

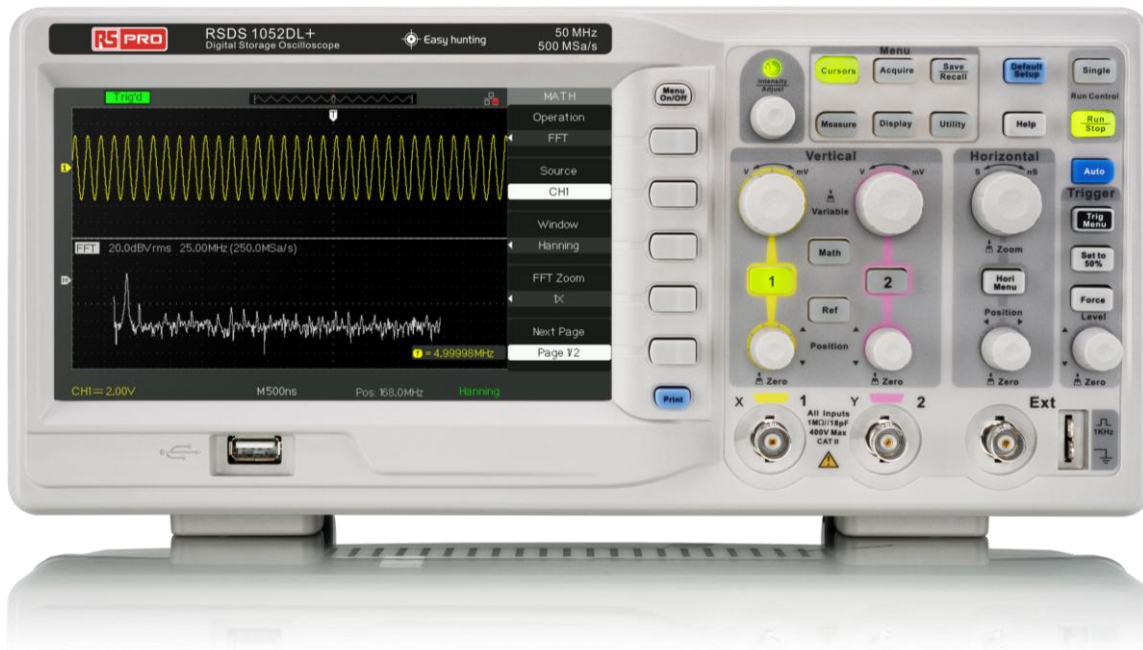


ENGLISH

## Product Datasheet

**Stock No: 1236435**  
**1236436**  
**1236437**  
**1236438**

# RS Pro DIGIAL OSCILLOSCOPE RSDS1000+ SERIES



## CHARACTERISTIC:

- The 150MHz,100MHz,70MHz,50MHz bandwidth models
- Real-time sampling rate up to 1GSa/s, Equivalent-time sampling rate up to 50GSa/s
- Memory Depth up to2Mpts
- Trigger types: Edge, Pulse, Video, Slope, Alternate
- Waveform math functions:+,-,\*,/,FFT
- 6 digital frequency counter
- Supports Multi-language display and embedded online help
- Screensaver from 1 minute to 5 hours
- Digital filter and waveform recorder function
- Shortcut storage function key
- 7 inch TFT-LCD display with 800 \* 480 resolution
- Multiple interfaces: USB Host, USB Device (USBTMC), LAN (VXI-11), Pass / Fail

## SPECIFICATIONS:

Model	RSDS1052DL+ Stock NO:1236435	RSDS1072CML+ Stock NO:1236436	RSDS1102CML+ Stock NO:1236437	RSDS1152CML+ Stock NO:1236438
Bandwidth	50MHz	70MHz	100MHz	150MHz
Sampling Rate(Max.)	500MSa/s	1GSa/s		
Channels	2+EXT			
Memory Depth(Max.)	32Kpts	2Mpts		
Trigger Types	Edge, Pulse, Video, Slope, Alternate			
I/O	USB Host, USB Device, LAN, Pass/Fail			
Probe(Std)	2 pcs passive probe, 70MHz		2 pcs passive probe, 100MHz	2 pcs passive probe, 200MHz
Display	7 inch TFT LCD(800x480)			
Net Weight	2.5Kg			

## Acquire System

Real-time Sampling Rate	RSDS1052DL+: 500 MSa/s RSDS1072CML+/RSDS1102CML+/RSDS1152CML+ : 1 GSa/s
Memory Depth	RSDS1052DL+: 32 Kpts RSDS1072CML+/RSDS1102CML+/RSDS1152CML+: 40 Kpts (Normal Mode) ; 2 Mpts (Long Memory Mode)
Acquire Mode Average	Normal, Peak Detect, Average Averages:4,16, 32,64,128,256
Waveform interpolation	Sinx,X

## Input

Channel	2
Coupling	DC, AC, GND
Impedance	(1MΩ±2%)   (18pF ±3pF)
MaxInput voltage	400V , 1MΩ
Channel Isolation	>100:1
Probe attenuator	1X, 10X, 50X, 100X, 500X , 1000X

## Vertical System

Bandwidth (-3dB)	150MHz (RSDS1152 CML+) 100MHz (RSDS1102 CML+) 70MHz (RSDS1072 CML+) 50MHz (RSDS1052 DL+)
Vertical Resolution	8 bit
Vertical Scale ( Probe 1X)	2mV/div - 10V/div(1-2-5 )
Offset Range ( Probe 1X)	2mV - 200mV: ± 1.6V; 206mV ~ 10V: ± 40V
Bandwidth Limit	20MHz ±40%
Bandwidth Flatness	DC - 10%(BW): ± 1dB 10% - 50%(BW): ± 2dB 50% - 100%(BW): + 2dB/-3dB
Low Frequency Response (AC-3dB)	≤10Hz (at input BNC)
Noise	STDEV≤0.6div (≥ 5mV/div) STDEV≤0.7div (2mV/div)
DC Gain Accuracy	≤±3.0%: 5mV/div ~10V/div ≤±4.0%: ≤2mV/div
DC Measurement Accuracy	± [3%× (  reading + offset  ) +1%× offset  +0.2div+2mV] , ≤100mV/div ±[3%×( reading + offset  ) +1%× offset  +0.2div+100mV] , >100mV/div
Rise time	< 2.3ns (RSDS1152 CML+, Typ.) < 3.5ns (RSDS1102CML+, Typ.) < 5.0ns (RSDS1072CML+, Typ.) <7.0ns (RSDS1052 DL+, Typ.)
Overshoot(500ps Pulse)	<10%

## Horizontal System

Timebase Scale	150 MHz 2.5ns/div - 50s/div 100 MHz 2.5ns/div - 50s/div 70 MHz 5.0ns/div - 50s/div 50 MHz 5.0ns/div - 50s/div
Channel Skew	<500ps
Display Format	Y-T, X-Y, Roll
Timebase Accuracy	±50ppm
Scan Mode	100ms/div ~ 50s/div

## Trigger System

Trigger Mode	Auto, Normal, Single
TriggerLevelRange	Internal:±6divisions from center of screen EXT: ±1.2V EXT/5: ±6V
Hold off Range	100ns ~ 1.5s
Trigger Coupling	AC、DC、LF Rej, HF Rej
Trigger Sensitivity	1 Divisions: DC-10MHz 1.5 Divisions: 10MHz - Max BW
Trigger Displacement	Pre-trigger: Memory depth/ (2*sampling) Delay Trigger: 260div

## Edge Trigger

Slope	Rising, Falling, Rising & Falling
Source	CH1/CH2/EXT/(EXT/5)/AC Line

## Slope Trigger

Slope	Rising, Falling
LimitRange	<, >, =
Source	CH1/CH2
Time Range	20ns ~ 10s

## Pulse Trigger

Polarity	+wid , -wid
LimitRange	<, >, =
Source	CH1/CH2
PulseRange	2ns -10s

## Video Trigger

Signal Standard	NTSC,PAL/Secam
Source	CH1/CH2
Trigger condition	odd field, even field, all lines, line num

## Measure System

Source	CH1, CH2		
Measurement Parameters(32 Types)			
Vertical (Voltage)	Vmax	Highest value in input waveform	
	Vmin	Lowest value in input waveform	
	Vpp	Difference between maximum and minimum data values	
	Vamp	Difference between top and base in a bimodal signal, or between max and min in an unimodal signal	
	Vtop	Value of most probable higher state in a bimodal waveform	
	Vbase	Value of most probable lower state in a bimodal waveform	
	Mean	Average of all data values	
	Vmean	Average of data values in the first cycle(Condition: there is an entire period)	
	Vrms	Root mean square of all data values	
	Crms	Root mean square of all data values in the first cycle(Condition: there is an entire period)	
	FOV	Overshoot after a falling edge;(base-min)/Amplitude	
	FPRE	Overshoot before a falling edge;(max-top)/Amplitude	
	ROV	Overshoot after a rising edge;(max-top)/Amplitude	
	RPRE	Overshoot before a rising edge;(base-min)/Amplitude	
	Horizontal (Time)	Period	Period for every cycle in waveform at the 50% level ,and positive slope
		Freq	Frequency for every cycle in waveform at the 50% level, and positive slope
+Wid		Width measured at 50% level and positive slope	
-Wid		Width measured at 50% level and negative slope	
Rise Time		Duration of rising edge from 10-90%	
Fall Time		Duration of falling edge from 90-10%	
Bwid		Time from the first rising edge to the last falling edge, or the first falling edge to the last rising edge at the 50% crossing	
+Dut		Ratio of positive width to period	
-Dut		Ratio of negative width to period	
Delay		Phase	Calculates the phase difference between two edges(Condition: there is an entire period)
	FRR	Time between the first rising edges of the two channels	
	FRF	Time from the first rising edge of channel A ,to the first falling edge of channel B	
	FFR	Time from the first falling edge of channel A ,to the first rising edge of channel B	
	FFF	Time from the first falling edge of channel A ,to the first falling edge of channel B	

	LRR	Time from the first rising edge of channel A ,to the last rising edge of channel B(Condition: there is an entire period)
	LRF	Time from the first rising edge of channel A, to the last falling edge of channel B (Condition: there is an entire period)
	LFR	Time from the first falling edge of channel A, to the last rising edge of channel B(Condition: there is an entire period)
	LFF	Time from the first falling edge of channel A, to the last falling edge of channel B
Cursors	Manual mode, Track mode and Auto mode	
Counter	Hardware Counter (Resolution1Hz)	

### Math Function

Operation	+ , - , * , / , FFT
FFT	Rectangular, Blackman, Hanning, Hamming
FFT display	Full Screen, Split

### Save/Recall

Type	Setting, Waveform, Bmp, CSV 2 refs, 20 settings, 10waveformsinternal Save to USB disk
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### I/O

Standard I/O	USB Host, USB Device, LAN, Pass/Fail
Pass/Fail	3.3V TTL Output

### Display(Screen)

Display Type	7 inch TFT-LCD
Display	800x480
Resolution	
Display Color	24 bit
Contrast(Typical)	500:1
Backlight	300nit
Wave display range	8 x 16div
Wave Display Mode	Dots, Vectors
Persist	Off, 1s, 2s, 5s, Infinite
Menu Display	2 sec, 5 sec, 10 sec, 20 sec, Infinite
Screen-Saver	Off,1min,2min,5min,10min,15min,30min,1hour,2hour,5hour
Color mode	Normal, Invert
Language	English, Simplified Chinese, Traditional Chinese, Arabic, French, German, Russian, Portuguese Spanish, Japanese, Korean, Italian

## Environments

Temperature	Operating: 10°C ~ +40°C Non-operating: -20°C ~ +60°C
Humidity	Operating: 85%RH, 40°C, 24 Hours Non-operating: 85%RH, 65°C, 24 Hours
Height	Operating: ≤3000m Non-operating: ≤15,266m

## Power Supply

Input	100 ~ 240 Vrms 50/60Hz 100 ~ 120 Vrms 400Hz
Power	50W Max

## Mechanical

Dimensions	Length 323.1mm Width 135.6mm Height 157mm
Weight	N.W:2.5Kg

## Ordering information

Description	Model
50MHz, 2CH, 50MSa/s (Max.) , 32Kpts, 7inch (800*480) LCD	RSDS1052DL+
70MHz, 2CH, 1GSa/s (Max.) , 2Mpts, 7inch (800*480) LCD	RSDS1072CML+
100MHz, 2CH, 1GSa/s (Max.) , 2Mpts, 7inch (800*480) LCD	RSDS1102CML+
150MHz, 2CH, 1GSa/s (Max.) , 2Mpts, 7inch (800*480) LCD	RSDS1152CML+

## Standard Accessories

USB Cable -1  
Quick Start -1  
Certificate of Calibration -1  
Passive Probe -2  
Quality Certificate -1  
Power Cord -1  
CD (Included User Manual and EasyScopeX software) -1