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Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 12, 2026

HP / AGILENT

HP / Agilent 8970A Noise Figure Meter

The HP/Agilent 8970A Noise Figure Meter is a microprocessor-based instrument for measuring noise figure and gain across RF and microwave devices. It delivers noise figure measurements from 0 to 30 dB with 0.01 dB resolution and ± 0.1 dB instrumentation uncertainty, plus gain measurements from -20 dB to +40 dB with ± 0.2 dB uncertainty. The meter tunes from 10 MHz to 1500 MHz natively, extending to 26.5 GHz with external local oscillator control. Automatic second-stage correction accounts for measurement system contributions, while swept measurements and adjustable exponential smoothing optimize characterization of multi-stage amplifiers and low-noise components. Storage and interpolation of excess noise ratio data across up to 27 frequencies ensure accurate corrections without manual calibration tables. HP-IB programmability provides remote control of virtually all functions, making the 8970A suitable for production test, design validation, and system integration laboratories.

Compatibility & Integration HP-IB (IEEE 488) interface with SH1, AH1, T5, L4, SR1, RL1, PPO, DC1, DT1, C1, C3, C28, E1 compliance codes. Rear panel analog outputs (X, Y, Z axes) support external oscilloscope and recorder integration. Aumictech offers NIST-traceable calibration and repair for the HP / Agilent 8970A. All calibrations are performed to NIST-traceable standards and ship with a certificate. Turnaround is typically 1-3 business days after receipt.



MODEL

HP / Agilent 8970A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

8970A

LISTING

<https://aumictechlabs.com/products/8970a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

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Technical Specifications

Noise Figure: 0 to 30 dB; 0.01 dB resolution (0.001 dB over HP-IB); ± 0.1 dB instrumentation uncertainty (0 to 55°C)
Gain: -20 dB to +40 dB; 0.01 dB resolution (0.001 dB over HP-IB); ± 0.2 dB instrumentation uncertainty
Input Frequency: 10 MHz to 1500 MHz tunable; up to 26.5 GHz with external LO; 1 MHz resolution; $\pm (1 \text{ MHz} + 0.01 \times \text{frequency})$ tuning accuracy, max 6 MHz IF Range: 10 MHz to 1500 MHz
Input Power: -10 dBm maximum operating; -5 dBm max (standard/Opt 001); +20 dBm max (Opt 002)
DC Input: ± 20 Vdc maximum safe level
Noise Source Drive: 28.0 ± 0.1 Vdc
Output Units: Noise figure (dB or ratio), Y-Factor (dB or ratio), effective input noise temperature (kelvins)
Measurement Speed: 3 to 5 measurements/second (6 to 9 with minimum smoothing) ENR
Storage: Up to 27 frequencies; -7 to +17 dB stored table; 0 to 14824 K spot frequency
Operating Temperature: 0°C to 55°C

Key Features

- Automatic second-stage correction for system noise figure and gain
- Swept measurements across full or partial frequency range
- Exponential averaging with adjustable smoothing factor
- HP-IB (IEEE 488) full programmability

Typical Applications

- Low-noise amplifier characterization
- RF and microwave device measurement
- Production noise figure test
- Multi-stage amplifier system validation

Compatibility & Integration

HP-IB (IEEE 488) interface with SH1, AH1, T5, L4, SR1, RL1, PPO, DC1, DT1, C1, C3, C28, E1 compliance codes. Rear panel analog outputs (X, Y, Z axes) support external oscilloscope and recorder integration.

Features & description

From manufacturer datasheet

Technical Specifications

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Key Features

Automatic second-stage correction for system noise figure and gain Swept measurements across full or partial frequency range Exponential averaging with adjustable smoothing factor HP-IB (IEEE 488) full programmability

Specifications

Parameter	Value
Frequency Range	10 MHz to 1500 MHz (tunable) up to 26.5 GHz with external LO
Power Range (dBm)	-10 dBm maximum operating -5 dBm to +20 dBm maximum safe RF input (depending on option)
Voltage / Current Range	± 20 Vdc maximum safe input

HP / Agilent 8970A — Repair & Calibration Service

Aumictech offers NIST-traceable calibration and repair for the HP / Agilent 8970A. All calibrations are performed to NIST-traceable standards and ship with a certificate. Turnaround is typically 1–3 business days after receipt. Standard Cal Pass/fail cert + NIST sticker Cal with Data Full NIST cert with measured values Request Calibration → Request Repair Quote →

HP / Agilent 8970A price

This HP / Agilent 8970A is listed at . Calibration is available separately from . Contact us for volume pricing or if you need multiple units.

HP / Agilent 8970A calibration cost

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Applications

Low-noise amplifier characterization RF and microwave device measurement Production noise figure test Multi-stage amplifier system validation Compatibility & Integration HP-IB (IEEE 488) interface with SH1, AH1, T5, L4, SR1, RL1, PPO, DC1, DT1, C1, C3, C28, E1 compliance codes. Rear panel analog outputs (X, Y, Z axes) support external oscilloscope and recorder integration.

Unit notes

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Noise Figure: 0 to 30 dB; 0.01 dB resolution (0.001 dB over HP-IB); ± 0.1 dB instrumentation uncertainty (0 to 55°C)

Gain: -20 dB to +40 dB; 0.01 dB resolution (0.001 dB over HP-IB); ± 0.2 dB instrumentation uncertainty

Input Frequency: 10 MHz to 1500 MHz tunable; up to 26.5 GHz with external LO; 1 MHz resolution; $\pm (1 \text{ MHz} + 0.01 \times \text{frequency})$ tuning accuracy, max 6 MHz

IF Range: 10 MHz to 1500 MHz

Input Power: -10 dBm maximum operating; -5 dBm max (standard/Opt 001); +20 dBm max (Opt 0)

8970A Specifications

PARAMETER	VALUE
Frequency Range	10 MHz to 1500 MHz (tunable)
up to 26.5 GHz with external LO Power Range (dBm)	'-10 dBm maximum operating
-5 dBm to +20 dBm maximum safe RF input (depending on option) Voltage / Current Range	±20 Vdc maximum safe input

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.

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8970A Specifications

PARAMETER	VALUE
Frequency Range	10 MHz to 1500 MHz (tunable)
up to 26.5 GHz with external LO Power Range (dBm)	-10 dBm maximum operating
-5 dBm to +20 dBm maximum safe RF input (depending on option) Voltage / Current Range	± 20 Vdc maximum safe input

Technical Specifications

Noise Figure: 0 to 30 dB; 0.01 dB resolution (0.001 dB over HP-IB); ± 0.1 dB instrumentation uncertainty (0 to 55°C) Gain: -20 dB to +40 dB; 0.01 dB resolution (0.001 dB over HP-IB); ± 0.2 dB instrumentation uncertainty

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Key Features

Automatic second-stage correction for system noise figure and gain Swept measurements across full or partial frequency range Exponential averaging with adjustable smoothing factor HP-IB (IEEE 488) full programmability

Specifications

ParameterValue Frequency Range10 MHz to 1500 MHz (tunable)up to 26.5 GHz with external LO | Power Range (dBm)-10 dBm maximum operating-5 dBm to +20 dBm maximum safe RF input (depending on option) | Voltage / Current Range ± 20 Vdc maximum safe input

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Standard Cal Pass/fail cert + NIST sticker Cal with Data Full NIST cert with measured values

[Request Calibration](#) → [Request Repair Quote](#) →

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HP / Agilent 8970A calibration cost

NIST-traceable calibration for the HP / Agilent 8970A is (standard – pass/fail certificate and calibration sticker) or (full measured data at every test point, reference standards documented, traceability chain included). Turnaround is 1 to 3 business days after receipt. See full calibration details →

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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Generated August 12, 2026

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