AXIe Compliance Requirements and Trademark Usage

Revision 1.0

January 11, 2018

Important Information

Notice

AXIe Compliance Requirements and Trademark Usage is authored by the AXIe Consortium companies. For a vendor membership roster list, please contact execdir@axiestandard.org.

The AXIe Consortium wants to receive your comments on this document. To provide such feedback, or to join the consortium, contact execdir@axiestandard.org.

Warranty

The AXIe Consortium and its member companies make no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Its member companies shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Trademarks

PICMG, CompactPCI, and AdvancedTCA® are registered trademarks of the PCI Industrial Computers Manufacturers Group.

PCI-SIG, PCI Express, and PCIe are registered trademarks of PCI-SIG.

LXI is a trademark of the LXI Consortium Inc.

PXI is a trademark of the PXI Systems Alliance.

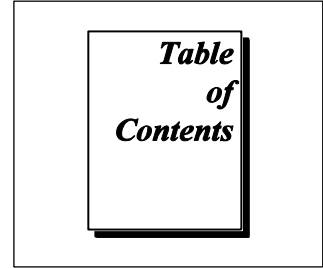IVI is a trademark of the IVI Consortium

VXI*plug&play* is a trademark of the IVI Consortium

VISA is a trademark of the IVI Consortium

PXI is a trademark of the PXI Systems Alliance

Other product and company names listed are trademarks or trade names of their respective companies.

No investigation has been made of common-law trademark rights in any work.

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Revision History

This section is an overview of the revision history of the AXIe Compliance Requirements and Trademark usage specification.

Table 1 Compliance Requirements and Trademark Usage specification revisions

Revision Number	Date of Revision	Revision Notes
1.0	January 11, 2018	Initial version of the spec.

1 Introduction

1.1 Overview of the AXIe Compliance Requirements and Trademark Usage

The AXIe Compliance Requirements and Trademark Usage document specifies the AXIe specifications that compliant products are required to comply with and the nomenclature and trademarks used to specify that compliance. Any product using the AXIe trademark and released after Jan 1, 2018 is only permitted to use AXIe trademarks as specified in this document.

1.2 Objectives

The AXIe-2 Base Software Specification specifies the software necessary to support AXIe chassis, system modules, and instrument modules that comply with AXIe-1 Base Hardware Architecture Specification.

The AXIe Compliance Requirements and Trademark Usage builds on the PXI software specifications in much the same way that the AXIe-1: Base Hardware Specification builds on the AdvancedTCA® specifications. Specifically, AXIe software is required to substantially comply with PXI-2, *the PXI Software Specification* and PXI-6, the *PXI Express Software Specification.* This permits AXIe system software to be supported by existing PXI utilities; it also facilitates integrating systems composed of both PXI and AXIe components.

1.3 Audience

This specification is intended to be used by:
- Product developers interested in implementing and utilizing software features of the AXIe platform.
- Hardware designers interested in referencing description files that identify and describe AXIe hardware capabilities.
- Software designers interested in utilizing descriptors for managing AXIe resources, such as AXIe triggers, local busses, and geographic parameters for slot and chassis identification.
- Anyone producing data sheets or promotional material that need to know how to indicate the compliance of their products.

1.4 References

Several other documents and specification are related to this specification. These other related documents are the following:

VPP-4.3   Defines the semantics of the VISA library (see www.ivifoundation.org)

VPP-4.3.2 VISA Implementation Specification for Textual Languages (see: www.ivifoundation.org)

IVI-6.3   VISA PXI Plug-in Specification (see: www.ivifoundation.org)

PXI-2   PXI Software Specification (see: www.pxisa.org). References to PXI-2 in this document are to PXI-2 Revision 2.3, January 22, 2008.

PXI-4   PXI Module Description File Specification (see: www.pxisa.org). References to PXI-4 in this document are to PXI-4 Revision 1.0, September 2003

PXI-6   PXI Express Software Specification (see: www.pxisa.org). References to PXI-6 in this document are to PXI-6 Revision 1.1, January 22, 2008.

PXI-8   PXI MultiComputing Software Specification (see: www.pxisa.org). References to PXI-8 in this document are to PXI-8 Revision 1.0, September 16, 2009.

CompactPCI PICMG 2.0 Specification

1.5 Definitions of Terms and Acronyms

This section defines terms and acronyms used in this specification:

PXI	This term originates from PXISA.org and refers broadly to the PXI specifications and compliant components; this includes both PXI Express and PXI-1.
PXI-1	This term originates from PXISA.org and refers specifically to PXI modules that are based on parallel PCI and not PCI Express.
System	A system is a collection of one or more chassis. Each chassis may be an AXIe chassis or a PXI chassis.
Chassis	A chassis is a unit that contains a backplaneand slots for a system module, instrument modules, and a shelf manager.
Instrument Module	This is a card that plugs into an instrument slot within an AXIe chassis. In AdvancedTCA®, these cards are loosely referred to as "blades" or just "modules".
Peripheral Module	This term is synonymous with Instrument Module. It is commonly used in PXI and Compact PCI. This term is generally used in this document to be consistent with the referenced PXI specifications.
System Module	The system module provides the communication interface, both network and PCIe, outside the chassis. The system module also distributes these communication fabrics among the modules.
Shelf Manager	The Shelf Manager Module, also referred to as the *ShMM*, interacts with modules in the chassis as well as other Field Replaceable Units (FRU), such as power supplies and fans. The shelf manager maintains an inventory of these units and is responsible for powering and monitoring of modules over an independent Intelligent Platform Management Bus (IPMB). Much more information may be found in PICMG 3.0.
System Module Driver	The driver defined by PXI-6 that enumerates system modules and the chassis they connect to and provides API access to the chassis and system modules.
Chassis Driver	The driver defined by PXI-6 that returns information about the chassis. In AXIe and PXI Express chassis information is primarily provided by the system module driver, however AXIe-2 defines additional APIs that provide FRU information.
Peripheral Module Driver	The driver defined by PXI-6 that returns information about its supported peripheral modules.
IPMC	Intelligent Platform Management Controller. The microcontroller the provides a IPMB connection to the ShMC. Although required, on an instrument module, an IPMC may reside in the chassis and provide other services such as power supply monitoring.
ShMC	Shelf Manager Controller. The microcontroller that resides on the shelf and is the master of the IPMB.
FRU	Field replaceable unit. This term refers to a set of functionality on an AXIe module. This is a historical term and the referenced functionality may not actually be a replaceable unit.

1.6 Organization

This specification was created and is maintained under the rules of the AXIe consortium.

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This specification consists of a system of numbered RULES, RECOMMENDATIONS, PERMISSIONS, and OBSERVATIONS, along with supporting text, tables, and figures.

RULEs outline the requirements of the specification. They are characterized by the keyword "**SHALL**". Conformance to these rules provides the necessary level of compatibility to support the multi-vendor interoperability expected by system integrators and end users in the test and measurement industry. Products that conform to this specification must meet all of the requirements spelled out in the various rules.

RECOMMENDATIONs provide additional guidance that will help AXIe equipment manufacturers improve their users' experiences with AXIe systems. They are characterized by the keyword "**SHOULD**". Following the recommendations should improve the functionality, flexibility, interoperability, and/or usability of AXIe products. Products are not required to implement the recommendations.

PERMISSIONs explicitly highlight some of the flexibility of the AXIe specification. They are characterized by the keyword "**MAY**". The permissions generally clarify the range of design choices that are available to product and system designers at their discretion. They allow designers to trade off functionality, cost, and other factors in order to produce products that meet their users' expectations. Permissions are neutral and imply no preference as to their implementation.

OBSERVATIONs explicitly highlight some of the important nuances of the specification. They help the readers to fully understand some of the implications of the specification's requirements and/or the rationale behind particular requirements. They generally provide valuable design guidance.

All rules, recommendations, permissions, and observations must be considered in the context of the surrounding text, tables, and figures. Rules may explicitly or implicitly incorporate information from the text, tables, and figures. Although the authors of this specification have gone to significant effort to insure that all of the necessary requirements are spelled out in the rules, it is possible that some important requirements appear only in the specification's free text. Conservative design practice dictates that such embedded requirements be treated as rules.

The AXIe-2 specification is based on several PXISA® specifications and AXIe 1.0 hardware specifications. Relevant PXISA® numbered requirements are explicitly referenced in this specification's rules, recommendations, permissions, and observations. These requirements are incorporated along with their supporting context (text, tables, figures, etc.). Any numbered requirement that is not explicitly included by this specification's rules, recommendations, permissions, or observations, is excluded from the AXIe-2 requirements.

Successful implementation of AXIe products and systems requires in-depth knowledge of the AXIe 1.0 Base Architecture Specification and PXISA® specifications.

2 Conformance to AXIe PCI Express Bus Standards

AXIe specifies three types of PCI Express Bus devices: chassis, system modules, and modules. When the term *devices* is used in this document, it refers to any of these types of devices.

Section 2.1, *General Requirements,* describes the general requirements for usage of the AXIe trademark. Section 2.2, *Specifying Compliance*

Device Compliance Criteria, describes specific product designations that are used in conjunction with the AXIe trademark.

2.1 General Requirements

Members, licensees or authorized agents of the AXIe Consortium use of the AXIe trademark must comply with these policies as amended from time to time. Users are responsible to follow the most recent version of these guidelines. Please visit www.axiestandard.org/ to obtain the most recent version.

- One must be a member, licensee or authorized agent of the AXIe Consortium to use the trademark or logo for marketing collateral (web, data sheets, ads, presentations, etc.).

- One must be a member or licensee or authorized agent of the AXIe Consortium with a conformant product to use the trademark or logo on a product.

- Only devices that meet the AXIe standard as described in section 2.2, *Specifying Compliance*, may use the AXIe trademark or logo.

- Software products may use the AXIe trademark or logo in marketing collateral if they can communicate with AXIe compliant devices.

- System integrators may us the AXIe trademark or logo in marketing collateral if they are using or accessing AXIe compliant devices.

- Devices must comply with all AXIe rules to use the AXIe trademark or Logo in this document. All devices shall meet the rules listed to qualify for using the AXIe trademark.

- AXIe is a trademark of the AXIe Consortium, Inc., which reserves the right to allow or disallow use of the AXIe trademark and logo on products and published material based on conformance to the AXIe Standards.

- Failure to comply with these guidelines or misuse of the AXIe Consortium's trademark or logo may result in the revocation of your right to use the AXIe Consortium's trademark or logo and possible legal actions.

- Vendor (company) name and logo must appear on any materials that display the AXIe trademark or logo. To prevent branding confusion, vendor name and logo must be larger and more prominent than the AXIe trademark or logo in all applications.

Because of the variety of communication mediums, this document cannot be all-inclusive. Case-by-case issues may arise and good judgment should be used. For questions, please contact Bob Helsel at execdir@axiestandard.org . All appropriate customer interfaces and electronic and hard-copy communications referring to products with these capabilities may carry the AXIe trademark. Interfaces and communications include, but are not limited to, Web pages, direct mail, brochures, product overviews, catalogs, application notes, presentations, and tradeshow materials.

2.2 Specifying Compliance

2.2.1 Device Compliance Criteria

AXIe devices that utilize the PCI Express bus for communication shall comply with all of the RULES in AXIe-1 and AXIe-2. They are permitted to use the AXIe trademark along with the appropriate designation:

AXIe™ Compliant Module

AXIe™ Compliant Chassis

AXIe™ Compliant Chassis with Embedded System Module

AXIe™ Compliant System Module

2.2.2 Preliminary AXIe-0 Compliance

Devices that are compliant with the Preliminary AXIe-0 specification are permitted to use the AXIe trademark and shall cite compliance to Preliminary AXIe-0 specification, but must clearly state that the specification it complies with is preliminary. For instance: "This product complies with the *preliminary* AXIe-0 specification."

2.2.3 Software Compliance

Software that controls AXIe compliant devices is permitted to use the AXIe trademark. Software shall indicate:

Designed for AXIe™ Devices

2.2.4 System Compliance

Systems that are composed of devices that comply with AXIe-1, but do not comply with AXIe 2 are permitted to use the AXIe trademark along with the following designation:

AXIe™ Hardware Compliant System

3 AXIe Trademark and Logo Usage

This section provides guidelines for the use of the AXIe Consortium's trademark (including the logo) by the Consortium members, licensees and authorized agents. It is important to follow these rules as they ensure a consistent look and feel throughout all communications -- regardless of who creates them. Following these rules and properly implementing all the policies and use guidelines will ensure the AXIe trademark is treated correctly and carries a consistent, strong meaning wherever it is displayed.

3.1 Definitions:

The AXIe trademark is the letters **AXIe.**

The AXIe logo is the symbol shown in Figure 1.

Figure 1 AXIe Logo

3.2 Usage Requirements

Members, licensees or authorized agents of the AXIe Consortium use of the AXIe trademark must comply with these policies as amended from time to time. Users are responsible to follow the most recent version of these guidelines. Please visit www.axiestandard.org/ to obtain the most recent version. One must be a member, licensee or authorized agent of the AXIe Consortium to use the trademark or logo for marketing collateral (web, data sheets, ads, presentations, etc.). The trademark or logo may only be used per the following requirements:

- One must be a member or licensee or authorized agent of the AXIe Consortium with a conformant product to use the trademark or logo on a product.
- Only devices that meet the AXIe standard may use the AXIe trademark or logo.
- Software products may use the AXIe trademark or logo in marketing collateral if they can communicate with AXIe compliant devices.
- System integrators may us the AXIe trademark or logo in marketing collateral if they are using or accessing AXIe compliant devices.
- Devices must comply with all AXIe rules to use the AXIe trademark or Logo in this document. All devices shall meet the rules listed to qualify for using the AXIe trademark.
- AXIe is a trademark of the AXIe Consortium, Inc., which reserves the right to allow or dis**al**low use of the AXIe trademark and logo on products and published material based on conformance to the AXIe Standards.
- Failure to comply with these guidelines or misuse of the AXIe Consortium's trademark or l**og**o may result in the revocation of your right to use the AXIe Consortium's trademark or logo and possible legal actions.
- Vendor (company) name and logo must appear on any materials that display the AXIe tradem**ar**k or logo. To prevent branding confusion, vendor name and logo must be larger and more prominent than the AXIe trademark or logo in all applications.

Because of the variety of communication mediums, this document cannot be all-inclusive. Case-by-case issues may arise and good judgment should be used. For questions, please contact Bob Helsel at execdir@axiestandard.org .
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www.axiestandard.org   *10*

ll appropriate customer interfaces and electronic and hard-copy communications referring to products with these capabilities may carry the AXIe trademark. Interfaces and communications include, but are not limited to, Web pages, direct mail, brochures, product overviews, catalogs, application notes, presentations, and tradeshow materials.

3.3 Trademark Use Standards

3.3.1 Logo Mark

The AXIe Logo is the standalone visual implementation of the AXIe Consortium. The logo has a precise position and scaled relationship which must be maintained. ***The AXIe logo shall not be altered or distorted.***

3.3.2 The AXIe Trademark and the AXIe Consortium Name Use in Text

The AXIe Trademark (AXIe) shall be used with the first three letters in upper case and the last letter in lower case, so "AXIe" is correct (never use "AXIE" or "axie"). The Consortium name must be used in full when it is first referenced in text, and should appear in uppercase and lowercase and in the same style and weight as the rest of the text. Thereafter, you may choose to drop the descriptor and refer to the organization as the Consortium.

3.3.3 AXIe Logo for Product Labeling

The size of the AXIe logo in product labeling has not been specified, since the breadth of products may dictate a considerable degree of flexibility.

3.4 Logo Use Standards

3.4.1 Scale

The AXIe Consortium logo may be uniformly enlarged or reduced as illustrated in Figure 2, provided that legibility and quality are not compromised. There is no minimum recommended size of the AXIe logo. The precision of the printing or reproduction process and the quality of the substrate used at small sizes must be sufficient to reproduce all the elements of the trademark clearly and accurately. Some printing processes, such as silkscreen, and other mediums, such as the Web, do not always reproduce small letterforms and elements clearly. Accordingly, reproduction of the trademark in these mediums should be larger.

Figure 2 Various sizes of AXIe logo

3.4.2 Clear Space

Clear space is the area surrounding the visual cue that should be free of any text, graphics, borders and other logos. The measurement "1A" represents the clear space around the logo and is determined by the distance from the bottom of the "A" to the bottom curve of the of the "e" as shown in **Error! Reference source not found.**.
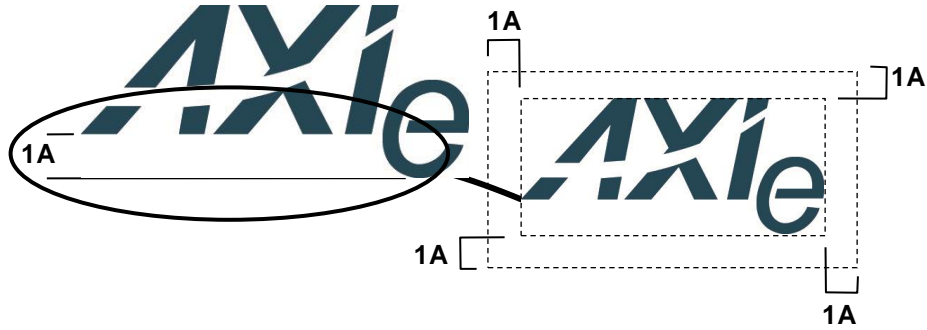
Figure 3 Required clear space around the AXIe logo

3.4.3 Color Treatments

The acceptable colors for the AXIe Consortium logo are Pantone 7477 C (or RGB, hexadecimal and CMYK equivalents, listed in Table 2 Pantone 7477 C color specifications), black, or white. The background color of the contrasting "reversed-out" or "transparent" portions of the logos can be any color. The Pantone 7477 C and black logos with white backgrounds are shown in Figure 3.

Color

Pantone 7477 C

(or equivalent)

Black

Figure 4 Pantone 7477 C and black AXIe logos

Table 2 Pantone 7477 C color specifications

Pantone	RGB			HEX (web color)	C-M-Y-K
7477 C	0	75	99	#004b63	96-64-42-26

Note: The colors shown here have not been evaluated by Pantone, Inc. for accuracy and may not match the PANTONE Color Standards. PANTONE is a U.S. trademark of Pantone, Inc.

3.4.4 Approved Formats

The AXIe logos are available from the AXIe Consortium in a number of formats, including **.eps, .tif, .png, .gif, and .jpg.** For a copy of the artwork, email execdir@AXIestandard.org.

3.5 Application Examples

3.5.1 Acceptable Usage

- Members, licensees, or authorized agents of the AXIe Consortium may use the AXIe logo and trademark in conjunction with AXIe conformant products, as detailed in Section 2.2, Specifying Compliance. The logo and/or trademark may appear on the product itself or in marketing collateral.

3.5.2 Product Usage

The AXIe mark shall be a secondary visual to the host brand. It should be placed on the product away from and in a subordinate position to the host (primary) brand.

3.5.3 Unacceptable Usage

The AXIe logo shall not be altered or distorted. Some examples of unacceptable usage are shown in Figure 5.

Don't add an outline around the logo

Don't use unapproved colors or formats

Do not use as a repeated graphical element

Do Not change the type of the Logo

Do Not combine the AXIE logo with other logos

The AXIE logo is always secondary to the other brand

Figure 5 Examples of unacceptable AXIe logo usage