Introducing HDMI 1.4 Specification Features

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Announcing features of the upcoming HDMI 1.4 specification

- HDMI Ethernet Channel
- Audio Return Channel
- 3D Support
- 4K x 2K Support
- More Color Spaces
- New Connectors
a success story....
850 Licensed Adopters

Source: 04/2009, HDMI, LLC
Adopters by Geographic Distribution

HDMI Adopters Distribution

- EU/ROW: 14%
- US: 16%
- Japan: 8%
- Korea: 8%
- China: 29%
- Taiwan: 25%

Source: 04/2009, HDMI, LLC
Projected HDMI Devices Shipped

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Source: 12/2008, In-Stat

In thousands

- Mobile Phones
- PCs & Peripherals
- PMPs
- Digital Still Cameras
- Digital Camcorder
- Game Console
- AV Receiver
- Blu-ray Player/Recorder
- DVD Recorder
- DVD Player
- STB (All)
- DTVs

Projected units shipped:
- 2005 - 100,000
- 2006 - 200,000
- 2007 - 300,000
- 2008 - 400,000
- 2009 - 500,000
- 2010 - 600,000
- 2011 - 700,000
- 2012 - 800,000
One Billion Unit Installed Base…

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Source: 12/2008, In-Stat
Why has HDMI succeeded?

Simplicity | Reliability | Performance
Our Vision

HDMI is positioned to enable new consumer experiences by continuing to **evolve ahead of the market**.

By focusing on the core principles of **simplicity, reliability, and performance**, manufacturers and consumers will always have a single digital connection that meets all of their needs **wherever HD is consumed**.
Looking Ahead

evolve ahead of the market

simplicity, reliability, and performance

wherever HD is consumed
A New Era of Broadband Convergence
Heightened Viewing Experience
High-Definition Everywhere
Simplicity, Ease of Use
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Broadband Convergence: 2009
The Next Evolution in CE

24% of all consumer electronic devices will require Ethernet

100% of game consoles and digital media adapters will have network capabilities

80% of Blu-ray devices will have network capabilities

72% of PVR/DVRs will have network capabilities
HDMI Ethernet Channel

Consolidation of HD video, audio, and data in a single cable

Enables high speed bi-directional communication

Enables IP-based applications over HDMI

Transfer speeds up to 100Mbps
HDMI Ethernet Channel: Use Case

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HDMI Ethernet Channel: Use Case

Internet connection sharing
Device-to-device content distribution
Enables “recording” over HDMI
Enables current and future IP-based applications such as DLNA, UPnP, IPTV, LiquidHD™ and others
All over a single HDMI cable

HDMI 1.4 defines new cables:
Standard HDMI Cable with Ethernet
High Speed HDMI Cable with Ethernet

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Simplicity, Ease of Use

Adds an audio channel that enables “upstream” audio connections via HDMI

Simplifies the audio connection between the TV and Audio/Video Receiver

Helps reduce yet another cable within the home

Audio Return Channel

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Audio Return Channel: Use Case

- Built-in Tuner
- Audio Cable
- HDMI

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Audio Return Channel: Use Case

Simplifies cabling by combining the upstream audio capability into a single HDMI cable.
Heightened Viewing Experience: 3D over HDMI

Defines **common** 3D formats and resolutions

3D support for up to **1080p** resolution

Supports many **3D techniques**:

- Full side-by-side
- Half side-by-side
- Frame alternative
- Field alternative
- Line alternative
- Left + Depth
- Left + Depth + Gfx + Gfx Depth
Heightened Viewing Experience: Support for 4K x 2K Resolution

Same resolution as many state of the art digital theaters

Up to 4 times the resolution of 1080p

3840x2160 24Hz | 25Hz | 30Hz
4096x2160 24Hz
Heightened Viewing Experience: Real-Time Content Signaling

Enables real-time signaling of content types between display and source devices

Enables the TV to optimize picture settings based on content type

Enables simple, automated picture setting selection with no user intervention
Heightened Viewing Experience: Support for Additional Color Spaces

Supports digital still camera (DSC) - specific color spaces

- sYCC601
- AdobeRGB
- AdobeYCC601

Enables HDTV’s to reproduce the rich, natural, lifelike colors from digital still cameras (DSC)

Enables consistency and accuracy between DSCs and HDTVs
Smaller, portable devices are becoming sources of HD content.
High-Definition Everywhere:
Micro HDMI Connector

Smaller, portable devices are becoming sources of HD content.

![Micro HDMI Connector](image)

- Significantly smaller connector for portable devices
- Full 19-pin design
- Supports same electrical performance as the HDMI Standard & Mini connectors
- Enables compact devices to have all the benefits of HDMI

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High-Definition Everywhere: Automotive Connection System

An **Automotive Connection System** designed specifically for in-vehicle HD distribution

New **interlocking** connector for internal connections

A more **robust** connection specification to withstand the rigors of an automotive environment

- vibrations, heat, noise, etc.
HDMI 1.4 Launch Timeline and Activities

HDMI 1.4 Specification was released to the public on June 5, 2009

Future press tours, including technology demonstrations of a selection of HDMI 1.4 enhancements, are planned for Munich on 10/13, Paris on 10/14 and London on 10/15, and US (TBD) in Q4, 2009

For more information on HDMI 1.4 please visit http://www.hdmi.org/manufacturer/hdmi_1_4.aspx
Questions and Answers

Thank you!

Questions and Answers

One Cable, One Standard

Simplicity | Reliability | Performance

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