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Data Sheet
August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 34970A Data Acquisition / Data Logger Switch Unit

Agilent HP 34970A Data Acquisition Switch Unit The Agilent 34970A is a 3-slot data acquisition/switch mainframe withabuilt-in 6.5-digit (22-bit) DMM. OEM 34970A datasheet specifies 0.004% basic 1-year dcV accuracy, scan rates to 250 ch/s with 34902A, and GPIB plus RS-232 interfaces. Automated temperature voltage and resistance logging, production switch/measure ATE, and benchtop multi-channel DAQ with modular multiplexers and actuators. Built-in 6.5-digit DMM measurement engine The Agilent 34970A is a 3-slot data acquisition/switch mainframe withabuilt-in 6.5-digit (22-bit) DMM. OEM 34970A datasheet specifies 0.004% basic 1-year dcV accuracy, scan rates to 250 ch/s with 34902A, and GPIB plus RS-232 interfaces. Automated temperature voltage and resistance logging, production switch/measure ATE, and benchtop multi-channel DAQ with modular multiplexers and actuators. Built-in 6.5-digit DMM measurement engine Three module slots for switch and control cards

MODEL **Agilent / Keysight 34970A**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **34970A**	LISTING **https://aumictechlabs.com/products/34970a-2/**

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

NAICS 423690 · 811210 · 541380

This unit

The Keysight 34970A is a modular data acquisition and switch unit built around a 6½ digit (22-bit) resolution DMM for automated test, data logging, and process monitoring. It delivers 0.004% basic DC voltage accuracy with scan rates to 250 channels/second across 11 measurement functions: temperature (thermocouples, RTDs, thermistors), DC/AC voltage, 2- and 4-wire resistance, frequency, period, and DC/AC current. The three-slot mainframe accepts plug-in switch and control modules to expand capability up to 60 channels, with per-channel configurability for function, scaling, and alarm limits.Data logging stores up to 50,000 time-stamped readings at user-defined intervals. GPIB (IEEE-488) and RS-232 interfaces enable remote control and programming via SCPI commands. BenchLink Data Logger Software provides configuration, control, and data collection functionality.The 34970A addresses applications requiring multi-channel signal acquisition with flexible sensor compatibility and precise measurement in compact benchtop form.Technical Specifications Resolution: 6½ digits (22 bits) Basic DC Voltage Accuracy: 0.004% Scan Rate: Up to 250 channels/second Data Logger Capacity: 50,000 time-stamped readings Module Slots: 3 Maximum Channels: Up to 60 (with appropriate modules)Key Features Eleven measurement functions for thermal and electrical parameters Independent per-channel configuration of function, scaling (Mx+B), and alarm thresholds Modular architecture supporting multiplexers, actuator modules, matrix modules, RF multiplexers, and multifunction plug-in modules Low reading noise for precision measurements Interval scanning with automatic data storageTypical Applications Automated test systems, environmental and process monitoring, multi-point temperature acquisition with RTD and thermocouple sensors, resistance measurement in quality assurance, frequency and period analysis.Compatibility & Integration GPIB and RS-232 interfaces for instrument control. SCPI command language compatibility. Accepts 34901A, 34902A, 34903A, 34904A, 34905A, 34906A, 34907A, and 34908A plug-in modules to customize input signal types and switching configurations.

Features & description

From manufacturer datasheet

Built-in 6.5-digit DMM measurement engine

Three module slots for switch and control cards Up to 250 channels per second scanning Measures 11 input signal types including thermocouples RTDs and thermistors GPIB and RS-232 standard Technical Specifications Internal DMM Resolution: 6.5 digits (22 bits) Basic 1 Year DCV Accuracy: 0.004 percent Basic 1 Year ACV Accuracy: 0.06 percent Basic 1 Year Resistance Accuracy: 0.01 percent A/D Linearity: 2 ppm of reading + 1 ppm of range Module Slots: 3 Max Single Ended Measurements Class: up to 120 Max Matrix Crosspoints Class: up to 96 Scan Rate 34902A DCV: 250 ch/s Scan Rate Single Channel DCV Into Memory: 490 ch/s Scan Rate 34901A/34908A DCV: 60 ch/s Scan Rate 34902A Temperature: 160 ch/s RS232 Baud Rate: 115 kbaud Remote Interfaces: GPIB and RS-232 Form Factor: 3.5 inch half rack Thermocouple Measurements: Supported RTD Measurements: Supported Thermistor Measurements: Supported DC AC Volts: Supported Two and Four Wire Resistance: Supported Frequency and Period: Supported DC AC Current: Supported Notes From Agilent 34970A Data Acquisition/Switch Unit data sheet. Per-function range and digit tables and module-specific channel counts are in the full OEM sheet and module manuals.

34970A Characteristics / Specifications

PARAMETER	VALUE
Internal DMM Resolution	6.5 digits (22 bits)
Basic 1 Year DCV Accuracy	0.004 percent
Basic 1 Year ACV Accuracy	0.06 percent
Basic 1 Year Resistance Accuracy	0.01 percent
A/D Linearity	2 ppm of reading + 1 ppm of range
Module Slots	3
Max Single Ended Measurements Class	up to 120
Max Matrix Crosspoints Class	up to 96
Scan Rate 34902A DCV	250 ch/s
Scan Rate Single Channel DCV Into Memory	490 ch/s
Scan Rate 34901A/34908A DCV	60 ch/s
Scan Rate 34902A Temperature	160 ch/s
RS232 Baud Rate	115 kbaud
Remote Interfaces	GPIB and RS-232
Form Factor	3.5 inch half rack
Thermocouple Measurements	Supported
RTD Measurements	Supported
Thermistor Measurements	Supported
DC AC Volts	Supported
Two and Four Wire Resistance	Supported
Frequency and Period	Supported
DC AC Current	Supported

34970A Specifications

PARAMETER	VALUE
Agilent HP 34970A Data Acquisition Switch Unit	Overview
Key Features	Built-in 6.5-digit DMM measurement engine
Three module slots for switch and control cards	Up to 250 channels per second scanning
Technical Specifications	Internal DMM Resolution: 6.5 digits (22 bits)

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

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Notes
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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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