

KEYSIGHT TECHNOLOGIES (AGILENT HP)

34980A

The Keysight (Agilent) 34980A is an 8-slot LXI Data Acquisition / Multifunction Switch Unit mainframe. Designed for design verification, automated test, and data logging applications, it accommodates a wide variety of plug-in modules including multiplexers, matrices, RF switches, and digital I/O. It supports an optional high-performance internal 6.5-digit DMM and provides seamless connectivity via LAN, USB, and GPIB.

SPECIFICATIONS

General

Interfaces	LAN (10/100), USB 2.0, GPIB
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Physical

Operating Temperature	0 to 55 °C
Form Factor	3U full rack width

Mainframe Characteristics

Number of Slots	8
Maximum Channels per Mainframe	Up to 560 2-wire multiplexer channels or 4096 matrix crosspoints
Internal Reading Memory	500,000 readings
Supported Plug-In Modules	Keysight 34921A through 34959A series

System Measurement Rates

Maximum Resolution	6.5 Digits (with internal DMM option)
Maximum DMM Reading Rate	Up to 3,000 readings/s (with internal DMM)
Scanning Switch/Measure Rate	Up to 1,000 channels/s

Built-In DMM: DC Voltage

Measurement Ranges	100 mV, 1 V, 10 V, 100 V, 300 V (with internal DMM option)
Maximum Input Voltage	300 V

Built-In DMM: AC Voltage

Frequency Bandwidth	3 Hz to 300 kHz
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Built-In DMM: Resistance

Measurement Type	2-Wire and 4-Wire
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Built-In DMM: Current

DC Current Ranges	10 mA to 1 A (with internal DMM option)
AC Current Ranges	10 mA to 1 A (with internal DMM option)

Built-In DMM: Frequency and Period

Frequency and Period Range	3 Hz to 300 kHz (with internal DMM option)
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Built-In DMM: Temperature

Thermocouple Types Supported	B, E, J, K, N, R, S, T
Thermistor Types Supported	2.25 kΩ, 5 kΩ, 10 kΩ

Connectivity and Interfaces

LXI Compliance Level	LXI Class C (or LXI Core)
Embedded Web Server	Yes (Built-in graphical web interface)

Triggering and Synchronization

External Trigger Input	Yes (BNC)
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Environmental

Storage Temperature	-40 °C to 70 °C
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Compliance

EMC Compliance	IEC/EN 61326-1, CISPR 11
Safety Compliance	IEC 61010-1, EN 61010-1, CSA 22.2 No. 61010-1

Software & Control

Command Language	SCPI
Software Drivers	IVI-C, IVI-COM, LabVIEW

System

Internal DMM	Optional (6.5 digits)
Real-Time Clock	Battery-backed real-time clock for time-stamping

TECHNOLOGY

Data Acquisition / Switching

APPLICATIONS

Automated Test, Data Logging, Design Verification, Signal Routing

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