



## AGILENT 34970A DATA ACQUISITION / SWITCH SYSTEM DEDICATED DATA-ACQUISITION PERFORMANCE AT PC PLUG-IN PRICES

The Agilent 34970A consists of a three-slot mainframe with a built-in 6-1/2 digit DMM. Choose from eight optional plug-in modules to create a compact data logger, full-featured data acquisition system or low-cost switching unit. **FEATURES:** Three-slot mainframe, choice of 8-plug-in modules. 6-1/2 digits (22 bits) of resolution. Scan rates of up to 250 channels/second. 60 2-wire mux or 96 2-wire matrix cross-points in one mainframe. Measures and converts 11 different input signals: Temperature with thermocouples, RTDs, and thermistors; DC/AC volts; 2- and 4-wire resistance; frequency and period; DC/AC current. Includes BenchLink Data Logger software to configure and control tests, display results and move data for further analysis.

Cat. No.	Description	Net Price
34970A	Data Acquisition/Switch Unit. Three-slot mainframe with internal 6-1/2 digit DMM. GPIB, RS-232 and 50 K reading non-volatile memory with timestamp.	\$1805.94

### OPTIONAL PLUG-IN MODULES FOR 34970A DATA ACQUISITION / SWITCH SYSTEM

Cat. No.	Description	Speed (ch/sec)	Max Voltage	Max Current	Comments	Net Price
34901A	20-ch. multiplexer (2/4-wire)	60	300 V	1 A	2 current channels (22 ch. total); built-in cold junction reference; connects to internal DMM	\$550.29
34902A	16-ch. multiplexer (2/4-wire)	250	300 V	50 mA	Built-in cold junction reference; reed relays multiplex inputs to internal DMM	612.00
34903A	20-ch. actuator/GP switch	120	300 V	1 A	Form C (SPDT) switches; no connection to internal DMM	457.79
34904A	4 x 8 matrix	120	300 V	1 A	2-wire, full crosspoint; no connection to internal DMM	557.69
34905A	2-GHz dual 1:4 RF mux, 50Ω	60	42 V	0.7 A	1-GHz through provided BNC-to-SMB adapter cables; no connection to internal DMM	698.32
34906A	2-GHz dual 1:4 RF mux, 75Ω	60	42 V	0.7 A	1-GHz through provided BNC-to-SMB adapter cables; no connection to internal DMM	698.32
34907A	Two 8-bit digital 10 ports 26-bit, 100-KHz event counter Two 16-bit analog outputs	N/A	42 V 42 V ± 12 V	400 mA 10 mA	Open drain Gated, selectable input threshold; Earth referenced; calibrated No connection to internal DMM	415.11
34908A	40-ch. single-ended multiplexer	60	300 V	1 A	Common low, no 4-wire meas. Built-in cold junction reference; connects to internal DMM	557.69



## AGILENT 34980A DATA ACQUISITION / SWITCH UNIT FLEXIBLE, RELIABLE SWITCHING AND DATA ACQUISITION SYSTEM IN ONE COMPACT, ECONOMICAL BOX

The new 34980A data acquisition and switch unit is a compact, economical one-box solution for medium to high-density switch/measure applications in design verification, automated test and data acquisition. The 34980A is an expandable and reconfigurable with 19 mix and match switch measurement modules. **FEATURES:** Broad offering of modules: 8-slots with integrated 6-1/2 digital DMM. 19 plug-in modules with LF/RF/uW switch, DIO, D/A converter, and counter. 560 2-wire mux or 1024 2-wire matrix cross-points in one mainframe. Ease of integration: Standard LAN, USB, GPIB connectivity to PC. Standard cables, terminal cards or mass interconnect. Low cost: Priced up to 40% less than comparable module solutions in VXI or PXI. Scan rates up to 1,000 channels/sec. IVI-COM, IVI-C, NI LabVIEW drives.

Cat. No.	Description	Net Price
34980A	The 34980A includes a built-in graphical web interface that provides remote access and control of the instrument via a java-enabled browser such as Internet Explorer. Using the Web interface, you can set up, troubleshoot, and maintain your system remotely. <b>Comes complete with:</b> LAN cross over cable, I/O library CD, Addendum card, Firmware update flyer, Screwdriver, CD—if you do not get it in the manual, you will get it separately in box, Power cord and Manual set.	\$2832.08

## OPTIONAL PLUG-IN MODULES FOR 34980A DATA ACQUISITION / SWITCH UNIT

The 34980A mainframe holds up to eight plug-in modules. Mix and match them to create a custom system to meet your switching system control needs. You can easily add or replace modules as your needs change.

### ASSORTED MODULES FOR THE 34980A DATA ACQUISITION / SWITCH UNIT

Cat. No.	Description	Max Volts	Max Current	BW (MHz)	Scan ch/sec	Thermal offset	Comments
34921A	40-channel armature multiplexer w/ low thermal offset	± 300V	1 A	45 MHz	100	< 3 uV	Temperature reference 4 current channels Config as 2- or 4-wire
34922A	70-channel armature multiplexer	± 300V	1 A	25 MHz	100	< 3 uV	Config as 2- or 4-wire
34923A	40/80-channel reed multiplexer	± 150V	0.5 A	45 MHz	500	< 5 uV	Config as 1-, 2- or 4-wire
34924A	70-channel reed multiplexer	± 150V	0.5 A	25 MHz	500	< 50 uV	Config as 2- or 4-wire
34925A	40/80-channel optically isolated FET multiplexer	± 80V	0.05 A	1 MHz	1000	< 3 uV	Config as 1-, 2- or 4-wire
34931A	Dual 4 × 8 armature matrix	± 300V	1 A	30 MHz	100	< 3 uV	Backplane expandable
34932A	Dual 4 × 16 armature matrix	± 300V	1 A	30 MHz	100	< 3 uV	Backplane expandable
34933A	Dual/Quad 4 × 8 reed matrix	± 150V	0.5 A	30 MHz	500	< 50 uV	Backplane expandable Config as 1- or 2-wire
34937A	28-channel Form C and 4-channel Form A	300 V 250 AC	1 A 5 A	10 MHz	N/A	< 3 uV	
34938A	20-channel 5-amp Form A	250 AC	5 A	1 MHz	N/A	< 3 uV	

Cat. No.	Description	Insertion loss	Isolation	Freq range	VSWR	Input Impedance	Comments
34941A	Quad 1 × 4 50 ohm 3 GHz RF multiplexer	0.6 dB	>58 dB	3 GHz	<1.25	50 Ω	@ 1 GHz
34945A /34945EXT	Microwave switch/attenuator driver	Can drive up to 64 external switch coils; 32 SPDT switches, 8 multipoint switches, 8 attenuators, or your own combination. Expand with additional 34945EXTs.					
34946A	Dual 1 × 2 SPDT terminated microwave switch	<0.42dB <0.69dB	>85dB >67dB	4 GHz or 20 GHz	<1.15 <1.30	50 Ω	@ 4 GHz @ 20 GHz
34947A	Triple 1 × 2 SPDT unterminated microwave switch	<0.42dB <0.69dB	>85dB >67dB	4 GHz or 20 GHz	<1.15 <1.30	50 Ω	@ 4 GHz @ 20 GHz

Cat. No.	Description	Information
34950A	64-bit digital I/O with memory and counter	Eight 8-bit digital I/O channels with programmable polarity, thresholds up to 5 V, with 7 handshaking protocols and pattern memory. Two 10-MHz frequency counter/totalizers and programmable clock output to 20 MHz.
34951A	4-channel isolated D/A converter with waveform memory	Output DC voltage up to +/- 16 V or DC current up to +/- 20 mA. Output waveforms with a 200 kHz update rate and 16 bits of resolution. Use on-board memory to create point-to-point waveforms with more than 500,000 points.
34952A	Multifunction module with 32-bit DIO, k 2-ch D/A and totalizer	Four 8-bit digital I/O channels, two +/- 12-V analog outputs, and a 100-kHz gated totalizer.
34959A	Breadboard module	Create your own custom designs with access to the +12V and +5V supplies, 16 GPIO ports and 28 relay drive lines

### LOW FREQUENCY MODULES

Cat. No.	Description	Net Price
<b>MULTIPLEXERS</b>		
34921A	40 Channel Armature	\$966.01
34922A	70 Channel Armature	1556.67
34923A	40/80 Channel Reed	1207.51
34924A	70 Channel Reed	1799.15
34925A	40/80 Channel Optically Isolated FET	1440.29
<b>GP / ACTUATOR SWITCHES</b>		
34937A	32 Channel Form C/Form A General	1086.28
34938A	20 Channel 5 Amp Form A	1319.05
<b>MATRIX SWITCHES</b>		
34931A	Dual 4 × 8 Armature	1086.28
34932A	Dual 4 × 16 Armature	1799.15
34933A	Dual/Quad 4 × 8 Reed	1207.51

### RF AND MICROWAVE MODULES

Cat. No.	Description	Net Price
<b>RF SWITCHING</b>		
34941A	Quad 1 × 4 3 GHz 50 Ohm	\$1920.38
<b>MICROWAVE SWITCHING</b>		
34945A	Microwave Switch/Attenuator Driver	843.80
34946A	Dual 1 × 2 SPDT Terminated	843.80
34947A	Triple 1 × 2 SPDT	843.80

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