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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight U2355A

Agilent Keysight U2355A USB Modular Multifunction DAQ The Agilent/Keysight U2355A is a high-density USB modular multifunction data acquisition device with 64 single-ended / 32 differential analog inputs at 16-bit resolution and 250 kSa/s maximum sampling. OEM USB Modular Products data sheets also list 2 analog outputs and 24-bit digital I/O. Automated multi-channel data acquisition, USB modular test systems, and chassis-synchronized measurements with U2781A. USB modular dual-play standalone or chassis The Agilent/Keysight U2355A is a high-density USB modular multifunction data acquisition device with 64 single-ended / 32 differential analog inputs at 16-bit resolution and 250 kSa/s maximum sampling. OEM USB Modular Products data sheets also list 2 analog outputs and 24-bit digital I/O. Automated multi-channel data acquisition, USB modular test systems, and chassis-synchronized measurements with U2781A. USB modular dual-play standalone or chassis Analog Input Resolution: 16 bits no missing codes



MODEL

**Agilent / Keysight
U2355A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

U2355A

LISTING

<https://aumictechlabs.com/products/u2355a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight U2355A is a USB modular multifunction data acquisition device that combines analog input, analog output, digital I/O, and counter functionality in a compact form factor. It delivers 16-bit resolution analog acquisition across up to 64 single-ended or 32 differential input channels at sampling rates to 250 kSa/s, paired with two 12-bit analog outputs operating at 1

MSa/s update rate. The device integrates 24-bit programmable TTL digital I/O, two general-purpose counter channels, and 8M points of onboard memory to support polling, continuous, and burst acquisition modes.

Technical Specifications

- # Analog Input 64 single-ended or 32 differential channels 16-bit resolution Up to 250 kSa/s sampling rate AC/DC input coupling 1 M Ω $\pm$ 5% || 15 pF $\pm$ 10% input impedance (standard); >10 M Ω (high impedance mode)
- # Analog Output 2 channels 12-bit resolution Up to 1 MSa/s update rate
- # Digital I/O 24-bit programmable TTL channels
- # Digital Counters 2 general-purpose channels
- # Performance 8M points onboard memory Polling, continuous, and burst acquisition modes
- # Interfaces USB 2.0, USBTMC-USB488 compliant
- # Physical Characteristics 182.4 mm $\times$ 120 mm $\times$ 44 mm 565 g Operating temperature: 0°C to +55°C

Key Features

- Flexible channel configuration balances single-ended and differential measurement needs
- High input impedance option minimizes loading effects on sensitive sources
- Dual analog outputs enable stimulus-response testing and closed-loop applications
- Programmable digital I/O supports TTL-level signal control and monitoring

Typical Applications

Industrial data logging, R&D measurement campaigns, sensor characterization, real-time signal monitoring, and hardware-in-the-loop testing.

Compatibility & Integration

Operates with Microsoft Windows platforms. Supports Keysight VEE, MATLAB R2007a and later, NI LabVIEW, Microsoft Visual Studio, and Keysight Measurement Manager (AMM). Integrates into the U2781A USB modular chassis for expanded system configurations. Terminal block accessories U2901A and U2902A, plus U2802A thermocouple module, extend measurement capabilities.

U2355A Characteristics / Specifications

PARAMETER	VALUE
Model	U2355A
Analog Input Resolution	16 bits no missing codes
Analog Input Channels	64 SE / 32 DI software selectable
Maximum Sampling Rate	250 kSa/s
Scan List Memory	up to 100 selectable channel entries
Programmable Bipolar Input Ranges	plus or minus 10 V 5 V 2.5 V 1.25 V
Programmable Unipolar Input Ranges	0 to 10 V 5 V 2.5 V 1.25 V
FIFO Buffer Size	up to 8 MSa
Analog Output Resolution	12 bits
Analog Output Channels	2
Analog Output Maximum Update Rate	1 MSa/s
Analog Output Ranges	0 to 10 V plus or minus 10 V and external reference paths
Digital I/O Bits	24 bit programmable
Counter Channels	2
Counter Max Count	2 ³¹ minus 1 bits
Trigger Modes	pre delay post and middle trigger
Remote Interface	Hi Speed USB 2.0
Compatible Chassis	U2781A USB modular product chassis
Brand Lineage	Agilent / Keysight
Series Family	U2300A USB modular DAQ

U2355A Specifications

PARAMETER	VALUE
Agilent Keysight U2355A USB Modular Multifunction DAQ	Overview
Applications	Automated multi-channel data acquisition, USB modular test systems, and chassis-synchronized measurements with U2781A.
Key Features	64 SE / 32 DI analog inputs
Technical Specifications	Model: U2355A
Notes	From Keysight/Agilent USB Modular Products data sheet model column for U2355A.

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	
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Remote Interface	Hi Speed USB 2.0
Compatible Chassis	U2781A USB modular product chassis
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Series Family	U2300A USB modular DAQ
Notes	
From Keysight/Agilent USB Modular Products data sheet model column for U2355A.	

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

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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.