

Keysight Technologies

Data Converter

Selection Guide



PCI Cards



8-bit High-speed digitizers

	Channels	Bandwidth (from DC)	Max sample rate	Max memory
U1071A ¹	1- 2 ch	150 MHz - 1 GHz	0.5 - 2 GS/s	256 MB (128 MSamples/ch)

www.keysight.com/find/u1071a

Choice of firmware options

U1071A-SAR	Simultaneous multibuffer acquisition and readout firmware
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PCIe® 1.1 x4 Cards



8-bit High-speed digitizers with on-board processing

	Channels	Bandwidth (from DC)	Max sample rate	Max memory
U1084A ¹	2 ch	500 MHz - 1.5 GHz	0.5 - 4 GS/s	512 MB (25 GSamples/ch)

www.keysight.com/find/u1084a

Choice of firmware options

U1084A-DGT	Digitizer firmware with long memory acquisition
U1084A-DGS	Digitizer firmware with simultaneous acquisition and readout
U1084A-AVG	Real-time sampling and averaging firmware
U1084A-TDC	Real-time signal peak detection, time-to-digital conversion and analysis firmware

1. Not recommended for new design, for alternative see U5303A and U5309A PCIe digitizers.

PCIe 2.0 x8 Cards



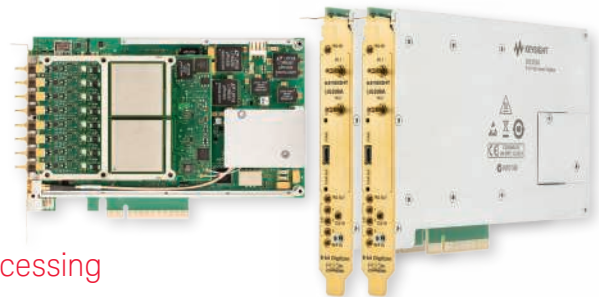
12-bit High-Speed Digitizers with Custom On-Board Processing

	Channels	Bandwidth (from DC)	Max sample rate	Max memory	
U5303A	2 ch	650 MHz - 2 GHz	1.6 - 3.2 GS/s	4 GB (1 GSamples/ch)	NEW

www.keysight.com/find/u5303a

Choice of firmware options and software tool

U5303A-DGT	Digitizer firmware				
U5303A-INT	Interleaved channel sampling functionality				
U5303A-AVG	Real-time averager firmware				
U5303A-PKD	Real-time peak detection firmware				
U5303A-TSR	Triggered simultaneous acquisition and readout				
U5303A-FDK	Custom firmware capable (required to load FPGA firmware created with U5340A)				
U5340A	FPGA development kit for high-speed digitizers				NEW



8-bit High-Speed Digitizers with Custom On-Board Processing

	Channels	Bandwidth (from DC)	Max sample rate	Max memory	
U5309A	2 - 8 ch	300 - 500 MHz	0.5 - 2 GS/s	2 GB	NEW

www.keysight.com/find/u5309a

Choice of firmware options and software tool

U5309A-DGT	Digitizer firmware				
U5303A-AVG	Real-time averager firmware				
U5303A-PKD	Real-time peak detection firmware				
U5303A-TSR	Triggered simultaneous acquisition and readout				
U5309A-FDK	Custom firmware capable (required to load FPGA firmware created with U5340A)				
U5340A	FPGA development kit for high-speed digitizers				NEW



Contact our dedicated digitizers team at digitizers@keysight.com to find the best solution for your application, signal measurement and data processing need.

CompactPCI® Cards



10-bit High-Speed Digitizers

	Channels	Bandwidth (from DC)	Max sample rate	Max memory
U1065A ¹	1 - 4 ch	1 - 3 GHz	2 - 8 GS/s	2 GB (1 G - 256 MSamples/ch)

www.keysight.com/find/u1065a

To be discontinued May 2015. For replacement, contact digitizers@keysight.com.



Time-to-Digital Converters

	Channels	Resolution	TDC function
U1050A ¹	12 ch	5 - 50 ps	Single hit

	Channels	Resolution	TDC function
U1051A ¹	6 ch	50 ps	Multi- hit

1. Not recommended for new design. For alternative, contact digitizers@keysight.com.

PXIe Cards



12-bit Wideband IF Digitizer

	Channels	Bandwidth (AC/DC)	Max sample rate	Max memory
M9202A ¹	1 ch	1 GHz	2 GS/s	512 MB (256 MSamples/ch)

www.keysight.com/find/m9202a

Choice of firmware options

M9202A-DDC	Digital down-conversion firmware
M9202A-BAS	Basic digitizer firmware

PXI-H Cards



10-bit High-Speed Digitizing Scope

	Channels	Bandwidth (AC/DC)	Max sample rate	Max memory
M9210A ¹	2 ch	1.4 GHz	2 - 4 GS/s	1 GB (256 MSamples/ch)

www.keysight.com/find/m9210a

10-bit UWB High-Speed IF Digitizer

	Channels	Bandwidth (AC/DC)	Max sample rate	Max memory
M9211A ¹	1 ch	3 GHz	4 GS/s	1 GB (512 MSamples/ch)

www.keysight.com/find/m9211a

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1. Not recommended for new design. For alternative, contact digitizers@keysight.com.

AXIe Multichannel Acquisition System

Chassis

- 2-, 5-slot AXIe chassis with integrated interface.

Processor

- Optionally an embedded controller can be included in the system.

Software

- Turnkey software for multichannel visualization, or standard software support for easy integration into your measurement system.

Portable high-resolution system

Example configuration

1x M9502A	2-slot AXIe chassis (with interface to PC)
1x M9536A	Embedded AXIe controller
1x M9703A	AXIe 12-bit digitizer, 8-channel



This low power, 2-slot portable system provides 8 synchronized input channels with 12-bit resolution and a high-performance embedded host processor. The system built looks to be one single instrument. Ideal for RF and microwave applications.

High-speed data acquisition

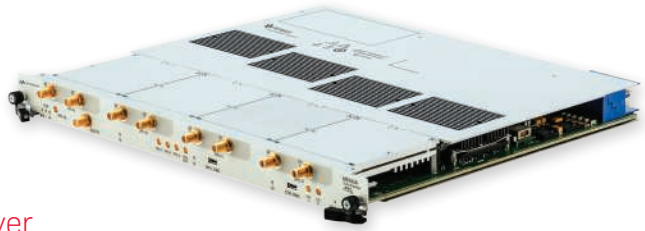
Example configuration

1x M9505A	5-slot AXIe chassis (with interface to PC)
5x M9703A	AXIe 12-bit digitizer, 8-channel
1x U1092A-S01	AcqirisMAQS single-station, master license



By including five M9703A modules, synchronized using the AXIe bus, this system offers 40 high-speed (1 GS/s) data acquisition channels that look to be one single instrument. Ideal for large scale applied physics experiments such as particle physics, microwave astronomy or hydrodynamics applications.

AXIe Modules



12-bit High-Speed Digitizer/Wideband Digital Receiver

	Channels	Bandwidth (from DC)	Max sample rate	Max memory	
M9703A	8 ch	650 MHz - 1.4 GHz	1 - 3.2 GS/s	16 GB (1 GSamples/ch)	NEW

www.keysight.com/find/m9703a

Choice of firmware options and software tool

M9703A-DGT	Digitizer firmware
M9703A-DDC	Wideband real-time digital downconversion firmware
M9703A-LDC	Limited-bandwidth real-time digital down-conversion firmware
M9703A-INT	Interleaved channel sampling functionality

Related products

M9502A	2-slot AXIe chassis
M9505A	5-slot AXIe chassis
M9514A	14-slot AXIe chassis
M9536A	Embedded AXIe controller

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www.axistandard.org

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www.pxisa.org

PCI eXTensions for Instrumentation (PXI) modular instrumentation delivers a rugged, PC-based high-performance measurement and automation system.

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www.keysight.com/find/modular

www.keysight.com/find/embedded-digitizers

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