



Agilent M9703A AXIe Digitizer 12-bit , 8 Channels

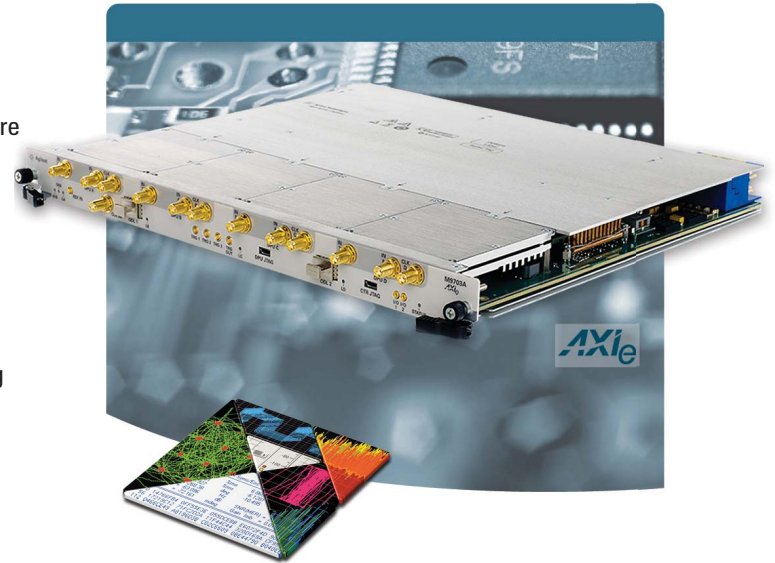
DISCOVER the Alternatives...

Industries and Applications

- Large scale applied physics experiments
- Wideband multi-channel and high-fidelity signal capture

Product Description

The M9703A is a single-slot AXIe wideband digitizer, providing 4 - 8 synchronous channels with 12-bit resolution running at up to 3.2 GS/s, and offering up to 1 GHz analog bandwidth. The Agilent M9703A also provides very long acquisition capability by implementing up to 4 GBytes internal memory. In addition, to ensure high data throughput, the module also provides a PCIe backplane connection.



Models

M9703A AXIe Digitizer 12-bit, 8 channels

... Agilent **MODULAR** Products

Main Features and Benefits

Product features	Your benefit
8 channels (4 if interleaving is enabled)	Easily build large scale acquisition systems
12-bit resolution	High dynamic range for the best measurement fidelity
Up to 3.2 GS/s sampling rate	Get very fast measurements on the fastest signals
DC - 1 GHz analog bandwidth	Wideband signal capture
Four on-board Xilinx Virtex-6 FPGAs	High on-board processing capability
Up to 4 GB (256 MSamples/ch) on-board memory	Long data acquisition time
Four lanes (x4) PCIe Gen 2 backplane link	High digitized data throughput

Connector compatibility: AXIe, ATCA

Specifications

Hardware	
Size	1 slot
Resolution	12 bits
Sample rate	1 GS/s to 3.2 GS/s
Bandwidth	DC to 1 GHz
Impedance	50 Ω \pm 2 %
Coupling	DC
Full scale (FS) range	1 V / 2 V
Spurious-free dynamic range (SFDR)	60 dBc (<i>typical</i>)
Effective number of bits (ENOB)	8.8 bits (<i>typical</i>)
Signal to Noise Ratio (SNR)	57 dB (<i>typical</i>)



Agilent Technologies

Software

The M9703A includes the Agilent MD1 soft front panel (SFP) graphical interface. This simple software application can be used to control, verify the functionality and explore the capabilities of the Agilent modular high-speed digitizers. The MD1 SFP provides several different measurement and display capabilities, one being a real-time FFT plot of the acquired signal.

Supported operating systems	Microsoft Windows® XP (32-bit) Microsoft Windows® Vista (32/64-bit) Microsoft Windows® 7 (32/64-bit) Linux
Standard compliant drivers	IVI-COM, IVI-C, LabVIEW, MATLAB
Supported application development environments (ADE)	VisualStudio® (VB.NET, C#, C/C++), VEE, LabVIEW, LabWindows/CVI, MATLAB
Agilent IO libraries	Includes: VISA Libraries, Agilent Connection Expert, IO Monitor

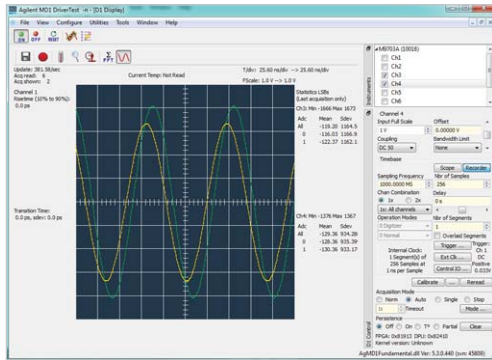


Figure 1. Agilent M9703A MD1 software front panel (SFP) interface.

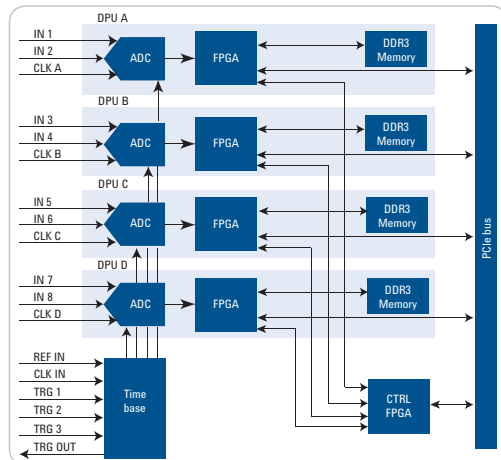


Figure 2. Simplified block diagram of the M9703A AXLe Digitizer.



Figure 3. Five Agilent M9703A AXLe 12-bit digitizers installed in the Agilent M9505A 5-slot AXLe chassis to form a 40-channel 12-bit acquisition system.

Ordering Information

Typical Product Configuration

Model	Description
M9703A	AXLe 12-bit Digitizer
M9703A-SR1 ¹	1 GS/s sampling rate
M9703A-SR2	1.6 GS/s sampling rate
M9703A-INT	Interleaved channel sampling functionality
M9703A-F05 ¹	650 MHz maximum analog bandwidth
M9703A-F10	1 GHz bandwidth
M9703A-M10 ¹	1 GB (64 MS/ch) acquisition memory
M9703A-M20	2 GB (128 MS/ch) acquisition memory
M9703A-M40	4 GB (256 MS/ch) acquisition memory

¹ These options are included in the default configuration of the M9703A

Related products

M9502A	2-slot AXLe chassis
M9505A	5-slot AXLe chassis
M9536A	Embedded AXLe controller
U1092A	AcqirisMAQS Multichannel Acquisition Software

Accessories

Software and product information on CD (included)

Advantage Services: Calibration and Warranty

Agilent Advantage Services is committed to your success throughout your equipment's lifetime.

M9703A-UK6	Commercial calibration certificate calibration with test data
R-51B-001-3C	1 year return-to-Agilent warranty extended to 3 years
R-51B-001-5C	1 year return-to-Agilent warranty extended to 5 years

Discover Agilent ...

www.agilent.com
www.agilent.com/find/modular
www.agilent.com/find/m9703a
 USA: (800) 829-4444



For more information on Agilent Technologies' products, applications, or services, please contact your local Agilent office. The complete list is available at www.agilent.com/find/contactus

PICMG and the PICMG logo, CompactPCI and the CompactPCI logo, AdvancedTCA and the AdvancedTCA logo are US registered trademarks of the PCI Industrial Computers Manufacturers Group. "PCIe" and "PCI EXPRESS" are registered trademarks and/or service marks of PC-SIG. Microsoft, Windows, Visual Studio, Visual C++, Visual C#, and Visual Basic are either registered trademark or trademarks of Microsoft Corporation in the United States and/or other countries.

Product specifications and descriptions in this document subject to change without notice.

© Agilent Technologies, Inc. 2011-2012 Printed in USA, February 21, 2012
 5990-8506EN