

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

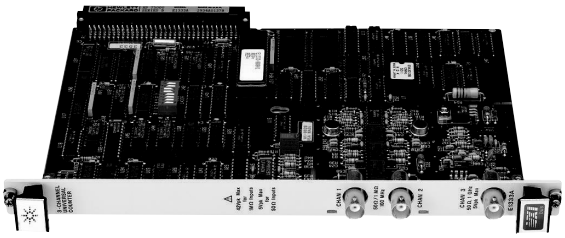
All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Keysight / Agilent E1333A* at our website: ***Click HERE***

Agilent E1333A
3-Channel Universal Counter

Data Sheet

- **1-Slot, B-size, register based**
- **Six counter functions**
- **1 GHz frequency measurement**
- **1 ns time interval/pulse width resolution (avg mode)**
- **Compatible with all Agilent Foundations**
- **Measure time interval between transitions**



Agilent E1333A

Description

The Agilent Technologies E1333A 3-Channel Universal Counter is a **B-size, 1-slot, register-based VXI module.** It provides the capabilities needed for electronic test applications. You can connect three signals to one counter card and multiplex between them to measure frequency. Counter functions include frequency, period average, pulse width and pulse width average, time interval and time interval average, totalize, and ratio.

You can select the resolution directly in seconds, the number of periods to be averaged, the number of intervals (2^n to be averaged), or the number of transitions (2^n on one channel). Additionally, you can measure the time interval between transitions from one channel to another channel, or measure the frequency ratio between channels 1 and 2 or channels 2 and 1.

To complete the E1333A module's functionality, you may also select the rising or falling edge via software commands, and count the number of transitions on channels 1 and 2. Input Signal Conditioning commands control all channels simultaneously. Trigger level/ sensitivity commands are available for each channel.

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

Agilent Technologies

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Frequency Measurement

- Minimum pulse width (Channels 1 and 2): 5 ns
- Resolution: 1/gate time

Period Average Measurement

Channels 1 or 2 average 2^N periods of an input signal. You select the resolution directly in seconds or the number of periods to be averaged.

- Minimum pulse width: 60 ns
- Range of N: 1 to 16
- Resolution: $1 / (10 \times 10^6 \times 2^N)$ s

Pulse Width (with Average Mode) Measurement

- Minimum pulse width: 200 ns
- Maximum pulse width: $(6871/2^N)$ s
- Range of N: 0 to 7
- Resolution: $(100/2^N)$ ns

Time Interval (with Average Mode) Measurement

You can measure the time interval between transitions from one channel to another channel. You select the resolution directly in seconds or the number of intervals, 2^N to be averaged. You select the rising or falling edge via software commands.

- Minimum interval: 200 ns
- Maximum interval: $(6871/2^N)$ s
- Range of N: 0 to 7
- Resolution: $(100/2^N)$ ns

Totalizing

You can count the number of transitions on channels 1 and 2.

- Minimum pulse width: 5 ns
- Range: 1 to $(2^{36}-1)$

Frequency Ratio Measurement

You can measure the frequency ratio between channels 1 and 2 or channels 2 and 1. You select the resolution directly or the number of transitions, 2^N on one channel.

- Minimum pulse width: 5 ns
- Range of N: 6 to 36
- Resolution: $½^N$

Input Signal Conditioning commands control all channels simultaneously.

Trigger level/sensitivity commands are available for each channel.

C-size Adapter

This product is easily adapted for use in a C-size mainframe. See the Accessories section for a selection of adapters.

Product Specifications

Functions	
Period:	Yes
Time interval:	Yes
Totalizer:	Yes
Gated totalizer:	No
Ratio:	Yes
Pulse width:	Yes
Rise/fall time:	No
Phase:	No
Vdc:	No
Vac:	No
Up/down counter:	No
Number of channels:	3

Time Base	
Frequency:	10 MHz
Initial accuracy:	2 ppm
Aging rate:	2 ppm/year
Temperature drift:	5 ppm (0 to 50° C)

Channels 1 and 2	
Channel 3	
Frequency range:	75 MHz to 1 GHz, prescaled by 64
Coupling:	ac coupled
Input impedance:	50 Ω
Input range:	± 5 Vp
Sensitivity:	
75 MHz to 600 MHz:	10 mV
600 MHz to 900 MHz:	30 mV
900 MHz to 1 GHz:	40 mV
Dynamic range:	
75 MHz to 600 MHz:	51 dB
600 MHz to 900 MHz:	41 dB
900 MHz to 1 GHz:	39 B
VSWR (typical):	1.5 @ 0 dBm

Dynamic Range	
Low input range (dc to 100 MHz):	43 dB
High input range (dc to 100 MHz):	41 dB

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Sensitivity

Low input range (dc to 100 MHz):	25 mV
High input range (dc to 100 MHz):	250 mV

Input range:
(select the input attenuator)

Low range:	± 5 V
High range:	± 42 V

Trigger level:

Low input range:	–2.56 V to 2.54 V in 20 mV step
High input range:	–25.6 V to 25.4 V in 0.2 V step
Input attenuator:	Programmable x1 or x10 attenuator
Filter:	Programmable Low-Pass Filter, 3 dB point at 100 kHz
Input impedance (typical):	Programmable 1 MΩ shunted by 50 pF or 50 Ω
Coupling:	Programmable ac or dc coupled

Frequency range:

ac coupled:	100 Hz to 100 MHz
dc coupled:	dc to 100 MHz

General Specifications

VXI Characteristics

VXI device type:	Register based
Size:	B
Slots:	1
Connectors:	P1
Shared memory:	n/a
VXI buses:	n/a

Instrument Drivers -See the Agilent Technologies Website (http://www.agilent.com/find/inst_drivers) for driver availability and downloading.

Command module firmware:	ROM
Command module firmware rev:	A.01
I-SCPI Win 3.1:	Yes
I-SCPI Series 700:	Yes
C-SCPI LynxOS:	Yes
C-SCPI Series 700:	Yes
Panel Drivers:	Yes
VXI*plug&play* Win Framework:	No
VXI*plug&play* Win 95/NT Framework:	No
VXI*plug&play* HP-UX Framework:	No

Module Current

	I_{PM}	I_{DM}
+5 V:	0.5	0.01
+12 V:	0.03	0.01
–12 V:	0.02	0.01
+24 V:	0	0
–24 V:	0	0
–5.2 V:	0	0
–2 V:	0	0

Cooling/Slot

Watts/slot:	5.00
ΔP mm H_2O:	0.08
Air Flow liter/s:	0.42

Ordering Information

Description	Product No.
3-Channel Universal Counter	E1333A
Service Manual	E1333A 0B3
Japan - Japanese Localization	E1333A ABJ

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Agilent Technologies' Test and Measurement Support, Services, and Assistance

Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

Our Promise

Our Promise means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you use Agilent equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, at no extra cost upon request. Many self-help tools are available.

Your Advantage

Your Advantage means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and on-site education and training, as well as design, system integration, project management, and other professional engineering services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

By internet, phone, or fax, get assistance with all your test & measurement needs.

Online assistance:
www.agilent.com/find/assist

Phone or Fax

United States:
(tel) 1 800 829 4444

Canada:
(tel) 1 877 894 4414
(fax) (905) 282 6495

China:
(tel) 800 810 0189
(fax) 800 820 2816

Europe:
(tel) (31 20) 547 2323
(fax) (31 20) 547 2390

Japan:
(tel) (81) 426 56 7832
(fax) (81) 426 56 7840

Korea:
(tel) (82 2) 2004 5004
(fax) (82 2) 2004 5115

Latin America:
(tel) (305) 269 7500
(fax) (305) 269 7599

Taiwan:
(tel) 0800 047 866
(fax) 0800 286 331

Other Asia Pacific Countries:
(tel) (65) 6375 8100
(fax) (65) 6836 0252
(e-mail) tm_asia@agilent.com

Data Subject to Change

© Agilent Technologies, Inc. 2001

Printed in the U.S.A. May 1, 2004
5965-5547E

Agilent Technologies

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP