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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight E1333A 3-Channel Universal Counter

Agilent E1333A 3 Channel Universal Counter The Agilent/Keysight E1333A isaB-size VXI 3-channel universal counter. OEM user manual lists frequency to 100 MHz on channels 1 and 2 and 75 MHz to 1 GHz on channel 3, plus time interval, ratio, and event counting to 2^{32} events. Frequency, period/time interval, ratio, and totalize measurements in SeriesBVXI automated test systems. Time interval and ratio on channel 1/2 pair The Agilent/Keysight E1333A isaB-size VXI 3-channel universal counter. OEM user manual lists frequency to 100 MHz on channels 1 and 2 and 75 MHz to 1 GHz on channel 3, plus time interval, ratio, and event counting to 2^{32} events. Frequency, period/time interval, ratio, and totalize measurements in SeriesBVXI automated test systems. Time interval and ratio on channel 1/2 pair Programmable input conditioning on channels 1 and 2



MODEL

**Agilent / Keysight
E1333A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

E1333A

LISTING

<https://aumictechlabs.com/products/e1333a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight E1333A is a VXI-based 3-channel universal counter module for frequency, time interval, and event counting within automated test systems. It delivers six core measurement functions - frequency, period average, pulse width, time interval, totalize, and ratio - with three input channels supporting multiplexed operation. The module integrates directly into VXI systems

for R&D, manufacturing, and service test environments.

Technical Specifications

Measurement Functions

Frequency Period Average Pulse Width (with Average Mode) Time Interval (with Average Mode) Totalize Frequency Ratio Frequency Measurement

Maximum frequency: 1 GHz (prescaled by 64 on Channels 1 and 2) Range (Channels 1–3): 75 MHz to 1 GHz Input coupling: AC coupled Input impedance: 50 Ω Input range: ± 5 Vp Sensitivity (75 MHz to 600 MHz): 10 mV Dynamic range (75 MHz to 600 MHz): 51 dB Period Average Measurement Averages 2^N periods; N range: 1 to 16 Minimum pulse width: 60 ns Resolution: $1 / (10 \times 10^6 \times 2^N)$ s Pulse Width Measurement Minimum pulse width: 5 ns Resolution: $(100/2^N)$ ns; N range: 0 to 7 Time Interval Measurement Minimum interval: 200 ns Maximum interval: $(6871/2^N)$ s; N range: 0 to 7 Resolution: $(100/2^N)$ ns Totalizing Count range: 1 to $(2^{36} - 1)$ Minimum pulse width: 5 ns

Frequency Ratio Measurement Measures ratio between Channels 1 and 2 or Channels 2 and 1 Resolution: $1/2^N$; N range: 6 to 36 Minimum pulse width: 5 ns

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

Key Features

Three independent input channels with simultaneous signal conditioning Per-channel trigger level and sensitivity controls AC-coupled 50 Ω inputs rated ± 5 Vp Prescaled operation to 1 GHz on all channels 10 MHz time base with ± 2 ppm initial accuracy

Typical Applications

Automated frequency and timing measurements in production test Multi-channel event counting and pulse characterization Ratio and time-interval analysis in systems verification Research and service instrumentation requiring VXI integration

Compatibility & Integration B-size, 1-slot register-based VXI module Compatible with Agilent/Keysight Foundations VXI bus interface

E1333A Characteristics / Specifications

PARAMETER	VALUE
Channels	3
Frequency Range Channels 1 And	DC to 100 MHz
Frequency Range Channel	75 MHz to 1 GHz
Event Count Capacity	2 ³² (about 4.3 billion) events
Time Interval Channels	channel 1 and 2 pair
Ratio Measurements	channel 1 and 2 pair
Channel 3 Functions	frequency only
Input Impedance Channels 1 And	1 MOhm or 50 ohm
Input Coupling Channels 1 And	AC or DC
LP Filter Channels 1 And	about 100 kHz
Normal Range Channels 1 And	plus/minus 5 V
Divide By 10 Range Channels 1 And	plus/minus 42 V
Channel 3 Input Impedance	50 ohm
Channel 3 Coupling	AC
Channel 3 Input Range	plus/minus 5 V
Event Level Normal Range	-2.56 to +2.54 V
Event Level Divide By 10 Range	-25.6 to +25.4 V
Module Size	B
Slots Occupied	1
VXI Device Type	register based counter
Programming	SCPI
Simultaneous Frequency Channels	one channel at a time
Product Family	E13xx SeriesB Notes Frequency ranges, input conditioning, and event capacity from Keysight E1333A 3-Channel Universal Counter Module user's manual Table 1-1/1-2.

E1333A Specifications

PARAMETER	VALUE
Agilent E1333A 3 Channel Universal Counter	Overview
Three measurement channels	Channel 3 extends frequency to 1 GHz
Time interval and ratio on channel 1/2 pair	Programmable input conditioning on channels 1 and 2
Technical Specifications	Channels: 3

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	
PARAMETER	VALUE
Channels	3
Frequency Range Channels 1 And 2	DC to 100 MHz
Frequency Range Channel 3	75 MHz to 1 GHz
Event Count Capacity	2^32 (about 4.3 billion) events
Time Interval Channels	channel 1 and 2 pair
Ratio Measurements	channel 1 and 2 pair
Channel 3 Functions	frequency only
Input Impedance Channels 1 And 2	1 MOhm or 50 ohm
Input Coupling Channels 1 And 2	AC or DC
LP Filter Channels 1 And 2	about 100 kHz
Normal Range Channels 1 And 2	plus/minus 5 V
Divide By 10 Range Channels 1 And 2: plus/minus 42 V	
Specifications	
PARAMETER	VALUE
Channel 3 Input Impedance	50 ohm
Channel 3 Coupling	AC
Channel 3 Input Range	plus/minus 5 V
Event Level Normal Range	-2.56 to +2.54 V
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Frequency ranges, input conditioning, and event capacity from Keysight E1333A 3-Channel Universal Counter Module user's manual Table 1-1/1-2.

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

Aumictech

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30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.