

Keysight Technologies

USB Data Acquisition

Control, Acquire, Measure, Evolve



Introduction

Control, Acquire, Measure, Evolve

The USB data acquisition (DAQ) family gives you the choice and flexibility to create solutions that evolve and expand according to your changing measurement needs. You can quickly and easily acquire, measure and analyze data from electrical, mechanical, physical and acoustical phenomena.

The DAQ series includes multifunction measurement modules, simultaneous-sampling measurement modules, two types of digital input/output (DIO) devices and a thermocouple input. All can be used side-by-side with Keysight Technologies, Inc. USB MI modules—standalone or in the six-slot chassis. All modules provide USB 2.0 connectivity with USBTMC-USB488 standard and plug-and-play simplicity.



Introduction

A quick reference to the Keysight USB data acquisition family

Features	U2300A Series multifunction DAQ devices	U2500A Series simultaneous sampling DAQ devices	U2100A Series digital I/O devices	U2600A Series isolated DIO devices	U2802A thermocouple input device
Number of models	7	3	3	3	1
Analog input					
Channels/modules, max	64	4	–	–	31
Sampling rate, max	Up to 3 MSa/s (single channel) Up to 1 MSa/s ¹	Up to 2 MSa/s/channel	–	–	Up to 500 kSa/s ²
Resolution	Up to 16-bit	Up to 16-bit	–	–	Up to 16-bit
Input voltage, max	10 V	10 V	–	–	10 V
Analog output					
Channels/modules, max	2	2	–	–	2
Update rate, max	1 MSa/s	1 MSa/s	–	–	1 MSa/s
Resolution	Up to 16-bit	12-bit	–	–	12-bit
Output voltage, max	10 V	10 V	–	–	10 V
Digital I/O					
Channels/modules, max	24	24	32	64	–
Input levels, max	5 V	5 V	24 V	24 V	–
Output levels, max	5 V	5 V	24 V	35 V	–
Counter					
Channels	2	2	–	–	–
Max count	(2 ³¹ – 1) bits	(2 ³¹ – 1) bits	–	–	–
Software and drivers					
Keysight Measurement Manager	Yes	Yes	–	Yes	Yes
Keysight DIO Diagnostics	–	–	Yes	–	–
IVI-COM	Yes	Yes	Yes	Yes	Yes
LabVIEW drivers	Yes	Yes	Yes	Yes	–
MATLAB drivers	Yes	Yes	Yes	Yes	Yes
SCPI	Yes	Yes	Yes	Yes	–
Keysight VEE	Yes	Yes	Yes	Yes	Yes
Compatibility with U2781A	Yes	Yes	–	Yes	–
Synchronization between modules	Yes	Yes	–	Yes	–

1. Aggregate sampling rate (1 MSa/s when more than one channel is used)

2. Dependent on selected U2300A module

Get more out of your modular instruments at
www.keysight.com/find/usbTECHoffer.

USB DAQ, U2300A MF DAQ

USB DAQ: Control, acquire, measure, evolve

Basic and high-density DAQ

U2300A Series USB modular multifunction DAQ devices

This high-performance series consists of four basic models and three high-density models. The basic models feature 16 single-ended/eight differential inputs with 16-bit resolution and ± 10 V maximum range. The high-density models offer 64 single-ended/32 differential inputs with 16-bit resolution in the lower-speed models and the 12-bit resolution in high-speed U2331A.



- Up to 3 MSa/s sampling rate (single channel; U2331A)
- Up to 384 channels when used in U2781A chassis
- Powerful analog and digital triggering capabilities
- 24-bit programmable digital I/O
- Two analog outputs with function generator and arbitrary waveform capability (except U2352A/U2354A)
- Two general purpose digital timer/counter capabilities

The U2300A Series is compatible with wide range of application development environments (ADEs):

- Keysight VEE and Keysight T&M Toolkit
- MATLAB R2007a
- Microsoft Visual Studio .NET
- Microsoft C/C++
- Microsoft Visual Basic 6
- LabVIEW

Dimensions (W x D x H)

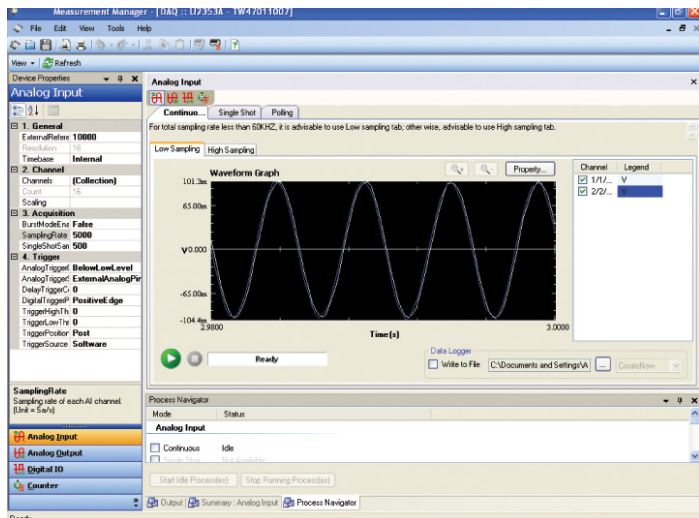
120.00 x 182.40 x 44.00 mm with plastic casing
(4.72 x 7.18 x 1.73 inches)

105.00 x 174.54 x 25.00 mm without plastic casing
(4.13 x 6.87 x 0.98 inches)

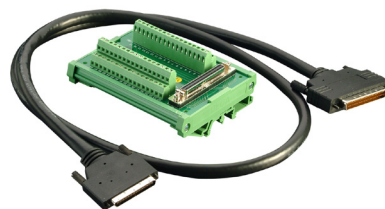
Accessories

Each U2300A Series module includes an AC/DC adapter, a USB extension cable and an L-mount kit (for use in the U2781A chassis). The table presents other items and accessories that may be useful.

Item	Model number
Terminal block and 1-m SCSI-II cable	U2901A
Terminal block and 2-m SCSI-II cable	U2902A
Six-slot USB MI chassis	U2781A



Configure easily and make measurements quickly using the intuitive KMM interface.



U2901A, terminal block and 1-m SCSI-II cable

For complete specifications of U2300A, please download the data sheet from www.keysight.com/find/U2300A.

USB DAQ, U2300A MF DAQ

Quick comparison: Basic DAQ table

	U2351A	U2352A	U2353A	U2354A
Analog input				
Resolution	16 bits, no missing codes			
Number of channels	16 single-ended / 8 differential (software selectable per channel)			
Maximum sampling rate/ch	(250 kSa/s)/# ¹ of channels used		(500 kSa/s)/# ¹ of channels used	
Scan list memory	Up to 100 selectable channel entries			
Analog output				
Resolution	16 bits	n/a	16 bits	n/a
Number of channels	2	n/a	2	n/a
Maximum update rate	1 MSa/s	n/a	1 MSa/s	n/a
Function generator mode	Sine, square, triangle, sawtooth, and noise	n/a	Sine, square, triangle, sawtooth, and noise	n/a
Digital I/O				
Number of channels	24-bit programmable input/output			
Compatibility	TTL			
General purpose digital counter				
Maximum count	(2 ³¹ – 1) bits			
Number of channels	Two independent up/down counters			
Input frequency range	0.1 Hz to 6 MHz at 50% duty cycle			
Calibration²				
On-board reference voltage	5 V			
Temperature drift	±2 ppm/°C			
Stability	±6 ppm/1000 hrs			

1. Denotes number

2. 20-minute warm up time recommended

Quick comparison: High-density DAQ

	U2355A	U2356A	U2331A
Analog input			
Resolution	16 bits, no missing codes	16 bits, no missing codes	12 bits, no missing codes
Number of channels	64 single-ended/32 differential (software selectable per channel)		
Maximum sampling rate/ch	(250 kSa/s)/ (# ³ of channels used)	(500 kSa/s)/ (# ³ of channels used)	Single channel: 3 MSa/s Multiple channels: 1 MSa/s
Scan list memory	Up to 100 selectable channel entries		
Analog output			
Resolution	12 bits		
Number of channels	2		
Maximum update rate	1 MSa/s		
Function generator mode	Sine, square, triangle, sawtooth, and noise waveforms		
Digital I/O			
Number of channels	24-bit programmable input/output		
Compatibility	TTL		
General purpose digital counter			
Maximum count	(2 ³¹ – 1) bits		
Number of channels	Two independent up/down counters		
Input frequency range	0.1 Hz to 6 MHz at 50% duty cycle		
Calibration⁴			
On-board reference voltage	5 V		
Temperature drift	±2 ppm/°C		
Stability	±6 ppm/1000 hrs		

3. Denotes number

4. 20-minute warm up time recommended

USB DAQ: Control, Acquire, Measure, Evolve

USB DAQ, U2500A SS DAQ

Simultaneous signal acquisition

U2500A Series USB modular simultaneous-sampling multifunction DAQ devices

This family of three high-performance modules provides up to four channels per module with one analog-to-digital converter (ADC) for each channel. Maximum sampling rates are 2 MSa/s/ch in the U2531A (14 bits), 500 kSa/s/ch in the U2542A (16 bits) and 250 kSa/s/ch in the U2541A (16 bits).



- Dedicated ADC for each channel with up to 2 MSa/s/ch sampling
- Multifunction: Four analog inputs, two analog outputs, 24-bit programmable digital I/O, two general purpose digital counter and timer

The U2500A Series supports SCPI and IVI-COM as well as a wide range of languages and ADEs:

- Keysight VEE and Keysight T&M Toolkit
- MATLAB R2007a
- Microsoft Visual Studio .NET
- Microsoft C/C++
- Microsoft Visual Basic 6
- LabVIEW

Dimensions (W x D x H)

120.00 x 182.40 x 44.00 mm with plastic casing
(4.72 x 7.18 x 1.73 inches)

105.00 x 174.54 x 25.00 mm without plastic casing
(4.13 x 6.87 x 0.98 inches)

Accessories

Each U2500A Series module includes an AC/DC adapter, a USB extension cable and an L-mount kit (for use in the U2781A chassis). The table presents other items and accessories that may be useful.

Item	Model number
Terminal block and 1-m SCSI-II cable with 68-pin connector	U2901A
Terminal block and 2-m SCSI-II cable with 68-pin connector	U2902A
Six-slot USB MI chassis	U2781A



U2902A, terminal block and 2-m SCSI-II cable

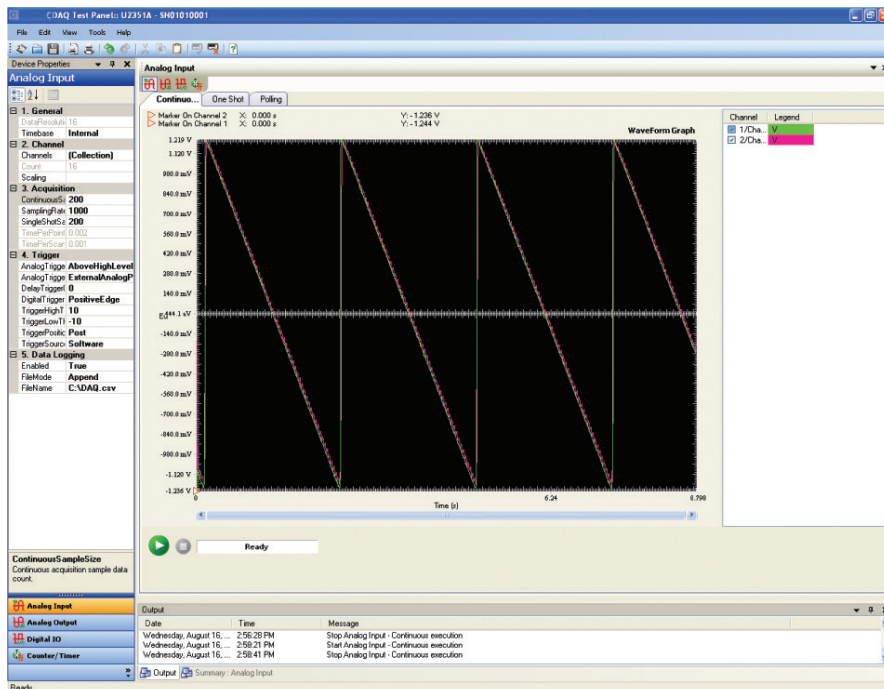
USB DAQ: Control, Acquire, Measure, Evolve

USB DAQ, U2500A SS DAQ

Quick comparison: Simultaneous-sampling DAQ

	U2531A	U2541A	U2542A
Analog input			
Resolution	14 bits	16 bits	16 bits
Maximum sampling rate	2 MSa/s	250 kSa/s	500 kSa/s
Number of channels	4 differential input channels		
Analog output			
Resolution	12 bits		
Number of channels	2		
Maximum update rate	1 MSa/s		
Function generator mode	Sine, square, triangle, sawtooth, and noise waveforms		
Digital I/O			
Number of channels	24-bit programmable input/output		
Compatibility	TTL		
General purpose digital timer/counter			
Maximum count	$(2^{31} - 1)$ bits		
Number of channels	Two independent up/down counters		
Input frequency range	0.1 Hz to 6 MHz at 50% duty cycle		
Calibration¹			
On-board reference voltage	5 V		
Temperature drift	± 2 ppm/ $^{\circ}$ C		
Stability	± 6 ppm/1000 hrs		

1. 20-minute warm up time recommended



Capture and save data in various formats (HTML, text or .xls) for analysis.

USB DAQ: Control, Acquire, Measure, Evolve USB DAQ, U2600A DIO

High channel count digital I/O

U2600A Series USB modular isolated digital I/O devices

The three U2600A modules offer digital input and output with high channel count and opto-isolation. Virtual port grouping lets you select any eight input or output bits and group them into a single channel as a virtual DIO port. An interrupt function automatically triggers your system when a digital change of state occurs.



Dimensions (W x D x H)

120.00 x 182.40 x 44.00 mm with plastic casing
(4.72 x 7.18 x 1.73 inches)

105.00 x 174.54 x 25.00 mm without plastic casing
(4.13 x 6.87 x 0.98 inches)

- 32 or 64 opto-isolated digital input and output lines
- Up to 1250 V_{rms} of isolation protection on inputs and outputs
- Supports digital inputs of up to 24 V
- 5 to 35 V external supply voltage range for digital output
- On-board isolated +5 V, 150 mA (85 W) power supply

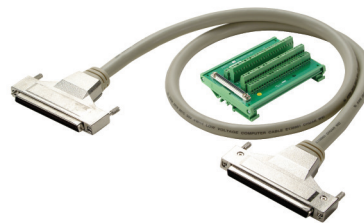
The U2600A Series supports SCPI and IVI-COM as well as a wide range of languages and ADEs:

- Keysight VEE and Keysight T&M Toolkit
- MATLAB R2007a
- Microsoft Visual Studio .NET
- Microsoft C/C++
- Microsoft Visual Basic 6
- LabVIEW

Accessories

Each U2600A Series module includes an AC/DC adapter, a USB extension cable and an L-mount kit (for use in the U2781A chassis). The table presents other items and accessories they may be useful.

Item	Model number
Terminal block and 1-m SCSI-II cable with 100-pin connector	U2903A
Terminal block and 2-m SCSI-II cable with 100-pin connector	U2904A
Six-slot USB MI chassis	U2781A



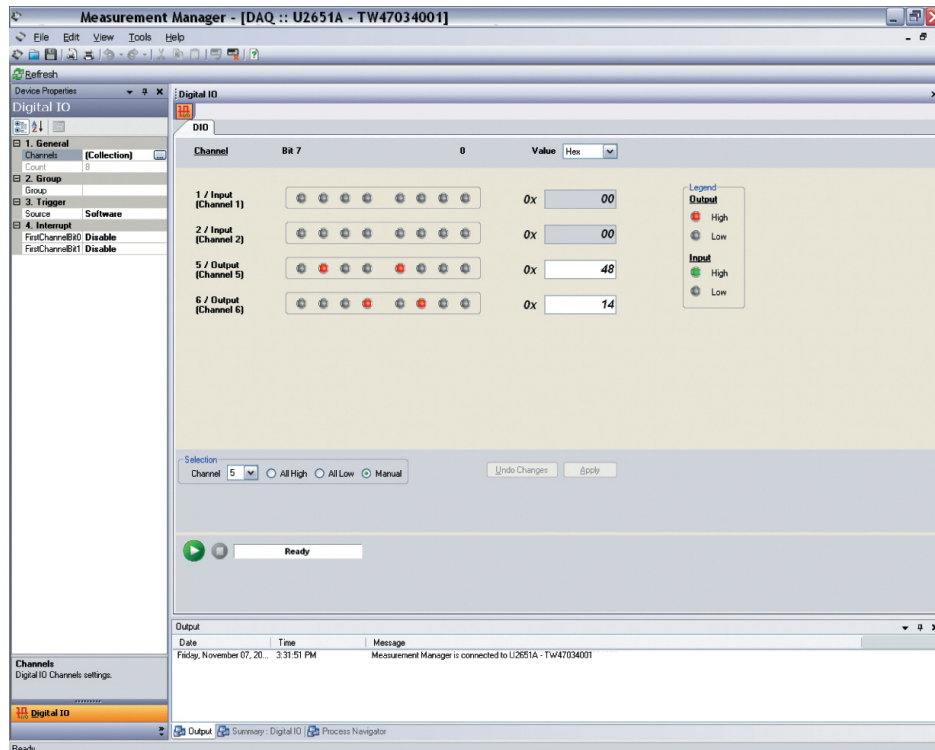
U2903A, terminal block and 1-m SCSI-II cable with 100-pin connector

USB DAQ: Control, Acquire, Measure, Evolve

USB DAQ, U2600A DIO

Quick comparison: Digital input and output modules

	U2651A DIO module	U2652A digital input module	U2653A digital output module
Digital input			
Number of isolated bits	32	64	n/a
Digital logic levels	High: 10-24 V; Low: 0-2 V	High: 10-24 V; Low: 0-2 V	n/a
Input current (maximum)	1.5 mA per bit	1.5 mA per bit	n/a
Digital output			
Number of isolated bits	32	n/a	64
Output type	Open drain power MOSFET driver	n/a	Open drain power MOSFET driver
General			
Power consumption	+12 V at 235 mA (typ)	+12 V at 115 mA (typ)	+12 V at 260 mA (typ)
Connector type	100-pin SCSI-II	100-pin SCSI-II	100-pin SCSI-II
Remote interface	Hi-Speed USB 2.0	Hi-Speed USB 2.0	Hi-Speed USB 2.0



Control digital inputs and monitor digital outputs through the easy-to-use KMM interface

USB DAQ: Control, Acquire, Measure, Evolve USB DAQ, U2100A DIO

Standalone digital I/O

U2100A Series USB digital I/O devices

This group of three standalone units offers cost-effective DIO for applications such as driving relays, actuators and valves. Equipped with opto-isolation, they can also act as an interface to industrial sensors. Capabilities such as a failsafe watchdog timer and programmable power-up states ensure safe, predictable operation.



- Up to 32 input terminals and 32 output terminals
- Supports digital inputs ranging from 0 to 24 V
- Opto-isolation with maximum transient voltage of 1500 Vpk
- Digital filtering removes unwanted glitches and pulses
- Edge detection monitors state changes on input lines (U2121A/U2122A)
- Fuse-protected output channels (shared by eight terminals)

The U2100A Series supports IVI-COM as well as a wide range of languages and ADEs:

- Keysight VEE
- Microsoft Visual Studio .NET
- Microsoft C/C++
- Microsoft Visual Basic 6
- LabVIEW
- LabWindows/CVI

RF switch driver

The U2121A is also part of a low-cost RF switch driver solution that includes the U2121A-101 adapter board. This five-channel solution is designed for small, simple test systems that contain up to five RF switches. Compatible Keysight RF switches include the 8762/63/64 coaxial switches, the 8765x microwave SPDT switches and the N1810/11/12 coaxial switches.

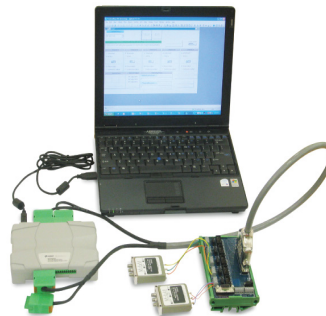
Dimensions (W x D x H)

154.60 x 120.00 x 32.60 mm
(6.09 x 4.72 x 1.28 inches)

Accessories

Each U2100A Series module includes an AC/DC adapter, a USB interface cable, a terminal block and a DIN rail clamp. The table presents another item that may be useful.

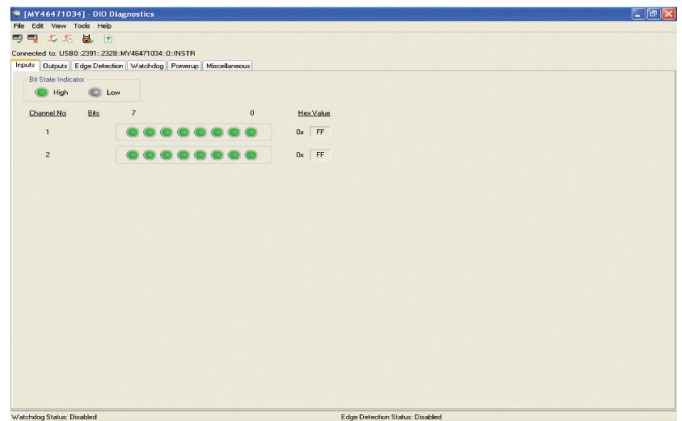
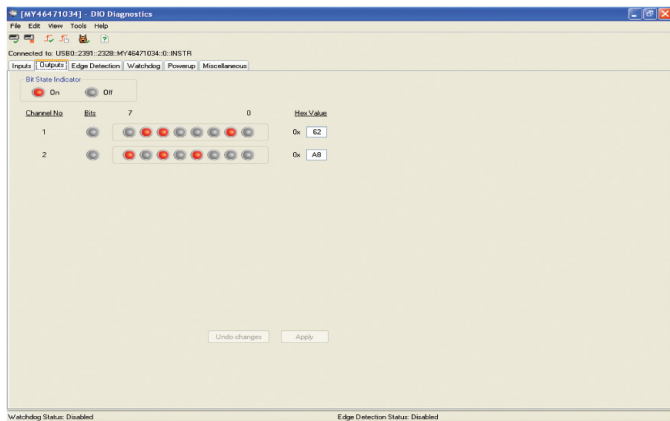
Item	Model number
RF switch driver board	U2121A-101



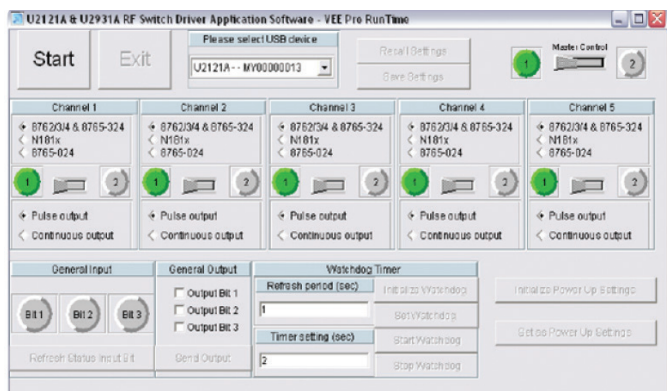
USB DAQ: Control, Acquire, Measure, Evolve USB DAQ, U2100A DIO

Quick comparison: Standalone digital input and output modules

	U2121A DIO Module	U2122A digital input module	U2123A digital output module
Digital I/O			
Number of lines	16 input, 16 output	32 input	32 output
Input characteristics			
Input voltage	0 to 24 V	0 to 24 V	n/a
Input logic voltage (low/high)	< 1.3 V / > 3.5 V	< 1.3 V / > 3.5 V	n/a
Input propagation delay	100 µs (opto-isolator)	100 µs (opto-isolator)	n/a
Output characteristics			
Output load voltage (maximum)	24 V	n/a	24 V
Output low voltage	1.2 V	n/a	1.2 V
Output propagation delay	100 µs (opto-isolator)	n/a	100 µs (opto-isolator)
Other features			
Device type	Software timed	Software timed	Software timed
Operating capabilities	<ul style="list-style-type: none"> – Programmable power-up states – Watchdog timer – Edge detection – Digital filter 	<ul style="list-style-type: none"> – Edge detection – Digital filter 	<ul style="list-style-type: none"> – Programmable power-up states – Watchdog timer



Set digital inputs and observe the status of outputs easily.



Control up to five RF switches and configure the watchdog timer, edge detection and digital filter applications using the RF Switch Driver Application software.

USB DAQ: Control, Acquire, Measure, Evolve USB DAQ, U2802A Thermocouple Interface

Temperature measurements for thermal analysis

U2802A 31-channel thermocouple input module

The Keysight U2802A thermocouple input module is a signal conditioner that converts low-voltage thermocouple signals into a ± 10 volt signal range. The module is designed to be used with the U2355A and U2356A multifunction DAQ modules, connected through two SCSI-II cables. The U2802A is suitable for a wide range of applications in a variety of industrial environments.



Dimensions (W x D x H)

159.7 x 254.2 x 40.5 mm
(6.3 x 10 x 1.6 inches)

- Supports thermocouple types J, K, R, S, T, N, E and B
- Includes built-in isothermal terminal block, thermistor and zeroing function
- Provides error detection of open thermocouples
- Independently configurable for thermocouple or voltage-input mode on any channel
- Handles input voltages up to 10 V
- NIST-traceable calibration

Configuration and control is performed through the easy-to-use KMM software, which is included with the U2802A. The module is also compatible with a wide range of application development environments including Keysight VEE, LabVIEW and Microsoft Visual Studio.

Accessories

The U2802A includes one J-type thermocouple, a power supply splitter and two SCSI-II 68-conductor cables (1 m). The table presents three more items that may be useful.

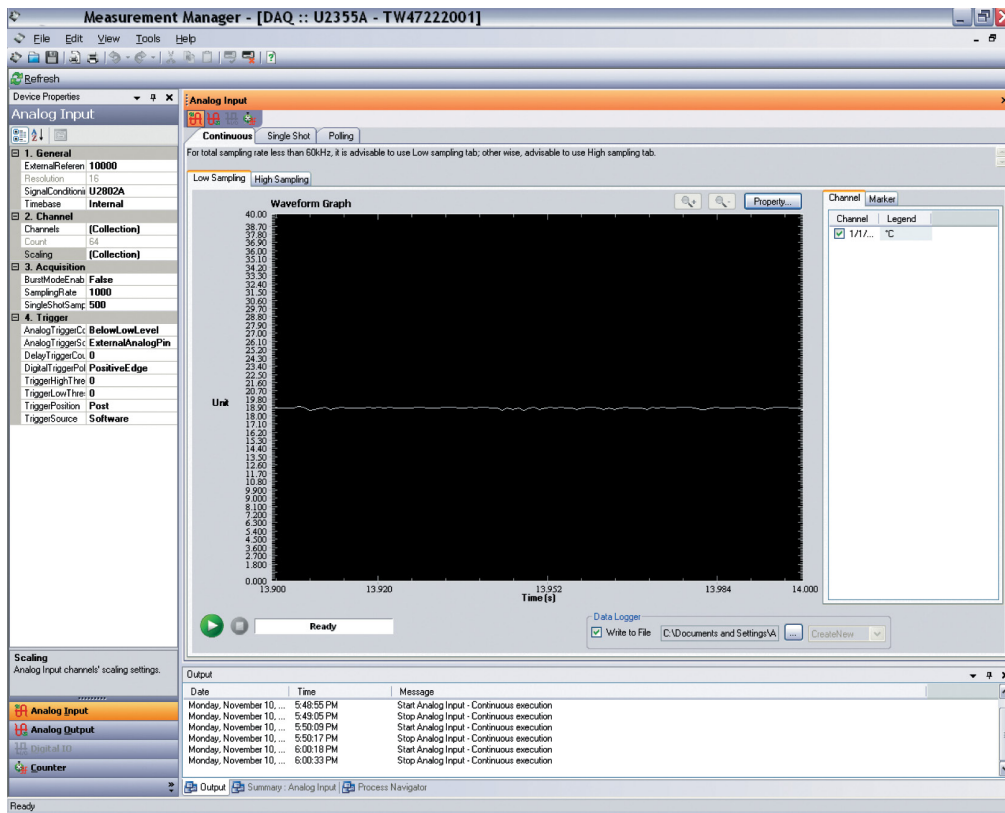
Item	Model number
Power supply adapter	U2802A-001
J-type thermocouples (10 pieces)	U2802A-100
Two 2-m SCSI-II cables	U2802A-201
Two 1-m SCSI-II cables	U2802A-202



U2802A-100, J-type thermocouple kit

USB DAQ: Control, Acquire, Measure, Evolve

USB DAQ, U2802A Thermocouple Interface



Monitor temperature measurements using the KMM interface

On the Bench and on the Go U2781A Chassis

On the bench: Integration made easy

U2781A USB modular product chassis

The U2781A is a six-slot chassis for Keysight USB modular instruments and data acquisition devices. It offers the convenience of one AC-power connection and a single USB link. Modules are hot-swappable and the auto-detection feature reduces setup time and effort. This 4U-high chassis also provides simultaneous synchronization between modules and enables SSI/star-trigger bus synchronization with an external trigger source.



Dimensions (W x D x H)

270.00 x 271.20 x 197.00 mm
(10.63 x 10.68 x 7.76 inches)

- Six USB module slots
- System Synchronous Interface (SSI)
- Star trigger and trigger-in/trigger-out signals
- Internal and external 10 MHz reference clock
- SCPI and IVI-COM compatibility

The U2781A modular chassis allows expansion up to 384 channels when slotted with the U2300A Series DAQ devices, providing a high-density data acquisition solution. The optional rackmount kit simplifies integration into a test system. The chassis' master/slave triggering capabilities also enable synchronization among various modules. This is possible even across modules with different functions (except for the switch matrix).

Its compact size saves space on the bench or in a rack. Hi-Speed USB 2.0 compatibility makes connection to a PC quick and easy.

Accessories

The modular instrument chassis includes a USB extension cable. The table presents another accessory that may be useful.

Item	Model number
Rackmount kit	U2905A



U2905A, Rackmount Kit for U2700A Series USB DAQ Modular Instrument Chassis

On the Bench and On the Go E5813A

On the bench: Connectivity expansions

E5813A networked 5-port USB hub

The E5813A networked 5-port USB hub uses LAN technology to end the five-meter USB cabling distance limitation, allowing USB devices to be connected anywhere on a Local Area Networked (LAN). With access to remote devices, you can collect data, perform measurements or monitor the progress of your tests.



- Connect up to five instruments
- Interface with GPIB, RS-232 and SUB devices
- Maximum data transfer rate of 12 Mbps per port
- Extended USB connectivity beyond 5 meters
- USB 1.1, USB 2.0 and 10BASE-T/100BASE-TX compatible

On the Bench and On the Go Essential Accessories

On the go: Essential accessories

When you're on the road, a few essential "survival kit" items may reduce weight and eliminate hassles. You should be able to find these at electronics stores (and some music stores) that carry computer accessories and power adapters.

USB hub: Most laptop PCs have just two USB ports, and many people use one for a wireless mouse. To connect more than one USB modular instrument, you'll need a multiport USB 2.0 hub and an extra USB cable to connect the hub to your PC. Also, be sure that the hub is compatible with Windows XP Pro or Home (SP1 or later), or Windows 2000 Pro (SP4 or later).

Multiport AC/DC adapter: Each USB modular instrument is powered by a 12 V, 2 A AC/DC adapter (12 V, 3 A for USB modular source/measure unit). To lighten the load on your shoulder, you may want to carry a Y-splitter or a multiport AC/DC adapter. The key specs for a suitable multiport adapter are 12 V/5 A for two USB MIs and 12 V/8 A, for up to four USB MIs. The DC connectors must be 9 mm long with a 5.5 mm outside diameter and 2.5 mm inside diameter.



Keysight USB Modular Test Instrument Modules

USB Modular Test Instrument Modules

Keysight's growing family of USB-based modular test instruments now includes oscilloscopes, a function generator, source measure unit, switch matrix, and a digital multimeter while the series of data acquisition family consists of numerous modules. This makes electronic functional test, troubleshooting, data logging, and measurement effortless. These devices offer the flexibility of standalone or modular operation for easy, affordable measurements and analysis. Kick start your measurements with a USB interface to your PC and the easy-to-use, feature-packed software bundled with each instrument.



A quick reference to the Keysight USB modular test instruments family

Modules	Description
U2701A USB modular oscilloscope, 100 MHz	The U2701A is a 2 channel 8-bit 100 MHz oscilloscope.
U2702A USB modular oscilloscope, 200 MHz	The U2702A is a 2 channel 8-bit 200 MHz oscilloscope.
U2722A USB modular source measure unit	The U2722A is a 3 channel 20 V/120 mA source measure unit that can operate in a 4-quadrant operation.
U2723A USB modular source measure unit	The U2723A is a 3 channel 20 V/120 mA source measure unit that can operate in a 4-quadrant operation, and includes embedded test scripts.
U2741A USB modular digital multimeter, 5 1/2 digit	The U2741A is a 5 1/2-digit resolution digital multimeter that is able to capture up to 100 readings/sec.
U2751A 4x8 2-wire USB modular switch matrix	The U2751A offers a flexible connection path between the device under test and test equipment, thus allowing different instruments to be connected to multiple points on the device under test at the same time. This instrument offers measurement at a higher bandwidth up to 45 MHz.
U2761A USB modular function/arbitrary generator	The U2761A is a 20 MHz function generator that offers 10 standard waveforms plus pulse and arbitrary waveforms generation capabilities.

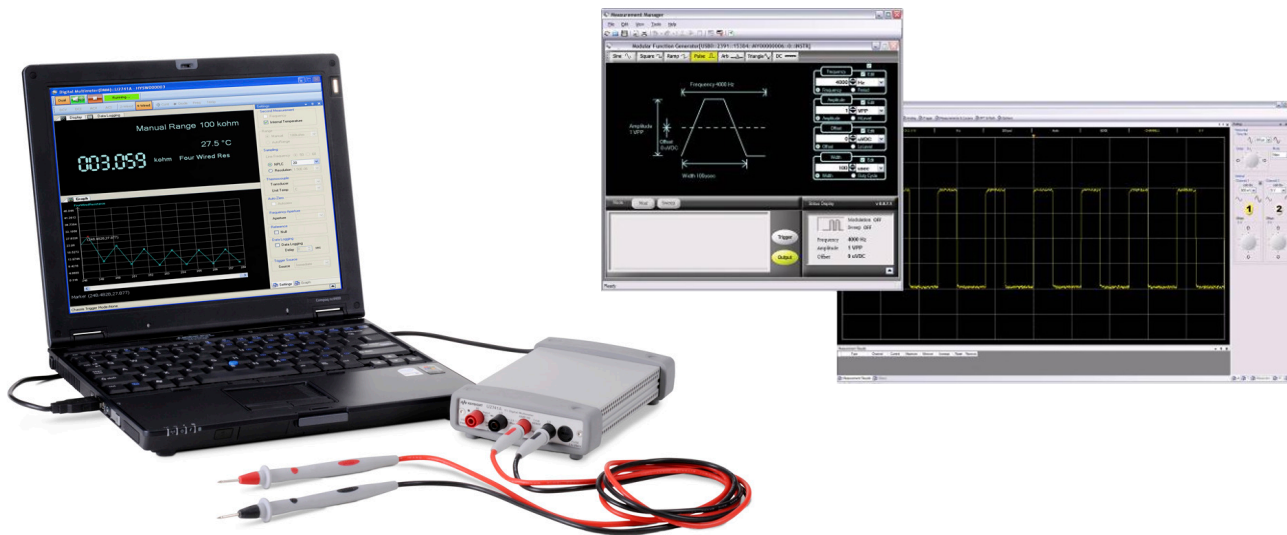
For more information on the Keysight USB modular instrument family, go to www.keysight/find/usbmodular.

Software and Related Literature Keysight Measurement Manager

A familiar interface

Keysight Measurement Manager

The Keysight Measurement Manager (KMM) software is an application data viewer designed to help you perform quick configuration and measurement acquisition. Through individual windows on your PC screen, the KMM software provides a user-friendly front-panel interface for Keysight’s USB modular products. KMM helps you perform quick configuration and measurement acquisition as well as flexible analysis of measured data. This software also includes two special features – the **command logger** and **code converter** capabilities to further ease your programming tasks.



Command Logger

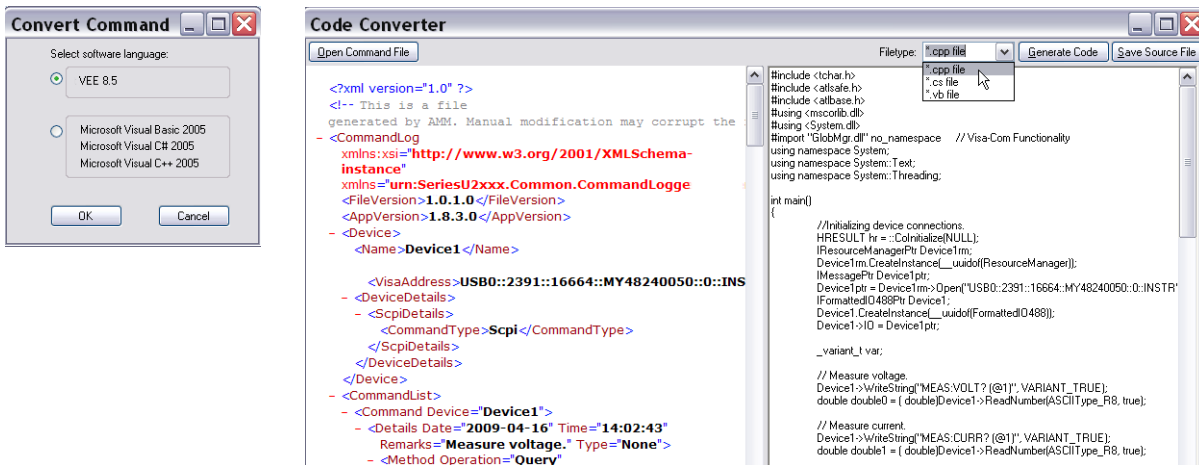
The Command Logger function allows users to log SCPI or IVI-COM command sequences used to control your Keysight USB modular product. The function also captures the time each command is executed. Review the configuration commands at your own pace, or convert the commands to other programming languages with the KMM’s Code Converter.

Date	Time	Device	Type	Command	Remarks
<input checked="" type="checkbox"/>	Friday, March 21, 2014 4:37:54 PM	USB0::2391::437...	Scpi	ACQ:SRAT 10000	Set the sampling rate of analog input.
<input checked="" type="checkbox"/>	Friday, March 21, 2014 4:37:54 PM	USB0::2391::437...	Scpi	WAV:POIN 10000	Set the number of acquisition points for AI continuous acquisition.
<input checked="" type="checkbox"/>	Friday, March 21, 2014 4:38:08 PM	USB0::2391::437...	Scpi	WAV:POIN 10000	Set the number of acquisition points for AI continuous acquisition.
<input checked="" type="checkbox"/>	Friday, March 21, 2014 4:38:08 PM	USB0::2391::437...	Scpi	ROUT:SCAN (@101,102,103)	Set the acquisition sequence specified in the channel list.
<input checked="" type="checkbox"/>	Friday, March 21, 2014 4:38:08 PM	USB0::2391::437...	Scpi	RUN	Start the continuous data acquisition.
<input checked="" type="checkbox"/>	Friday, March 21, 2014 4:38:09 PM	USB0::2391::437...	Scpi	STOP	Stop the asynchronous analog input operation.

Software and Related Literature Keysight Measurement Manager

Code Converter

KMM Code Converter comes with two converters: the Keysight VEE Code Converter, and the Microsoft C#/C++/VB Code Converter, allowing you to convert logged SCPI/IVI-COM commands to snippets of VEE Pro, Visual Basic, C++ and C# codes. You can now convert SCPI commands without needing advanced programming skills, helping you program with ease and allowing you to integrate your programs seamlessly for automated tests.



For more information, please see www.keysight.com/find/KMM.

Software and Related Literature Keysight VEE Pro and VEE Express

Refine your design—sooner

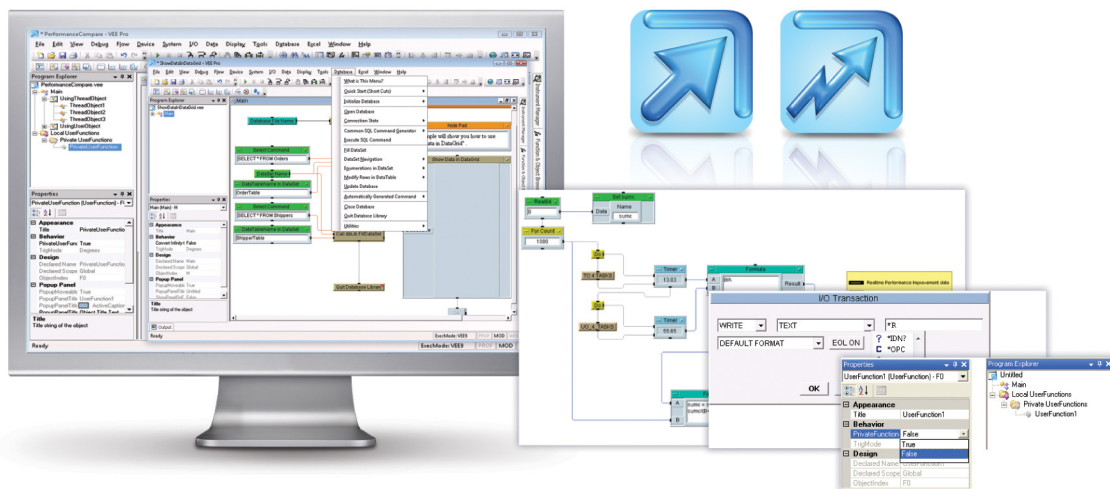
Keysight VEE Pro and VEE Express

Keysight VEE Pro is an award winning graphical language environment that provides a quick path to measurement and analysis. Designed for easy expansion, flexibility and compatibility with the latest industry standards, Keysight VEE allows seamless operation with hardware and software from Keysight and other manufacturers.

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Related Literature

A variety of MI-related application notes can be downloaded from www.keysight.com.

Publication title	Pub number
<i>U2100A Series USB Digital I/O Automated Handler Machine for Test Systems</i> , Application Note	5989-7420EN
<i>U2531A USB Simultaneous Sampling DAQ in Power Measurement Unit Monitoring</i> , Application Note	5989-7422EN
<i>CCFL Panel's Luminance and White Chromaticity Testing in Manufacturing Environment</i> , Application Note	5989-7428EN
<i>Creating a Small, Low-cost RF Switching System</i> , Application Note	5989-8069EN
<i>Small Engine Dynamometer Testing</i> , Application Note	5989-8070EN
<i>Testing Electromagnetic Compatibility of Remote Keyless Entry Modules in Automotive Applications</i> , Application Note	5989-8081EN
<i>Automotive Power Window Regulator Testing</i> , Application Note	5989-7805EN

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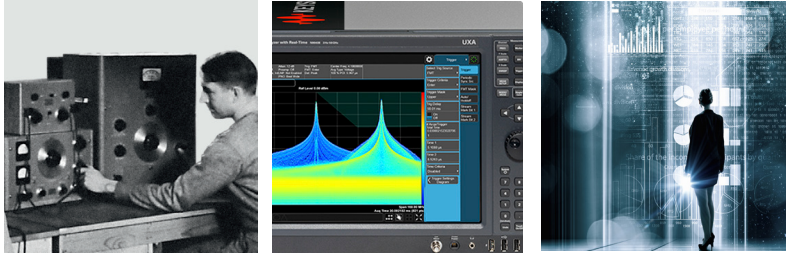
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