

models	SDS3000X HD
channels	4
Bandwidth	350 /500 MHz, 1 GHz
Vertical resolution	12-bit 16-bit (ERES)
Sample rate	One/Two channel mode:4 GSa/s Four channel mode: 2 GSa/s
Memory depth (Max.)	400 Mpts/ch (interleaving mode: single-channel) 200 Mpts/ch (interleaving mode: dual-channel) 100 Mpts/ch (non-interleaving mode)
Waveform capture rate	Normal mode: 200,000 wfm/s; Sequence mode: 890,000 wfm/s
Noise floor (50Ω,1mV/div)	70 μ Vms@350MHz 90 μ Vms@500MHz 125 μ Vms@1 GHz
ENOB	8.3-bit@1GHz 8.5-bit@500MHz 8.6-bit@350MHz
Timebase Accuracy	± 2 ppm initial (0~50 °); 1st year aging: ± 0.5 ppm 20-year aging: ± 3 ppm
DC gain accuracy	0.5 mV/div ~ 4.95 mV/div: ± 1.5 % 5 mV/div ~ 10 V/div: ± 0.5 %
Sequence	80
Serial trigger and decode	standard: I2C, SPI, UART, CAN, LIN optional: CAN FD, FlexRay, I2S, MIL-STD-1553B, SENT, Manchester (decode only)
Math	FFT, +, -, x, \div , \int dt, d/dt, $\sqrt{}$, Identity, Negation, x , Sign, ex, 10x, ln, lg, Interpolation, Max hold, Min hold, ERES, Average, Formula Editor

	SIGLENT SDS2000X HD	SIGLENT SDS2000X Plus
Analog channel	4	2 and 4
Bandwidth	100/200/350 MHz upgradable to 500 MHz	100/200/350 MHz (upgradable to 500 MHz)
Vertical resolution	12-bit	8-bit
HiRes/ERES	ERES 3-bit , hardware based	ERES 3-bit, only supported in Math
Memory depth	200 Mpts interleaving mode	200 Mpts interleaving mode
Waveform capture rate	100,000 wfm/s normal mode	120,000 wfm/s normal mode
Real-Time sample rate	2 GSa/s interleaving mode	2 GSa/s interleaving mode
Vertical scale	1 Mohm: 500uV/div ~ 10 V/div 50 ohm: 500uV/div ~ 1 V/div	1 Mohm: 500uV/div ~ 10 V/div 50 ohm: 500uV/div ~ 1 V/div
Time base Accuracy	± 2 ppm initial; ± 0.5 ppm 1st year aging; ± 3 ppm 20-year aging	± 1 ppm initial; ± 1 ppm 1st year aging; ± 3.5 ppm 10-year aging
DC gain accuracy	0.5mV/div ~ 4.95mV/div: ± 1.5 %; 5mV/div ~ 10V/div: ± 0.5 %	≤ 3.0 %
Time scale	1 ns/div ~ 1000 s/div; 0.5 ns/div ~ 1000 s/div (500 MHz)	1 ns/div ~ 1000 s/div; 0.5 ns/div ~ 1000 s/div (500 MHz)
Impedance	(1 M Ω ± 2 %) (16 pF ± 2 pF) 50 Ω : 50 Ω ± 1 %	(1 M Ω ± 2 %) (17 pF ± 2 pF) 50 Ω : 50 Ω ± 1 %
Noise floor	70 uVrms @ 500 MHz	80 uVrms @ 500 MHz
SFDR	≥ 45 dBc	≥ 40 dBc
Sequence	Up to 80,000 segments	Up to 90,000 segments
CH to CH Isolation (@50Ω)	> 60 dBc, < 500MHz > 70 dBc, < 350MHz	DC ~ 100 MHz: >40 dB 100 MHz ~ BW: ≥ 34 dB
Serial protocol trigger and decode	Standard: I2C, SPI, UART, CAN, LIN Optional: CAN FD, FlexRay, I2S, MIL-STD-1553B, SENT, Manchester(decode only)	Standard: I2C, SPI, UART, CAN, LIN Optional: CAN FD, FlexRay, I2S, MIL-STD-1553B, SENT, Manchester(decode only)
Math functions	2 traces; 2 Mpts FFT, +, -, x, \div , \int dt, d/dt, $\sqrt{}$, Identity, Negation, Absolute, Sign, ex, 10x, ln, lg, Interpolation, MaxHold, MinHold. Supports formula editor	2 traces; 2 Mpts FFT, +, -, x, \div , \int dt, d/dt, $\sqrt{}$, Identity, Negation, Absolute, Sign, ex, 10x, ln, lg, Interpolation, MaxHold, MinHold. Supports formula editor

Trigger type	Edge, Slope, Pulse width, Window, Runt, Interval, Dropout, Pattern, Video, Qualified, Nth edge, Setup/hold, Delay, Serial
Zone Trigger	support
Measure	Max, Min, Pk-Pk, Top, Base, Amplitude, Mean, Cycle Mean, Stdev, Cycle Stdev, RMS, Cycle RMS, Median, Cycle Median, FOV, FPRE, ROV, RPPE, Level@Trigger, Period, Frequency, Time@max, Time@min, +Width, -Width, 10-90%Rise time, 90-10%Fall time, Rise time, Fall time, +Burst Width, -Burst Width, +Duty Cycle, -Duty Cycle, Delay, Time@Middle, CycleCycle jitter, +Area@DC, -Area@DC, Area@DC, Absolute Area@DC, +Area@AC, -Area@AC, Area@AC, Absolute Area@AC, Cycles, Rising Edges, Falling Edges, Edges, Positive pulses, Negative pulses, Positive Slope, Negative Slope, Phase, FRFR, FRFF, FFFR, FFFF, FRLR, FRLF, FFLR, FFLF, Skew, Tsu@R, Tsu@F, Th@R, Th@F
FFT	4 Mpts
Search	support
Mask Test	standard
Waveform generator	optional (50 MHz)
digital channels	optional (16)
DVM	4-digit
bode plot	standard
Power Analysis	optional
I/O	2×USB Host 3.0, 1×USB Host 2.0, 1×USB Device 3.0, LAN, EXT TRIG, AUX OUT

Trigger types	Edge, Slope, Pulse, Window, Runt, Interval, Dropout, Pattern, Video, Qualified, Nth edge, Delay, Setup/Hold time, Serial	Edge, Slope, Pulse, Window, Runt, Interval, Dropout, Pattern, Video and Serial
Trigger Zone	Support	Support
Automatic Measurements parameters	50	50
FFT	2 Mpts	2 Mpts
History	Up to 80,000 frames	Up to 90,000 frames
Measurement plots	Support	Support
Search and navigate	Support	Support
Mask test	Support	Support
Waveform Histogram	Support	-
AWG/FG	25 MHz	50 MHz single channel built-in
Logic analyzer	16 digital channels, 500 MSa/s	16 digital channels, 500 MSa/s
Digital multimeter	Support	-
Bode plot	Support	Support
Power analysis	Option	Option
I/O	USB 2.0 Host x3, USB 2.0 Device, 10M/100M LAN, EXT trigger, Auxiliary output: TRIG OUT, PASS/FAIL OUT	USB 2.0 Host x2; USB 2.0 Device; LAN: 100M; EXT trigger: EXT ≤1.5 Vrms, EXT/5 ≤7.5Vrms; Auxiliary output: TRIG OUT -- 3.3 V LVCMOS; PASS/FAIL OUT -- 3.3 V TTL
Intensity grading and color temperature display	256 levels	256 levels