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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight E1708A

Agilent HP Keysight E1708A Remote Dynamic Receiver The Agilent E1708A is a remote dynamic laser interferometer receiver for sub-nanometer measurements on moving stages. A fiber-optic remote sensor carries the measurement beam to the electronics so heat-producing circuits stay away from the measurement area, extending 10897B high-resolution laser axis board performance. High-speed stage metrology, VME laser interferometer axes with 10897B boards, and low thermal-drift remote receiver mounting on linear or plane-mirror optics. The Agilent E1708A is a remote dynamic laser interferometer receiver for sub-nanometer measurements on moving stages. A fiber-optic remote sensor carries the measurement beam to the electronics so heat-producing circuits stay away from the measurement area, extending 10897B high-resolution laser axis board performance. High-speed stage metrology, VME laser interferometer axes with 10897B boards, and low thermal-drift remote receiver mounting on linear or plane-mirror optics. Fiber remote sensor separates electronics heat from the measurement area

**MODEL****Agilent / Keysight
E1708A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****E1708A****LISTING**<https://aumictechlabs.com/products/e1708a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight E1708A Remote Dynamic Receiver delivers sub-nanometer resolution for systems in motion, operating in tandem with the Keysight 10897D High Resolution Laser Axis Board. The instrument uses fiber optic transmission to separate heat-generating components

from the measurement area, enabling improved accuracy and repeatability while providing flexible mounting and easier access to receiver adjustments. Output is a differential square wave with minimal phase processing errors, ensuring high-fidelity measurements even during dynamic stage movement and power level variations.

Technical Specifications

Performance Output: Differential square wave at Doppler-shifted frequency, 100 kHz to 7.2 MHz Sensitivity: 2.2 μ W (2 m fiber optic cable); 5 μ W (10 m fiber optic cable) Dynamic range: 10:1 Measurement errors: ± 1 LSB across entire frequency range Fixed data delay: 86 ns; additional fixed delay of 1190 ± 20 ns between actual position and hardware output lines Signal power immunity: Resistant to dynamic changes in measurement signal power level Optical Standard fiber optic cable: 2 m (plastic); extended lengths available Self-aligning with Keysight 10715A, 10716A, 10717A, 10719A, 10721A, 10735A, 10736A Alignment tolerances: Roll $\pm 3^\circ$; Pitch $\pm 1^\circ$; Yaw $\pm 1^\circ$ Power & Physical Power requirement: 15 V @ <250 mA Power dissipation: 3.8 W (typical) Receiver dimensions: 78.1 mm H $\times$ 115.6 mm W $\times$ 19.8 mm D Mounting holes: 40.0 mm H $\times$ 108.0 mm W rectangle Weight (receiver): 170 g; remote sensor with 2 m cable: 26 g Operating temperature: 0 to 40 $^\circ$ C

Key Features Remote sensor assembly enables thermal isolation and improved measurement stability Doppler-shifted frequency output (100 kHz–7.2 MHz) for direct integration with laser axis electronics Minimal phase processing errors optimized for dynamic measurement accuracy Self-aligning optical interface reduces installation complexity Compact receiver footprint with standard mounting pattern

Compatibility & Integration Designed for use with Keysight 10897D (also 10897B) High Resolution Laser Axis Board. Remote sensor mounts directly to specified interferometer optics: 10715A, 10716A, 10717A, 10719A, 10721A, 10735A, 10736A.

E1708A Characteristics / Specifications

PARAMETER	VALUE
Model	E1708A
Instrument Type	remote dynamic laser interferometer receiver
Optical Dynamic Range	10:1
Optical Sensitivity With 2 m Fiber	2.2 uW
Optical Sensitivity With 10 m Fiber	5 uW
Alignment Tolerance Roll	plus or minus 3 degrees
Alignment Tolerance Pitch	plus or minus 1 degree
Alignment Tolerance Yaw	plus or minus 1 degree
Compatible Self Aligning Optics	10715A 10716A 10717A 10719A 10721A 10735A 10736A
Electrical Output Signal	differential square wave at Doppler shifted frequency
Output Frequency Range	100 kHz to 7.2 MHz
Fixed Data Delay Typical	86 ns
Fixed Data Delay Temperature Coefficient Typical	0.15 ns perCError Linear Optics Frequency And Amplitude: plus or minus 1.2 nm
Error Plane Mirror Optics Frequency And Amplitude	plus or minus 0.6 nm
Error High Resolution Optics Frequency And Amplitude	plus or minus 0.3 nm
Signal Strength Monitor	0 to 8 V proportional to optical input
Input Signal Power Bound For Listed Errors	less than 200 uW
Power Requirements	15 Vdc plus or minus 1 V at less than 250 mA
Heat Dissipation Remote Sensor	0.0 W
Heat Dissipation Receiver Typical	3.8 W
Operating Temperature	0 C to 40 C
Fiber Optic Cable Length Standard	2 m
Fiber Optic Cable Length Maximum	10 m

PARAMETER	VALUE
Weight Receiver Body	170 g (6.0 oz)
Weight Remote Sensor With 2 m Cable	26 g (0.9 oz)
Paired Axis Board Family	10897B high resolution laser axis board

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to 40 C
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Weight Receiver Body	170 g (6.0 oz)
Weight Remote Sensor With 2 m Cable	26 g (0.9 oz)
Paired Axis Board Family	10897B high resolution laser axis board Notes Numeric rows from Agilent High Performance Laser Interferometer Positioning for VMEbus Systems brochure E1708A section.

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.

performance.

Applications

High-speed stage metrology, VME laser interferometer axes with 10897B boards, and low thermal-drift remote receiver mounting on linear or plane-mirror optics.

Key Features

Fiber remote sensor separates electronics heat from the measurement area

Differential square-wave Doppler output for axis boards

Signal-strength monitor proportional to optical input power

Self-aligning remote sensor with listed Agilent interferometer optics

Attenuation and squelch adjustments accessible at the receiver body

Technical Specifications

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Paired Axis Board Family	10897B high resolution laser axis board

Notes

Numeric rows from Agilent High Performance Laser Interferometer Positioning for VMEbus Systems brochure E1708A section.

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