PXI and AXIe Modular Instrumentation

M9018A PXIe Chassis
M9502A AXIe Chassis
M9505A AXIe Chassis
U4002A Digital Test Console Chassis

Tested Computer List
Technical Note

DISCOVER the Alternatives...

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OVERVIEW

This personal computer and controller selection guide has been prepared to provide the system designer with a list of tested computers that are compatible with Agilent Technologies PXI and AXIe chassis. The testing in this guide covers both the PCIe link and enumeration of the chassis.

Figure 1. M9045A PCIe ExpressCard Adapter and Y1200A PCIe Cable

Agilent Technologies modular chassis tested:

- Agilent M9018A PXIe Chassis
- Agilent M9502A AXIe Chassis
- Agilent M9505A AXIe Chassis
- Agilent U4002A Digital Test Console Chassis

Personal computing devices tested:

- Laptop PC
- Desktop PC
- Tested rack mount PCs
- Tested PXIe embedded PCs

Figure 2. M9502A AXIe 2 slot chassis

TESTING CONFIGURATIONS

Testing configurations	
Agilent M9018A PXIe chassis	• Tested using cabled PCI Express link with the M9021A PCIe cable interface and PXIe embedded controllers. • Testing was performed with only a graphics card in its standard slot and Agilent-recommended PCIe host cable card installed [1] • Laptop testing utilized the M9045A ExpressCard and Y1200A PCIe cable • Desktop/rack-mounted PC testing utilized the M9047A ExpressCard and Y1202A PCIe cable • Various versions of Microsoft Windows® were used for all testing. Upgrading to Windows 7 is recommended
Agilent M9502A AXIe chassis Agilent M9505A AXIe chassis Agilent U4002A DTC chassis	• Tested using: cabled PCI Express link, • Testing was performed with only a graphics card in its standard slot and Agilent-recommended PCIe host cable card installed [1] • Laptop testing utilized the M9045A ExpressCard and Y1200A PCIe cable • Desktop/rack-mounted PC testing utilized the M9047A ExpressCard and Y1202A PCIe cable • Various versions of Microsoft Windows® were used for all testing. Upgrading to Windows 7 is recommended

[1] Applies to desktop and rackmount computers only

Laptop personal computers [2]						
Manufacturer	Model	BIOS	PCIe Link	Compatibility [3]		Comments
				AXIe/DTC	PXIe	
Dell	Precision M4400	A19	x1 Gen 1	yes	Yes	No restrictions
Dell	Precision M4500	A04	x1 Gen 1	yes	Yes	No restrictions
Dell	Studio 15z	A04	x1 Gen 1	yes	Yes	No restrictions
Hewlett Packard	Elitebook 8530p	F.11	x1 Gen 1	yes	No	No restrictions
Hewlett Packard	Elitebook 8440p	68CCU Ver. F.OB	x1 Gen 1	yes	Yes	No restrictions
Hewlett Packard	Elitebook 8540w	68CVD Ver. F.OE	x1 Gen 1	yes	Yes	No restrictions
Hewlett Packard	6930p	68PCU Ver F.OB	x1 Gen 1	yes	Yes	No restrictions
Hewlett Packard	Pavilion dv8	F.17	x1 Gen 1	yes	Yes	No restrictions
MSI	A6200	E1681IMR VER. 105	x1 Gen 1	yes	Yes	No restrictions

[2] Laptops require the use of ExpressCard® x1 interface cards and therefore will exhibit lower performance than desktop links; however, the advantage is a thinner cable and added portability.

[3] Compatibility is based on: 1) the ability to fully enumerate a chassis, 2) meeting the PCIe specification at PC slot's rated speed. This is impacted by many factors including computer bios and signal path within the computer and cable.

Desktop personal computers						
Manufacturer	Model	BIOS	PCIe Link	Compatibility [1]		Comments
				AXIe/DTC	PXIe	
Dell	T3500	From ftp. agilent. com	x8 Gen 2	yes	yes	It is not recommended to use PCIe slot 1 since it requires a BIOS update that is currently unavailable. Dell is currently working on a software update. Check ftp://ftp.agilent.com/pub/mpusup/BIOS for latest information including supported BIOS versions and slot and cable card/link width restrictions.
Dell	T5500	From ftp. agilent. com	x8 Gen 2	yes	yes	It is not recommended to use PCIe slot 1 since it requires a BIOS update that is currently unavailable. Dell is currently working on a software update. Check ftp://ftp.agilent.com/pub/mpusup/BIOS for latest information including supported BIOS versions and slot and cable card/link width restrictions.
Dell	T7500	From ftp. agilent. com	x8 Gen 2	yes	yes	It is not recommended to use PCIe slot 1 since it requires a BIOS update that is currently unavailable. Dell is currently working on a software update. Check ftp://ftp.agilent.com/pub/mpusup/BIOS for latest information including supported BIOS versions and slot and cable card/link width restrictions.
Hewlett Packard	Elite 8000	1.07 Rev. A 10 Sep 2010	x4 Gen 1	yes	No	Only Gen1x4 slot is supported (slot 2)
Hewlett Packard	Z400	3.07 Rev A	x4 Gen 1	yes	No	Only Gen1x4 slot is supported (slot 3)
Hewlett Packard	xw4600	01.22 rev A	x4 Gen 1	yes	No	Only Gen1x4 slot is supported. Note: Some xw4600 computers contain a CFC and you must slide the clock isolation switch on the U4002A chassis to the non-default [left] position – see endnote [2].
Hewlett Packard	ML150G6 Server	O21	x8 Gen 2	yes	No	Gen2x16 slot only.

1. Compatibility is based on: 1) the ability to fully enumerate a chassis, 2) meeting the PCIe specification at PC slot's rated speed. This is impacted by many factors including computer bios and signal path within the computer and cable.

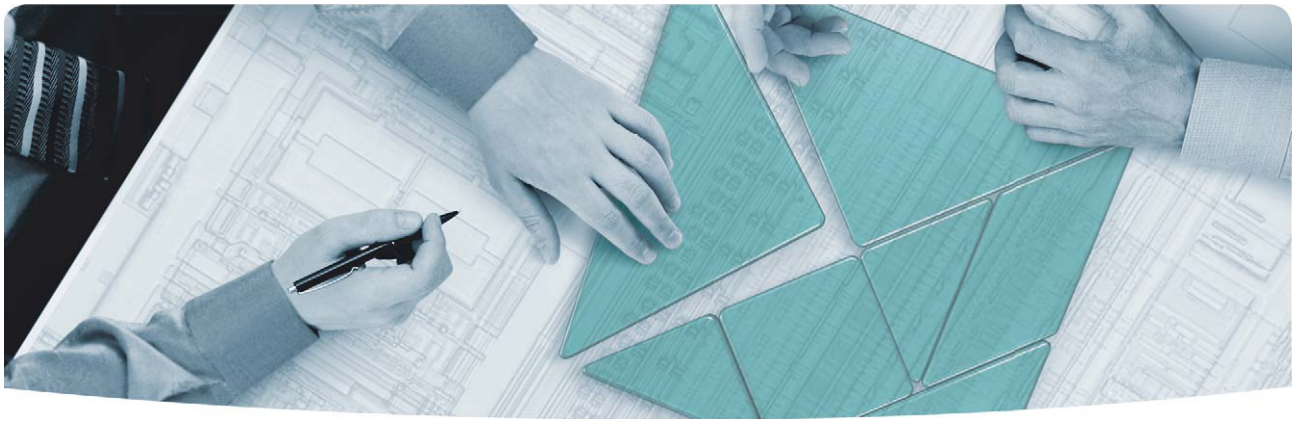
2. Most PCs utilize spread spectrum PCIe clocking (SSC), but some PCs utilize constant-frequency PCIe clocks (CFC). The U4002A Chassis Management Module has a clock isolation switch that allows it to work with either SSC or CFC clock modes. Leave the switch in the default (right) position for a PC utilizing the SSC mode. If the U4002A chassis is to be connected to a PC utilizing the CFC mode, slide the switch to its left position. If a link cannot be established with the U4002A chassis, adjust the clock isolation switch. The M9018, M9502A and M9505A have an automatic clock isolation system that does not require user intervention. For more information on this, consult the U4002A manual.

Rackmount personal computers						
Manufacturer	Model	BIOS	PCIe Link	Compatibility [1]		Comments
				AXIe/DTC	PXIe	
Kontron	KISS IPC 760	08.00.15	x8 Gen 2	yes	yes	No restrictions

1. Compatibility is based on: 1) the ability to fully enumerate a chassis and 2) meeting the PCIe specification at PC slot's rated speed. This is impacted by factors including computer bios and signal path within the computer and cable.

PXIe embedded personal computers				
Manufacturer	Model	BIOS	System Slot PCIe Links	Comments
National Instruments	PXIe-8101	4.6.3 (6/5/2009)	4x1 Gen 1	No restrictions
National Instruments	PXIe-8105	1.3.3 (1/1/1992)	Four link: 1x1 and 3x4 Gen 1	No restrictions
National Instruments	PXIe-8108	4.6.3 (10/28/2009)	4x1 Gen 1	No restrictions
National Instruments	PXIe-8133	4.6.3 (4/14/2010)	4x1 Gen 1	No restrictions

Figure 3. M9018A 18-slot PXIe Chassis



The Modular Tangram

The four-sided geometric symbol that appears throughout this document is called a tangram. This seven-piece puzzle originated in China a few centuries ago. The goal is to create shapes—from simple to complex—that form an identifiable silhouette. As with a tangram, the possibilities may seem infinite as you begin to create a new test system. With a set of clearly defined elements—architecture, hardware, software—Agilent can help you create the system you need, from simple to complex.

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