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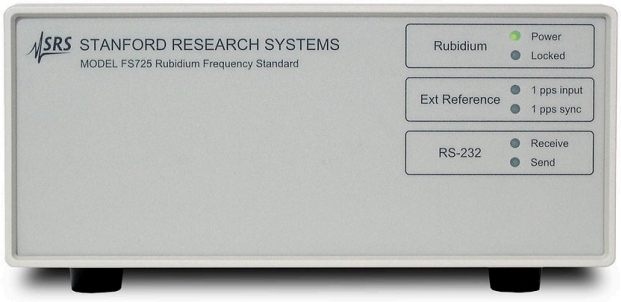
Data Sheet
August 13, 2026

STANFORD RESEARCH SYSTEMS

Stanford Research FS725 â€“ Benchtop Rubidium Frequency Standard

Stanford Research Systems FS725 Benchtop Rubidium Frequency Standard The SRS FS725 isahalf-width 2U benchtop rubidium frequency standard built around the PRS10 Rb oscillator, a low-noise AC supply, and distribution amplifiers. Standard outputs are two isolated 10 MHz sines, one 5 MHz sine, and one 10 us 1 pps pulse. Phase noise is less than -130 dBc/Hz at 10 Hz offset; 1 s Allan variance is less than 2e-11. An external 1 pps input (GPS class) provides Stratum 1 lock. Up to three option boards add four 10 MHz, one 5 MHz, and one 1 pps each (up to 22 outputs total). The SRS FS725 isahalf-width 2U benchtop rubidium frequency standard built around the PRS10 Rb oscillator, a low-noise AC supply, and distribution amplifiers. Standard outputs are two isolated 10 MHz sines, one 5 MHz sine, and one 10 us 1 pps pulse. Phase noise is less than -130 dBc/Hz at 10 Hz offset; 1 s Allan variance is less than 2e-11. An external 1 pps input (GPS class) provides Stratum 1 lock. Up to three option boards add four 10 MHz, one 5 MHz, and one 1 pps each (up to 22 outputs total). Laboratory 10 MHz / 5 MHz distribution; GPS-disciplined Stratum 1 holdover; calibration benches; low-phase-noise synthesizer references; RS-232 status and 1 pps steering with RbMon software.



MODEL	CALIBRATION
Stanford Research Systems FS725	Available on request
CONDITION	**STATUS**
Used	In stock
RFQ / SKU	**LISTING**
FS725	https://aumictechlabs.com/products/fs725-2/

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Stanford Research Systems FS725 is a benchtop rubidium frequency standard delivering ultra-stable 10 MHz reference signals for precision metrology, calibration, and research applications. Built around the SRS PRS10 rubidium oscillator and housed in a compact half-width 2U chassis, the FS725 combines exceptional long-term aging performance with demonstrated reliability exceeding 200,000 hours MTBF. The instrument outputs two 10 MHz sine waves, one 5 MHz sine wave, and one 1 pps signal, each with low phase noise and minimal jitter.Optional internal distribution modules expand output count to 22 total channels while maintaining specification compliance across all ports.Technical Specifications Frequency Outputs Two 10 MHz sine wave outputs One 5 MHz sine wave output One pulse-per-second (1 pps) output Output Amplitude & Power 10 MHz / 5 MHz: 0.5 V rms ±10% into 50 Ω (1.41 V pp, +7 dBm) 1 pps pulse: 2.5 V into 50 Ω; 5 V into high-impedance loads 1 pps pulse width: 10 µs Stability & Aging One-second Allan variance: $<2 \times 10^{-11}$ 20-year aging rate: $<5 \times 10^{-9}$ (−130 dBc/Hz at 10 Hz offset (SSB) >−140 dBc/Hz at other offsets 1 pps Synchronization External 1 pps locking to GPS or similar references Lock time constant: 8 minutes to 18 hours (computer-adjustable) Output jitter: 200,000 hour MTBF Sub-nanosecond 1 pps jitter for timing applications Stratum 1 performance via external GPS 1 pps locking Low-noise AC power supply integrated Computer control and remote monitoring via RS-232 Modular output expansion without performance degradationTypical Applications Primary frequency reference in calibration laboratories Timing reference for test equipment synchronization GPS disciplined clock systems and time-keeping networks Precision measurement and metrology setups Research environments requiring long-term frequency stabilityCompatibility & Integration The FS725 operates as a standalone instrument or integrates into larger timing systems through its external 1 pps locking input. RS-232 control enables automation and remote monitoring in networked lab environments. Optional distribution modules allow a single FS725 to serve multiple test instruments and data acquisition systems from one reference source.

Features & description

From manufacturer datasheet

Features

• 20 year aging typically 5e-9 (less than 0.005 ppm) • Rubidium oscillator MTBF over 200000 hours (SRS statement) • 1 pps output jitter less than 1 ns; settable with 1 ns resolution • Two SPDT alarm relays (Rb lock and 1 pps sync), 3 A • RS-232 DCE 9600 baud • 8.5 in x 3.5 in x 13 in, 9 lbs, 50 W

FS725 Characteristics / Specifications

PARAMETER	VALUE
Model	FS725
Manufacturer	Stanford Research Systems
Instrument Type	Benchtop Rubidium Frequency Standard
Internal Oscillator	PRS10 rubidium
Alias	FS725; SRS FS725
Output Frequencies	10 MHz sine, 5 MHz sine, 1 pps pulse 10 us wide
Sine Amplitude	0.5 Vrms +/-10 %
One PPS Amplitude Fifty Ohm	2.5 V into 50 ohm
One PPS Amplitude High Z	5 V into high-impedance loads
Phase Noise at Ten Hz	less than -130 dBc/Hz
Phase Noise at One Hundred Hz	less than -140 dBc/Hz
Phase Noise at One kHz	less than -150 dBc/Hz
Phase Noise at Ten kHz	less than -155 dBc/Hz
Spurious	less than -100 dBc (100 kHz BW)
Harmonics	less than -40 dBc
Accuracy at Shipment	+/-5e-11
Monthly Aging	less than 5e-11 after 30 days; less than 2.5e-11 at shipment with Opt. C
Yearly Aging	less than 5e-10
Twenty Year Aging Typical	5e-9
Allan Variance One Second	less than 2e-11
Allan Variance Ten Seconds	less than 1e-11
Allan Variance One Hundred Seconds	less than 2e-12
Holdover	72 hour Stratum 1 level (1e-11)
Frequency Retrace	+/-5e-11 (72 hrs off then 72 hrs on)
Settability	less than 5e-12

PARAMETER	VALUE
Trim Range Analog	+/-2e-9 (0 to 5 VDC)
Trim Range RS2	+/-0.5 ppm
Warm Up To Lock	less than 6 minutes
Warm Up To 1ppb	less than 7 minutes
Standard Ten MHz Outputs	two 50 ohm isolated sines
Standard Five MHz Outputs	one 50 ohm sine
Standard One PPS Outputs	one 50 ohm pulse
One PPS Input Impedance	100 kOhm, CMOS 0 to 5 VDC
One PPS Lock Time Constant	8 minutes to 18 hours (computer adjustable)
One PPS Sync Window	+/-1 us (front-panel sync LED)
Alarm Relay Current	3 A SPDT
Frequency Adjust Sensitivity	0 to 5 VDC adjusts +/-0.002 ppm
Operating Temperature	+10 C to +40 C
Temperature Stability	df/f less than +/-1e-10 (+10 C to +40 C)
Storage Temperature	-55 C to +85 C
Magnetic Field Sensitivity	df/f less than 2e-10 for 1 Gauss field reversal
Relative Humidity	95 % non-condensing
AC Power	90 to 132 VAC or 175 to 264 VAC, 47 to 63 Hz, 50 W
Dimensions	8.5 in x 3.5 in x 13 in (WHL)
Weight	9 lbs
Interface	RS-232 9-pin DCE, 9600 baud, RbMon software Notes Specs from SRS FS725 product page and FS725c catalog. Confirm installed distribution option boards and whether Opt. C aging is present. The FS725 chassis hostsaPRS10 module.
Humidity	95 % non-condensing

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	55 C to +85 C
Operating temperature	+10 C to +40 C
Operating Temperature	+10 C to +40 C
Humidity	95 % non-condensing
Temperature Stability	df/f less than +/-1e-10 (+10 C to +40 C)
Magnetic Field Sensitivity	df/f less than 2e-10 for 1 Gauss field reversal
Relative Humidity	95 % non-condensing
AC Power	90 to 132 VAC or 175 to 264 VAC, 47 to 63 Hz, 50 W
Dimensions	8.5 in x 3.5 in x 13 in (WHL)
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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

Specifications

PARAMETER	VALUE
Model	FS725
Manufacturer	Stanford Research Systems
Instrument Type	Benchtop Rubidium Frequency Standard
Internal Oscillator	PRS10 rubidium
Alias	FS725; SRS FS725
Output Frequencies	10 MHz sine, 5 MHz sine, 1 pps pulse 10 us wide
Sine Amplitude	0.5 Vrms +/-10 %
One PPS Amplitude Fifty Ohm	2.5 V into 50 ohm
One PPS Amplitude High Z	5 V into high-impedance loads
Phase Noise at Ten Hz	less than -130 dBc/Hz
Phase Noise at One Hundred Hz	less than -140 dBc/Hz
Phase Noise at One kHz	less than -150 dBc/Hz
Phase Noise at Ten kHz	less than -155 dBc/Hz
Spurious	less than -100 dBc (100 kHz BW)
Harmonics	less than -40 dBc
Accuracy at Shipment	+/-5e-11
Monthly Aging	less than 5e-11 after 30 days; less than 2.5e-11 at shipment with Opt. C
Yearly Aging	less than 5e-10
Twenty Year Aging Typical	5e-9
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Holdover	72 hour Stratum 1 level (1e-11)
Frequency Retrace	+/-5e-11 (72 hrs off then 72 hrs on)
Settability	less than 5e-12

PARAMETER	VALUE
Trim Range Analog	+/-2e-9 (0 to 5 VDC)
Trim Range RS232	+/-0.5 ppm
Warm Up To Lock	less than 6 minutes
Warm Up To 1ppb	less than 7 minutes
Standard Ten MHz Outputs	two 50 ohm isolated sines
Standard Five MHz Outputs	one 50 ohm sine
Standard One PPS Outputs	one 50 ohm pulse

Option Board Outputs: four 10 MHz, one 5 MHz, one 1 pps per board; up to 3 boards

Specifications

PARAMETER	VALUE
One PPS Input Impedance	100 kOhm, CMOS 0 to 5 VDC
One PPS Lock Time Constant	8 minutes to 18 hours (computer adjustable)
One PPS Sync Window	+/-1 us (front-panel sync LED)
Alarm Relay Current	3 A SPDT
Frequency Adjust Sensitivity	0 to 5 VDC adjusts +/-0.002 ppm
Operating Temperature	+10 C to +40 C
Temperature Stability	df/f less than +/-1e-10 (+10 C to +40 C)
Storage Temperature	-55 C to +85 C
Magnetic Field Sensitivity	df/f less than 2e-10 for 1 Gauss field reversal
Relative Humidity	95 % non-condensing
AC Power	90 to 132 VAC or 175 to 264 VAC, 47 to 63 Hz, 50 W
Dimensions	8.5 in x 3.5 in x 13 in (WHL)
Weight	9 lbs
Interface	RS-232 9-pin DCE, 9600 baud, RbMon software

Notes
Specs from SRS FS725 product page and FS725c catalog. Confirm installed distribution option boards and whether Opt. C aging is present. The FS725 chassis hostsaPRS10 module.

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

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