation
5. Q-Scape multi-tab display architecture
6. Up to 5 Gpts of acquisition memory
7. HD4096 technology - 12 bits all the time
8. Buttons/indicators color-coded to associated waveform on display
9. Use cursors and adjust settings without opening a menu
10. Mixed Signal capability with 16 integrated digital channels (optional)
11. 6 USB Ports (2 front 3.2 Gen1, 4 side 3.2 Gen2)
12. HDMI and DisplayPort - supports 8K (7680 x 4320) external monitor
13. Removable SSD (standard)
14. View 16 channels on one display with OscilloSYNC
15. Reference Clock Input/Output for connecting to other equipment
16. USBTMC over USB 3.1 for fast data offload



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

Differential Probes (500 MHz – 1.5 GHz)



Wide dynamic range, low loading, and excellent noise performance from 500 MHz to 1.5 GHz. Specialty AP033 provides 10x gain and high CMRR.

60 V Common Mode Differential Probes



The ideal probes for lower voltage GaN power conversion measurement with the highest accuracy, best CMRR and lowest noise. Up to 1 GHz.

High Voltage Differential Probes



1 kV, 2 kV and 6 kV CAT safety rated models. Widest differential voltage ranges, exceptional CMRR, low noise, 1% gain accuracy.

High Voltage Optically Isolated Probes



Ideal for GaN and SiC devices. Highest accuracy, most bandwidth, wide range of voltages, optical isolation.

High Voltage Passive Probes



1 kV to 6 kV ratings. Provides ground-referenced high voltage measurements for a wide range of applications.

Active Voltage Probes



1 to 4 GHz models. High signal fidelity and low circuit loading (<1 pF tip capacitance), ± 8 V dynamic range, ± 12 V offset.

Active Voltage/Power Rail Probe



4 GHz bandwidth, ± 60 V offset, ± 800 mV dynamic range. High DC input impedance and low noise/attenuation for power rail probing.

Current Probes



For AC, DC and impulse current measurements. Utilizes combination of Hall effect and transformer technology. Up to 500 A, up to 100 MHz.

Transmission Line Probes



High-bandwidth passive probe for use with 50 Ω inputs. DC to 7.5 GHz with 0.25 pF input capacitance. 10x or 20x attenuation.

Probe and Current Sensor Adapters



Change between the different Teledyne LeCroy Oscilloscope input types or provide a simple interface to 3rd-party probes.

Passive Probes



10x attenuating with 10 M Ω input resistance. Ideal for low-frequency signals.

TELEDYNE LECROY HIGH DEFINITION OSCILLOSCOPES

High Definition Oscilloscopes with HD4096 Technology have a variety of benefits that allow the user to debug in high definition. Waveforms displayed by High Definition Oscilloscopes are cleaner and crisper. More signal details can be seen and measured; these measurements are made with unmatched precision resulting in better test results and shorter debug time.



Experience HD4096 accuracy, detail, and precision and never use an 8-bit oscilloscope again. Whether the application is general-purpose design and debug, high-precision analog, power electronics, automotive electronics, mechatronics, or other specialized applications, the HD4096 technology provides unsurpassed confidence and measurement capabilities.

Clean, Crisp Waveforms

When compared to waveforms acquired and displayed using conventional 8-bit oscilloscopes, waveforms captured with HD4096 12-bit technology are dramatically crisper and cleaner, and are displayed more accurately.

More Signal Details

16x more resolution provides more signal detail. This is especially helpful for wide dynamic range signals in which a full-scale signal must be acquired while at the same time very small amplitude signal details must be analyzed.

Unmatched Measurement Precision

HD4096 technology delivers measurement precision several times better than conventional 8-bit oscilloscopes. Higher oscilloscope measurement precision provides better ability to assess corner cases and design margins, perform root cause analysis, and create the best possible solution for any discovered design issue.

TELEDYNE LECROY HIGH DEFINITION OSCILLOSCOPES



	HDO4000A	WaveSurfer 4000HD	HDO6000B	WaveRunner 8000HD	WavePro HD	WaveMaster 8000 HD
Resolution	12 bits	12 bits	12 bits	12 bits	12 bits	12 bits
Bandwidth	200 MHz - 1 GHz	200 MHz - 1 GHz	350 MHz - 1 GHz	350 MHz - 2 GHz	2.5 GHz - 8 GHz	6 GHz - 65 GHz
Input Channels	4	4	4	8	4	4
Sample Rate	10 GS/s	5 GS/s	10 GS/s	10 GS/s	20 GS/s	320 GS/s
Standard Toolbox	Basic	Basic	Advanced	Advanced	Advanced	Advanced
Serial Data Tools	TD	TD	TDME, SDAX, QualiPHY® 2	TDME, SDAX, QualiPHY 2	TDME, SDAX, QualiPHY 2	TDME, SDAX, QualiPHY 2
User Experience	MAUI with OneTouch	MAUI with OneTouch	MAUI with OneTouch	MAUI with OneTouch	MAUI with OneTouch	MAUI with OneTouch

WaveRunner 8038HD WaveRunner 8058HD WaveRunner 8108HD WaveRunner 8208HD

Vertical - Analog Channels

Analog Bandwidth @ 50 Ω (-3 dB)	350 MHz	500 MHz	1 GHz	2 GHz
Analog Bandwidth @ 1 MΩ (-3 dB)	350 MHz	500 MHz	500 MHz	500 MHz
Rise Time (10–90%, 50 Ω)	1 ns	700 ps	400 ps	235 ps
Rise Time (20–80%, 50 Ω)	750 ps	525 ps	300 ps	176 ps
Input Channels	8			
Vertical Resolution	12 bits; up to 15 bits with enhanced resolution (ERES)			
Effective Number of Bits (ENOB)	8.9 bits	8.8 bits	8.6 bits	8.4 bits
Vertical Noise Floor (rms, 50 Ω)				
1 mV/div	95 µV	100 µV	130 µV	170 µV
2 mV/div	95 µV	100 µV	130 µV	170 µV
5 mV/div	100 µV	105 µV	135 µV	175 µV
10 mV/div	115 µV	125 µV	155 µV	200 µV
20 mV/div	130 µV	145 µV	180 µV	235 µV
50 mV/div	185 µV	200 µV	250 µV	330 µV
100 mV/div	285 µV	310 µV	390 µV	510 µV
200 mV/div	1.30 mV	1.45 mV	1.80 mV	2.35 mV
500 mV/div	1.85 mV	2.00 mV	2.50 mV	3.25 mV
1 V/div	2.95 mV	3.15 mV	4.00 mV	5.20 mV
Sensitivity	50 Ω: 1 mV–1 V/div, fully variable; 1 MΩ: 1 mV–10 V/div, fully variable			
DC Vertical Gain Accuracy (Gain Component of DC Accuracy)	±(0.5%) FS, offset at 0 V			
Channel-Channel Isolation	70 dB up to 200 MHz 60 dB up to 350 MHz	70 dB up to 200 MHz 60 dB up to 500 MHz	70 dB up to 200 MHz 60 dB up to 500 MHz 50 dB up to 1 GHz	70 dB up to 200 MHz 60 dB up to 500 MHz 50 dB up to 1 GHz 40 dB up to 2 GHz
Offset Range	50 Ω: 1 mV to 4.95 mV: ±1.6 V, 5 mV to 9.9 mV: ±4 V 10 mV to 19.8 mV: ±8 V, 20 mV to 1 V: ±10 V 1 MΩ: 1 mV to 4.95 mV: ±1.6 V, 5 mV to 9.9 mV: ±4 V 10 mV to 19.8 mV: ±8 V, 20 mV to 100 mV: ±16 V 102 mV to 198 mV: ±80 V, 200 mV to 1 V: ±160 V 1.02 V to 10 V: ±400 V			
DC Vertical Offset Accuracy	±(0.5% of offset value + 0.5% FS + 1 mV)			
Maximum Input Voltage	50 Ω: 5 Vrms, ± 10 V Peak 1 MΩ: 400 V max. (DC + Peak AC ≤ 10 kHz)			
Input Coupling	1 MΩ: AC, DC, GND; 50 Ω: DC, GND			
Input Impedance	50 Ω ±2% or 1 MΩ 19 pF, 10 MΩ 10 pF			
Bandwidth Limiters	20 MHz, 200 MHz	20 MHz, 200 MHz, 350 MHz	20 MHz, 200 MHz, 350 MHz, 500 MHz	20 MHz, 200 MHz, 350 MHz, 500 MHz, 1 GHz
Rescaling	Length: meters, inches, feet, yards, miles; Mass: grams, slugs; Temperature: Celsius, Fahrenheit, Kelvin; Angle: radian, arcdeg, arcmin, arcsec, cycles, revolutions, turns; Velocity: m/s, in/s, ft/s, yd/s, miles/s; Acceleration: m/s ² , in/s ² , ft/s ² , g ₀ ; Volume: liters, cubic meters, cubic inches, cubic feet, cubic yards; Force (Weight): Newton, grain, ounce, pound; Pressure: Pascal, bar, atmosphere (technical), atmosphere (standard), torr, psi; Electrical: Volts, Amps, Watts, Volt-Amperes, Volt-Amperes reactive, Farad, Coulomb, Ohm, Siemen, Volt/meter, Coulomb/m ² , Farad/meter, Siemen/meter, power factor; Magnetic: Weber, Tesla, Henry, Amp/meter, Henry/meter; Energy: Joule, BTU, calorie; Rotating Machine: radian/second, frequency, revolution/second, revolution/minute, N-m, lb-ft, lb-in, oz-in, Watt, horsepower; Other: %			

Horizontal - Analog Channels

Timebases	Internal timebase common to 8 input channels			
Time/Division Range	100 ps/div to 5 ks/div (up to 10 ks/div with 500MPT memory, 25 ks/div with 1000MPT memory, 50 ks/div with 2000MPT memory, 100 ks/div with 5000MPT memory); Roll Mode available at ≥ 100 ms/div and ≤ 5 MS/s			
Clock Accuracy	±1 ppm + 1 ppm/year from calibration			
Sample Clock Jitter	Up to 10 µs Acquired Time Range: 80 frms (Internal Timebase Reference) Up to 10 ms Acquired Time Range: 150 frms (Internal Timebase Reference)			
Delta Time Measurement Accuracy	$\sqrt{2} \cdot \sqrt{\left(\frac{\text{Noise}}{\text{SlewRate}}\right)^2 + (\text{Sample Clock Jitter})^2 \text{ (RMS)} + (\text{clock accuracy} \cdot \text{reading}) \text{ (seconds)}}$			
Jitter Measurement Floor	$\sqrt{\left(\frac{\text{Noise}}{\text{SlewRate}}\right)^2 + (\text{Sample Clock Jitter})^2 \text{ (RMS, seconds, TIE)}}$			
Channel-Channel Deskew Range	±9 x time/div. setting, 100 ms max., each channel			
External Timebase Reference (Input)	10 MHz ±25 ppm at 0 to 10 dBm into 50 Ohms			
External Timebase Reference (Output)	10 MHz, 5.0 dBm ±2.5 dBm, sinewave synchronized to reference being used (internal or external reference)			

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Acquisition - Analog Channels

Sample Rate (Single-Shot)	5 GS/s on all channels and (10 GS/s with hardware Enhanced Sample Rate "ESR")
Memory Length (8 Ch / 4 Ch / 2 Ch) (Number of segments in sequence acquisition mode)	Standard: 50 Mpts / 100 Mpts / 200 Mpts (65,535 segments) WR8KHD-500MPT Option: 125 Mpts / 250 Mpts / 500 Mpts (65,535 segments) WR8KHD-1000MPT Option: 250 Mpts / 500 Mpts / 1000 Mpts (65,535 segments) WR8KHD-2000MPT Option: 500 Mpts / 1000 Mpts / 2000 Mpts (65,535 segments) WR8KHD-5000MPT Option: 1250 Mpts / 2500 Mpts / 5000 Mpts (65,535 segments)
Intersegment Time	1.5 μ s
Averaging	Summed averaging to 1 million sweeps; continuous averaging to 1 million sweeps (waveforms of $\leq$ 500 Mpts)
Interpolation	Linear or Sinx/x (2 pt and 5 pt) (waveforms of $\leq$ 500 Mpts)

Vertical, Horizontal, Acquisition - Digital Channels (WR8KHD-MSO only)

Maximum Input Frequency	500 MHz
Minimum Detectable Pulse Width	1 ns
Input Dynamic Range	$\pm$ 20 V
Input Impedance (Flying Leads)	100 k Ω 5 pF
Input Channels	16 Digital Channels
Maximum Input Voltage	$\pm$ 30 V Peak
Minimum Input Voltage Swing	400 mV
Threshold Groupings	Pod 2: D15 to D8, Pod 1: D7 to D0
Threshold Selections	TTL, ECL, CMOS (2.5 V, 3.3 V, 5 V), PECL, LVDS or User Defined
Threshold Accuracy	$\pm$ (3% of threshold setting + 100 mV)
User Defined Threshold Range	$\pm$ 10 V in 20 mV steps
User Defined Hysteresis Range	100 mV to 1.4 V in 100 mV steps
Sample Rate	2.5 GS/s
Record Length	Standard: 50 Mpts Any memory option: 500 Mpts
Channel-to-Channel Skew	350 ps

Triggering System

Modes	Normal, Auto, Single, and Stop (acquisition of $\leq$ 500 Mpts) Single (acquisition of $>$ 500 Mpts)			
Sources	Any input channel, Ext, Ext/10, or Line; slope and level unique to each source (except Line)			
Coupling	DC, AC, HFRej, LFRej			
Pre-trigger Delay	0 to 100% of memory size			
Post-trigger Delay	No limitation			
Hold-off	From 1 ns up to 20 s or from 1 to 99,999,999 events			
Trigger and Interpolator Jitter	$\leq$ 2.5 ps RMS (typical), $<$ 0.1 ps RMS (typical, software assisted)			
Internal Trigger Level Range	$\pm$ 4.1 div from center (typical)			
External Trigger Level Range	Ext ($\pm$ 0.4 V); Ext/10 ($\pm$ 4 V)			
Maximum Trigger Rate	650,000 waveforms/second			
Trigger Sensitivity with Edge Trigger (Ch 1–8)	0.9 div @ $<$ 10 MHz 1.0 div @ $<$ 200 MHz 1.5 div @ $<$ 350 MHz	0.9 div @ $<$ 10 MHz 1.0 div @ $<$ 200 MHz 1.5 div @ $<$ 500 MHz	0.9 div @ $<$ 10 MHz 1.0 div @ $<$ 200 MHz 1.5 div @ $<$ 500 MHz 2.0 div @ $<$ 1 GHz	0.9 div @ $<$ 10 MHz 1.0 div @ $<$ 200 MHz 1.5 div @ $<$ 500 MHz 2.0 div @ $<$ 1 GHz 2.5 div @ $<$ 2 GHz
External Trigger Sensitivity, Edge Trigger	0.9 div @ $<$ 10 MHz 1.0 div @ $<$ 200 MHz 1.5 div @ $<$ 350 MHz	0.9 div @ $<$ 10 MHz 1.0 div @ $<$ 200 MHz 1.5 div @ $<$ 500 MHz	0.9 div @ $<$ 10 MHz 1.0 div @ $<$ 200 MHz 1.5 div @ $<$ 500 MHz 4.5 div @ $<$ 1 GHz	0.9 div @ $<$ 10 MHz 1.0 div @ $<$ 200 MHz 1.5 div @ $<$ 500 MHz 4.5 div @ $<$ 1 GHz
Max. Trigger Frequency, SMART Trigger	350 MHz	500 MHz	1 GHz	2.0 GHz

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Trigger Types

Edge	Triggers when signal meets slope (positive, negative, or either) and level condition.
Width	Triggers on positive or negative glitches with selectable widths. Minimum width: 750 ps, maximum width: 20 s
Glitch	Triggers on positive or negative glitches with selectable widths. Minimum width: 750 ps, maximum width: 20 s
Window	Triggers when signal exits a window defined by adjustable thresholds.
Pattern	Logic combination (AND, NAND, OR, NOR) of 9 inputs (8 channels and external trigger input). Each source can be high, low, or don't care. The high and low level can be selected independently. Triggers at start or end of pattern.
Runt	Trigger on positive or negative runts defined by two voltage limits and two time limits. Select between 1 ns and 20 ns.
Slew Rate	Trigger on edge rates. Select limits for dV, dt, and slope. Select edge limits between 1 ns and 20 ns.
Interval	Triggers on intervals selectable between 1 ns and 20 s.
Dropout	Triggers if signal drops out for longer than selected time between 1 ns and 20 s.
Measurement	Select from a large number of measurement parameters to trigger on a measurement value with qualified limits.
Multi-stage: Qualified	Triggers on any input source only if a defined state or edge occurred on another input source. Delay between sources is selectable by time or events.
Multi-stage: Qualified First	In Sequence acquisition mode, triggers repeatably on event B only if a defined pattern, state or edge (event A) is satisfied in the first segment of the acquisition. Holdoff between sources is selectable by time or events.

Zone Trigger (Optional)

Zone shapes	Draw Rectangles and tap-and-draw custom shapes.
Channels	Create zone areas on any analog channel simultaneously.
Number of Areas	Supports up to 50 unique zone areas and supporting Boolean logic.
Zone Trigger Conditions	Each Area condition is set as the waveform must be "In", "Out", or "Don't Care".
Boolean Logic Equation	Build special custom logic trigger equations ie. (A1 and not A2) or (A3 and A4)
Visual Status indicators	Each created area and the descriptor have real-time status LED indicators. Know if the trigger is waiting, processed and failed to meet zone conditions or passed, meaning it met all conditions and was displayed.
Zone Troubleshooting	A special Pass-Thru mode helps troubleshoot when triggers aren't occurring.
Zone Save and Recall	Save a special zone Area setup file and recall just the zone areas.

Low Speed Serial Protocol Triggering (Optional)

I2C, I3C, SPI (SPI, SSPI, SIOP), UART-RS232, CAN1.1, CAN2.0, CAN FD, LIN, FlexRay, SENT, MIL-STD-1553, AudioBus (I2S, LJ, RJ, TDM), USB1.x/2.0, SPMI

Measurement Tools

Measurement Functionality	Display up to 12 measurement parameters together with statistics including mean, minimum, maximum, standard deviation, and total number. Each occurrence of each parameter is measured and added to the statistics table. Histicons provide a fast, dynamic view of parameters and waveshape characteristics. Parameter math allows addition, subtraction, multiplication, or division of two different parameters. Parameter gates define the location for measurement on the source waveform. Parameter accept criteria define allowable values based on range setting or waveform state.
Measurement Parameters - Horizontal and Jitter	Cycles (number of), Delay (from trigger, 50%), Δ Delay (50%), Duty Cycle (50%, @level), Edges (number of, @level), Fall Time (90-10, @levels), Frequency (50%, @level), Half Period (@level), Hold Time (@level), N Cycle Jitter (peakpeak), Number of Points, Period (50%, @level), Δ Period (@level), Phase (@level), Rise Time (10-90, @levels), Setup (@levels), Skew (@levels), Slew Rate (@levels), Time Interval Error (@level), Time (@level), Δ Time (@level), Width (50%, @level), Δ Width (@level), X(value)@max, X(value)@min
Measurement Parameters - Vertical	Amplitude, Base, Level@X, Maximum, Mean, Median, Minimum, Peak-to-Peak, RMS, Std. Deviation, Top
Measurement Parameters - Pulse	Area, Base, Fall Time (90-10, 80-20, @levels), Overshoot (positive, negative), Rise Time (10-90, 80-20, @levels), Top, Width (50%)
Measurement Parameters - Statistical (on Histograms)	Full Width (@HalfMax, @%), Amplitude, Base, Peak@MaxPopulation, Maximum, Mean, Median, Minimum, Mode, Range, RMS, Std. Deviation, Top, X(value)@Peak, Peaks (number of), Percentile, Population (@bin, total)

Math Tools

Math Functionality	Display up to 12 math functions traces (F1-F12). The easy-to-use graphical interface simplifies setup of up to two operations on each function trace, and function traces can be chained together to perform math-on-math.
Math Operators - Basic Math	Average (summed), Average (continuous), Difference (–), Envelope, Floor, Invert (negate), Product (x), Ratio (/), Reciprocal, Rescale (with units), Roof, Sum (+)
Math Operators - Digital (incl. with MSO option)	Digital AND, Digital DFlipFlop, Digital NAND, Digital NOR, Digital NOT, Digital OR, Digital XOR
Math Operators - Filters	Enhanced Resolution (ERes) to 15 bits vertical, Interpolate (cubic, quadratic, sinx/x)
Math Operators - Frequency Analysis	FFT (power spectrum, magnitude, phase, power density, real, imaginary, magnitude squared) up to full analysis memory length. Select from Rectangular, VonHann, Hamming, FlatTop and Blackman Harris windows.
Math Operators - Functions	Absolute value, Correlation (two waveforms), Derivative, Deskew (resample), Exp (base e), Exp (base 10), Integral, Invert (negate), Log (base e), Log (base 10), Reciprocal, Rescale (with units), Square, Square Root, Zoom (identity)
Math Operators - Other	Segment, Sparse

Measurement and Math Integration

Histogram of statistical distributions of up to 2 billion measurements. Trend (datalog) of up to 1 million measurements. Track (measurement vs. time, time-correlated to acquisitions) of any parameter. Persistence histogram and persistence trace (mean, range, sigma).

WaveRunner 8038HD WaveRunner 8058HD WaveRunner 8108HD WaveRunner 8208HD

Pass/Fail Testing

Display up to 12 Pass/Fail queries using a Single or Dual Parameter Comparison (compare All values, or Any value $<$, $\leq$, $=$, $>$, $\geq$, within limit $\pm\Delta$ value or %) or Mask Test (pre-defined or user-defined mask, waveform All In, All Out, Any In, or Any Out conditions). Combine queries into a boolean expression to Pass or Fail IF "All True", "All False", "Any True", "Any False", or groups of "All" or "Any", with following THEN Save (waveforms), Stop (test), (sound) Alarm, (send) Pulse, (save) LabNotebook or other User(-defined) Action.

Display System

Size	Color 15.6" widescreen capacitive touch screen
Resolution	Full HD (1920 x 1080 pixels)
Number of Traces	Display a maximum of 40 traces. Simultaneously display channel, zoom, memory and math traces.
Grid Styles	Auto, Single, Dual, Triplex, Quad, Octal, Tandem, Triad, Quattro, Twelve, Sixteen, Twenty, X-Y, Single+X-Y, Dual+X-Y. Supports Normal Display Mode (1 grid style, selectable) or Q-Scape Display Mode (4 different tabs, each with individually selectable grid styles). Q-Scape tabbed displays may be viewed in Single, Dual, or Mosaic mode.
Waveform Representation	Sample dots joined, or sample dots only

Processor/CPU

Type	Intel® Core 3-201E Quad Core, 3.6 GHz (or better)
Processor Memory	16 GB standard (Upgradable to 32 GB or 64 GB)
Operating System	Microsoft Windows® 11
Real Time Clock	Date and time displayed with waveform in hardcopy files. SNTP support to synchronize to precision internal clocks.

Connectivity

Ethernet Port	1 x 2.5 Gbps and 1 x 1 Gbps Ethernet interface (RJ45 port)
USB Host Ports	4 side USB 3.2 Gen2 ports, 2 front USB 3.2 Gen1 ports
USB Device Port	1 USBTMC over USB 3.1 Gen1 port
GPIB Port (Optional)	Supports IEEE-488.2 (External)
External Monitor Port	1 x DisplayPort 1.4a port, supports up to 7680x4320 @ 60 Hz 1 x HDMI 2.0b port, supports up to 5120x2880 @ 30 Hz 1 x HDMI 1.4a port, supports up to 3840x2160 @ 30 Hz
Remote Control	Microsoft COM Automation or LeCroy Remote Command Set
Network Communication Standard	VICP or VXI-11, LXI Compatible

Power Requirements

Voltage	90 to 264 Vrms, 47 to 63 Hz 90 to 132 Vrms, 380 to 420 Hz
Nominal Power Consumption	400 W / 400 VA
Max Power Consumption	500 W / 500 VA

Environmental

Temperature (Operating)	+5 °C to +40 °C
Temperature (Non-Operating)	-20 °C to +60 °C
Humidity (Operating)	5% to 90% relative humidity (non-condensing) up to +31 °C Upper limit derates to 50% relative humidity (non-condensing) at +40 °C
Humidity (Non-Operating)	5% to 95% relative humidity (non-condensing) as tested per MIL-PRF-28800F
Altitude (Operating)	Up to 10,000 ft (3048 m) at or below +30 °C
Altitude (Non-Operating)	Up to 40,000 ft (12,192 m)
Random Vibration (Operating)	0.31 grms 5 Hz to 500 Hz, 20 minutes in each of three orthogonal axes
Random Vibration (Non-Operating)	2.4 grms 5 Hz to 500 Hz, 15 minutes in each of three orthogonal axes
Functional Shock	30 g peak, half sine, 11 ms pulse, 3 shocks (positive and negative) in each of three orthogonal axes, 18 shocks total

Size and Weight

Dimensions (HWD)	13.6" H x 17.5" W x 7.7" D (345 mm x 445 mm x 196 mm)
Weight	24.4 lbs (11.1kg)

Certifications

CE Certification	CE compliant, UL and cUL listed; conforms to UL 61010-1 (3rd Edition), UL 61010-2-030 (1st Edition)
UL and cUL Listing	CAN/CSA C22.2 No. 61010-1-12

Warranty and Service

3-year warranty; calibration recommended annually. Optional service programs include extended warranty, upgrades, and calibration services.

Product Description Product Code

WaveRunner 8000HD Oscilloscopes

350 MHz, 8 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and 8K extended desktop	WaveRunner 8038HD
500 MHz, 8 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and 8K extended desktop	WaveRunner 8058HD
1 GHz, 8 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and 8K extended desktop	WaveRunner 8108HD
2 GHz, 8 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and 8K extended desktop	WaveRunner 8208HD

Included with Standard Configurations

÷10, 500 MHz passive probe (Qty. 4), protective cover, Getting Started Guide, Microsoft Windows® 11, commercial NIST traceable calibration with certificate, power cable for the destination country, 3-year warranty

Mixed Signal Solutions

Mixed Signal Option (incl. 16-channel digital leadset, 22 extra large gripper probes, 20 ground extenders, 5 flexible ground leads)	WR8KHD-MSO
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Memory Upgrade Options

500 Mpt/2 Ch (250 Mpt/4 Ch, 125 Mpt/8 Ch)	WR8KHD-500MPT
1 Gpt/2 Ch (500 Mpt/4 Ch, 250 Mpt/8 Ch)	WR8KHD-1000MPT
2 Gpt/2 Ch (1 Gpt/4 Ch, 500 Mpt/8 Ch)	WR8KHD-2000MPT
5 Gpt/2 Ch (2.5 Gpt/4 Ch, 1.25 Gpt/8 Ch)	WR8KHD-5000MPT

CPU, Computer and Other Hardware Options

Additional Standard Solid State Drive	WR8KHD-RSSD-02
32 GB RAM Upgrade	WR8KHD-UPG-32GBRAM*
64 GB RAM Upgrade	WR8KHD-UPG-64GBRAM

* 32 GB RAM upgrade is included with all memory upgrade options.

Oscilloscope Synchronization Option

16-channel OscilloSYNC Software (combines two WaveRunner/MDA 8000HD oscilloscopes)	WR8KHD-16CH-SYNCH
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Serial Trigger and Decode Options

1000Base-T1 Trigger and Decode	WR8KHD-1000Base-T1 TD
1000Base-T1 Trigger, Decode, Measure/Graph, Physical Layer	WR8KHD-1000Base-T1 TDMP
100Base-T1 Trigger and Decode	WR8KHD-100Base-T1BUS TD
100Base-T1 Trigger, Decode, Measure/ Graph, and Eye Diagram	WR8KHD-100Base-T1BUS TDME
10Base-T1S Trigger, Decode, Measure/ Graph, and Eye Diagram	WR8KHD-10BASE-T1S TDME
10Base-T1S Trigger and Decode	WR8KHD-10BASE-T1S TD
MIL-STD-1553 Trigger & Decode	WR8KHD-1553 TD
MIL-STD-1553 Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-1553 TDME
8b10b Decode	WR8KHD-8B10B D
ARINC 429 Symbolic Decode	WR8KHD-ARINC429BUS D SYMBOLIC
ARINC 429 Symbolic Decode, Measure/Graph & Eye Diagram	WR8KHD-ARINC429BUS DME SYMBOLIC
AudioBus Trigger & Decode	WR8KHD-AUDIOBUS TD
AudioBus Trigger, Decode & Graph	WR8KHD-AUDIOBUS TDG
CAN, CAN FD Trigger & Decode	WR8KHD-CAN FDBUS TD
CAN, CAN FD Symbolic Trigger, Decode, Measure/ Graph & Eye Diagram	WR8KHD-CAN FDBUS TDME SYMBOLIC
CAN, CAN XL Trigger and Decode	WR8KHD-CAN XL TD
CAN, CAN FD, CAN XL Symbolic Decode	WR8KHD-CAN XL TDME Symbolic
DigRF 3G Decode	WR8KHD-DIGRF3GBUS D
DigRF V4 Decode	WR8KHD-DIGRFV4BUS D
DisplayPort AUX Trigger and Decode Option	WR8KHD-DPAUX TD
MIPI D-PHY CSI-2 & DSI Decode	WR8KHD-DPHYBUS D

Product Description Product Code

Serial Trigger and Decode Options (cont'd)

Embedded Bundle: I2C, SPI, UART-RS232 Trigger & Decode	WR8KHD-EMB TD
Embedded Bundle: I2C, SPI, UART-RS232 Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-EMB TDME
ENET Decode	WR8KHD-ENETBUS D
FlexRay Trigger & Decode	WR8KHD-FLEXRAYBUS TD
FlexRay Trigger, Decode, Measure/Graph & Physical Layer Tests	WR8KHD-FLEXRAYBUS TDMP
I2C Trigger & Decode	WR8KHD-I2CBUS TD
I2C Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-I2CBUS TDME
I3C Trigger & Decode	WR8KHD-I3CBUS TD
I3C Trigger, Decode, Meas./Graph & Eye Diagram	WR8KHD-I3CBUS TDME
LIN Trigger & Decode	WR8KHD-LINBUS TD
LIN Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-LINBUS TDME
MDIO Decode	WR8KHD-MDIOBUS D
NRZ and Manchester Trigger and Decode	WR8KHD-NRZ-Manchester TD
PMBus Trigger and Decode	WR8KHD-PMBUS TD
PMBus Trigger, Decode, Measure/Graph, and Eye Diagram Option	WR8KHD-PMBUS TDME
QSPI (Simple, Dual, Quad) Trigger and Decode	WR8KHD-QSPI TD
SENT Trigger & Decode	WR8KHD-SENTBUS TD
SENT Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-SENTBUS TDME
SMBus Trigger, Decode, Measure/Graph, and Eye Diagram	WR8KHD-SMBUS TDME
SMBus Trigger and Decode	WR8KHD-SMBUS TD
SpaceWire Decode	WR8KHD-SPACEWIREBUS D
SPI Trigger & Decode	WR8KHD-SPIBUS TD
SPI Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-SPIBUS TDME
SPMI Trigger and Decode	WR8KHD-SPMIBUS TD
SPMI Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-SPMIBUS TDME
UART-RS232 Trigger & Decode	WR8KHD-UART-RS232BUS TD
UART-RS232 Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-UART-RS232BUS TDME
USB 2.0 Trigger & Decode	WR8KHD-USB2BUS TD
USB 2.0 Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-USB2BUS TDME
USB 2.0 HSIC Decode	WR8KHD-USB2-HSICBUS D
USB-PD Trigger and Decode	WR8KHD-USBDP TD
USB-PD Trigger, Decode, Measure/Graph, and Physical Layer	WR8KHD-USBDP TDMP
USB4 Sideband Channel Trigger & Decode	WR8KHD-USB4SB TD
USB4 Sideband Channel Trigger, Decode, Measure/Graph, and Physical Layer	WR8KHD-USB4SB TDMP

Serial Data Compliance Test Software

QualiPHY 1000Base-T1 Compliance Software	QPHY-1000BASE-T1*
100Base-T1/BroadR-Reach Compliance Software	QPHY-100Base-T1
QualiPHY Enabled 10Base-T1L	QPHY-10BASE-T1L
QualiPHY 10Base-T1S Compliance Software	QPHY-10Base-T1S
QualiPHY Ethernet 10/100/1000BT Software	QPHY-ENET*
QualiPHY MOST150 Software	QPHY-MOST150
QualiPHY MOST50 Software	QPHY-MOST50
QualiPHY USB 2.0 Software	QPHY-USB†

* TF-ENET-B required ‡ TF-USB-B required

Serial Data Test Fixtures

HMTD-Connector (m) to SMA (f) Test Fixture	TF-AUTO-HMTD
MATenet-Connector (m) to SMA (f) Test Fixture	TF-AUTO-MATENET
Mini-50-Connector (m) to SMA (f) Test Fixture	TF-AUTO-MINI50
10/100/1000Base-T Ethernet Test Fixture	TF-ENET-B**
USB4 Sideband Test Coupon Fixture	TF-USB-C-SB
USB 2.0 Compliance Test Fixture	TF-USB-B

** Includes ENET-2CAB-SMA018 and ENET-2ADA-BNCSMA

ORDERING INFORMATION

HD
4096

Product Description

Product Code

Debug Toolkit Options

100Base-T1 and 1000Base-T1 Debug Toolkit	WR8KHD-AUTO-ENET-TOOLKIT
Automotive Ethernet Breakout Test Fixture for 100Base-T1 and 1000Base-T1 Debug	TF-AUTO-ENET

Serial Data Analysis Options

NRZ Serial Data Expert Analysis Framework, Eye, Jitter and Noise Measurements	WR8KHD-SDAX-NRZ
PAM Serial Data Expert Analysis Framework, Eye, Jitter and Noise Measurements	WR8KHD-SDAX-PAM
Serial Data Analysis Software (single-lane eye, jitter and noise measurements)	WR8KHD-SDAIII
Eye Doctor II Software (channel & fixture de-embedding/emulation, Tx/Rx equalization)	WR8KHD-EYEDRII
Virtual Probe Software (advanced de-embedding, emulation and virtual probing)	WR8KHD-VIRTUALPROBE
Serial Data Mask Software	WR8KHD-SDM
Cable De-Embedding Software	WR8KHD-CBL-DE-EMBED

Power Analysis Software

Power Analysis Software	WR8KHD-PWR
Power Device Analysis	WR8KHD-POWER-DEVICE
Digital Power Management Analysis Software	WR8KHD-DIG-PWR-MGMT
3-Phase Power Analysis Software	WR8KHD-THREEPHASEPOWER
3-phase Vector Display	WR8KHD-THREEPHASEVECTOR
3-phase dq0 Transform	WR8KHD-THREEPHASEDQ0
3-Phase Harmonics Calculation Software (requires WR8KHD-THREEPHASEPOWER)	WR8KHD-THREEPHASEHARMONICS

Jitter Analysis Software

Clock Expert Jitter Analysis	WR8KHD-CLOCK-X
Clock Expert Jitter Analysis with SSC, Phase Noise, Accumulated Jitter	WR8KHD-CLOCK-X-PRO
JitKit Software (clock/clock-data jitter analysis with statistical, spectral and jitter overlay)	WR8KHD-JITKIT

Other Software Options

Digital Filter Software	WR8KHD-DFP2
EMC Pulse Parameter	WR8KHD-EMC
Spectrum Analyzer for WaveRunner 8000HD - 1 trace	WR8KHD-SPECTRUM-1
Spectrum Analyzer for WaveRunner 8000HD - 2 traces + reference	WR8KHD-SPECTRUM-PRO-2R
VectorLinQ Vector Signal Analysis	WR8KHD-VECTORLINQ
Advanced Customization	WR8KHD-XDEV
Zone Trigger	WR8KHD-ZONETRIGGER

Offline Analysis Software

MAUI Studio Pro Offline Remote and PC Analysis Software License	MAUI Studio Pro
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Remote Control/Network Options

External USB2 to GPIB Adaptor	USB2-GPIB
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General Accessories

WaveRunner 8000HD Rackmount Kit	WR8KHD-RACKMOUNT
Soft Carrying Case	WPHD-CARRYCASE
Instrument Cart (with additional shelf and drawer)	OC1024-A

Product Description

Product Code

Probes - Please consult sales

High Voltage Optically Isolated Probe, 350 MHz Bandwidth.	DL03-ISO
High Voltage Optically Isolated Probe, 700 MHz Bandwidth	DL07-ISO
High Voltage Optically Isolated Probe, 1 GHz Bandwidth	DL10-ISO
250 MHz 60 V Common Mode Differential Probe	DL02-HCM
500 MHz 60 V Common Mode Differential Probe	DL05-HCM
1 GHz 60 V Common Mode Differential Probe	DL10-HCM
Power/Voltage Rail Probe. 2 GHz bandwidth, 1.2x attenuation, ± 60 V offset, ± 800 mV	RP2060
Power/Voltage Rail Probe. 4 GHz bandwidth, 1.2x attenuation, ± 60 V offset, ± 800 mV	RP4060
High Voltage Fiber Optic Probe, 150 MHz Bandwidth	HVF0108
500 MHz Passive Probe, 2.5mm, 10:1, 10 MOhm	PP021
500 MHz Passive Probe, 5mm, 10:1, 10 MOhm	PP025
1 GHz, 0.9 pF, 1 MQ High Impedance Active Probe	ZS1000
1.5 GHz, 0.9 pF, 1 MQ High Impedance Active Probe	ZS1500
500 MHz, 1.0 pF Active Differential Probe, ± 8 V	ZD500
1 GHz, 1.0 pF Active Differential Probe, ± 8 V	ZD1000
1.5 GHz, 1.0 pF Active Differential Probe, ± 8 V	ZD1500
500 MHz, Active Differential Probe ($\div 1$, $\div 10$, $\div 100$)	AP033
7.5 GHz Low Capacitance Passive Probe ($\div 10$, 1 k Ω ; $\div 20$, 500 Ω)	PP066
100:1 400 MHz 50 MQ 1 kV High Voltage Probe	HVP120
6kV High Voltage Passive Probe, 500 MHz	PPE6KV-A
30 A, 50 MHz Current Probe - AC/DC, 30 Arms, 50 A peak pulse, 1.5-meter cable	CP030B
30 A, 10 MHz Current Probe - AC/DC, 30 Arms, 50 A peak pulse, 3-meter cable	CP030B-3M
30 A, 50 MHz High Sensitivity Current Probe - AC/DC, 30 Arms, 50 A peak pulse, 1.5-meter cable	CP030A
30 A, 100 MHz Current Probe - AC/DC, 30 Arms, 50 A peak pulse, 1.5-meter cable	CP031
30A, 100 MHz High Sensitivity Current Probe - AC/DC, 30 Arms, 50 A peak pulse, 1.5-meter cable	CP031A
150 A, 10 MHz Current Probe - AC/DC, 150 Arms; 500 A peak pulse, 2-meter cable	CP150B
150 A, 5 MHz Current Probe - AC/DC, 150 Arms, 500 A peak pulse, 6-meter cable	CP150B-6M
500 A, 2 MHz Current Probe - AC/DC, 500 Arms, 700 A peak pulse, 6-meter cable	CP500
Deskew Calibration Source	DCS025
Programmable Current Sensor to ProBus Adapter (for third-party current sensors)	CA10
TekProbe to ProBus Probe Adapter	TPA10
1 kV, 25 MHz High Voltage Differential Probe	HVD3102A
1 kV, 25 MHz High Voltage Differential Probe (without tip accessories)	HVD3102A-NOACC
1 kV, 120 MHz High Voltage Differential Probe	HVD3106A
1 kV, 120 MHz High Voltage Differential Probe (without tip accessories)	HVD3106A-NOACC
1 kV, 80 MHz High Voltage Differential Probe - 6-meter cable and Auto Zero disconnect	HVD3106A-6M
2 kV, 120 MHz High Voltage Differential Probe	HVD3206A
2 kV, 80 MHz High Voltage Differential Probe - 6-meter cable and Auto Zero disconnect	HVD3206A-6M
6 kV, 100 MHz High Voltage Differential Probe	HVD3605A
2kV, 400 MHz High Voltage Differential Probe	HVD3220

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

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