

WaveSurfer WaveSurfer WaveSurfer WaveSurfer WaveSurfer WaveSurfer 24Xs 44Xs 42Xs 64Xs 62Xs 104Xs

Bandwidth (@ 50 ?) 200 MHz 400 MHz 600 MHz 1 GHz

Rise Time 1.75 ns 875 ps 625 ps 400 ps

Input Channels 4 4 2 4 2 4

Display 10.4" Color flat-panel TFT-LCD, 800 x 600 SVGA, touch screen

Sample Rate (single-shot) 2.5 GS/s (5 GS/s interleaved) 2.5 GS/s (5 GS/s interleaved)

Sample Rate (RIS mode) 50 GS/s

Standard Record Length 2.5 Mpts/Ch (all channels)

Standard Capture Time up to 1 ms at full sample rate on all four channels

Vertical Resolution 8 bits

Vertical Sensitivity (V/div) 2 mV/div–10 V/div (1 M?); 2 mV/div–1 V/div (50 ?)

Vertical (DC Gain) Accuracy $\pm 1.0\%$ of full scale (typical); $\pm 1.5\%$ of full scale ? 10 mV/div (warranted)

BW Limit 20 MHz 20 MHz, 200 MHz

Maximum Input Voltage 50 ? : 5 Vrms, 1 M? : 400 V max. 50 ? : 5 Vrms

(DC + Peak AC ? 5 kHz) 1 M? : 250 V max.

(DC + Peak AC

? 10 kHz)

Input Coupling AC, DC, GND (DC and GND for 50 ?)

Input Impedance 1 M? || 16 pF, or 50 ? 1 M? || 20 pF,

or 50 ?

Probing System BNC or ProBus

Probes One PP009 (5 mm) per channel (standard) One PP011 (5 mm)

per channel

(standard)

Timebase Range 200 ps/div–1000 s/div (roll mode from 500 ms/div–1000 s/div)

Timebase Accuracy 10 ppm

Trigger Modes Normal, Auto, Single, and Stop

Trigger Sources Any input channel, External, Ext/10, or line; slope and level unique to each source (except for line trigger)

Trigger Coupling DC, AC, HFRej, LFRej

Pre-trigger Delay 0–100% of full scale

Post-trigger Delay 0–10,000 divisions

Trigger Hold-off 1 ns to 20 s or 1 to 1,000,000,000 events

Internal Trigger Level Range ± 4.1 div from center

External Trigger Range EXT/10 $\pm 4V$; EXT ± 400 mV

Triggering

Standard Edge, Glitch, Width, Logic (Pattern), TV-Composite Video

Advanced (WS Xs-ADVTRIG) Runt, Slew Rate, Interval (Signal or Pattern), Dropout, Qualified (State or Edge)

Measure, Zoom, and Math Tools

Standard Parameter Up to 6 of the following parameters can be calculated at one time on any waveform:

Amplitude, Area, Base

Measurements (Low), Cyclic Area, Cyclic Mean, Cyclic RMS, Cyclic Std. Deviation, Delay, Duty, Fall Time

(90%-10%), Fall Time

(80%-20%), Frequency, Maximum, Mean, Minimum, Overshoot+, Overshoot-, Period, Peak-Peak, Phase,

Rise Time (10%-90%), Rise Time (20%-80%), RMS, Skew, Standard Deviation, Top (High), Width+, Width-

Measurements can be gated.

Zooming Use front panel QuickZoom button, or use touch screen or mouse to draw a box around the zoom area.

Standard Math Operators include Sum, Difference, Product, Ratio, and FFT (up to 25 kpts with power spectrum

output and rectangular, VonHann, and FlatTop windows). 1 math function may be defined at a time.

Extended Math Adds the following additional math functions: Absolute Value, Averaging (summed and continuous),

(WSXs-MATHSURF Option) Derivative, Envelope, Enhanced Resolution (to 11 bits), Floor, Integral, Invert,

Reciprocal, Roof, Square, and

Square Root. Also adds chaining of two math functions and rescaling to different units, and 1 Mpts FFTs.