

STANFORD RESEARCH SYSTEMS

SR620

The Stanford Research Systems SR620 is a universal time interval and frequency counter offering 25 ps single-shot timing resolution and frequency measurements up to 1.3 GHz. Designed for laboratory and ATE environments, it features built-in statistical analysis, Allan variance calculations, and live graphical outputs to external oscilloscopes for histograms and strip charts.

SPECIFICATIONS

General

Interfaces	GPIB, RS-232
Display	16-digit alphanumeric LED

Physical

Power Supply	100 / 120 / 220 / 240 VAC, 50/60 Hz, 50 W
Operating Temperature	0 to +50 °C
Dimensions (W×H×D)	356 x 89 x 356 mm
Weight	4.5 kg

Measurement Modes

Available Measurements	Time interval, frequency, pulse-width, rise and fall time, period, phase, events
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Time Interval Specifications

Single-Shot Resolution	25 ps rms
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Frequency and Period Specifications

Frequency Range	0.001 Hz to 1.3 GHz
Frequency Resolution	Up to 11 digits (1 s gate)

Phase Specifications

Phase Resolution	0.001°
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Timebase / Reference Oscillator

Standard Oscillator Aging Rate	1 × 10 ⁻⁶ / year
Optional Ovenized Oscillator Aging Rate	5 × 10 ⁻¹⁰ / day

Statistical and Math Functions

Sample Size Range	1 to 1,000,000
Calculated Statistics	Mean, standard deviation, Allan variance, minimum, maximum
Histogram Generation	Up to 250 bins
Strip Chart Display	Mean or jitter (standard deviation / Allan variance), up to 250 points

Display Characteristics

Graphical Output	Via X-Y scope inputs or HP-GL compatible plotter/printer
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Auxiliary Outputs

Internal Reference Output	1 kHz, 50% duty cycle square wave
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Auxiliary Inputs

DVM Inputs	2 rear-panel channels
DVM Input Voltage Range	± 20 VDC
DVM Input Accuracy	0.3%

Calibration

Auto-Calibration Duration	~2 minutes
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Measurement Ranges

Time Interval Range	-1000 s to +1000 s
Phase Measurement Range	-180° to +180°

Inputs A & B

Input Impedance (Inputs A & B)	50 Ω or 1 M Ω
Input Coupling (Inputs A & B)	AC or DC
Trigger Level Range	± 5.00 V
Trigger Level Resolution	10 mV
Input Bandwidth	300 MHz
Input Sensitivity	50 mVrms
Typical Input Noise	350 μ Vrms

Reference / Timebase

Timebase Frequency	10.000 MHz
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Outputs

Internal Reference Output Level	1 Vpp into 50 Ω
Analog Outputs (D/A) Channels	Two rear-panel outputs (X-axis, Y-axis)

DVM Inputs

DVM Input Impedance	1 M Ω
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Performance

Internal Time Jitter	25 ps rms (typical)
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Inputs & Outputs

External Arming Input	TTL level
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Power

Power Consumption	50 W
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APPLICATIONS

Laboratory, ATE, Atomic clock drift measurement, PLL jitter measurement

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.