Recommended Extensions to IEEE 1685-2022

May 2023

Accellera Systems Initiative, 1370 Trancas Street #163, Napa, CA 94558, USA.

Notices

Accellera Systems Initiative Standards documents are developed within Accellera Systems Initiative and the Technical Committees and Working Groups of Accellera Systems Initiative, Inc. Accellera Systems Initiative develops its standards through a consensus development process, approved by its members and board of directors, which brings together volunteers representing varied viewpoints and interests to achieve the final product. Volunteers are not necessarily members of Accellera and serve without compensation. While Accellera Systems Initiative administers the process and establishes rules to promote fairness in the consensus development process, Accellera Systems Initiative does not independently evaluate, test, or verify the accuracy of any of the information contained in its standards.

Use of an Accellera Systems Initiative Standard is wholly voluntary. Accellera Systems Initiative disclaims liability for any personal injury, property or other damage, of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, or reliance upon this, or any other Accellera Systems Initiative Standard document.

Accellera Systems Initiative does not warrant or represent the accuracy or content of the material contained herein, and expressly disclaims any express or implied warranty, including any implied warranty of merchantability or suitability for a specific purpose, or that the use of the material contained herein is free from patent infringement. Accellera Systems Initiative Standards documents are supplied "**AS IS**."

The existence of an Accellera Systems Initiative Standard does not imply that there are no other ways to produce, test, measure, purchase, market, or provide other goods and services related to the scope of an Accellera Systems Initiative Standard. Furthermore, the viewpoint expressed at the time a standard is approved and issued is subject to change due to developments in the state of the art and comments received from users of the standard. Every Accellera Systems Initiative Standard is subjected to review periodically for revision and update. Users are cautioned to check to determine that they have the latest edition of any Accellera Systems Initiative Standard.

In publishing and making this document available, Accellera Systems Initiative is not suggesting or rendering professional or other services for, or on behalf of, any person or entity. Nor is Accellera Systems Initiative undertaking to perform any duty owed by any other person or entity to another. Any person utilizing this, and any other Accellera Systems Initiative Standards document, should rely upon the advice of a competent professional in determining the exercise of reasonable care in any given circumstances.

Interpretations: Occasionally questions may arise regarding the meaning of portions of standards as they relate to specific applications. When the need for interpretations is brought to the attention of Accellera Systems Initiative, Accellera Systems Initiative will initiate reasonable action to prepare appropriate responses. Since Accellera Systems Initiative Standards represent a consensus of concerned interests, it is important to ensure that any interpretation has also received the concurrence of a balance of interests. For this reason, Accellera Systems Initiative and the members of its Technical Committees and Working Groups are not able to provide an instant response to interpretation requests except in those cases where the matter has previously received formal consideration.

Comments for revision of Accellera Systems Initiative Standards are welcome from any interested party, regardless of membership affiliation with Accellera Systems Initiative. Suggestions for changes in documents should be in the form of a proposed change of text, together with appropriate supporting comments. Comments on standards and requests for interpretations should be addressed to:

Accellera Systems Initiative
1370 Trancas Street #163
Napa, CA 94558
USA

Note: Attention is called to the possibility that implementation of this standard may require use of subject matter covered by patent rights. By publication of this standard, no position is taken with respect to the existence or validity of any patent rights in connection therewith. Accellera Systems Initiative shall not be responsible for identifying

patents for which a license may be required by an Accellera Systems Initiative standard or for conducting inquiries into the legal validity or scope of those patents that are brought to its attention.

Accellera Systems Initiative is the sole entity that may authorize the use of Accellera Systems Initiative -owned certification marks and/or trademarks to indicate compliance with the materials set forth herein.

Suggestions for improvements to the Accellera Recommended Extensions to IEEE 1685-2022 are welcome. They should be sent to the group's email Reflector:

ip-xact@lists.accellera.org

The current IP-XACT Technical Committee web page is:

www.accellera.org/activities/committees/ip-xact

Participants

The following IP-XACT Working Group participants have contributed to the development of IEEE Std 1685-2022 or the creation, editing, and review of this document describing Accellera Recommended Vendor Extensions for IEEE Std 1685-2022.

Erwin de Kock, NXP Semiconductors, *Chair*
Jean-Michel Fernandez, Arteris IP, *Vice-Chair*
John Blyler, Accellera Systems Initiative, Inc., *Technical Editor*

Grégoire Avot, Arteris IP
Thomas Burg, STMicroelectronics
David Cheng, Qualcomm, Inc.
David Courtright, Advanced Micro Devices (AMD)
Edwin Dankert, ARM, Ltd.
Sylvain Duvillard, ARM, Ltd.
Rakesh Gulati, Advanced Micro Devices (AMD)
Eyal Herzberg, Cadence Design Systems, Inc.
Arthur Kalsing, Defacto Technologies
Devender Khari, Agnisys, Inc.
Benoit Lafage, Arteris IP
David Murray, ARM, Ltd.
Mark Noll, Synopsys, Inc.
Kamlesh Pathak, Intel
Robert Lessmeier, Texas Instruments, Inc.
Uwe Simm, Cadence Design Systems, Inc.
Vincent Thibaut, Arteris IP
Michael Velten, Infineon Technologies AG.
Scott Venier, NVIDIA Corporation
Richard Weber, Semifore, Inc.

and our dear friend **Joe Daniels** whose spirit is with us.

Table of Contents

1. Overview

This section explains the scope and purpose of this standard. Furthermore, it gives an overview of the basic concepts and summarizes its contents.

1.1. Scope

This standard describes XML schemas for IP-XACT vendor extensions that have been defined by the Accellera IP-XACT Working Group. These XML schemas are called Accellera Vendor Extensions.

1.2. Purpose

This standard provides a way to describe conditional elements to IEEE Std 1685-2022 using IP-XACT vendor extensions. Although IEEE Std 1685-2014 introduced conditional elements, the IP-XACT Working Group decided to remove conditional elements in IEEE Std 1685-2022. The standard described in this document is used by the IP-XACT Working Group to describe conditional elements in 1685-2022 XML documents that are created by XSL transformations of 1685-2014 XML documents with conditional elements. The purpose of this standard is not to introduce new conditional elements; only the conditional elements that are present in 1685-2014 are supported with vendor extensions.

1.3. Concepts

Accellera IP-XACT vendor extensions make use of Accellera vendor extension containers. An Accellera vendor extension container is an XML element that can occur in an IP-XACT vendor extension. The containers are defined in a generic unversioned namespace to enable generic processing of Accellera vendor extensions by IP-XACT enabled implementations; see Section 1.4. The sub-elements of the containers are defined in domain-specified versioned namespaces such that domain-specific tools do not have to process information from other domains.

1.4. IP-XACT Enabled Implementations

As described in IEEE Std 1685-2022, Section 1.5.1, when modifying any existing IP-XACT descriptions, IP-XACT enabled design environments shall do so without losing any preexisting information. In particular, they shall preserve any vendor extension data included in the existing IP-XACT description.

In addition, IP-XACT enabled implementations that support vendor extensions shall not corrupt IP-XACT descriptions containing vendor extensions. More specifically, such implementations shall process name and id references correctly and avoid dangling references.

1.5. Outline

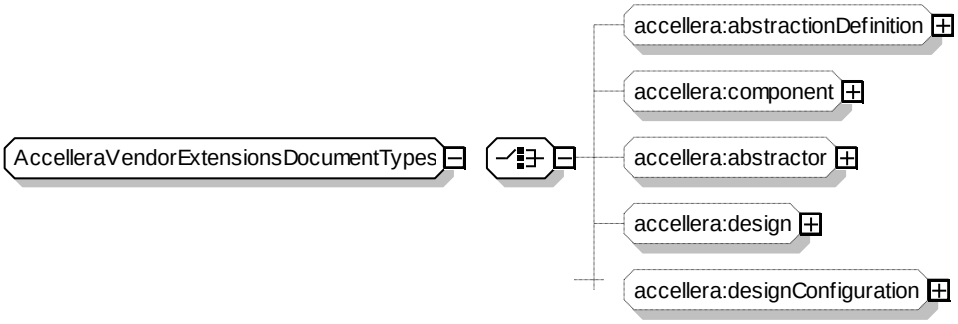
Section 2 defines the XML schema for the **accellera** namespace to describe the organization of Accellera vendor extensions containers in groups. Section 3 through Section 7 describe the Accellera vendor extensions contains for the different groups **abstractionDefinition**, **component**, **abstractor**, **design**, and **designConfiguration**, respectively. Each container contains the **isPresent** element which is part of the **accellera-cond** namespace.

2. Accellera vendor extensions container groups

An *Accellera vendor extensions container* is a container for Accellera vendor extensions meta-data. All Accellera vendor extensions containers are defined in the namespace “accellera”. This namespace is not versioned to enable generic standard extensions support from IP-XACT enabled design environments and tools. The Accellera vendor extensions container name is identical to the ipxact element name that it extends, except for the element names that exist in abstraction definitions and abstractor which conflict with element names in components such as port and view. The Accellera vendor extensions containers for these elements in abstraction definitions are prefixed with “abstractionDefinition” in order to distinguish them from the Accellera vendor extensions containers in components; see Section 3. The Accellera vendor extensions containers for these elements in abstractors are prefixed with “abstractor” in order to distinguish them from the Accellera vendor extensions containers in components.; see Section 5.

2.1. Schema

The following schema defines groups of Accellera vendor extensions container elements.



2.2. Description

Each element of the ***AccelleraVendorExtensionsDocumentTypes*** defines a group of Accellera vendor extensions containers:

a) ***accellera:abstractionDefinition*** (optional) describes vendor extensions containers for an **abstractionDefinition**.
b) ***accellera:component*** (optional) describes vendor extensions containers for a **component**.
c) ***accellera:abstractor*** (optional) describes vendor extensions containers for an **abstractor**.
d) ***accellera:design*** (optional) describes vendor extensions containers for a **design**.
e) ***accellera:designConfiguration*** (optional) describes vendor extensions containers for a **designConfiguration**.

3. Accellera vendor extensions for abstraction definition

3.1. Schema

The following schema defines the Accellera vendor extensions for an **abstractionDefinition** element.

3.2. Description

The **abstractionDefinition** group defines the following Accellera vendor extensions containers inside an **abstractionDefinition** element:

a) **accellera:abstractionDefinitionPort** (optional) describes a vendor extensions container for a **logicalPort** element.

Each container element contains the following sub-element:

a) **accellera-cond:isPresent** (mandatory; type: ***unsignedBitExpression***) element describes whether the ipxact element enclosing the ipxact:vendorExtensions element is present in the document. If its value evaluates to 0 then the enclosing element is not present. If its value evaluates to 1 then the enclosing element is present.

3.3. Example

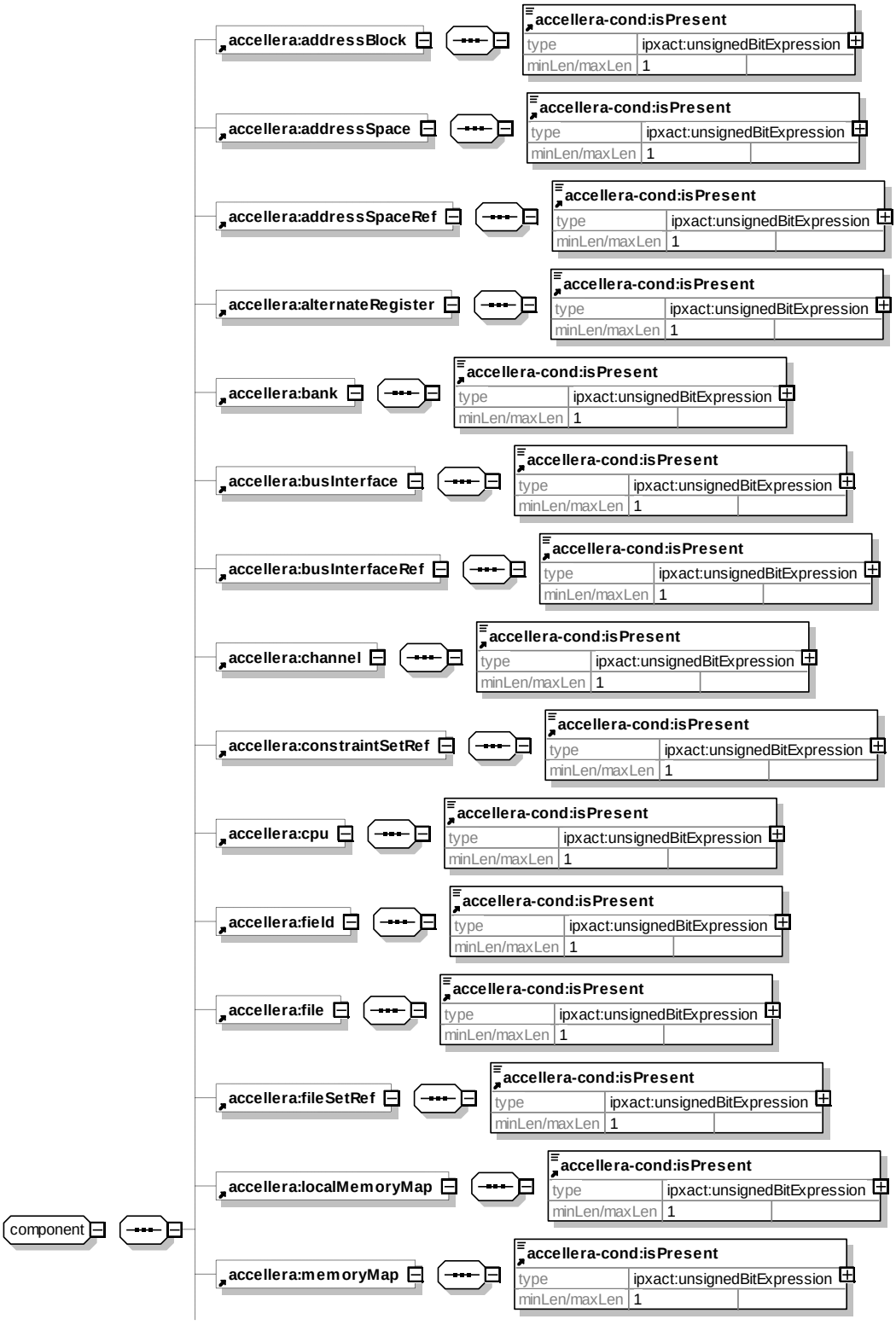
This is an example of an abstraction definition containing an Accellera vendor extensions container. The container contains the **isPresent** element. In this example, the value of the **isPresent** element evaluates to 1, hence, the element **port** enclosing the **vendorExtensions** element is present.

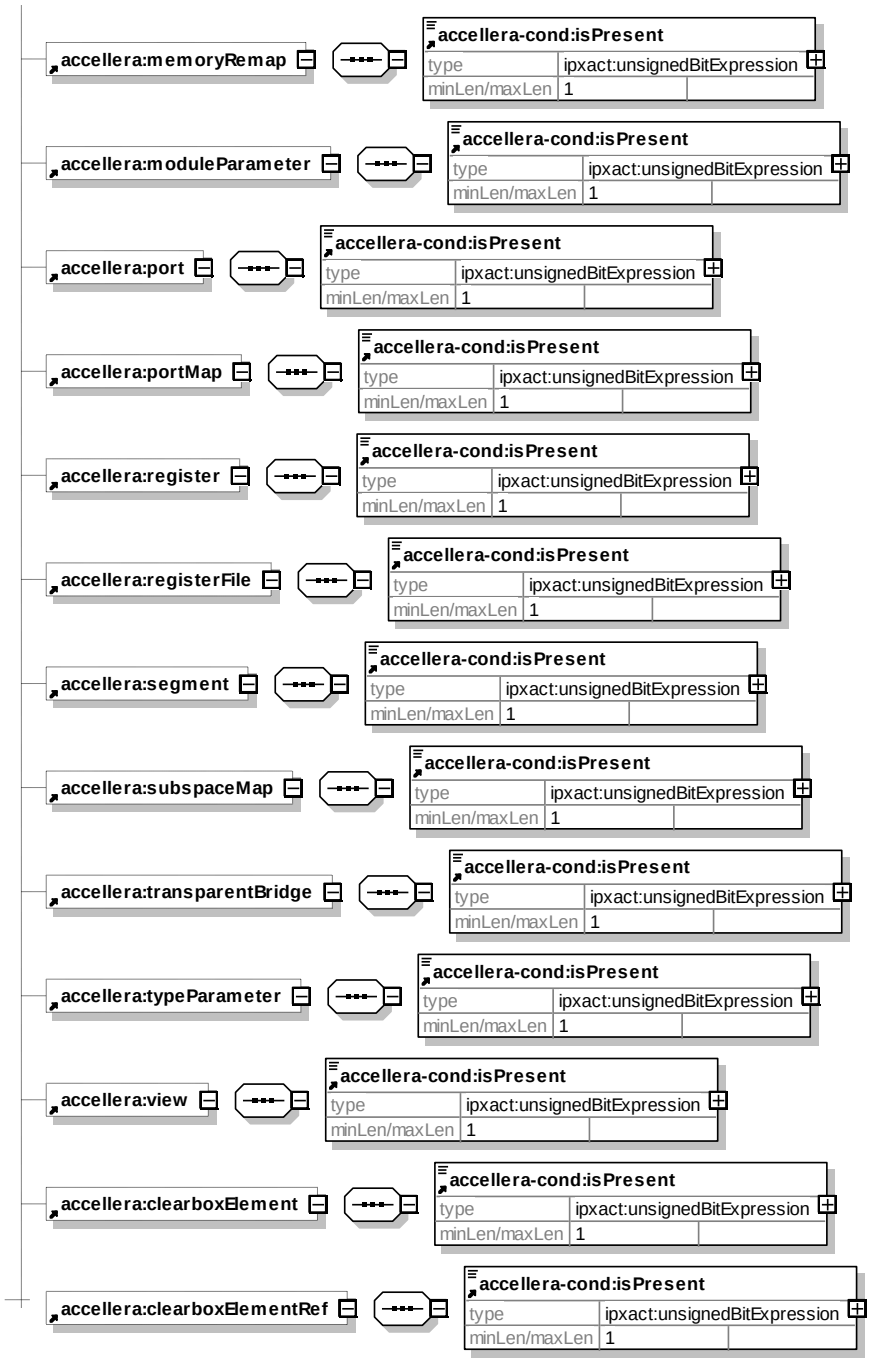
```
<?xml version="1.0"?>
<ipxact:abstractionDefinition
xmlns:ipxact="http://www.accellera.org/XMLSchema/IPXACT/1685-2022"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.accellera.org/XMLSchema/IPXACT/1685-2022
http://www.accellera.org/XMLSchema/IPXACT/1685-2022/index.xsd"
xmlns:accellera="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE"
xmlns:accellera-cond="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE/COND-
1.0">
  <ipxact:vendor>accellera.org</ipxact:vendor>
  <ipxact:library>ipxact-wg</ipxact:library>
  <ipxact:name>abstractionDefinition</ipxact:name>
  <ipxact:version>1.0</ipxact:version>
  <ipxact:busType vendor="a" library="b" name="c" version="d"/>
  <ipxact:ports>
    <ipxact:port>
      <ipxact:logicalName>logicalPortName</ipxact:logicalName>
      <ipxact:wire/>
      <ipxact:vendorExtensions>
        <accellera:abstractionDefinitionPort>
          <accellera-cond:isPresent>1</accellera-cond:isPresent>
        </accellera:abstractionDefinitionPort >
      </ipxact:vendorExtensions>
    </ipxact:port>
  </ipxact:ports>
</ipxact:abstractionDefinition>
```

4. Accellera vendor extensions for component

4.1. Schema

The following schema defines the Accellera vendor extensions for a **component** element.





4.2. Description

The **component** group defines the following Accellera vendor extensions containers inside a **component** element:

a) **accellera:addressBlock** (optional) describes a vendor extensions container for an **addressBlock** element.
b) **accellera:addressSpace** (optional) describes a vendor extensions container for an **addressSpace** element.
c) **accellera:addressSpaceRef** (optional) describes a vendor extensions container for an **addressSpaceRef** element.
d) **accellera:alternateRegister** (optional) describes a vendor extensions container for an **alternateRegister** element.
e) **accellera:bank** (optional) describes a vendor extensions container for a **bank** element.
f) **accellera:busInterface** (optional) describes a vendor extensions container for a **busInterface** element.

g) **accellera:busInterfaceRef** (optional) describes a vendor extensions container for a **busInterfaceRef** element.
h) **accellera:channel** (optional) describes a vendor extensions container for a **channel** element.
i) **accellera:constraintSetRef** (optional) describes a vendor extensions container for a **contraintSetRef** element.
j) **accellera:cpu** (optional) describes a vendor extensions container for a **cpu** element.
k) **accellera:field** (optional) describes a vendor extensions container for a **field** element.
l) **accellera:file** (optional) describes a vendor extensions container for a **file** element.
m) **accellera:fileSetRef** (optional) describes a vendor extensions container for a **fileSetRef** element.
n) **accellera:localMemoryMap** (optional) describes a vendor extensions container for a **localMemoryMap** element.
o) **accellera:memoryMap** (optional) describes a vendor extensions container for a **memoryMap** element.
p) **accellera:memoryRemap** (optional) describes a vendor extensions container for a **memoryRemap** element.
q) **accellera:moduleParameter** (optional) describes a vendor extensions container for a **moduleParameter** element.
r) **accellera:port** (optional) describes a vendor extensions container for a **port** element.
s) **accellera:portMap** (optional) describes a vendor extensions container for a **portMap** element.
t) **accellera:register** (optional) describes a vendor extensions container for a **register** element.
u) **accellera:registerFile** (optional) describes a vendor extensions container for a **registerFile** element.
v) **accellera:segment** (optional) describes a vendor extensions container for a **segment** element.
w) **accellera:subspaceMap** (optional) describes a vendor extensions container for a **subspaceMap** element.
x) **accellera:transparentBridge** (optional) describes a vendor extensions container for a **transparentBridge** element.
y) **accellera:typeParameter** (optional) describes a vendor extensions container for a **typeParameter** element.
z) **accellera:view** (optional) describes a vendor extensions container for a **view** element.
aa) **accellera:clearboxElement** (optional) describes a vendor extensions container for a **clearboxElement** element**.**
bb) **accellera:clearBoxElementRef** (optional) describes a vendor extensions container for a **clearboxElementRef** element

Each container element contains the following sub-element:

a) **accellera-cond:isPresent** (mandatory; type: ***unsignedBitExpression***) element describes whether the ipxact element enclosing the ipxact:vendorExtensions element is present in the document. If its value evaluates to 0 then the enclosing element is not present. If its value evaluates to 1 then the enclosing element is present.

4.3. Example

This is an example of a component containing Accellera vendor extensions containers. The containers contain the **isPresent** element. In this example, value 'P' of the **isPresent** elements evaluates to 1, hence, the elements **addressSpaceRef**, **busInterface**, and **addressSpace** enclosing the **vendorExtensions** elements are present. Note that parameter P is user resolvable meaning that for different instances of this component the value of P can be different.

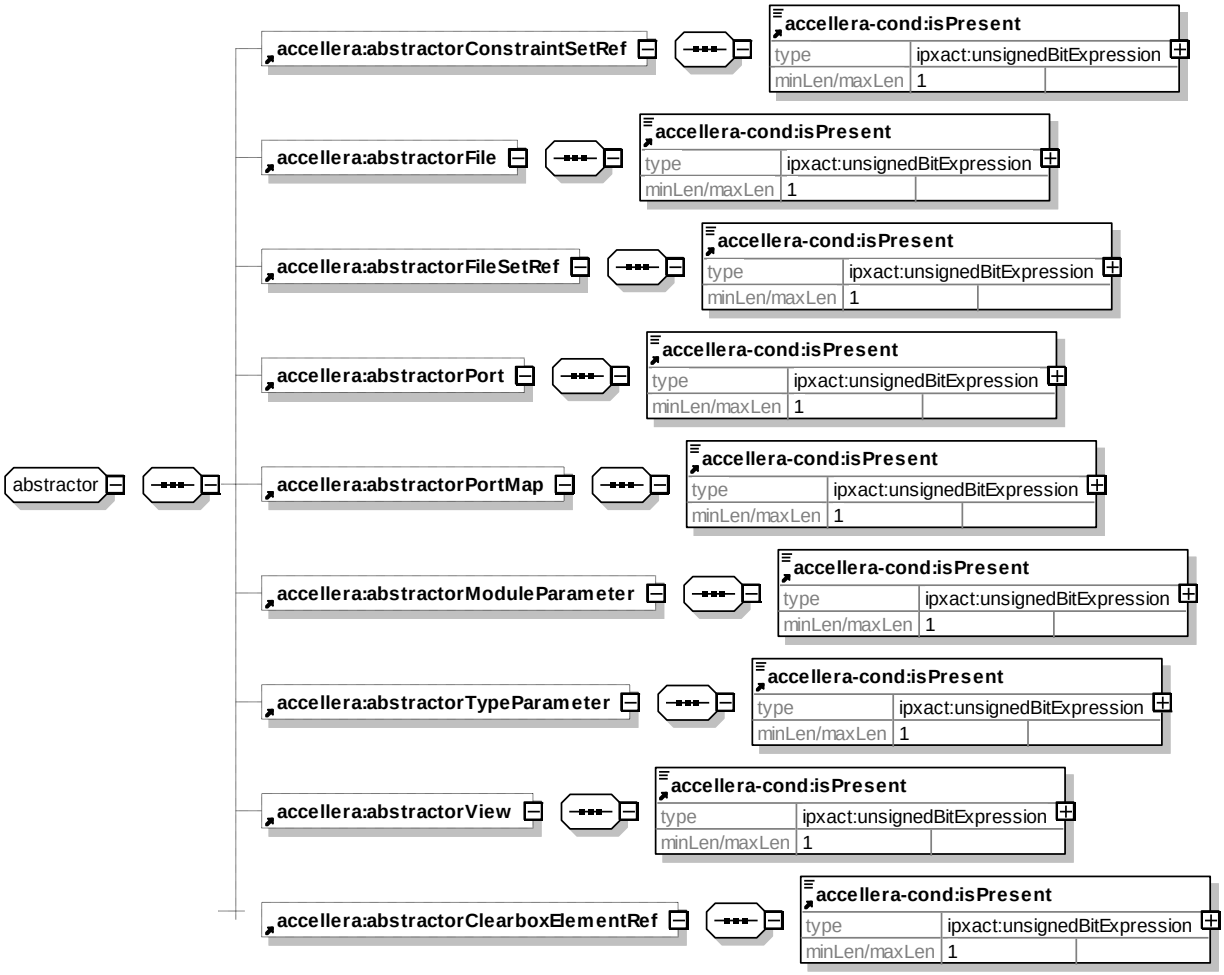
```
<?xml version="1.0"?>
<ipxact:component xmlns:ipxact="http://www.accellera.org/XMLSchema/IPXACT/1685-2022"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.accellera.org/XMLSchema/IPXACT/1685-2022
http://www.accellera.org/XMLSchema/IPXACT/1685-2022/index.xsd"
xmlns:accellera="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE"
xmlns:accellera-cond="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE/COND-
1.0">
  <ipxact:vendor>accellera.org</ipxact:vendor>
  <ipxact:library>ipxact-wg</ipxact:library>
  <ipxact:name>component</ipxact:name>
  <ipxact:version>1.0</ipxact:version>
```

```
  <ipxact:busInterfaces>
    <ipxact:busInterface>
      <ipxact:name>initiator</ipxact:name>
      <ipxact:busType vendor="a" library="b" name="c" version="d"/>
      <ipxact:initiator>
        <ipxact:addressSpaceRef addressSpaceRef="AS">
          <ipxact:vendorExtensions>
            <accellera:addressSpaceRef>
              <accellera-cond:isPresent>P</accellera-cond:isPresent>
            </accellera:addressSpaceRef>
          </ipxact:vendorExtensions>
        </ipxact:addressSpaceRef>
      </ipxact:initiator>
      <ipxact:vendorExtensions>
        <accellera:busInterface>
          <accellera-cond:isPresent>P</accellera-cond:isPresent>
        </accellera:busInterface>
      </ipxact:vendorExtensions>
    </ipxact:busInterface>
  </ipxact:busInterfaces>
  <ipxact:addressSpaces>
    <ipxact:addressSpace>
      <ipxact:name>AS</ipxact:name>
      <ipxact:range>'h1000</ipxact:range>
      <ipxact:width>32</ipxact:width>
      <ipxact:vendorExtensions>
        <accellera:addressSpace>
          <accellera-cond:isPresent>1</accellera-cond:isPresent>
        </accellera:addressSpace>
      </ipxact:vendorExtensions>
    </ipxact:addressSpace>
  </ipxact:addressSpaces>
  <ipxact:parameters>
    <ipxact:parameter parameterId="P" resolve="user">
      <ipxact:name>P</ipxact:name>
      <ipxact:value>1</ipxact:value>
    </ipxact:parameter>
  </ipxact:parameters>
</ipxact:component>
```

5. Accellera vendor extensions for abstractor

5.1. Schema

The following schema defines the Accellera vendor extensions for an **abstractor** element.



5.2. Description

The **abstractor** group defines the following Accellera vendor extensions containers inside an **abstractor** element:

a) **accellera:abstractorConstraintSetRef** (optional) describes a vendor extensions container for a **constraintSetRef** element.
b) **accellera:abstractorFile** (optional) describes a vendor extensions container for a **file** element.
c) **accellera:abstractorFileSetRef** (optional) describes a vendor extensions container for a **fileSetRef** element.
d) **accellera:abstractorPort** (optional) describes a vendor extensions container for a **port** element.
e) **accellera:abstractorPortMap** (optional) describes a vendor extensions container for a **portMap** element.
f) **accellera:abstractorModuleParameter** (optional) describes a vendor extensions container for a **moduleParameter** element.
g) **accellera:abstractorTypeParameter** (optional) describes a vendor extensions container for a **typeParameter** element.
h) **accellera:abstractorView** (optional) describes a vendor extensions container for a **view** element.
i) **accellera:abstractorClearboxElementRef** (optional) describes a vendor extensions container for a **clearboxElementRef** element.

Each container element contains the following sub-element:

a) **accellera-cond:isPresent** (mandatory; type: ***unsignedBitExpression***) element describes whether the ipxact element enclosing the ipxact:vendorExtensions element is present in the document. If its value evaluates to 0 then the enclosing element is not present. If its value evaluates to 1 then the enclosing element is present.

5.3. Example

This is an example of an abstractor containing Accellera vendor extensions containers. The containers contain the **isPresent** element. In this example, the value of the **isPresent** elements evaluates to 1, hence, the elements **portMap**, **view**, and **port** enclosing the **vendorExtensions** element are present.

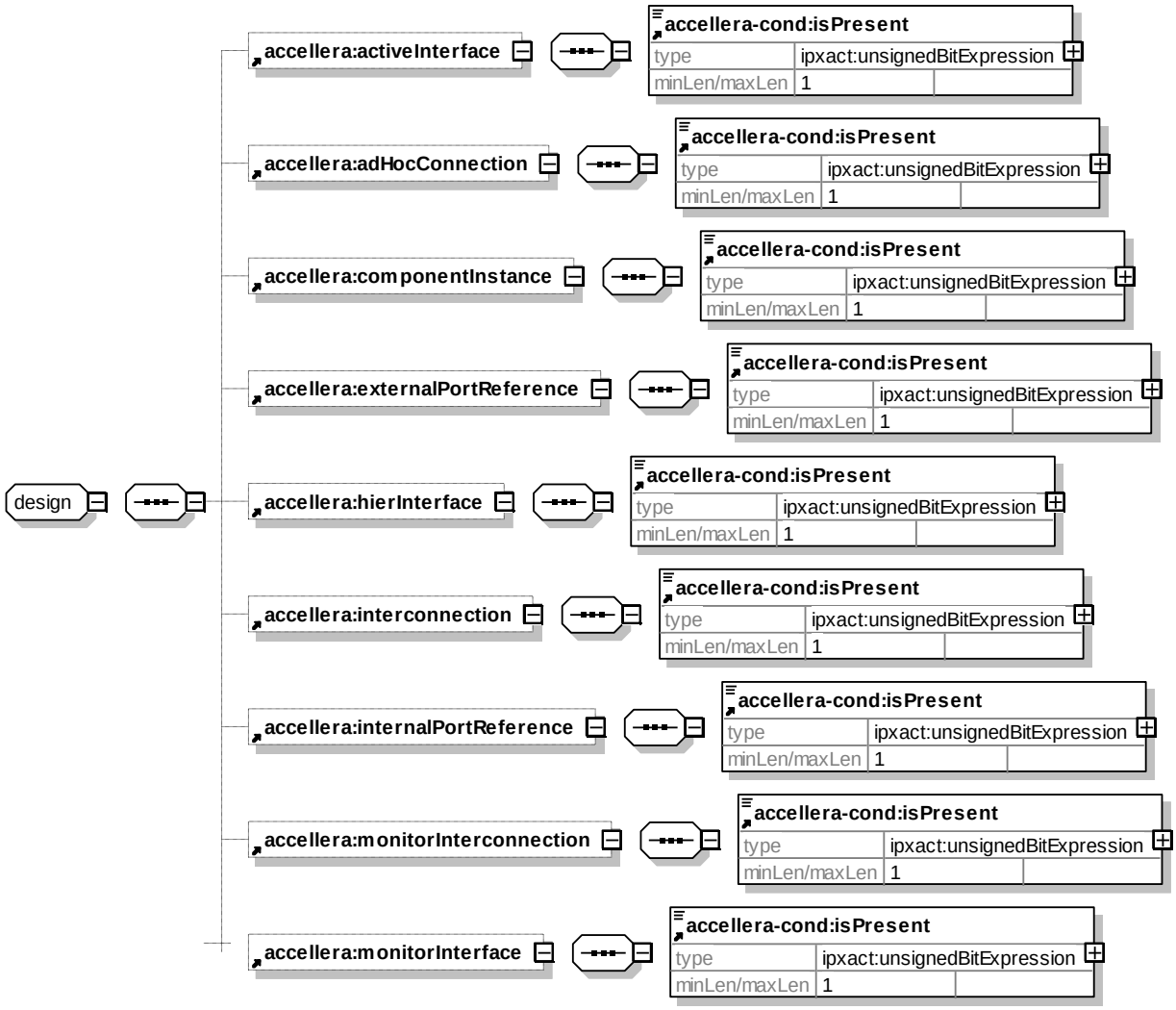
```
<?xml version="1.0"?>
<ipxact:abstractor xmlns:ipxact="http://www.accellera.org/XMLSchema/IPXACT/1685-2022"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.accellera.org/XMLSchema/IPXACT/1685-2022
http://www.accellera.org/XMLSchema/IPXACT/1685-2022/index.xsd"
xmlns:accellera="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE"
xmlns:accellera-cond="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE/COND-
1.0">
  <ipxact:vendor>accellera.org</ipxact:vendor>
  <ipxact:library>ipxact_wg</ipxact:library>
  <ipxact:name>abstractor</ipxact:name>
  <ipxact:version>1.0</ipxact:version>
  <ipxact:abstractorMode>direct</ipxact:abstractorMode>
  <ipxact:busType vendor="a" library="b" name="c" version="d"/>
  <ipxact:abstractorInterfaces>
    <ipxact:abstractorInterface>
    <ipxact:name>target</ipxact:name>
    <ipxact:abstractionTypes>
      <ipxact:abstractionType>
        <ipxact:abstractionRef vendor="a" library="b" name="c_rtl" version="d"/>
          <ipxact:portMaps>
            <ipxact:portMap>
              <ipxact:logicalPort>
                <ipxact:name>ACLK</ipxact:name>
              </ipxact:logicalPort>
              <ipxact:physicalPort>
                <ipxact:name>aclk</ipxact:name>
              </ipxact:physicalPort>
              <ipxact:vendorExtensions>
                <accellera:abstractorPortMap>
                  <accellera-cond:isPresent>1</accellera-cond:isPresent>
                </accellera:abstractorPortMap>
              </ipxact:vendorExtensions>
            </ipxact:portMap>
          </ipxact:portMaps>
        </ipxact:abstractionType>
      </ipxact:abstractionTypes>
    </ipxact:abstractorInterface>
    <ipxact:abstractorInterface>
      <ipxact:name>initiator</ipxact:name>
      <ipxact:abstractionTypes>
        <ipxact:abstractionType>
          <ipxact:abstractionRef vendor="a" library="b" name="c" version="d"/>
        </ipxact:abstractionType>
      </ipxact:abstractionTypes>
    </ipxact:abstractorInterface>
  </ipxact:abstractorInterfaces>
  <ipxact:model>
    <ipxact:views>
      <ipxact:view>
        <ipxact:name>view</ipxact:name>
        <ipxact:vendorExtensions>
          <accellera:abstractorView>
```

```
            <accellera-cond:isPresent>1</accellera-cond:isPresent>
          </accellera:abstractorView>
        </ipxact:vendorExtensions>
      </ipxact:view>
    </ipxact:views>
    <ipxact:ports>
      <ipxact:port>
        <ipxact:name>aclk</ipxact:name>
        <ipxact:wire>
          <ipxact:direction>in</ipxact:direction>
        </ipxact:wire>
        <ipxact:vendorExtensions>
          <accellera:abstractorPort>
            <accellera-cond:isPresent>1</accellera-cond:isPresent>
          </accellera:abstractorPort>
        </ipxact:vendorExtensions>
      </ipxact:port>
    </ipxact:ports>
  </ipxact:model>
</ipxact:abstractor>
```

6. Accellera vendor extensions for design

6.1. Schema

The following schema defines the Accellera vendor extensions for a **design** element.



6.2. Description

The **design** group defines the following Accellera vendor extensions containers inside a **design** element:

a) **accellera:activeInterface** (optional) describes a vendor extensions container for an **activeInterface** element.
b) **accellera:adHocConnection** (optional) describes a vendor extensions container for an **adHocConnection** element.
c) **accellera:componentInstance** (optional) describes a vendor extensions container for a **componentInstance** element.
d) **accellera:externalPortReference** (optional) describes a vendor extensions container for an **externalPortReference** element.
e) **accellera:hierInterface** (optional) describes a vendor extensions container for an **hierInterface** element.
f) **accellera:interconnection** (optional) describes a vendor extensions container for an **interconnect** element
g) **accellera:internalPortReference** (optional) describes a vendor extensions container for an **internalPortReference** element.
h) **accellera:monitorInterconnection** (optional) describes a vendor extensions container for a **monitorInterconnection** element.

i) **accellera:monitorInterface** (optional) describes a vendor extensions container for a **monitorInterface** element.

Each container element contains the following sub-element:

a) **accellera-cond:isPresent** (mandatory; type: ***unsignedBitExpression***) element describes whether the ipxact element enclosing the ipxact:vendorExtensions element is present in the document. If its value evaluates to 0 then the enclosing element is not present. If its value evaluates to 1 then the enclosing element is present.

6.3. Example

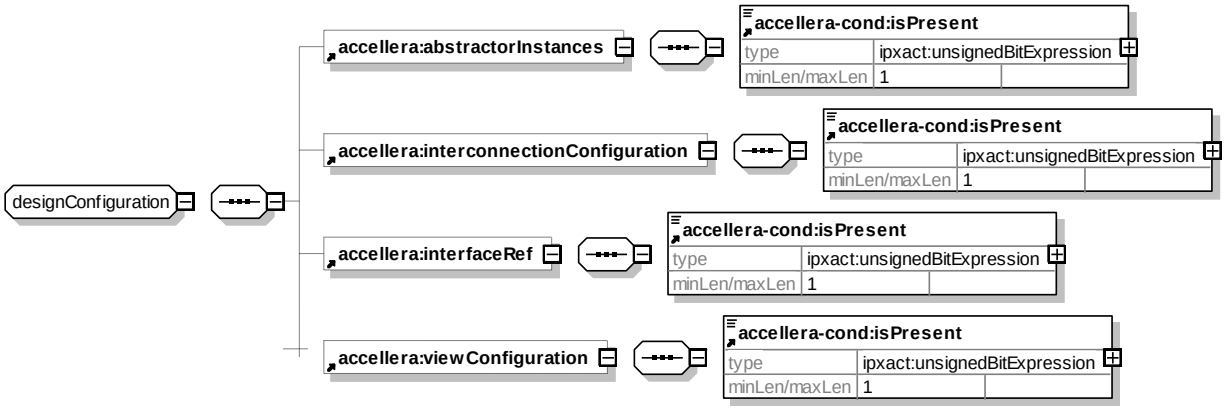
This is an example of a design containing an Accellera vendor extensions container. The container contains the **isPresent** element. In this example, the value of the **isPresent** element evaluates to 1, hence, the element **componentInstance** enclosing the **vendorExtensions** element is present.

```
<?xml version="1.0"?>
<ipxact:design xmlns:ipxact="http://www.accellera.org/XMLSchema/IPXACT/1685-2022"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.accellera.org/XMLSchema/IPXACT/1685-2022
http://www.accellera.org/XMLSchema/IPXACT/1685-2022/index.xsd"
xmlns:accellera="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE"
xmlns:accellera-cond="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE/COND-
1.0">
  <ipxact:vendor>accellera.org</ipxact:vendor>
  <ipxact:library>ipxact-wg</ipxact:library>
  <ipxact:name>design</ipxact:name>
  <ipxact:version>1.0</ipxact:version>
  <ipxact:componentInstances>
    <ipxact:componentInstance>
      <ipxact:instanceName>instance</ipxact:instanceName>
      <ipxact:componentRef vendor="a" library="b" name="c" version="d"/>
      <ipxact:vendorExtensions>
        <accellera:componentInstance>
          <accellera-cond:isPresent>1</accellera-cond:isPresent>
        </accellera:componentInstance>
      </ipxact:vendorExtensions>
    </ipxact:componentInstance>
  </ipxact:componentInstances>
</ipxact:design>
```

7. Accellera vendor extensions for design configuration

7.1. Schema

The following schema defines the Accellera vendor extensions for a **designConfiguration** element.



7.2. Description

The **designConfiguration** group defines the following Accellera vendor extensions containers inside a **designConfiguration** element:

a) **accellera:abstractorInstances** (optional) describes a vendor extensions container for an **abstractorInstances** element.
b) **accellera:interconnectionConfiguration** (optional) describes a vendor extensions container for an **adHocConnection** element.
c) **accellera:interfaceRef** (optional) describes a vendor extensions container for an **interfaceRef** element.
d) **accellera:viewConfiguration** (optional) describes a vendor extensions container for a **viewConfiguration** element.

Each container element contains the following sub-element:

a) **accellera-cond:isPresent** (mandatory; type: ***unsignedBitExpression***) element describes whether the ipxact element enclosing the ipxact:vendorExtensions element is present in the document. If its value evaluates to 0 then the enclosing element is not present. If its value evaluates to 1 then the enclosing element is present.

7.3. Example

This is an example of a design configuration containing Accellera vendor extensions containers. The containers contain the **isPresent** element. In this example, the value of the **isPresent** element evaluates to 1, hence, the elements **abstractorInstances**, **interconnectionConfiguration**, **interfaceRef**, and **viewConfiguration** enclosing the **vendorExtensions** element are present.

```
<?xml version="1.0"?>
<ipxact:designConfiguration
xmlns:ipxact="http://www.accellera.org/XMLSchema/IPXACT/1685-2022"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.accellera.org/XMLSchema/IPXACT/1685-2022
http://www.accellera.org/XMLSchema/IPXACT/1685-2022/index.xsd"
xmlns:accellera="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE"
xmlns:accellera-cond="http://www.accellera.org/XMLSchema/IPXACT/1685-2022-VE/COND-
1.0">
  <ipxact:vendor>accellera.org</ipxact:vendor>
  <ipxact:library>ipxact-wg</ipxact:library>
  <ipxact:name>designConfiguration</ipxact:name>
  <ipxact:version>1.0</ipxact:version>
  <ipxact:interconnectionConfiguration>
    <ipxact:interconnectionRef>interconnection</ipxact:interconnectionRef>
```

```
    <ipxact:abstractorInstances>
      <ipxact:interfaceRef componentRef="a" busRef="b">
        <ipxact:vendorExtensions>
          <accellera:abstractorInterfaceRef>
            <accellera-cond:isPresent>1</accellera-cond:isPresent>
          </accellera:abstractorInterfaceRef>
        </ipxact:vendorExtensions>
      </ipxact:interfaceRef>
      <ipxact:abstractorInstance>
        <ipxact:instanceName>abstractorInstance</ipxact:instanceName>
        <ipxact:abstractorRef vendor="a" library="b" name="c" version="d"/>
        <ipxact:viewName>view</ipxact:viewName>
      </ipxact:abstractorInstance>
      <ipxact:vendorExtensions>
        <accellera:abstractorInstances>
          <accellera-cond:isPresent>1</accellera-cond:isPresent>
        </accellera:abstractorInstances>
      </ipxact:vendorExtensions>
    </ipxact:abstractorInstances>
    <ipxact:vendorExtensions>
      <accellera:interconnectionConfiguration>
        <accellera-cond:isPresent>1</accellera-cond:isPresent>
      </accellera:interconnectionConfiguration>
    </ipxact:vendorExtensions>
  </ipxact:interconnectionConfiguration>
  <ipxact:viewConfiguration>
    <ipxact:instanceName>instance</ipxact:instanceName>
    <ipxact:view viewRef="view"/>
    <ipxact:vendorExtensions>
      <accellera:viewConfiguration>
        <accellera-cond:isPresent>1</accellera-cond:isPresent>
      </accellera:viewConfiguration>
    </ipxact:vendorExtensions>
  </ipxact:viewConfiguration>
</ipxact:designConfiguration>
```