

HDMI认证规则与流程剖析

百佳泰股份有限公司

(Tina Yu)

Agenda

- HDMI Certification Flow Chart
- Capabilities Declaration Form (CDF)



HDMI Certification Flow Chart

Becoming an Adopter



Product Design

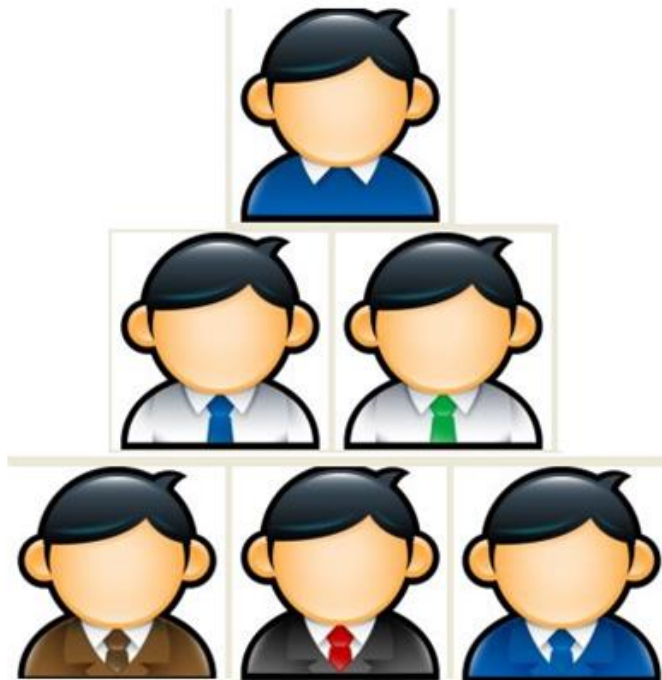


Compliance Test

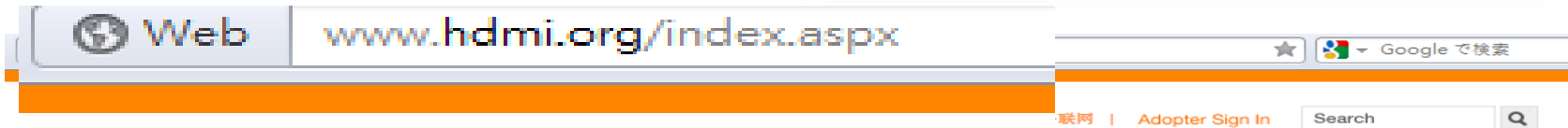


HDMI Certification

- HDMI Group



Becoming an Adopter



Home

Manufacturers

Introducing HDMI 1.4
Specification

Becoming an Adopter

Adopter Extranet

采纳者外联网

Approved Connector List

Testing Policies

Test Equipment

Manufacturers

Authorized Test Centers

Events & Press



3 of 6

Feature

HDMI 1.4

No Use of HDMI Version Numbers

Major Update to Trademark and Logo Guidelines
—January 2012

> [How-to Guides for Trademark Use](#)

HDMI® Product Finder Features Fully-Compliant
Products from the Following Adopters

LEADER
Technology Innovator



Becoming an Adopter

- 2. Simply complete the initial application form

Business Information

Company Name:

Company Name in Alternate Language:

Company Website: http://

Country: --Choose One From The Dropdown Menu--

Company Address Line 1:

Company Address Line 2:

Company Address Line 3:

City:

State:

Postal Code:

Phone Number:

Fax Number:

Country: Consumer Electronics Products

What kind of HDMI product(s) you are planning to develop/make? (Please select all that apply.)

Set Top Boxes/DVRs (Cable/Satellite/Terrestrial/IP/DSL)

Cables

DTVs

Standard Definition DVD Player/Recorders

High Definition Optical Disc Players/Recorders (HD DVD & Blu-ray)

AV Receiver/Pre-Amplifier

Projectors

Camcorders and digital still cameras

Mobile Phones

Portable Media Players

Game Consoles & Handheld Games

Repeaters/Boosters

Switches & Splitters

"Home Theater in a Box" (Bundled AV receiver/D

PCs (Desktop/Notebooks)

PC Video Cards

PC Displays/Monitors

Other (please specify)

Product Status: --Choose One From The Dropdown Menu--

Primary Contact Information

First Name:

Last Name:

Job Title:

Email Address:

Phone Number:

Fax Number:

Stay Connected: I would like to receive updates from HDMI Licensing, LLC.

By choosing to opt-in, you agree that your contact information may be used by HDMI Licensing, LLC for the purposes of sending you information on HDMI-related items.

HDMI respects your desire for privacy. Personal information will not be shared with organizations without your consent, except to process data on HDMI Licensing, LLC's behalf. Please refer to HDMI's [privacy policy](#) for more information.

Licensing Option

Please select which HDMI Adopter agreement is appropriate for your company.

Manufacturers of End Products that will include HDMI:

Ten thousand fixed annual licensing fee plus royalty

Five thousand annual licensing fee plus \$1.00 administration fee per licensed product plus royalty

Manufacturers of Test Equipment:

Test Equipment Manufacturer Agreement with \$10,000 annual licensing fee

Test Equipment Manufacturer Agreement with \$5,000 annual licensing fee plus \$1.00 administration fee per test equipment unit sold



Becoming an Adopter

- Licensing Fee

| | Annual Fee (per year) | Administration Fee (per product) | Royalty Fee (per product) |
|---------------|--------------------------|-------------------------------------|------------------------------|
| End Product A | US 10000 | None | US 0.15 |
| End Product B | US 5000 | US 1 | US 0.15 |



Becoming an Adopter

- HDMI Royalty Fee

Royalty: **US\$0.15** per unit sold for each end-user Licensed Product

| Fee Reduced | Term |
|-------------|--|
| US\$0.10 | if the Adopter reasonably uses the HDMI logo on the product and promotional materials |
| US\$0.01 | if the Adopter implements HDCP content protection as set forth in the HDMI Specification; Adopters must license HDCP separately from DCP, LLC, |

– Lowest rate is US\$0.04 per unit sold



Becoming an Adopter

- 3. After confirm your contact information, send you a link to download and review the Adopter Agreement(s).
- 4. Then “Print and fill out the Adopter Agreement”.
- 5. Return agreement with your licensing fee.
- 6. Receive a account and password.



HDMI Certification Flow Chart

Becoming an Adopter



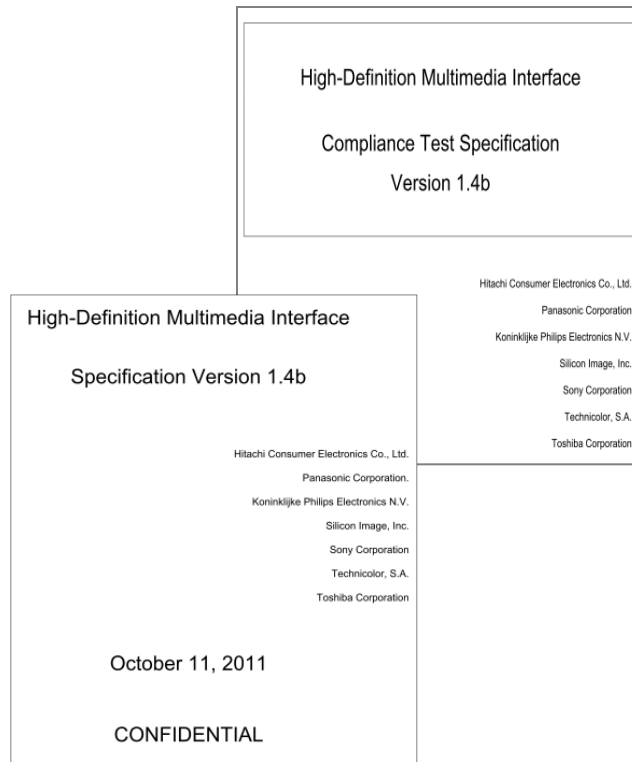
Product Design



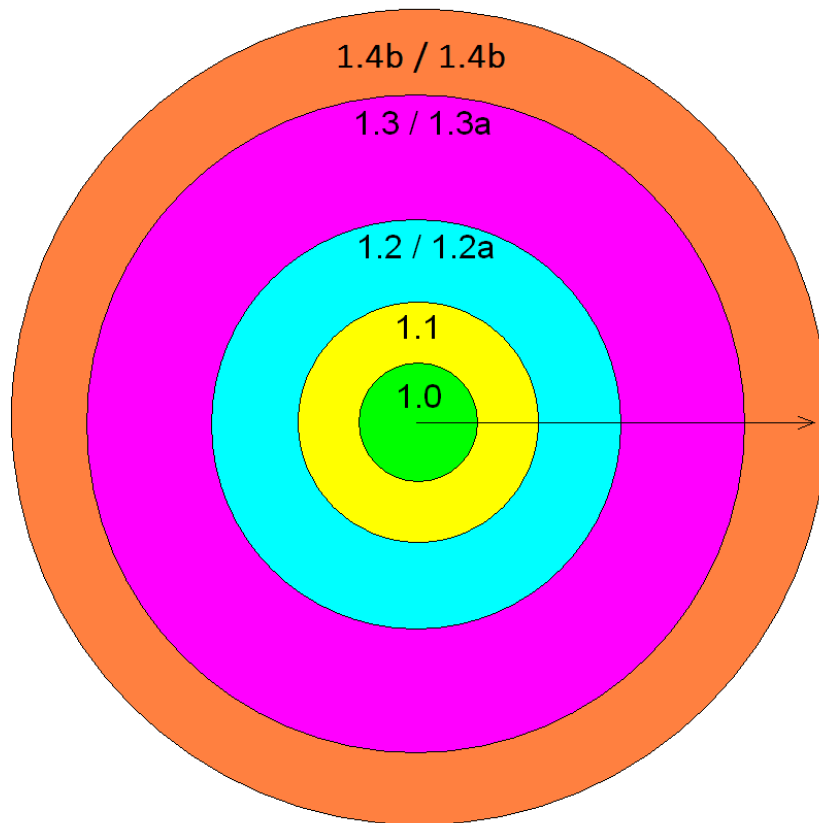
Compliance Test



HDMI Certification



Product Design



HDMI Ethernet Channel
Audio Return Channel
3D over HDMI
4K x 2K Video Support
Additional Color Spaces
Micro HDMI connector
Automotive Connection

Higher Speeds
Deep Color
x.v Color
High Bitrate Audio
Lip Sync
Mini Connector

CEC

PC support
Super Audio CD

DVD-Audio

Digital A/V Standard

Adopter Extranet

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HDMI Certification Flow Chart

Becoming an Adopter



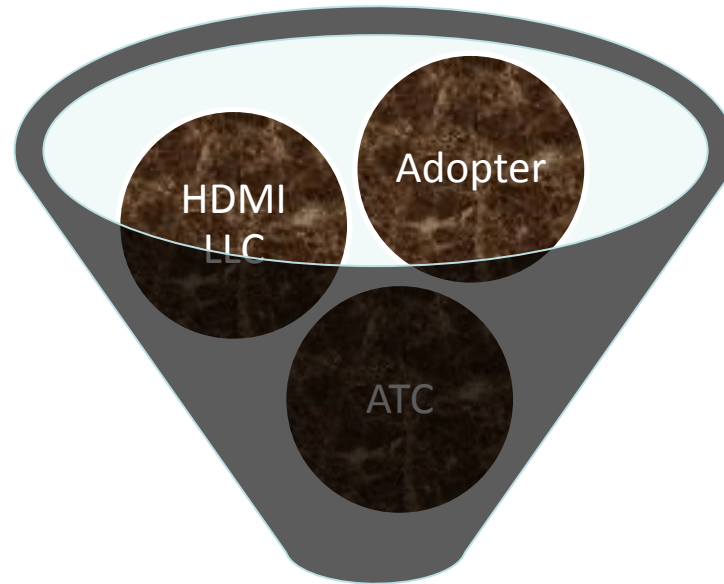
Product Design



Compliance Test



HDMI Certification



HDMI[®]
HIGH-DEFINITION MULTIMEDIA INTERFACE



Compliance Test -- Test Policy

Test Policy:

1. DUT should meet “Current Specification and CTS” before market.
2. First Production Model of each Product type should test in the ATC.
3. The HDMI Compliance Test Specification represents the minimum compliance testing required for Licensed Products. Successful completion of the Compliance Test Specification or ATC Testing does not guarantee that any product will conform to the High-Definition Multimedia Interfaces, function correctly or interoperate with any other product.



Compliance Test -- Test Policy

Product Type

- Source
- Sink
- Cable
- Repeater



Compliance Test -- Test Policy

- **First Production Model**

- The first production model under each Licensed product category (i.e, Source, Sink, Repeater, and Cable) from each adopter must be tested at ATC
- Adopters are encouraged to test Licensed Products at their own facilities prior to ATC test



Compliance Test -- Test Policy

- **Family Model (ATC testing only + Device only)**
 - Devices only qualify as members of the same family when they have the same characteristics and behavior of the DUT and also meet all of the criteria set forth in the Family Model Declaration Form (e.g. such family all uses the same HDMI ICs, board, connectors, etc.)



Compliance Test -- Test Policy

- **Subsequent Production Model**
 - After the first Production Model in a given category has successfully passed ATC testing, the adopter shall perform self-testing for subsequent production model under the same category



Compliance Test -- Test Policy

- Test Policy (Device)

PASS

Source ★★

Sink ★★

Repeater



ATC

HDMI
Test
Report

3rd Party



Compliance Test -- Test Policy

- Test Policy (Cable)

Cable

Adopters shall submit to the ATC any new Cable Assembly product that has a length that exceeds previously submitted cable products in each cable category or that has construction substantially different than that of previously submitted cable products.



線長
5M

線長
3M

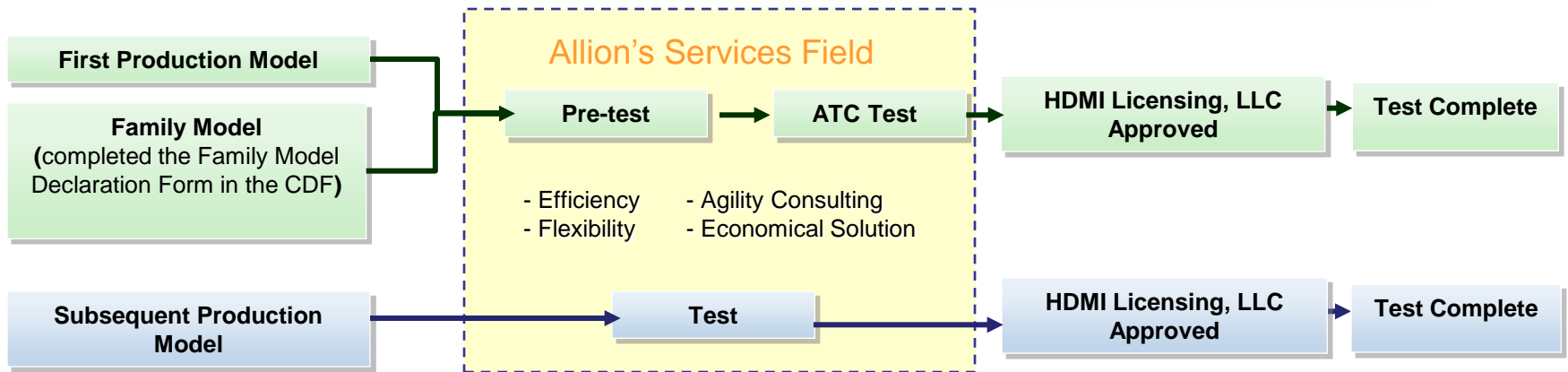
線長
1.8M



1.4版
HDMI規格
150公分



Compliance Test -- Test Policy



HDMI/MHL/HDCP – One Stop Solution at Allion

➔ Allion is the only one that has the ATC labs in TW, JP and China

Sony ATC at Allion (Taipei, TW)

Sony ATC at Allion (Tokyo, JP)

Sony ATC at Allion (Shenzhen, China)

Taipei, Taiwan

Japan, Tokyo

Shenzhen, China



Compliance Test – ATC Test Process

HDMI Compliance Test Process: <http://www.sony.net/Products/ATC/HDMI/cn/>

MHL ATC Testing

Japanese

En

资料索取

HDMI Authorized Testing Center

Sony为使客户放心使用HDMI产品，向HDMI Adopter（会员）企业提供HDMI认证测试服务。测试遵照High-Definition Media Interface (HDMI) Adopter's Agreement（会员协议）所规定的认证测试规格进行，并发送测试结果以作为HDMI Licensing, LLC注册所需的报告书。

测试概要

※由以下4个地方的测试中心进行：

- Sony HDMI ATC Office
- Sony HDMI ATC - Gotanda
- Sony HDMI ATC - Taiwan
- Sony HDMI ATC - Shenzhen

申请程序

详细情况请参考这里：

● [HDMI认证测试申请程序](#)

关于认证测试的基本信息，请参考HDMI LLC网页上的 "[Testing Policies](#)"

测试价格

请看这里的[表格](#)。

资料索取

请通过下面的调查表格索取申请测试所需的资料。稍后由Sony发送。
(仅限于HDMI Adopter)

Sony HDMI ATC的资料索取，遵循以下个人信息管理中的规定。请阅读并同意后进入下一步填写页面。

使用规定

1. 取得个人信息的组织机构

索尼公司 Sony HDMI ATC Office

2. [Allion]个人信息的收集

在用户进行咨询时，需要用户填写姓名，公司名，部门名称，电话号码，e-mail等个人信息。

3. 个人信息的使用目的

对于用户所填写的个人信息，索尼公司负责管理，并只限于向用户回答或其他有关咨询业务时使用。除法律允许范围，我们不会在没有征得用户同意的前提下，向第三方公开以及用于其他目的。
※本公司针对上述使用目的，已经把一部分的用户咨询业务委托给了外部公司。

4. 关于共同使用

在以下情况之下 索尼公司和索尼集团各公司有权利共同使用用户填写的个人信息：

(1) 共同使用的个人信息
同上2。

(2) 共同使用者的范围
索尼公司和索尼集团各公司

(3) 共同使用个人信息的目的
同上3。

(4) 共同使用个人信息管理的责任归属方
索尼公司

※索尼集团各公司是指索尼公司的子公司，其相关企业以及类似团体(不论这个公司或团体是否在日本拥有总店)。

5. 其他关于个人信息的管理

更多关于索尼公司对于个人信息的管理条例，请参照下面的「[隐私政策](#)」说明

6. 适用法律及管辖法院

本网站的使用以及对于本使用规定的解释和适用，在没有其他规定的情况下，遵循日本法律。对于本网站使用引起的纷争，在没有其他规定的情况下，东京地方法院作为第一审的专属协议管辖法院进行审理。

如果您同意个人信息处理的条款，请点击“同意”键，进入下一步填写相关信息。
您所提交的个人资料将会发送至日本Sony Corporation。以下的页面会链接到Salesforce.com公司的网站。

资料索取

同意

取消



Compliance Test – ATC Test Process

Document

- 1. Request the information of HDMI ATC application.
- 2. Submit the application form to ATC.
- 3. Execution of Agreement.
- 4. Submit the related documents (CDF, PCP etc) to ATC.

Test Fee

- Remit testing charge to ATC.

Testing

- 1. Ship the test sample set and the related necessary materials to ATC.
- 2. Perform testing of product according to HDMI Compliance Test Specification.

Result

- 1. Send test result to the applicant.
- 2. Return test sample set and accessories to the applicant



Compliance Test -- Basic Check Point

Allion's Basic Check Point

- CDF
- PCP
- Manual...etc

Document

DUT

Compliance Test

- Configuration
- AV Output
- Function Output

Usual issue:

- Sink: Auto search/ Quick Standby/Minimum requirement
- Source: Interoperability with DVI/ EDID detect/ Minimum requirement



HDMI Certification Flow Chart

Becoming an Adopter



Product Design



Compliance Test



HDMI Certification

HDMI



HDMI Certification

HDMI Compliance Testing Confirmation

Please answer in English.

All information in the white compliance section below is CONFIDENTIAL and will not be shared or released publicly.

| | |
|---------------------------------------|---|
| *Name: | <input type="text"/> |
| *Email: | <input type="text"/> |
| Company: | <input type="text"/> |
| *Address: | <input type="text"/> |
| *Type of Testing: | -- Please choose testing type -- |
| *HDMI CTS Version: | -- Please choose CTS version -- |
| *Parent Model Number/ Name: | <small>(This is the product's model number/name, for example HD-X1000.)</small> <input type="text"/> |
| *Date Passed: | <input type="text"/> |
| Required files: | |
| *Capabilities Declaration Form (CDF): | <input type="text"/> 選択... |
| *Passing HDMI Test Results: | <input type="text"/> 選択... |
| *Certificate of ATC Testing: | <small>(required for ATC testing only)</small> <input type="text"/> 選択... |
| Optional files: | |
| Additional Certificates: | <small>(For example, HDCP test results.)</small> <input type="text"/> 選択... |
| Notes <small>(optional)</small> : | |
| <input type="text"/> | |

ATC
Self test

• 1.4b

» Adopter Extranet

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HDMI Certification

Add Your Products to the HDMI Product Finder

Reach more customers by adding your Fully-Compliant HDMI products to the [HDMI Product Finder](#). This valuable public resource for channel partners and end-consumers can be viewed on www.hdmi.org/

As soon as your compliance certification is confirmed, **the information in the section below will be publicly available in the HDMI Product Finder**. Submitting product information using the form below is the most efficient way to include your products in the HDMI Product Finder. However, if you prefer to add products manually via offline product submission templates, simply uncheck the box below.

Adopters who choose to post to the Product Finder will have their submissions prioritized.

Add this product to the HDMI Product Finder.

¹All the information in the section below, **except SKU/Model #**, will be publicly available in the Product Finder web pages!

| | |
|---|---|
| Product Type¹ | (Choices based on product category) Select a Product Type |
| Product Name¹ | <input type="text"/> |
| Submitted on Behalf of¹ (Optional) | <input type="text"/> If left blank your Adopter name will appear on the Product Finder |
| SKU/Model # | <input type="text"/> Must exactly match the model number/name of a confirmed component included in the Product Finder. |
| Product Description¹ | <input type="text"/> |

| | |
|--|--|
| HDMI Keywords¹ | <input type="text"/> |
| Product Website¹ | <input type="text"/> |
| Country of Origin¹ | Select Product's Country of Origin |
| Sales Channel¹ | <input type="radio"/> Business-to-Business <input type="radio"/> Business-to-Consumer <input checked="" type="radio"/> All |
| Sales Contact Email¹ | <input type="text"/> |

¹Information will be shared on the public Product Finder web pages.

Submit Compliance Confirmation AND Product Information



HDMI Certification

Black HDMI Logo on White



Black HDMI Logo on White



White HDMI Logo on Black



White HDMI Logo on Black



Gray HDMI Logo on White



Gray HDMI Logo on White



Standard HDMI Cable



Standard HDMI Cable with Ethernet



Standard Automotive HDMI Cable



High Speed HDMI Cable



High Speed HDMI Cable with Ethernet

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Capabilities Declaration Form (CDF)

- Information
- Family
- General
- Source CDF
- Sink CDF
- Repeater CDF
- Rptr-Mini-Source
- Rptr-Mini-Sink
- Cable CDF



Capabilities Declaration Form (CDF)

Source

DVD Player

Sink



Repeater



Cable



Information
General
Family

Information
General

Source CDF

Sink CDF

Repeater CDF
Rptr-Mini-Source
Rptr-Mini-Sink

Cable CDF



Capabilities Declaration Form (CDF)

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HDMI® Product Finder

Related Links

- » [Contact Us](#)
- » [List of HDMI Adopters](#)
- » [Knowledge Base](#)
- » [FAQ](#)

Testing Policies

Prior to mass producing or distributing any Licensed Product or component that claims compliance with the HDMI Specification (or allowing someone else to do such activities), each Adopter must test a representative sample for HDMI compliance. First, the Adopter must self-test as specified in the then-current HDMI Compliance Test Specification. The HDMI Compliance Test Specification provides a suite of testing procedures, and establishes certain minimum requirements specifying how each HDMI Adopter should test Licensed Products for conformance to the HDMI Specification. Such compliance testing is limited to evaluation of a product's compliance with the HDMI Specification and is not designed to test the overall performance of any Licensed Product.

Second, each Adopter must submit the first product of each Licensed Product type (i.e. source, sink, repeater, or cable) to an HDMI Authorized Testing Center (ATC) for testing. Once an Adopter product of each type has passed testing, it is not required to submit to the ATC subsequent products of that type. For example, once an Adopter's television has passed ATC testing, it is not required to submit another television or other display for ATC testing. However, to help ensure HDMI interoperability, we encourage Adopters to use the ATCs.

The HDMI Compliance Test Specification represents the minimum compliance testing required for Licensed Products. Successful completion of the Compliance Test Specification or ATC Testing does not guarantee that any product will conform to the High-Definition Multimedia Interfaces, function correctly or interoperate with any other product. Each Adopter is solely responsible for ensuring that its products function correctly, fully comply with the HDMI Specification and Adopter Agreement, and interoperate with other products.

For more information, or to facilitate testing exercises, the following documents are available for download in .pdf format.

- [Compliance Testing Policies and Procedures Version 1.4b](#) (PDF 115Kb)
- [Capabilities Declaration Form \(CDF\) Version 1.4b](#) (XLS 332Kb)



Capabilities Declaration Form (CDF) -- Information

Application and Product Information

| | |
|----------------------------------|-------|
| Application No. (ATC use only): | ----- |
| Application Date:(ATC use only): | |

Description of Product to be Tested

| | | |
|---|--|----------|
| Product Brand Name: | | |
| Product Type (DVD player, etc.): | | (select) |
| Model (commercial name of the product): | | |
| Notes/Remarks (optional): | | |
| | | |
| | | |

Applicant Information

Must be HDMI LLC Member

| | |
|---------------------------|--|
| Name: | |
| Title: | |
| Company Name: | |
| Division (if applicable): | |
| Company address: | |
| Street | |
| City, State/Province | |
| Country | |
| Postal Code | |
| Telephone: | |
| Fax: | |
| Email: | |



Capabilities Declaration Form (CDF) -- Family

Declaration of Family Model

Instructions

Please fill out this sheet to declare Family model(s).

Applicant may use this sheet to declare that one or more models has the same HDMI characteristics and behavior as the DUT. When the DUT passes the compliance test, the name(s) of the Family model will be listed in the "Confirmation of ATC Compliance

Declaration

Applicant designated on the previous page declares that the following model(s) are model(s) within one Family. It is solely applicant's responsibility to guarantee that all

Applicant guarantees that the following Family model(s) have the same HDMI characteristics and behavior (listed below) as the **Yes** Family No. Yes / No (or "none")
 Number of model(s) included in the family:
 Family model(s) (the brand name must be mentioned if different of the Product to be tested): **Family Model Name**

注意：

1. 只有ATC测试，才能申请Family Model，才需要填写这页。
2. 如果是ATC测试，但没有Family Model，只需在下面第一个黄色格子填"No"即可，其他栏目都不需要填写。
3. 如果是HDMI Cable，不能申请Family Model，即使是ATC测试，也全部留空白。

申请人保证以下的Family model(s) 具有相同的HDMI的特性和行为。(通常填Y)

Family Model的数量 (不含送测DUT本身)

请列出Family model(s)的所有型号，如果Family model(s)中包含不同的Brand Name，也一并并Brand Name填入。
 注意：型号中请勿包含Series的字眼，也不要填送测DUT本身型号。

Confirmed Common Characteristics/Components of all Family Model(s) and DUT

| For all models within the Family, including the DUT... | Hardware | Yes / No (or "none") | |
|---|-----------|---|--|
| ...the HDMI related PCB(s) pattern, layer construction and material are the same | | | HDMI相关的印刷电路板，层数结构和材料都是一样的。(通常填Y) |
| ...all discrete components for HDMI-related circuits (e.g. ESD protection, buffer/equalizers, switches, etc.) on the PCB(s) achieve the same HDMI electrical characteristics (e.g. each component has the same part number) | | | 在印刷电路板上的所有HDMI相关电路的分离原件(如ESD保护、缓冲/均衡器、开关等)都能达到相同的HDMI特性(如每个组件都具有相同的零件号)。(通常填Y) |
| ...the HDMI transmitter IC is the same (Vendor Name / Model | | (or "none") | HDMI的发送器IC是相同的。Source通常填Yes，且后面填入(Vendor Name / Model Name)；Sink请填写None。 |
| ...the HDMI receiver IC is the same (Vendor Name / Model | | (or "none") | HDMI的接收器IC是相同的。Sink通常填Yes，且后面填入(Vendor Name / Model Name)；Source请填写None。 |
| ...the number of HDMI output ports (indicate-->) are the same. | | (or "none") | HDMI输出端子数是否相同，Source请填写Yes，Sink请填写None |
| ...the number of HDMI input ports (indicate-->) are the same. | | (or "none") | HDMI输入端子数是否相同，Sink请填写Yes，Source请填写None |
| ...the behavior of software and firmware related to HDMI control, including CEC is the same (e.g. the same source code) | Firmware | Yes / No | 控制HDMI相关的软件与固件，包含CEC等，皆具有相同的行为。(通常填Y) |
| ...the same CDF applies to all | CDF | Yes / No | 所有的Family Model皆可以套用相同的CDF(也就是能力宣告全都一样)。(通常填Y) |
| ...the HDMI connectors are the same (indicate Vendor Name(s) / Model Name(s): If more than one kind of connector is used, indicate which connectors are found on which ports (e.g. Input port 1,2 = (Vendor AA / Model BBB), Input Port 3 = (Vendor CC / Model DDD)) | Connector | | HDMI的Connector是相同的(供货商名称/型号)，如果使用超过一种Connector，那请填写清楚哪个port使用哪一种Connector(需标明供货商名称/型号) 填写格式为：Yes (Vendor Name / Model Name)，需与另一页General填写的Connector一样。 HDMI Connector必须要在协会授权许可的联结器表里找得到才可以。 (http://www.hdmi.org/manufacturers/approved_connectors.aspx) |
| ...the EDID data is the same for each same input port except for: - product identification fields (Vendor/Product ID, Monitor Name Descriptor, serial number, etc.), - display characteristics related fields (Basic Display Parameters/Features, Color Characteristics, etc.), and - checksums. | EDID | Yes / No / N.A. (no EDID in Source or Repeater) | Family Model的相同input拥有相同的EDID资料(除了产品特性的栏目，例如Vendor/Product ID、Monitor Name、序号等；显示器的参数特性以及Checksum之外) 注：Source 要写N.A. (只有Input才会有EDID) |

上述任何一个栏目填了"No"都不能申请Family Model。



Capabilities Declaration Form (CDF) -- General

| | | | |
|--|--|----------------------|--------------|
| Product: | Type: | Appl'n: ----- | |
| Instructions | | | |
| Please fill out this sheet and each of the sheets required for the category of product being submitted. For Repeaters, all sheets may need to be completed except for the Cable CDF sheet. See the Repeater CDF sheet for more detail. | | | |
| Each cell that is shaded yellow must be filled out. Most of the cells can be filled out using the drop-down menu that appears when you select the cell. The red cell to the left will change to white to indicate that the cell is filled out. | | | |
| General | | | |
| Field Name | Field Definition | Choices | Value |
| Product_Category | Is the product a Source, Sink, Repeater or | Source, etc. | (select) |
| Conn_Vendor_1 | Connector Vendor Name: | <any> | |
| Conn_Model_Name_1 | Connector Model Name or ID: | <any> | |
| Conn_1_Port_Number_s | On which port(s) is this connector found? | <any> | |
| Conn_Vendor_2 | Alternate (or second) connector Vendor Name: | <any> | |
| Conn_Model_Name_2 | Alternate (or second) connector Model Name or | <any> | |
| Conn_2_Port_Number_s | On which port(s) is this connector found? | <any> | |
| Conn_Vendor_3 | Alternate (or third) connector Vendor Name: | <any> | |
| Conn_Model_Name_3 | Alternate (or third) connector Model Name or ID: | <any> | |
| Conn_3_Port_Number_s | On which port(s) is this connector found? | <any> | |
| Connector_Note | The ATC will fail products submitted with connectors that are not on the approved list. For details, refer to following URL http://www.hdmi.org/manufacture/approved_conn_actors.aspx | | |
| Min_AC_Voltage | What is the minimum supported AC voltage? | 100, 110, etc | VAC |
| Max_AC_Voltage | What is the maximum supported AC voltage? | 110, 240 etc | VAC |
| AC_Frequency | Which freqs of AC are supported? | 50, 60, both | Hz (select) |

| | | | |
|--|---|----------------|--------------|
| Source/Sink/Repeater Characteristics | | | |
| Must be filled out for any Source, Sink or Repeater. Do not fill out if Cable. | | | |
| Product Category | | | |
| Field Name | Field Definition | Choices | Value |
| HDMI_output_count | How many HDMI output ports are on the | 0...X | |
| HDMI_input_count | How many HDMI input ports are on the product? | 0...X | |
| HDCP_Supported | Is HDCP supported on the product? | Y/N | |
| CEC Characteristics | | | |
| Field Name | Field Definition | Choices | Value |
| CEC_protocol | Is CEC protocol supported? If this field is "Y", then CEC CDF shall be submitted. | Y/N | |
| Independent_CEC | Are the CEC signals on input connectors independent? (Meaning: no physical connection between inputs and the product has a logical address of 0 for all inputs). [Note: If the product has no HDMI inputs, answer "N".] | Y/N | |
| CEC_root_device | Does the product act as a CEC root device? (Meaning: the product is a Sink or Repeater and the product's Physical Address is 0.0.0.0 and the product's EDID(s) [if present] contain Source Physical Address of P.0.0.0). [Note: If the product has no HDMI inputs, answer "N".] | Y/N | |
| HEAC Characteristics | | | |
| Field Name | Field Definition | Choices | Value |
| HEC_supported | Is HEC supported? If this field is "Y", then HEAC CDF shall be submitted. | Y/N | |
| ARC_supported | Is ARC supported? If this field is "Y", then HEAC CDF shall be submitted. | Y/N | |

如果Connector在网页上面找不到登录
那ATC有可能会拒绝你此篇Report的提交



Capabilities Declaration Form (CDF) -- CEC

| Field Name | Field Definition | Choices | Value | |
|-----------------|---|---------|-------|--|
| CEC_protocol | Is CEC protocol supported? If this field is "Y", then CEC CDF shall be submitted. | Y/N | | 请问此DUT是否有支持CEC protocol? 如果有支持, 那么CDF里面的CEC页面 (CEC General, CEC Features_Messages, CEC Features Messages2) 必须要填写。 |
| Independent_CEC | Are the CEC signals on input connectors independent? (Meaning: no physical connection between inputs and the product has a logical address of 0 for all inputs). [Note: If the product has no HDMI inputs, answer "N".] | Y/N | | 请问此产品的HDMI CEC之间连接是否是独立的? (意思是Input彼此间的实体线路都不连通, 而且每个Input的逻辑位址都是0) 注意: 如果此产品没有Input请填N。 |
| CEC_root_device | Does the product act as a CEC root device? (Meaning: the product is a Sink or Repeater and the product's Physical Address is 0.0.0.0 and the product's EDID(s) [if present] contain Source Physical Address of P.0.0.0). [Note: If the product has no HDMI inputs, answer "N".] | Y/N | | 请问此产品是CEC root device吗? (意思是这款产品一定是Sink or Repeater, 而且该产品的实体位址一定是0.0.0.0, 且EDID包含了Source的实体位址 P.0.0.0) 注意: 如果此产品没有Input请填N。 (普通的Sink通常填Y) |

CEC Table 5 Logical Addresses

| Address | Device |
|---------|---|
| 0 | TV |
| 1 | Recording Device 1 |
| 2 | Recording Device 2 |
| 3 | Tuner 1 |
| 4 | Playback Device 1 |
| 5 | Audio System |
| 6 | Tuner 2 |
| 7 | Tuner 3 |
| 8 | Playback Device 2 |
| 9 | Recording Device 3 |
| 10 | Tuner 4 |
| 11 | Playback Device 3 |
| 12 | Reserved |
| 13 | Reserved |
| 14 | Free Use |
| 15 | Unregistered (as initiator address) Broadcast (as destination address) |

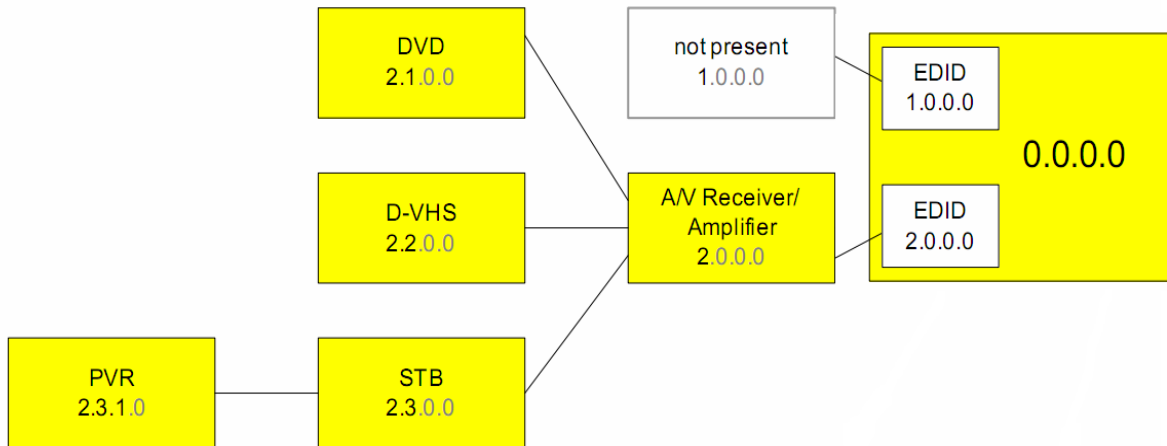


Figure 8-1 CEC and DDC line connections



Capabilities Declaration Form (CDF) -- Source CDF

Usual issue:

1. AVI InfoFrame

| | | | | |
|---------------------------|--|-----|--|---|
| Source_AVI_Required | Is the product ever required to transmit an AVI InfoFrame | Y/N | | 产品是否会一直传送AVI Infoframe |
| Source_AVI_Supported | Does the product support the transmission of the AVI InfoFrame under some conditions? | Y/N | | 产品是否在某些的情况下会送出AVI Infoframe (例如在支持YCbCr的时候, 会送出AVI Infoframe) |
| Source_AVI_Info_Available | Is any of the following information available and valid at the product?: Active Format Aspect Ratio, bar widths, overscan vs. underscan, non-uniform picture scaling, or the colorimetry of the video. | Y/N | | 产品的AVI Infoframe中有包含任何有用的信息吗? 如 Active Format Aspect Ratio, bar widths, overscan vs. underscan, non-uniform picture scaling, 或是 the colorimetry of the video 等等 |

2. Deep Color

| | | | | |
|---------------------------|---|---|--|--|
| Source_Above_165 | Does the product support any video format/color mode with a TMDS clock frequency above 165MHz? | Y/N | | 产品是否支持超过165MHz的TMDS clock frequency。 (如果产品支持1080p以及Deep Color 36bit, 那么这个一定填Y) |
| Source_Deep_Color | Does the product support any Deep Color modes? | Y/N | | 产品是否支持Deep Color (深色域) ? |
| Source_Video_Formats | Which HDMI video formats are supported by the product and at which color depths?(Select supported items below.) | <u>N, 24 bit, 30 bit, 36 bit, and/or 48 bit</u> | | 产品所支持的分辨率以及色彩的深度。请客户依照产品输出分辨率的能力, 填写以下栏位。(不支持Deep Color就止写24bit即可, 支持Deep Color就看产品到底支持哪些依照实际能力填写) |
| CEA Video ID Code (VIC) 1 | 640x480p/60Hz 4:3 | N, 24, 30, 36, 48 bit | | |
| 2 | 720x480p/60Hz 4:3 | N, 24, 30, 36, 48 bit | | |
| 3 | 720x480p/60Hz 16:9 | N, 24, 30, 36, 48 bit | | |
| 4 | 1280x720p/60Hz 16:9 | N, 24, 30, 36, 48 bit | | |
| 5 | 1920x1080i/60Hz 16:9 | N, 24, 30, 36, 48 bit | | |
| 6 | 1440x480i/60Hz 4:3 | N, 24, 30, 36, 48 bit | | |
| 7 | 1440x480i/60Hz 16:9 | N, 24, 30, 36, 48 bit | | |
| 16 | 1920x1080p/60Hz 16:9 | N, 24, 30, 36, 48 bit | | |



Capabilities Declaration Form (CDF) -- Source CDF

3. Audio

| Audio | | | | | |
|------------------------|---|--|--|------------------|---|
| Source_Basic_Audio | Is "Basic Audio" supported? | Y/N | | | 产品是否支持声音输出？(必须至少是2CH 32KHz, 44.1KHz, or 48KHz的LPCM格式) |
| Source_PCM_Channels | Max supported L-PCM Channel Count | 0, 2...8 channels | | (type in value) | 产品支持L-PCM最多声道的数量。例如两声道就填2，5.1声道就填6，7.1声道就填8 |
| Source_Max_Fs_2ch | L-PCM Maximum Freq for 2-channel audio. | 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, or 192kHz | | | 2声道L-PCM的最高频率，例如支持2CH-192K 就填写192KHz |
| | Under what conditions can above occur? | <Media required, signal input required, UI actions, etc.> | | (type in answer) | 在什么条件下可以让产品在2CH下输出最大声道、最高支持频率。例如影像需求，播放器需求，输入讯源需求等 |
| Source_Max_Fs_Multi-Ch | L-PCM Maximum Freq for multi-channel audio. | 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, or 192kHz | | | 多声道L-PCM的最高频率，例如支持8CH-192K 就填写192KHz |
| | Under what conditions can above occur? | <Media required, signal input required, UI actions, etc.> | | (type in answer) | 在什么条件下可以让产品在多声道下输出最大声道、最高支持频率。例如影像需求，播放器需求，输入讯源需求等 |



Capabilities Declaration Form (CDF) -- Sink CDF

Usual issue:

1. Electrical

| Electrical | | | | | |
|--------------------|--|---|--|--|--|
| Sink_Diff_PowerOn | Does the product require that power is applied when termination impedance is measured? | Y/N | | | <p>产品是否一定要Power ON的状况之下才能够量测到IC里面的termination?</p> <p>此栏位并不是只说是否要在Power ON/OFF的状况之下量测, 量测impedance一定得要在Power OFF的状况之下, 因为TDR是精密的仪器, 在Power ON的状况之下量测有可能会打坏仪器。这里的重点在于IC是否一定要在Power ON的状况之下才可以量到termination, 如果是Y, 代表我得要在Power ON的状况之下才量测的到相关的数值, 而实际上我们是在Power OFF状况之下量测, 所以一定需要客户提供距离等相关数值(下栏位)。反之则不需要</p> |
| Sink_Term_Distance | If Sink_Diff_PowerOn is 'Y' then: For an impedance measurement, what is the length that can be correctly measured with power off? The length is defined as the number of nsecs it takes for a pulse to travel from the input connector, begin to reflect from the termination impedance, and travel back to the input connector. | <any number> | | | <p>如果Sink_Diff_PowerOn = Y 则在此栏位得要给我们Connector到IC ping脚的距离 单位是ps (pico second)</p> |
| Sink_HPD_True | Besides an active '+5V Power' signal, what additional conditions are required for the HPD signal to be TRUE? E.g. If the HPD signal is asserted whenever the +5V Power signal is detected, answer "None". If the product must be powered-on, answer "Power-On". | <Required condition for HPD to be TRUE> | | | <p>我们在测试HPD的项目之中会在+5V 针脚加入5V的电压 请问除此之外HPD讯号在什么样的状况之下会被TRUE起来 例如如果你的HPD信号无论如何都量测的到 那么就填写none, 如果是产品一定得要Power ON的状况之下才量测的到 填写Power ON</p> |



Capabilities Declaration Form (CDF) -- Sink CDF

2. Input port Name

| Sink_Input_Name | P: the port number | Input Name: the name of the port corresponding to P in the left field. If no port, then fill in as "(not present)" | | | |
|-----------------|--------------------|--|--|--|--|
| | 1 | <Fill in> | | | |
| | 2 | <Fill in> | | | |
| | 3 | <Fill in> | | | |
| | 4 | <Fill in> | | | |
| | 5 | <Fill in> | | | |
| | 6 | <Fill in> | | | |
| | 7 | <Fill in> | | | |
| | 8 | <Fill in> | | | |
| | 9 | <Fill in> | | | |
| | 10 | <Fill in> | | | |
| | 11 | <Fill in> | | | |
| | 12 | <Fill in> | | | |
| | 13 | <Fill in> | | | |
| | 14 | <Fill in> | | | |
| | 15 | <Fill in> | | | |

输入端口的名称是什么



Capabilities Declaration Form (CDF) -- Repeater CDF

Usual issue:

1. Source&Sink Function

| | | | | |
|--------------------|--|-----|--|--|
| Repeater_Source_Fn | Does the product contain an audio or video generating function (such as STB or DVD player)? | Y/N | | DUT具有产生影像或声音的功能吗? 例像是STB or DVD player的功能吗? |
| Repeater_Sink_Fn | Does the product contain an audio or video consuming function (such as a display or an audio amplifier)? | Y/N | | DUT具有接收影像或声音的功能吗? 例像是能显示或者是扩大机的功能吗? |

2. Repeater CEC

| CEC | | | | |
|-----------------------|--|-----------------------|--|--|
| Repeater_CEC | Is CEC supported? | Y/N | | 请问DUT支持CEC的功能吗?如果有请填写Y |
| Repeater_CEC_Output | Which output port is connected to CEC? | <port name or number> | | 请问哪个输出有连接到CEC?如果有请填写连接的是哪个输出 |
| Repeater_PA_Copy | Does Physical Address simply get copied from the Sink to the internal EDID (simple repeater case)? | Y/N | | 物理地址是否不经处理仅做拷贝? 举例来说, 当DUT接到一个物理地址为1.0.0.0的Sink, Source最后读到的物理地址就是1.0.0.0。 |
| Repeater_PA_Increment | Does Physical Address simply get incremented for each input port? | Y/N | | 物理地址是否依据每个输入而做增加? 举例来说, 当Repeater接到一个物理地址为1.0.0.0的Sink, Source最后读到的物理地址变为1.1.0.0。 |



Capabilities Declaration Form (CDF) -- Cable CDF

Usual issue:

1. Cable Type&Category

| | | | | |
|----------------|---|--|--|---|
| Cable_Type | <p>Which of the following best describes the cable type:(Plain) Wire: Wire-only construction with no circuit components (neither active nor passive). Passive (Equalized): Wire plus passive circuit components. No active circuit components. Active: Contains active circuit components with equalizer function. Does not have Tx or Rx function.. Converter: Contains Rx and Tx function. Any Transmission media like wireless, optical fiber etc. may be used between Rx and Tx function. Acts as 1to1 repeater where both ends are cable plug.</p> | Wire, Passive equalized, Active, Converter | | <p>该线材待测物属于Wire, passive, active, 或是converter类型的线材? Wire: 没有电路组件的纯导线架构 Passive: 纯导线外还有被动式组件,如电容,电感 Active:含有主动式组件(例如:IC)的线材 Converter:有能量转换功能(例如光电转换)的线材, 透过无线或是光纤等来收发, 运作如同两端皆为公头的repeater</p> |
| Cable_Category | <p>Which HDMI 1.3-defined Cable Category does the cable fall into? Category 1 (supports all frequencies up to 74.25MHz, or, Category 2 (supports all frequencies up to 340MHz).</p> | Cat1, Cat2 | | <p>请问线材的类别(category)?支持到频率74.25MHz为cat1, 支持到频率340MHz的为cat2。。</p> |



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