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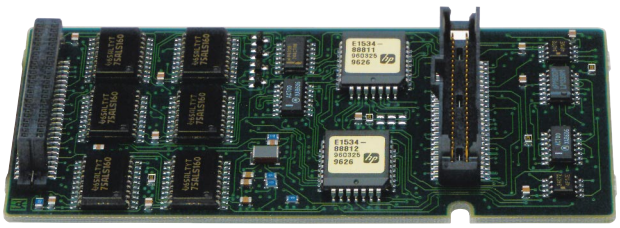
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Find the *Keysight / Agilent E1534A* at our website: ***Click HERE***

8-Bit Frequency/Totalize/PWM SCP HP E1534A

Technical Specifications

- **Use with HP E1415A and HP E1419A**
- **8-channel non-isolated counter/PWM input/ output**
- **Frequency counter input to 100 kHz**
- **Totalize to >16 million counts**
- **PWM output — square wave or variable pulse width**



HP E1534A

Description

The HP E1534A Frequency/Totalize/PWM SCP has eight channels. Each of the eight channels can be individually configured to perform input and output functions.

Input functions include frequency measurements and totalize (positive or negative digital transitions) for TTL level signals.

Output functions in free-run mode include TTL square wave with programmable frequency and pulse train with pre-set frequency and programmable pulse width. In the single-pulse-per-module trigger mode, the pulse width and delay can be varied independently. With continuous algorithm execution, this becomes a pulse train with a frequency the same as the algorithm execution rate or trigger rate.

In addition, any channel can be configured as a one-bit TTL level digital input or output.

Use the HP E1534A with the following VXI modules:

Model	Description
HP E1415A	Algorithmic Closed Loop Controller
HP E1419A	Multifunction Measurement and Control Module

Refer to the HP Website for instrument driver availability and downloading instructions, as well as for recent product updates, if applicable.

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Input/Output Functions

The HP E1534A channels can be individually configured to either an input or an output function.

Input functions include:

- static digital state
- frequency measurement
- totalize positive digital transitions

Output functions include:

- static digital state
- single pulse per trigger
- free running pulse trains

The logical sense of input and output channels can be configured as invert or normal.

Output channels can be configured as either active TTL or passive pull-up.

Product Specifications

Output Characteristics

	Active Pull-up:	Passive Pull-up:
Current source (logic 1):	5 mA	0 mA
Current sink (logic 0):	48 mA	48 mA
Voltage (logic 1):	2.5 V min. @ 5 mA load	n/a
Voltage (logic 0):	0.5 V max. @ 48 mA load	0.5 V max. @ 48 mA load

Input Characteristics

Equivalent circuit: 1.2 K Ω connected to 3 V
Maximum input low: 0.8 V
Minimum input high: 2 V
Maximum voltage applied to any input/output terminal: + 5.5 V and –0.5 V (inputs clamped, user must limit I/O current to 15 mA.)

Frequency Counter

Gate time ($t_{aperture}$): 1 ms to 1 s, resolution $1/f_{in}$
Range: $1/t_{aperture}$ to 100 kHz
Accuracy: 0.1%
Resolution: $f_{in}/(t_{aperture}$ x 4.194 MHz)
Min. pulse width: 500 ns

Totalizer

Capacity: 24 bits or 16,777,215 counts
Minimum pulse width: 500 ns
Frequency range: 0-100 kHz

Frequency Source

Range:
Square wave: 64 Hz to 40 kHz
Other shapes: 128 Hz to 40 kHz
Accuracy: 0.1%
Resolution: f^2_{out}/ 4.194 MHz

Pulse Source

Range:
Square wave: 7.87 µs to 1/f-7.87 µs
Pulse per trig: 7.87 µs to 7.812 ms
Accuracy: 0.1%
Resolution: 238.4 ns

Ordering Information

Description	Product No.
8-Bit Frequency/Totalize/PWM SCP	HP E1534A

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Related Literature

1998 Test System and VXI Products Data Book,
HP Pub. No. 5966-2812E

1998 Test System and VXI Products Catalog,
HP Pub. No. 5966-2815

Warranty

Standard Hewlett-Packard VXIbus hardware products are warranted against defects in materials and workmanship for a period of three years unless otherwise noted. HP software and firmware products that are designated by HP for use with a hardware product, when properly installed on that hardware product, are warranted not to fail to execute their programming instructions due to defects in materials and workmanship.

For a complete and detailed warranty statement please see the HP *Test System and VXI Products Data Book* or visit the HP Website at http://www.hp.com/go/vxi.

HP Website Directory

Main HP Website
http://www.hp.com

HP Test and Measurement
http://www.hp.com/go/tmdir

HP VXI Product Information
http://www.hp.com/go/vxi

HP VXI Channel Partners
http://www.hp.com/go/vxichanpart

HP VEE Application Website
http://www.hp.com/go/hpvee

Data Acquisition and Control Website
http://www.hp.com/go/data_acq

HP Instrument Driver Downloads
http://www.hp.com/go/inst_drivers

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For more information about Hewlett-Packard test & measurement products, applications, services, and for a current sales office listing, visit our website, *http://www.hp.com/go/tmdir.* **You can also contact one of the following centers and ask for a test and measurement sales representative.**

United States:
Hewlett-Packard Company
Test and Measurement Call Center
P.O. Box 4026
Englewood, CO 80155-4026
1 800 452 4844

Canada:
Hewlett-Packard Canada Ltd.
5150 Spectrum Way
Mississauga, Ontario L4W 5G1
(905) 206 4725

Europe:
Hewlett-Packard
European Marketing Centre
P.O. Box 999
1180 AZ Amstelveen
The Netherlands
(31 20) 547 9900

Japan:
Hewlett-Packard Japan Ltd.
Measurement Assistance Center
9-1, Takakura-Cho, Hachioji-Shi,
Tokyo 192, Japan
Tel: (81) 426 56 7832
Fax: (81) 426 56 7840

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