LeCroy

WaveMaster® 8 Zi Series

4 GHz – 30 GHz

World's Fastest Real-time Oscilloscope

Eye Doctor™ II Advanced Signal Integrity Tools

Superior Serial Data Analysis

SPECIFICATIONS

Vertical System	WaveMaster 804Zi (SDA)	WaveMaster 806Zi (SDA)	WaveMaster 808Zi (SDA)	WaveMaster 813Zi (SDA)	WaveMaster 816Zi (SDA,DDA)
Analog (ProLink Input) Bandwidth @ 50 Ω (-3 dB)	4 GHz (≥10 mV/div)	6 GHz (≥10 mV/div)	8 GHz (≥10 mV/div)	13 GHz (≥10 mV/div)	16 GHz (≥ 10 mV/div)
Analog (ProBus Input) Bandwidth @ 50 Ω (-3 dB)	3.5 GHz (≥10 mV/div)	3.5 GHz (≥10 mV/div)	3.5 GHz (≥10 mV/div)	3.5 GHz (≥10 mV/div)	3.5 GHz (≥ 10 mV/div)
Analog (ProBus Input) Bandwidth @ 1 MΩ (-3 dB)	500 MHz (typical, ≥2 mV/div)				
Rise Time (typical, 10–90%, 50 Ω)	94 ps	63 ps	50 ps	33 ps	28 ps
Rise Time (typical, 20–80%, 50 Ω)	71 ps	47 ps	37 ps	25 ps	21 ps
Input Channels	4				
Bandwidth Limiters	20 MHz, 200 MHz, 1 GHz	20 MHz, 200 MHz, 1 GHz, 4 GHz	20 MHz, 200 MHz, 1 GHz, 4 GHz, 6 GHz	20 MHz, 200 MHz, 1 GHz, 4 GHz, 6 GHz, 8 GHz	20 MHz, 200 MHz, 1 GHz, 4 GHz, 6 GHz, 8 GHz, 13 GHz
Input Impedance	50 Ω ±2% or 1 MΩ || 16 pF, 10 MΩ || 11 pF with supplied probe				
Input Coupling	ProLink Inputs: 50 Ω: DC, GND ProBus Inputs: 1 MΩ: AC, DC, GND 50 Ω: DC, GND				
Maximum Input Voltage	50 Ω (ProLink): ±2 V max. 50 Ω (ProBus): ±5 V max., 3.5 V_{rms} 1 MΩ (ProBus): 250 V max. (peak AC: < 10 kHz + DC)				
Vertical Resolution	8 bits up to 11 bits with enhanced resolution (ERES)				
Sensitivity	50 Ω (ProLink): 2 mV–1 V/div, fully variable (2–9.9 mV/div via zoom) 50 Ω (ProBus): 2 mV–1 V/div, fully variable 1 MΩ (ProBus): 2 mV–10 V/div, fully variable				
DC Gain Accuracy	±1.5% of full scale				
Offset Range	50 Ω (ProLink): ±500 mV @ 2–100 mV/div ±4 V @ > 100 mV/div–1 V/div 50 Ω (ProBus): ±750 mV @ 2–100 mV/div ±4 V @ > 100 mV/div–1 V/div 1 MΩ: ±1 V @ 2–128 mV/div ±10 V @ 130 mV–1.28 V/div ±100 V @ 1.3 V–10 V/div				
Offset Accuracy	±(1.5% of full scale + 1.5% of offset value + 2 mV)				

Horizontal System

Timebases	Internal timebase common to 4 input channels an external clock may be applied at the auxiliary input
Time/Division Range	5 ps/div–320 s/div (Real-time mode: 5 ps/div–20 s/div RIS mode: 5 ps/div–10 ns/div Roll mode: up to 320 s/div)
Clock Accuracy	< 1 ppm + (aging of 0.5 ppm/yr from last calibration)
Time Interval Accuracy	< 0.06 / SR + (clock accuracy* Reading) (rms)
Jitter Noise Floor	< 500 fs (typical)
Trigger and Interpolator Jitter	1 ps rms (typical) < 0.1 ps rms (typical, software assisted)
Channel-Channel Deskew Range	±9 x time/div. setting, 100 ms max., each channel
External Timebase Reference (Input)	10 MHz 50 Ω impedance, applied at the rear input
External Timebase Reference (Output)	10 MHz 50 Ω impedance, output at the rear

SPECIFICATIONS

Vertical System	WaveMaster 820Zi (SDA)	WaveMaster 825Zi (SDA, DDA)	WaveMaster 830Zi (SDA)
Analog (2.92 mm Input) Bandwidth @ 50 Ω (-3 dB)	20 GHz (≥10 mV/div)	25 GHz (≥10 mV/div)	30 GHz (≥10 mV/div)
Analog (ProLink Input) Bandwidth @ 50 Ω (-3 dB)	16 GHz (≥ 10 mV/div)	16 GHz (≥ 10 mV/div)	16 GHz (≥ 10 mV/div)
Analog (ProBus Input) Bandwidth @ 50 Ω (-3 dB)	3.5 GHz (≥ 10 mV/div)	3.5 GHz (≥ 10 mV/div)	3.5 GHz (≥ 10 mV/div)
Analog (ProBus Input) Bandwidth @ 1 MΩ (-3 dB)	500 MHz (typical, ≥ 2 mV/div)		
Rise Time (typical, 10–90%, 50 Ω)	21 ps	19 ps (@ full BW)	17 ps (@ full BW)
Rise Time (typical, 20–80%, 50 Ω)	16 ps	14 ps	13 ps
Input Channels	4 (@ 16 GHz), 2 (@ full BW)		
Bandwidth Limiters	20 MHz, 200 MHz, 1 GHz, 4 GHz, 6 GHz, 8 GHz, 13 GHz		
Input Impedance	50 Ω ±2% or 1 MΩ || 16 pF, 10 MΩ || 11 pF with supplied probe		
Input Coupling	2.92 mm Inputs: 50 Ω: DC, GND ProLink Inputs: 50 Ω: DC, GND ProBus Inputs: 1 MΩ: AC, DC, GND; 50 Ω: DC, GND		
Maximum Input Voltage	2.92 mm Inputs: ±2 V max. @ ≤ 100 mV/div, 5.5 V_{rms} @ > 100 mV/div 50 Ω (ProLink): ±2 V max. @ ≤ 100 mV/div, 5.5 V_{rms} @ > 100 mV/div 50 Ω (ProBus): ±5 V max., 3.5 V_{rms} 1 MΩ (ProBus): 250 V max. (peak AC: < 10 kHz + DC)		
Vertical Resolution	8 bits up to 11 bits with enhanced resolution (ERES)		
Sensitivity	50 Ω (2.92 mm): 10 mV–500 mV/div 50 Ω (ProLink): 2 mV–1 V/div, fully variable (2–9.9 mV/div via zoom) 50 Ω (ProBus): 2 mV–1 V/div, fully variable 1 MΩ (ProBus): 2 mV–10 V/div, fully variable		
DC Gain Accuracy	±1.5% of full scale		
Offset Range	50 Ω (2.92 mm): ±500 mV @ 2–74 mV/div ±4 V @ > 76 mV/div–500 mV/div 50 Ω (ProLink): ±500 mV @ 2–100 mV/div ±4 V @ > 100 mV/div–1 V/div 50 Ω (ProBus): ±750 mV @ 2–100 mV/div ±4 V @ > 100 mV/div–1 V/div 1 MΩ: ±1 V @ 2–128 mV/div ±10 V @ 130 mV–1.28 V/div ±100 V @ 1.3 V–10 V/div		
Offset Accuracy	±(1.5% of full scale + 1.5% of offset value + 2 mV)		

Horizontal System

Timebases	Internal timebase common to 4 input channels an external clock may be applied at the auxiliary input
Time/Division Range	For ≥ 20 GHz mode: Real-time mode, 5 ps/div–10 µs/div (upper time/div is a function of memory available at 80 GS/s) For < 20 GHz mode: 5 ps/div–320 s/div (Real-time mode: 5 ps/div–20 s/div; RIS mode: 5 ps/div–10 ns/div; Roll mode: up to 320 s/div)
Clock Accuracy	< 1 ppm + (aging of 0.5 ppm/yr from last calibration)
Time Interval Accuracy	< 0.06 / SR + (clock accuracy* Reading) (rms)
Jitter Noise Floor	< 500 fs (typical)
Trigger and Interpolator Jitter	1 ps rms (typical) < 0.1 ps rms (typical, software assisted)
Channel-Channel Deskew Range	±9 x time/div. setting, 100 ms max., each channel
External Timebase Reference (Input)	10 MHz 50 Ω impedance, applied at the rear input
External Timebase Reference (Output)	10 MHz 50 Ω impedance, output at the rear

SPECIFICATIONS

Acquisition System	WaveMaster 804Zi (SDA)	WaveMaster 806Zi (SDA)	WaveMaster 808Zi (SDA)	WaveMaster 813Zi (SDA)	WaveMaster 816Zi (SDA, DDA)
Single-Shot Sample Rate/Ch	40 GS/s on 4 Ch (80 GS/s on 2 Ch using optional WM8Zi-2X80GS External Interleaving Device)				
Random Interleaved Sampling (RIS)	200 GS/s for repetitive signals (20 ps/div to 10 ns/div)				
Maximum Trigger Rate	1,000,000 waveforms/second (in Sequence Mode, up to 4 channels)				
Intersegment Time	1 µs				
Maximum Acquisition and Analysis Memory Points/Ch	4 Ch Memory				Number of Segments
Standard Memory	10 Mpts (20 Mpts for SDA, DDA models) Memory can be doubled in 2 Ch and 80 GS/s mode with use of optional WM8Zi-2X80GS External Interleaving Device				5,000
S-32 – Memory Option	32 Mpts Memory and Sample Rate can be doubled in 2 Ch mode with use of optional WM8Zi-2X80GS External Interleaving Device				15,000
M-64 – Memory Option	64 Mpts Memory and Sample Rate can be doubled in 2 Ch mode with use of optional WM8Zi-2X80GS External Interleaving Device				15,000
L-128 – Memory Option	128 Mpts Memory and Sample Rate can be doubled in 2 Ch mode with use of optional WM8Zi-2X80GS External Interleaving Device				15,000
VL-256 – Memory Option	256 Mpts Memory and Sample Rate can be doubled in 2 Ch mode with use of optional WM8Zi-2X80GS External Interleaving Device				15,000

Acquisition Processing

Averaging	Summed averaging to 1 million sweeps continuous averaging to 1 million sweeps
Enhanced Resolution (ERES)	From 8.5 to 11 bits vertical resolution
Envelope (Extrema)	Envelope, floor, or roof for up to 1 million sweeps
Interpolation	Linear or Sin x/x

Triggering System

Modes	Normal, Auto, Single, and Stop				
Sources	Any input channel, Aux, Aux/10, or line slope and level unique to each source (except line trigger)				
Coupling Mode	DC, AC, HFRej, LFRej				
Pre-trigger Delay	0–100% of memory size (adjustable in 1% increments of 100 ns)				
Post-trigger Delay	0–10,000 divisions in real time mode, limited at slower time/div settings or in roll mode				
Hold-off by Time or Events	From 2 ns up to 20 s or from 1 to 99,999,999 events				
Internal Trigger Range	±4.1 div from center				
Trigger Sensitivity with Edge Trigger (Ch 1–4) ProLink Inputs	2 div @ < 3.5 GHz 1.5 div @ < 1.75 GHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling, ≥ 10 mV/div, 50 Ω)	2 div @ < 4 GHz 1.5 div @ < 3 GHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling, ≥ 10 mV/div, 50 Ω)	2 div @ < 6 GHz 1.5 div @ < 3 GHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling, ≥ 10 mV/div, 50 Ω)	2 div @ <13 GHz 1.5 div @ < 3 GHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling, ≥ 10 mV/div, 50 Ω)	2 div @ < 15 GHz 1.5 div @ < 3 GHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling, ≥ 10 mV/div, 50 Ω)
Trigger Sensitivity with Edge Trigger (Ch 1–4) ProBus Inputs	2 div @ < 3.5 GHz 1.5 div @ < 3 GHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling, ≥ 10 mV/div, 50 Ω)				
External Trigger Sensitivity, (Edge Trigger)	2 div @ < 1 GHz 1.5 div @ < 500 MHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling)				
Max. Trigger Frequency, SMART Trigger	2.0 GHz @ ≥ 10 mV/div (minimum triggerable width 200 ps)				
External Trigger Input Range	Aux (±0.4 V); Aux/10 (±4 V)				

SPECIFICATIONS

Acquisition System	WaveMaster 820Zi (SDA)	WaveMaster 825Zi (SDA, DDA)	WaveMaster 830Zi (SDA)
Single-Shot Sample Rate/Ch	80 GS/s at full bandwidth on 2 channels 40 GS/s on 4 Ch		
Random Interleaved Sampling (RIS)	Not Applicable		
Maximum Trigger Rate	1,000,000 waveforms/second (in Sequence Mode, up to 4 channels)		
Intersegment Time	1 µs		
Maximum Acquisition and Analysis Memory Points/Ch	4 Ch Memory		Number of Segments
Standard Memory	10 Mpts (20 Mpts for SDA, DDA models) (20 Mpts on 2 Ch when operated in Digital Bandwidth Interleave mode)		5,000
S-32 – Memory Option	32 Mpts (64 Mpts on 2 Ch when operated in Digital Bandwidth Interleave mode)		15,000
M-64 – Memory Option	64 Mpts (128 Mpts on 2 Ch when operated in Digital Bandwidth Interleave mode)		15,000
L-128 – Memory Option	128 Mpts (256 Mpts on 2 Ch when operated in Digital Bandwidth Interleave mode)		15,000
VL-256 – Memory Option	256 Mpts (512 Mpts on 2 Ch when operated in Digital Bandwidth Interleave mode)		15,000

Acquisition Processing

Averaging	Summed averaging to 1 million sweeps continuous averaging to 1 million sweeps
Enhanced Resolution (ERES)	From 8.5 to 11 bits vertical resolution
Envelope (Extrema)	Envelope, floor, or roof for up to 1 million sweeps
Interpolation	Linear or Sin x/x

Triggering System

Modes	Normal, Auto, Single, and Stop
Sources	Any input channel, Aux, Aux/10, or line slope and level unique to each source (except line trigger)
Coupling Mode	DC, AC, HFRej, LFRej
Pre-trigger Delay	0–100% of memory size (adjustable in 1% increments of 100 ns)
Post-trigger Delay	0–10,000 divisions in real time mode, limited at slower time/div settings or in roll mode
Hold-off by Time or Events	From 2 ns up to 20 s or from 1 to 99,999,999 events
Internal Trigger Range	±4.1 div from center
Trigger Sensitivity with Edge Trigger (Ch 1–4) ProLink Link and 2.92 mm Inputs	2 div @ < 15 GHz 1.5 div @ < 3 GHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling, ≥ 10 mV/div, 50 Ω)
Trigger Sensitivity with Edge Trigger (Ch 1–4) ProBus Inputs	2 div @ < 3.5 GHz 1.5 div @ < 3 GHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling, ≥ 10 mV/div, 50 Ω)
External Trigger Sensitivity, (Edge Trigger)	2 div @ < 1 GHz 1.5 div @ < 500 MHz 1.0 div @ < 200 MHz (for DC, AC, LFRej coupling)
Max. Trigger Frequency, SMART Trigger	2.0 GHz @ ≥ 10 mV/div (minimum triggerable width 200 ps)
External Trigger Input Range	Aux (±0.4 V); Aux/10 (±4 V)

SPECIFICATIONS

Basic Triggers	WaveMaster 804Zi (SDA)	WaveMaster 806Zi (SDA)	WaveMaster 808Zi (SDA)	WaveMaster 813Zi (SDA)	WaveMaster 816Zi (SDA, DDA)
Edge	Triggers when signal meets slope (positive, negative, or either) and level condition				
Window	Triggers when signal exits a window defined by adjustable thresholds				
TV-Composite Video	Triggers NTSC or PAL with selectable line and field HDTV (720p, 1080i, 1080p) with selectable frame rate (50 or 60 Hz) and Line or CUSTOM with selectable Fields (1–8), Lines (up to 2000), Frame Rates (25, 30, 50, or 60 Hz), Interlacing (1:1, 2:1, 4:1, 8:1), or Synch Pulse Slope (Positive or Negative)				

SMART Triggers™					
State or Edge 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				
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. Delay between sources is selectable by time or events				
Dropout	Triggers if signal drops out for longer than selected time between 1 ns and 20 s				
Pattern	Logic combination (AND, NAND, OR, NOR) of 5 inputs (4 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 the pattern				

SMART Triggers with Exclusion Technology					
Glitch	Triggers on positive or negative glitches with widths selectable as low as 200 ps (depending on oscilloscope bandwidth) to 20 s, or on intermittent faults				
Width (Signal or Pattern)	Triggers on positive, negative, or both widths with widths selectable as low as 200 ps (depending on oscilloscope bandwidth) to 20 s, or on intermittent faults				
Interval (Signal or Pattern)	Triggers on intervals selectable between 1 ns and 20 s				
Timeout (State/Edge Qualified)	Triggers on any source if a given state (or transition edge) has occurred on another source. Delay between sources is 1 ns to 20 s, or 1 to 99,999,999 events				
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				
Exclusion Triggering	Trigger on intermittent faults by specifying the expected behavior and triggering when that condition is not met				

Cascade (Sequence) Triggering					
Capability	Arm on "A" event, then Trigger on "B" event. Or Arm on "A" event, then Qualify on "B" event, and Trigger on "C" event				
Types	A or B event: Edge, Glitch, Width, Window, Dropout, Interval, Runt, Slew Rate, or Pattern (analog) C event: Edge				
Holdoff	Delay between A and B, B and C, or both is selectable by time or number of events				
Reset	Reset between A and B, B and C, or both is selectable in time				

High-speed Serial Protocol Triggering (Option WM8Zi-HSPT)					
Data Rates	50 Mb/s–2.7 Gb/s, 3.0, 3.125 Gb/s (standard with SDA models)				
Pattern Length	80-bits, NRZ or 8b10b				
Clock and Data Outputs	400 mV_{p-p} (typical) AC coupled				
Clock Recovery Jitter	1 ps rms + 0.3% Unit Interval rms for PRBS data patterns with 50% transition density				
Hardware Clock Recovery Loop BW	PLL Loop BW = Fbaud/5500, 50 Mb/s to 1.25 Gb/s (typical)				

Low-speed Serial Protocol Triggering (Optional)					
Optionally Available	I^2C, SPI (SPI, SSPI, SIOP), UART-RS232, CAN, LIN, FlexRay				

Color Waveform Display					
Type	Color 15.3" flat panel TFT-Active Matrix LCD with high resolution touch screen				
Resolution	WXGA 1280 x 768 pixels				
Number of Traces	Display a maximum of 8 traces. Simultaneously display channel, zoom, memory and math traces				
Grid Styles	Auto, Single, Dual, Quad, Octal, X-Y, Single+X-Y, Dual+X-Y				
Waveform Representation	Sample dots joined, or sample dots only				

SPECIFICATIONS

Basic Triggers	WaveMaster 820Zi (SDA)	WaveMaster 825Zi (SDA, DDA)	WaveMaster 830Zi (SDA)
Edge	Triggers when signal meets slope (positive, negative, or either) and level condition		
Window	Triggers when signal exits a window defined by adjustable thresholds		
TV-Composite Video	Triggers NTSC or PAL with selectable line and field HDTV (720p, 1080i, 1080p) with selectable frame rate (50 or 60 Hz) and Line or CUSTOM with selectable Fields (1–8), Lines (up to 2000), Frame Rates (25, 30, 50, or 60 Hz), Interlacing (1:1, 2:1, 4:1, 8:1), or Synch Pulse Slope (Positive or Negative)		

SMART Triggers™	
State or Edge 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
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. Delay between sources is selectable by time or events
Dropout	Triggers if signal drops out for longer than selected time between 1 ns and 20 s.
Pattern	Logic combination (AND, NAND, OR, NOR) of 5 inputs (4 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 the pattern

SMART Triggers with Exclusion Technology	
Glitch	Triggers on positive or negative glitches with widths selectable as low as 200 ps (depending on oscilloscope bandwidth) to 20 s, or on intermittent faults
Width (Signal or Pattern)	Triggers on positive, negative, or both widths with widths selectable as low as 200 ps (depending on oscilloscope bandwidth) to 20 s, or on intermittent faults
Interval (Signal or Pattern)	Triggers on intervals selectable between 1 ns and 20 s
Timeout (State/Edge Qualified)	Triggers on any source if a given state (or transition edge) has occurred on another source. Delay between sources is 1 ns to 20 s, or 1 to 99,999,999 events
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
Exclusion Triggering	Trigger on intermittent faults by specifying the expected behavior and triggering when that condition is not met

Cascade (Sequence) Triggering	
Capability	Arm on "A" event, then Trigger on "B" event. Or Arm on "A" event, then Qualify on "B" event, and Trigger on "C" event
Types	A or B event: Edge, Glitch, Width, Window, Dropout, Interval, Runt, Slew Rate, or Pattern (analog) C event: Edge
Holdoff	Delay between A and B, B and C, or both is selectable by time or number of events
Reset	Reset between A and B, B and C, or both is selectable in time

High-speed Serial Protocol Triggering (Option WM8Zi-HSPT)	
Data Rates	50 Mb/s–2.7 Gb/s, 3.0, 3.125 Gb/s (standard with SDA models)
Pattern Length	80-bits, NRZ or 8b10b
Clock and Data Outputs	400 mV_{p-p} (typical) AC coupled
Clock Recovery Jitter	1 ps rms + 0.3% Unit Interval rms for PRBS data patterns with 50% transition density
Hardware Clock Recovery Loop BW	PLL Loop BW = Fbaud/5500, 50 Mb/s to 1.25 Gb/s (typical)

Low-speed Serial Protocol Triggering (Optional)	
Optionally available	I^2C, SPI (SPI, SSPI, SIOP), UART-RS232, CAN, LIN, FlexRay

Color Waveform Display	
Type	Color 15.3" flat panel TFT-Active Matrix LCD with high resolution touch screen
Resolution	WXGA 1280 x 768 pixels
Number of Traces	Display a maximum of 8 traces. Simultaneously display channel, zoom, memory and math traces
Grid Styles	Auto, Single, Dual, Quad, Octal, X-Y, Single+X-Y, Dual+X-Y
Waveform Representation	Sample dots joined, or sample dots only

SPECIFICATIONS

Integrated Second Display	WaveMaster 804Zi (SDA)	WaveMaster 806Zi (SDA)	WaveMaster 808Zi (SDA)	WaveMaster 813Zi (SDA)	WaveMaster 816Zi (SDA, DDA)
Type	Color 15.3" flat panel TFT-Active Matrix LCD with high resolution touch screen				
Resolution	WXGA 1280 x 768 pixels				

LeCroy WaveStream Fast Viewing Mode	
Intensity	256 Intensity Levels, 1–100% adjustable via front panel control
Types	Select analog or color-graded
Number of Channels	Up to 4 simultaneously
Max. Sampling Rate	40 GS/s (80 GS/s with optional WM8Zi-2X80GS external interleaving device)
Persistence Aging	Select from 500 ms to Infinity
Waveforms/Second (Continuous)	Up to 2500 waveforms/second

Analog Persistence Display	
Analog and Color-Graded Persistence	Variable saturation levels stores each trace's persistence data in memory
Persistence Types	Select analog, color, or three-dimensional
Trace Selection	Activate persistence on all or any combination of traces
Persistence Aging	Select from 500 ms to infinity
Sweep Display Modes	All accumulated, or all accumulated with last trace highlighted

High-speed Digitizer Output (Option)	
Type	LeCroy LSIB
Transfer Rate	Up to 250 Mpts/s (Maximum)
Output Protocol	PCI Express®, Gen1 (4 lanes utilized for data transfer)
Control Protocol	TCP/IP
Command Set	Via Windows Automation, or via LeCroy Remote Command Set

Zoom Expansion Traces	
	Display up to 4 Zoom and 8 Math/Zoom traces

Processor/CPU	
Type	Intel® Core™ 2 Quad, 2.5 GHz (or better)
Processor Memory	4 GB standard, up to 8 GB optional (8 GB standard with "M-64", "L-128", or "VL-256" memory)
Operating System	Microsoft Windows® Vista® Business Edition (64-bit) with SP1
Real Time Clock	Date and time displayed with waveform an in hardcopy files. SNTP support to synchronize to precision internal clocks

Internal Waveform Memory	
	4 active waveform memory traces (M1-M4) store 16-bit/point full length waveforms. Waveforms can be stored to any number of files limited only by the data storage media capacity

Setup Storage	
Front Panel and Instrument Status	Store to the internal hard drive or to a USB-connected peripheral device

Interface	
Remote Control	Via Windows Automation, or via LeCroy Remote Command Set
Network Communication Standard	VXI-11 or VICP, LXI Class C Compliant
GPIB Port (Optional)	Supports IEEE – 488.2
LSIB Port (Optional)	Supports PCIe Gen1 x4 protocol with LeCroy supplied API
Ethernet Port	Supports 10/100/1000BaseT Ethernet interface (RJ45 port)
USB Ports	Minimum 6 total (incl. 3 front panel) USB 2.0 ports support Windows compatible devices
External Monitor Port	15-pin D-Type WXGA compatible to support customer-supplied external monitor. DVI and power connector to support LeCroy Zi-EXTDISP-15 additional touch screen display accessory. Includes support for extended desktop operation with optional LeCroy or other second monitor
Peripheral Bus	LeCroy LBUS standard

SPECIFICATIONS

Integrated Second Display	WaveMaster 820Zi (SDA)	WaveMaster 825Zi (SDA, DDA)	WaveMaster 830Zi (SDA)
Type	Color 15.3" flat panel TFT-Active Matrix LCD with high resolution touch screen		
Resolution	WXGA 1280 x 768 pixels		

LeCroy WaveStream Fast Viewing Mode	
Intensity	256 Intensity Levels, 1–100% adjustable via front panel control
Types	Select analog or color-graded
Number of Channels	Up to 4 simultaneously
Max. Sampling Rate	40 GS/s (80 GS/s when operated in Digital Bandwidth Interleave mode)
Persistence Aging	Select from 500 ms to Infinity
Waveforms/Second (Continuous)	Up to 2500 waveforms/second

Analog Persistence Display	
Analog and Color-Graded Persistence	Variable saturation levels stores each trace's persistence data in memory
Persistence Types	Select analog, color, or three-dimensional
Trace Selection	Activate persistence on all or any combination of traces
Persistence Aging	Select from 500 ms to infinity
Sweep Display Modes	All accumulated, or all accumulated with last trace highlighted

High-speed Digitizer Output (Option)	
Type	LeCroy LSIB
Transfer Rate	Up to 250 Mpts/s (Maximum)
Output Protocol	PCI Express®, Gen1 (4 lanes utilized for data transfer)
Control Protocol	TCP/IP
Command Set	Via Windows Automation, or via LeCroy Remote Command Set

Zoom Expansion Traces	
	Display up to 4 Zoom and 8 Math/Zoom traces

Processor/CPU	
Type	Intel® Core™ 2 Quad, 2.5 GHz (or better)
Processor Memory	4 GB standard, up to 8 GB optional (8 GB standard with "M-64", "L-128", or "VL-256" memory)
Operating System	Microsoft Windows® Vista® Business Edition (64-bit) with SP1
Real Time Clock	Date and time displayed with waveform an in hardcopy files. SNTP support to synchronize to precision internal clocks

Internal Waveform Memory	
	4 active waveform memory traces (M1-M4) store 16 bit/point full length waveforms. Waveforms can be stored to any number of files limited only by the data storage media capacity

Setup Storage	
Front Panel and Instrument Status	Store to the internal hard drive or to a USB-connected peripheral device

Interface	
Remote Control	Via Windows Automation, or via LeCroy Remote Command Set
Network Communication Standard	VXI-11 or VICP, LXI Class C Compliant
GPIB Port (Optional)	Supports IEEE – 488.2
LSIB Port (Optional)	Supports PCIe Gen1 x4 protocol with LeCroy supplied API
Ethernet Port	Supports 10/100/1000BaseT Ethernet interface (RJ45 port)
USB Ports	Minimum 6 total (incl. 3 front panel) USB 2.0 ports support Windows compatible devices
External Monitor Port	15-pin D-Type WXGA compatible to support customer-supplied external monitor. DVI and power connector to support LeCroy eXT-Zi additional touch screen display accessory. Includes support for extended desktop operation with optional LeCroy or other second monitor
Peripheral Bus	LeCroy LBUS standard

SPECIFICATIONS

Auxiliary Input	WaveMaster 804Zi (SDA)	WaveMaster 806Zi (SDA)	WaveMaster 808Zi (SDA)	WaveMaster 813Zi (SDA)	WaveMaster 816Zi (SDA, DDA)
Signal Types	External Trigger				
Coupling	50 Ω: DC 1 MΩ: AC, DC, GND				
Max. Input Voltage	50 Ω: 5 V_{rms} 1 MΩ: 250 V (Peak AC < 10 kHz + DC)				
Auxiliary Output					
Signal Types	Select from calibrator, control signals or Off				
Calibrator Signal	500 Hz–5 MHz square wave or DC level 0.0 to 500 mV into 50 Ω (0–1 V into 1 MΩ)				
Control Signals	Trigger enabled, trigger out, pass/fail status				
Automatic Setup					
Auto Setup	Automatically sets timebase, trigger, and sensitivity to display a wide range of repetitive signals				
Find Vertical Scale	Automatically sets the vertical sensitivity and offset for the selected channel to display a waveform with the maximum dynamic range				
General					
Auto Calibration	Ensures specified DC and timing accuracy is maintained for 1 year minimum				
Probes					
Probes	Qty. (4) ÷10 Passive Probes				
Probe System	ProBus and ProLink. Automatically detects and supports a variety of compatible probes				
Scale Factors	Automatically or manually selected depending on probe used				
Calibration Output	1 kHz square wave, 1 V_{p-p} (typical), output to probe hook				
Power Requirements					
Voltage	100–240 VAC ±10% at 45–66 Hz 100–120 VAC ±10% at 380–420 Hz Automatic AC Voltage Selection				
Max. Power Consumption	1050 W / 1050 VA				
Environmental					
Temperature (Operating)	+5 °C to +40 °C including CD-RW/DVD-ROM drive				
Temperature (Non-Operating)	–20 °C to +60 °C				
Humidity (Operating)	5% to 80% 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 +25 °C				
Altitude (Non-Operating)	Up to 40,000 ft. (12,192 m)				
Random Vibration (Operating)	0.5 g_{rms} 5 Hz to 500 Hz, 15 minutes in each of three orthogonal axes				
Random Vibration (Non-Operating)	2.4 g_{rms} 5 Hz to 500 Hz, 15 minutes in each of three orthogonal axes				
Functional Shock	20 g_{peak}, half sine, 11 ms pulse, 3 shocks (positive and negative) in each of three orthogonal axes, 18 shocks total				
Physical Dimensions					
Dimensions (HWD)	14" H x 18.4" W x 14.4" D (355 x 467 x 366 mm)				
Weight	51.5 lbs. (23.4 kg)				
Shipping Weight	70.0 lbs. (31.8 kg)				
Certifications					
	CE Compliant, UL and cUL listed conforms to EN 61326, EN 61010-1, UL 61010-1 2nd edition, and CSA C22.2 No. 61010-1-04				
Warranty and Service					
	3-year warranty calibration recommended annually. Optional service programs include extended warranty, upgrades, and calibration services.				

SPECIFICATIONS

Auxiliary Input	WaveMaster 820Zi (SDA)	WaveMaster 825Zi (SDA, DDA)	WaveMaster 830Zi (SDA)
Signal Types	Select External Trigger or External Clock Input on the front panel		
Coupling	50 Ω: DC 1 MΩ: AC, DC, GND		
Max. Input Voltage	50 Ω: 5 V_{rms} 1 MΩ: 250 V (Peak AC < 10 kHz + DC)		
Auxiliary Output			
Signal Types	Select from calibrator, control signals or Off		
Calibrator Signal	500 Hz–5 MHz square wave or DC level 0.0 to 500 mV into 50 Ω (0–1 V into 1 MΩ)		
Control Signals	Trigger enabled, trigger out, pass/fail status		
Automatic Setup			
Auto Setup	Automatically sets timebase, trigger, and sensitivity to display a wide range of repetitive signals		
Find Vertical Scale	Automatically sets the vertical sensitivity and offset for the selected channel to display a waveform with the maximum dynamic range		
General			
Auto Calibration	Ensures specified DC and timing accuracy is maintained for 1 year minimum		
Probes			
Probes	Qty. (4) ÷10 Passive Probes		
Probe System	ProBus and ProLink. Automatically detects and supports a variety of compatible probes		
Scale Factors	Automatically or manually selected depending on probe used		
Calibration Output	1 kHz square wave, 1 V_{p-p} (typical), output to probe hook		
Power Requirements			
Voltage	100–240 VAC ±10% at 45–66 Hz 100–120 VAC ±10% at 380–420 Hz Automatic AC Voltage Selection		
Max. Power Consumption	1110 W / 1110 VA		
Environmental			
Temperature (Operating)	+5 °C to +40 °C including CD-RW/DVD-ROM drive		
Temperature (Non-Operating)	–20 °C to +60 °C		
Humidity (Operating)	5% to 80% 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 +25 °C		
Altitude (Non-Operating)	Up to 40,000 ft. (12,192 m)		
Random Vibration (Operating)	0.5 g_{rms} 5 Hz to 500 Hz, 15 minutes in each of three orthogonal axes		
Random Vibration (Non-Operating)	2.4 g_{rms} 5 Hz to 500 Hz, 15 minutes in each of three orthogonal axes		
Functional Shock	20 g_{peak}, half sine, 11 ms pulse, 3 shocks (positive and negative) in each of three orthogonal axes, 18 shocks total		
Physical Dimensions			
Dimensions (HWD)	14" H x 18.4" W x 14.4" D (355 x 467 x 366 mm)		
Weight	58 lbs. (26.3 kg)		
Shipping Weight	76 lbs. (34.5 kg)		
Certifications			
	CE Compliant, UL and cUL listed conforms to EN 61326, EN 61010-1, UL 61010-1 2nd edition, and CSA C22.2 No. 61010-1-04		
Warranty and Service			
	3-year warranty calibration recommended annually. Optional service programs include extended warranty, upgrades, and calibration services.		

SPECIFICATIONS

Standard

Math Tools

Display up to 8 math function traces (F1–F8). 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.

absolute value
average (summed)
average (continuous)
correlation (two waveforms)
derivative
deskew (resample)
difference (–)
enhanced resolution (to 11 bits vertical)
envelope
exp (base e)
exp (base 10)
fft (power spectrum, magnitude, phase, up to 128 Mpts)
floor
integral
interpolate (cubic, quadratic, sinx/x)
invert (negate)
log (base e)
log (base 10)
product (x)
ratio (/)
reciprocal
rescale (with units)
roof
(sinx)/x
sparse
square
square root
sum (+)
zoom (identity)

Measure Tools

Display any 12 parameters together with statistics, including their average, high, low, and standard deviations. Histicons provide a fast, dynamic view of parameters and wave shape characteristics. Parameter Math allows addition, subtraction, multiplication, or division of two different parameters.

amplitude
area
base
cycles
data
delay
Δ delay
duty cycle
duration
falltime (90–10%, 80–20%, @ level)
frequency
first
last
level @ x
maximum
mean
median
minimum
narrow band phase
narrow band power
number of points
+overshoot
–overshoot
peak-to-peak
period
risetime (10–90%, 20–80%, @ level)
rms
std. deviation
top
width
median
phase
time @ minimum (min.)
time @ maximum (max.)
Δ time @ level
Δ time @ level from trigger
x@ max.
x@ min.

Pass/Fail Testing

Simultaneously test multiple parameters against selectable parameter limits or pre-defined masks. Pass or fail conditions can initiate actions including document to local or networked files, e-mail the image of the failure, save waveforms, send a pulse out at the front panel auxiliary BNC output, or (with the GPIB option) send a GPIB SRQ.

Jitter and Timing

Parametric Measurements:

• Period@level • Width@level • Duty@level • Frequency@level
• TIE@level • Edge@level

Statistical Analysis:

Jitter Trend (1000 pts) • Histograms (1000 pts)

Software Options

SDA II Serial Data Analysis Software (WM8Zi-SDAII)
(Standard on SDA 8 Zi and DDA 8 Zi)

Total Jitter

A complete toolset is provided to measure total jitter. Eye Diagrams with millions of UI are quickly calculated from up to 512 Mpts records, and advanced tools may be used on the Eye Diagram to aid analysis. Complete TIE and Total Jitter (Tj) parameters and analysis functions are provided.

- Time Interval Error (TIE) Measurement Paameter, Histogram, Spectrum and Jitter Track
- Total Jitter (Tj) Measurement Parameter, Histogram, Spectrum
- Eye Diagram Display (sliced)
- Eye Diagram IsoBER (lines of constant Bit Error Rate)
- Eye Diagram Mask Violation Locator
- Eye Diagram Measurement Parameters
  - Eye Height
  - One Level
  - Zero Level
  - Eye Amplitude
  - Eye Width
  - Eye Crossing
  - Avg. Power
  - Extinction Ratio
  - Mask hits
  - Mask out
  - Bit Error Rate
  - Slice Width (setting)
- Q-Fit Tail Representation
- Bathtub Curve
- Cumulative Density Function (CDF)
- PLL Track

Jitter Decomposition Models

Two jitter decomposition methods are provided and simultaneously calculated to provide maximum measurement confidence. Q-Scale, CDF, Bathtub Curve, and all jitter decomposition measurement parameters can be displayed using either method.

- Spectral Method
- NQ-Scale Method

Random Jitter (Rj) and Non-Data Dependent Jitter (Rj+BUj)

- Random Jitter (Rj) Measurement Parameter
- Rj+BUj Histogram
- Rj+BUj Spectrum
- Rj+BUj Track

Deterministic Jitter (Dj)

- Deterministic Jitter (Dj) Measurement Parameter

Data Dependent Jitter (DDj)

- Data Dependent Jitter (DDj) Measurement Parameter
- DDj Histogram
- DDj Plot (by Pattern or N-bit Sequence)

SPECIFICATIONS

Software Options

Cable De-embedding (WM8Zi-CBL-DE-EMBED)
(Standard on SDA 8 Zi and DDA 8 Zi)

Removes cable effects from your measurements. Simply enter the S-parameters or attenuation data of the cable(s) then all of the functionality of the SDA 8 Zi can be utilized with cable effects de-embedded.

8b10b Decode (WM8Zi-8B10B D)
(Standard on SDA 8 Zi and DDA 8 Zi)

Intuitive, color-coded serial decode with powerful search capability enables captured waveforms to be searched for user-defined sequences of symbols. Multi-lane analysis decodes up to four simultaneously captured lanes.

Serial Data Mask (SDM) (WM8Zi-SDM)
(Standard on SDA 8 Zi and DDA 8 Zi)

Create eye diagrams using a comprehensive list of standard eye pattern masks, or create a user-defined mask. Mask violations are clearly marked on the display for easy analysis.

Electrical Telecom Pulse Mask Test (WM8Zi-ET-PMT)

Performs automated compliance mask tests on a wide range of electrical telecom standards.

Jitter and Timing Analysis Software Package (WM8Zi-JTA2)
(Standard on SDA 8 Zi and DDA 8 Zi)

This package provides jitter timing and analysis using time, frequency, and statistical views for common timing parameters, and also includes other useful tools. Includes:

- "Track" graphs of all parameters, no limitation of number
  - Cycle-Cycle Jitter
  - N-Cycle
  - N-Cycle with start selection
  - Frequency
  - Period
  - Half Period
  - Width
  - Time Interval Error
  - Setup
  - Hold
  - Skew
  - Duty Cycle
  - Duty Cycle Error
- Edge@lv parameter (counts edges)
- Histograms expanded with 19 histogram parameters and up to 2 billion events
- Trend (datalog) of up to 1 million events
- Track graphs of all parameters
- Persistence histogram, persistence trace (mean, range, sigma)

Spectrum Analyzer Mode (WM8Zi-SPECTRUM)

This package provides a new capability to navigate waveforms in the frequency domain using spectrum analyzer type controls.

FFT capability added to include:

- Power averaging
- Power density
- Real and imaginary components
- Frequency domain parameters
- FFT on up to 128 Mpts

Software Options

Disk Drive Measurements Package (WM8Zi-DDM2)
(Standard on DDA 8 Zi)

This package provides disk drive parameter measurements and related mathematical functions for performing disk drive WaveShape Analysis.

- Disk Drive Parameters are as follows:

amplitude assymetry
local base
local baseline separation
local maximum
local minimum
local number
local peak-peak
local time between events
local time between peaks
local time between troughs
local time at minimum
local time at maximum
local time peak-trough
local time over threshold
local time trough-peak
local time under threshold
narrow band phase
narrow band power
overwrite
pulse width 50
pulse width 50–
pulse width 50+
resolution
track average amplitude
track average amplitude–
track average amplitude+
auto-correlation s/n
non-linear transition shift

ORDERING INFORMATION

Product Description	Product Code
WaveMaster 8 Zi Series Oscilloscopes	
4 GHz, 40 GS/s, 4 Ch, 10 Mpts/Ch WaveMaster with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	WaveMaster 804Zi
6 GHz, 40 GS/s, 4 Ch, 10 Mpts/Ch WaveMaster with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	WaveMaster 806Zi
8 GHz, 40 GS/s, 4 Ch, 10 Mpts/Ch WaveMaster with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	WaveMaster 808Zi
13 GHz, 40 GS/s, 4 Ch, 10 Mpts/Ch WaveMaster with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	WaveMaster 813Zi
16 GHz, 40 GS/s, 4 Ch, 10 Mpts/Ch WaveMaster with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	WaveMaster 816Zi
20 GHz, 80 GS/s, 2 Ch, 20 Mpts/Ch WaveMaster with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input (16 GHz, 40 GS/s, 4 Ch, 10 Mpts/Ch)	WaveMaster 820Zi
25 GHz, 80 GS/s, 2 Ch, 20 Mpts/Ch WaveMaster with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input (16 GHz, 40 GS/s, 4 Ch, 10 Mpts/Ch)	WaveMaster 825Zi
30 GHz, 80 GS/s, 2 Ch, 20 Mpts/Ch WaveMaster with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input (16 GHz, 40 GS/s, 4 Ch, 10 Mpts/Ch)	WaveMaster 830Zi
SDA 8 Zi Series Serial Data Analyzers	
4 GHz, 40 GS/s, 4 Ch, 20 Mpts/Ch Serial Data Analyzer with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	SDA 804Zi
6 GHz, 40 GS/s, 4 Ch, 20 Mpts/Ch Serial Data Analyzer with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	SDA 806Zi
8 GHz, 40 GS/s, 4 Ch, 20 Mpts/Ch Serial Data Analyzer with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	SDA 808Zi
13 GHz, 40 GS/s, 4 Ch, 20 Mpts/Ch Serial Data Analyzer with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	SDA 813Zi
16 GHz, 40 GS/s, 4 Ch, 20 Mpts/Ch Serial Data Analyzer with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	SDA 816Zi
20 GHz, 80 GS/s, 2 Ch, 40 Mpts/Ch Serial Data Analyzer with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input (16 GHz, 40 GS/s, 4 Ch, 20 Mpts/Ch)	SDA 820Zi
25 GHz, 80 GS/s, 2 Ch, 40 Mpts/Ch Serial Data Analyzer with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input (16 GHz, 40 GS/s, 4 Ch, 20 Mpts/Ch)	SDA 825Zi
30 GHz, 80 GS/s, 2 Ch, 40 Mpts/Ch Serial Data Analyzer with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input (16 GHz, 40 GS/s, 4 Ch, 20 Mpts/Ch)	SDA 830Zi
DDA 8 Zi Series Oscilloscopes	
16 GHz, 40 GS/s, 4ch, 20 Mpts/Ch DDA with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input	DDA 816Zi
25 GHz, 80 GS/s, 2 Ch, 40 Mpts/Ch DDA with 15.3" WXGA Color Display. 50 Ω and 1 MΩ Input (16 GHz, 40 GS/s, 4 Ch, 20 Mpts/Ch)	DDA 825Zi
Included with Standard Configuration	
÷10, 500 MHz Passive Probe (Qty. 4 on 4–16 GHz units, Qty. 2 on 20–30 GHz units))	
ProLink to SMA Adapter: 4 each (for 4–8 GHz units)	LPA-SMA-A
ProLink to K/2.92 mm Adapter: 4 each (for 13–30 GHz units)	LPA-K-A
Optical 3-Button Wheel Mouse, USB 2.0	
Protective Front Cover	
Printed Quick Reference Guide	
Printed Getting Started Manual	
Product Manual Set on CD-ROM	
Norton Anti-virus Software (Trial Version)	
Microsoft Windows® Vista® License	
Commercial NIST Calibration with Performance Certificate	
Power Cable for the Destination Country	
3-year Warranty	

Product Description	Product Code
Memory and Sample Rate Options	
80 GS/s on 2 Ch Sampling Rate Option for WaveMaster 8 Zi (not available for 820Zi, 825Zi or 830Zi). Includes two separate external interleaving devices with storage case	WM8Zi-2X80GS
10 Mpts/Ch Standard Memory for WaveMaster 8 Zi. Includes 4 GB of RAM	WM8Zi-STD
20 Mpts/Ch Standard Memory for SDA 8 Zi. Includes 4 GB of RAM	SDA8Zi-STD
20 Mpts/Ch Standard Memory for DDA 8 Zi. Includes 4 GB of RAM	DDA8Zi-STD
32 Mpts/Ch Memory Option for WaveMaster 8 Zi. SDA 8 Zi, and DDA 8 Zi. Includes 4 GB RAM standard	WM8Zi-S-32
32 Mpts/Ch Memory Option for SDA 8 Zi. Includes 4 GB RAM standard	SDA8Zi-S-32
32 Mpts/Ch Memory Option for DDA 8 Zi. Includes 4 GB RAM standard	DDA8Zi-S-32
64 Mpts/Ch Memory Option for WaveMaster 8 Zi. Includes an additional 4 GB of RAM (8 GB total)	WM8Zi-M-64
64 Mpts/Ch Memory Option for SDA 8 Zi. Includes an additional 4 GB of RAM (8 GB total)	SDA8Zi-M-64
64 Mpts/Ch Memory Option for DDA 8 Zi. Includes an additional 4 GB of RAM (8 GB total)	DDA8Zi-M-64
128 Mpts/Ch Memory Option for WaveMaster 8 Zi. Includes an additional 4 GB of RAM (8 GB total)	WM8Zi-L-128
128 Mpts/Ch Memory Option for SDA 8 Zi. Includes an additional 4 GB of RAM (8 GB total)	SDA8Zi-L-128
128 Mpts/Ch Memory Option for DDA 8 Zi. Includes an additional 4 GB of RAM (8 GB total)	DDA8Zi-L-128
256 Mpts/Ch Memory Option for WaveMaster 8 Zi. Includes an additional 4 GB of RAM (8 GB total)	WM8Zi-VL-256
256 Mpts/Ch Memory Option for SDA 8 Zi. Includes an additional 4 GB of RAM (8 GB total)	SDA8Zi-VL-256
256 Mpts/Ch Memory Option for DDA 8 Zi. Includes an additional 4 GB of RAM (8 GB total)	DDA8Zi-VL-256
CPU, Computer and Other Hardware Options	
Upgrade from 4 GB to 8 GB CPU RAM	WM8Zi-4-UPG-8GBRAM
Upgrade from Standard Size Hard Drive to 200 GB Hard Drive	WM8Zi-200GB-HD
Additional 120 GB Hard Drive. Includes Windows® Vista® OS, LeCroy Oscilloscope Software and Critical Scope Operational File Duplicates	WM8Zi-120GB-RHD-02
Additional 200 GB Hard Drive. Includes Windows Vista OS, LeCroy Oscilloscope Software and Critical Scope Operational File Duplicates	WM8Zi-200GB-RHD-02
GPIB Option for LeCroy Oscilloscope. Half-height Card	GPIB-2
Serial Data Options and Accessories	
SDA II Serial Data Analysis Option (Standard on SDA 8 Zi and DDA 8 Zi)	WM8Zi-SDAII
50 Mb/s to 3.125 Gb/s High-speed Serial Pattern Trigger Option for 4–30 GHz Oscilloscopes and Disk Drive Analyzers (Standard on SDA 8 Zi)	WM8Zi-HSPT
Cable De-Embed Option (Standard on SDA 8 Zi and DDA 8 Zi)	WM8Zi-CBL-DE-EMBED
8b10b Decode Option (Standard on SDA 8 Zi and DDA 8 Zi)	WM8Zi-8B10B D
I²C Bus Trigger and Decode Option	WM8Zi-I2Cbus TD
SPI Bus Trigger and Decode Option	WM8Zi-SPIbus TD
LIN Trigger and Decode Option	WM8Zi-LINbus TD
UART and RS-232 Trigger and Decode Option	WM8Zi-UART-RS232bus TD

ORDERING INFORMATION

Serial Data Options and Accessories (cont'd)

Product Description	Product Code
FlexRay Trigger and Decode Option	WM8Zi-FlexRayBus TD
FlexRay Bus Trigger, Decode, and Physical Layer Test Option	WM8Zi-FlexRayBus TDP
CANbus TDM Trigger, Decode and Measure/Graph Option	WM8Zi-CANbus TDM
CANbus TD Trigger and Decode Option	WM8Zi-CANbus TD
Ethernet Application Software	QPHY-ENET*
USB Application Software	QPHY-USB†
PCIe Gen1 Compliance and Development Software Package	QPHY-PCIe
QualiPHY Enabled SATA Software Option	QPHY-SATA
WiMedia UWB Transmitter Measurement Software Option	QPHY-UWB
QualiPHY Enabled DisplayPort Software Option	QPHY-DisplayPort
QualiPHY Enabled HDMI Software Option	QPHY-HDMI‡
Eye Doctor II Advanced Signal Integrity Tools	WM8Zi-EYEDRII

*TF-ENET-B required. †TF-USB-B required.

‡ TF-HDMI-3.3V-QUADPAK required.

High-speed Digitizer Output

High-speed PCIe Gen1 x4 Digitizer Output	LSIB-1
PCI Express X4 Host Interface Board for Desktop PC	LSIB-HOSTBOARD
PCI Express X4 Express Card Host Interface for Laptop Express Card Slot	LSIB-HOSTCARD
PCI Express X4 3-meter Cable with X4 Cable Connectors Included	LSIB-CABLE-3M
PCI Express X4 7-meter Cable with X4 Cable Connectors Included	LSIB-CABLE-7M

Mixed Signal Testing Options

500 MHz, 2 GS/s, 18 Ch, 50 Mpts/Ch Mixed Signal Oscilloscope Option	MS-500
250 MHz, 1 GS/s, 36 Ch, 25 Mpts/Ch (500 MHz, 18 Ch, 2 GS/s, 50 Mpts/Ch Interleaved) Mixed Signal Oscilloscope Option	MS-500-36
250 MHz, 1 GS/s, 18 Ch, 10 Mpts/Ch Mixed Signal Oscilloscope Option	MS-250

General Purpose and Application Specific Software Options

Eye Doctor II Advanced Signal Integrity Tools	WM8Zi-EYEDRII
Advanced Customization Software Package	WM8Zi-XDEV
Spectrum Analyzer and Advanced FFT Option	WM8Zi-SPECTRUM
Digital Filter Software Package	WM8Zi-DFP2
Demodulation Software Package	WM8Zi-DMOD
Jitter Timing and Analysis Software Package (Standard on SDA8 Zi and DDA 8 Zi)	WM8Zi-JTA2
Serial Data Mask Software Package (Standard on SDA 8 Zi and DDA 8 Zi)	WM8Zi-SDM
Disk Drive Measurements Software Package (Standard on DDA 8 Zi)	WM8Zi-DDM2
Disk Drive Analyzer Software Package	WM8Zi-DDA
Advanced Optical Recording Measurement Package	WM8Zi-AORM
Electrical Telecom Mask Test Software Package	WM8Zi-ET-PMT
EMC Pulse Parameter Software Package	WM8Zi-EMC
Power Measure Analysis Software Package	WM8Zi-PMA2

General Accessories

Product Description	Product Code
Top-mounted, Fully Integrated 15.3" WXGA with Touch Screen Display, Including all Cabling and Software	Zi-EXTDISP-15
Keyboard, USB	KYBD-1
Probe Deskew and Calibration Test Fixture	TF-DSQ
Hard Carrying Case	WM8Zi-HARDCASE
Soft Carrying Case	WM8Zi-SOFTCASE
Rackmount Accessory for Converting a WM8Zi Series Oscilloscope to an 8U Rack-mounted Package	WM8Zi-RACKMOUNT
ProLink to SMA Adapter	LPA-SMA-A
Kit of ProLink to SMA Adapters	LPA-SMA-KIT-A
ProLink to K/2.92 mm Adapter	LPA-K-A
Kit of ProLink to K/2.92 mm Adapters	LPA-K-KIT-A
Oscilloscope Cart with Additional Shelf and Drawer	OC1024
Oscilloscope Cart	OC1021

Probes and Probe Accessories

18 GHz Differential Amplifier	DA18000
13 GHz Differential Probe System	D13000PS
11 GHz Differential Probe System	D11000PS
WaveLink 7.5 GHz, Differential Probe Adjustable Tip Module	D600A-AT*
WaveLink 3.5 GHz, 2.5 V_{p-p} Differential Probe Small Tip Module	D310*
WaveLink 3.5 GHz, 5 V_{p-p} Differential Probe Small Tip Module	D320*
WaveLink 6 GHz, 2.5 V_{p-p} Differential Probe Small Tip Module	D610*
WaveLink 6 GHz, 5 V_{p-p} Differential Probe Small Tip Module	D620*
WaveLink 6 GHz, Differential Positioner Mounted Tip Module	D500PT*
WaveLink ProLink Probe Body	WL-PLink
WaveLink ProBus Probe Body	WL-PBus
2.5 GHz, 0.7 pF Active Probe (÷10), Small Form Factor	HFP2500
1.5 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe	ZS1500
Set of 4 ZS1500, 1.5 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe	ZS1500-QUADPAK
7.5 GHz Low Capacitance Passive Probe (÷10, 1 kΩ; ÷20, 500 Ω)	PP066
1 GHz, Active Differential Probe (÷1, ÷10, ÷20)	AP034
Optical-to-Electrical Converter, 500–870 nm ProLink BMA Connector	OE525
Optical-to-Electrical Converter, 950–1630 nm ProLink BMA Connector	OE555
10/100/1000Base-T Compliance Test Fixture	TF-ENET-B†
Telecom Adapter Kit 100 Ω Bal., 120 Ω Bal., 75 Ω Unbal.	TF-ET
SATA Gen1/Gen2 Compliance Test Fixture	TF-SATA
USB 2.0 Testing Compliance Test Fixture	TF-USB-B

* For a complete probe, order a W-PLink or WL-PBus Probe Body with the Probe Tip Module.

† Includes ENET-2CAB-SMA018 and ENET-2ADA-BNCSMA.

A variety of other active voltage and current probes are also available. Consult LeCroy for more information.

Customer Service

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

This warranty includes:

- No charge for return shipping
- Long-term 7-year support
- Upgrade to latest software at no charge

LeCroy

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

Local sales offices are located throughout the world.
To find the most convenient one visit www.lecroy.com

WM8ZiDS_30Dec08
2.5K LG