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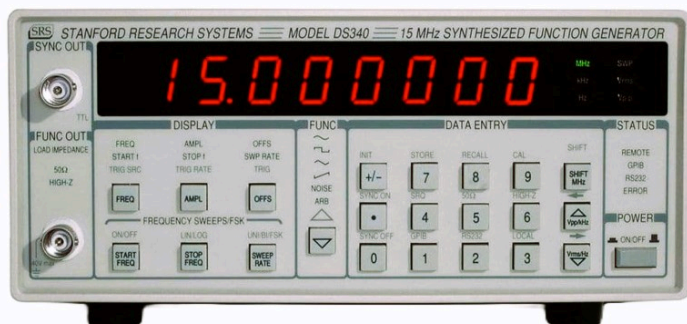
Data Sheet

August 13, 2026

STANFORD RESEARCH SYSTEMS

Stanford Research DS340 "Synthesized Function Generator

Stanford Research Systems DS340 Synthesized Function Generator The SRS DS340 is a 15.1 MHz DDS function and arbitrary-waveform generator. Sine and square waves reach 15.1 MHz; ramps and triangles reach 100 kHz; Gaussian noise and arbitrary waveforms reach 10 MHz. Frequency resolution is 1 uHz. Arbitrary waveforms use a 40 MHz sample clock (or integer sub-multiples) and 8 to 16300 points. Phase-continuous linear and log sweeps, FSK, and optional GPIB/RS-232 with AWC software cover general-purpose bench use. Optional 2 ppm TCXO (Opt. 02) improves the timebase. The SRS DS340 is a 15.1 MHz DDS function and arbitrary-waveform generator. Sine and square waves reach 15.1 MHz; ramps and triangles reach 100 kHz; Gaussian noise and arbitrary waveforms reach 10 MHz. Frequency resolution is 1 uHz. Arbitrary waveforms use a 40 MHz sample clock (or integer sub-multiples) and 8 to 16300 points. Phase-continuous linear and log sweeps, FSK, and optional GPIB/RS-232 with AWC software cover general-purpose bench use. Optional 2 ppm TCXO (Opt. 02) improves the timebase. 15 MHz function generation; arbitrary-waveform playback; FSK and sweep stimulus; general ATE when 30 MHz (DS345) is not required.



MODEL

**Stanford Research
Systems DS340**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

DS340

LISTING

<https://aumictechlabs.com/products/ds340-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Stanford Research Systems DS340 is a synthesized function and arbitrary waveform generator employing Direct Digital Synthesis (DDS) technology to deliver precise, stable waveforms across a broad range of test and measurement applications. It generates standard waveforms - sine, square, ramp, and triangle - plus Gaussian white noise and user-defined arbitrary waveforms with 12-bit vertical resolution and sample rates to 40 MHz. The instrument combines high frequency resolution (1 μ Hz), low phase noise, and excellent harmonic distortion performance, making it suitable for analog circuit characterization, component testing, and signal simulation in laboratory and production environments.

Technical Specifications

Waveform Generation

Standard waveforms: Sine, Square, Ramp, Triangle, Gaussian White Noise

Arbitrary waveforms: 8 to 16,300 points at 12-bit resolution; sample rate 40 MHz or integer sub-multiples 10 MHz

Gaussian white noise generator included

Frequency & Timing

Sine and Square: 1 Hz to 15.1 MHz

Ramp and Triangle: 1 Hz to 100 kHz

Frequency resolution: 1 μ Hz across all functions

Timebase accuracy: Standard; optional 2 ppm TCXO timebase (Option 02)

Output Specifications

Output impedance: 50 Ω

Amplitude (50 Ω): 50 mVpp to 10 Vpp

Amplitude (Hi-Z): 100 mVpp to 20 Vpp

Amplitude resolution: 3 digits

DC offset (50 Ω): ± 5 VDC; (Hi-Z): ± 10 VDC

Offset resolution: 3 digits

Signal Quality

Sine spurious response: < -65 dBc to 1 MHz (increases 6 dB/octave above 1 MHz)

Sine harmonic distortion: < -70 dBc (DC–20 kHz); < -60 dBc (20–100 kHz); < -50 dBc (100 kHz–1 MHz); < -40 dBc (1–15 MHz)

Sine phase noise: < -55 dBc (30 kHz band)

Square rise/fall time: < 15 ns ± 5 ns (10%–90%); asymmetry < 3 ns + 1% period; overshoot $< 2\%$

Ramp/Triangle rise/fall time: 45 ns (with 10 MHz Bessel filter); linearity $\pm 0.1\%$ full scale; settling time 200 ns (to 0.5%)

Modulation & Sweeping

FSK: Internal (max. 50 kHz) and External (TTL, max. 1 MHz)

Sweeps: Linear and logarithmic, unidirectional and bidirectional, phase-continuous

Rear-panel SWEEP output for external device synchronization

Key Features

Direct Digital Synthesis for frequency accuracy and stability

Arbitrary waveform capability with extended point count and fast update rates

Dual-range output impedance (50 Ω and Hi-Z) for flexible load matching

Integrated FSK and sweep functions with external trigger support

Low harmonic distortion across extended frequency range

Typical Applications

Analog filter and amplifier characterization

Component and device testing requiring precise stimulus signals

Signal simulation and circuit validation

Frequency-sweep measurements and frequency response analysis

Compatibility & Integration

The rear-panel SWEEP output and external FSK input enable synchronization with automated test systems and external measurement hardware.

Features & description

From manufacturer datasheet

Features

- 1 uHz resolution on all standard functions
- 10 MHz Gaussian white-noise generator
- 50 ohm output, floatable to +/-40 V
- Optional RS-232 and GPIB (Opt. 01) with AWC software
- Optional 2 ppm TCXO (Opt. 02)
- Nine stored instrument setups; 8.5 in x 3.5 in x 13 in, 8 lbs, 35 W

DS340 Characteristics / Specifications

PARAMETER	VALUE
Model	DS340
Manufacturer	Stanford Research Systems
Instrument Type	Synthesized Function and Arbitrary Waveform Generator
Alias	DS340; SRS DS340
Sine Maximum Frequency	15.1 MHz
Square Maximum Frequency	15.1 MHz
Ramp Maximum Frequency	100 kHz
Triangle Maximum Frequency	100 kHz
Noise Bandwidth	10 MHz Gaussian weighting
Arbitrary Maximum Frequency	10 MHz
Frequency Resolution	1 uHz
Arbitrary Sample Rate	40 MHz or integer sub-multiples
Arbitrary Waveform Length	8 to 16300 points
Source Impedance	50 ohm
Output Float Voltage	+/-40 V (AC + DC)
Sweep Type	linear and logarithmic, phase continuous
Linear Sweep Span	full frequency range
Log Sweep Span	6 decades
Sweep Rate	0.01 Hz to 1 kHz
FSK Maximum Internal Rate	50 kHz
External FSK	TTL input, 1 MHz max
Harmonic Distortion DC to 20 kHz	less than -70 dBc
Harmonic Distortion 20 kHz to 100 kHz	less than -60 dBc
Harmonic Distortion 100 kHz to 1 MHz	less than -50 dBc
Harmonic Distortion 1 MHz to 15 MHz	less than -40 dBc

PARAMETER	VALUE
Spurious Response	less than -65 dBc to 1 MHz (increasing 6 dB/octave above 1 MHz)
Phase Noise	less than -55 dBc (30 kHz band centered on carrier)
Nonvolatile Memory	up to nine instrument settings
Dimensions	8.5 in x 3.5 in x 13 in (WHD)
Weight	8 lbs
Line Power	35 W, 100/120/220/240 VAC, 50/60 Hz
Architecture	Direct Digital Synthesis (DDS)
FSK Waveforms	sine, square, triangle, ramp
Related Higher Bandwidth Model	DS345 to 30.2 MHz
Related Lower Bandwidth Model	DS335 to 3.1 MHz Notes Specs from SRS DS340 catalog sheet. Confirm Opt. 01 communications and Opt. 02 TCXO. Amplitude, offset, and remaining waveform-purity details belong on the faceplate/manual of the shipped unit if not listed on the family catalog page used here.
Bandwidth	10 MHz Gaussian weighting

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Noise Bandwidth	10 MHz Gaussian weighting
Arbitrary Maximum Frequency	10 MHz
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Arbitrary Sample Rate	40 MHz or integer sub-multiples
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Sweep Type	linear and logarithmic, phase continuous
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Dimensions	8.5 in x 3.5 in x 13 in (WHD)
Weight	8 lbs
Line Power	35 W, 100/120/220/240 VAC, 50/60 Hz

Optional Interfaces: RS-232 and GPIB with AWC software (Opt. 01)
Optional Timebase: 2 ppm TCXO (Opt. 02)

Specifications

PARAMETER	VALUE
Architecture	Direct Digital Synthesis (DDS)
FSK Waveforms	sine, square, triangle, ramp
Related Higher Bandwidth Model	DS345 to 30.2 MHz
Related Lower Bandwidth Model	DS335 to 3.1 MHz

Notes
Specs from SRS DS340 catalog sheet. Confirm Opt. 01 communications and Opt. 02 TCXO. Amplitude, offset, and remaining waveform-purity details belong on the faceplate/manual of the shipped unit if not listed on the family catalog page used here.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.