Molex's Category 2†, full-duplex Micro HDMI-to-HDMI cable assemblies with Ethernet Channel and Audio Return Channel functions provide the one-cable connectivity required for IP-based, networked home-entertainment devices, eliminating the need for separate Ethernet and audio upstream processing and playback cables.

With the release of the HDMI 1.4 Revision Specification, a new feature known as the HDMI Ethernet Channel and Audio Return Channel has been added to the features of the HDMI cable to allow bi-directional, high-bandwidth, high-audio throughput communication between HDMI-enabled home theater and consumer electronics devices.

The Ethernet Channel is a data channel in the HDMI cable that allows connected devices such as notebooks or netbooks to send and receive data at Ethernet speeds of up to 100Mbps across HDMI-enabled home entertainment devices such as HDTVs, gaming consoles, Blu-ray Disc players, digital TVs and hand-held video recorders.

This functionality allows internet-enabled HDMI devices to share an internet connection via the cable as well as exchange digital content in their native formats, making recording, storage and playback across these networked devices possible without the need for a separate Ethernet cable.

Originally, the HDMI cable was a ‘uni-directional’ audio/video data interface from the HDMI source device — DVD players, set-top boxes - to the TV sink device – a digital TV, for example. In broadcast applications, audio received by a digital TV tuner must be transmitted back to the A/V receiver – a home theater system, say - for decoding and playback of sounds using a separate S/PDIF (audio) cable. With the Audio Return Channel added to the Specification, the cable that sent audio signals from an A/V receiver to the TV now allows audio signals to be sent back to the source device thereby eliminating the need for a separate audio cable.

Molex’s series 68786 Category 2-speed HDMI Ethernet Channel and Audio Return Channel cable assemblies provide the ‘upstream’ audio processing and playback capability needed for an enhanced digital video and audio experience of networked home-theater systems, with reduced hardware (cabling) costs.

Visit our website at: www.molex.com/product/hdmi_type_d.html

**FEATURES AND BENEFITS**

**HDMI Ethernet Channel**
- Combines video, audio and data streams into a single HDMI cable to provide unmatched signal quality, convenience and control for home-entertainment networking; and supports high screen-resolutions of 1080p/60Hz and above at 340MHz clock rate
- Enables high-speed, two-way communication between HDMI-enabled devices up to 100Mbps Ethernet speed, making them instantly ready for any IP-based application such as UPnP®, IPTV**, LiquidHD††, DLNA‡‡ and others

**Audio Return Channel**
- Allows internet-enabled HDMI entertainment devices such as gaming consoles, Blu-ray Disc players, digital TVs, and others, to share an internet connection via this high-speed cable without the need for a separate Ethernet cable (Remark: An integral router device is required in the network)
- Enables a maximum audio throughput of 36.86 Mbps while supporting all audio formats that can be sent through traditional S/PDIF audio connection including Dolby Digital§§, DTS*** and PCM††† audio
- Provides audio transport from HD TV, recorders and other source devices (set-top-boxes for example) to A/V receivers by combining upstream audio capability into a single HDMI cable without the need for a separate (S/PDIF) audio cable for ‘upstream’ processing and playback (Remark: HDMI 1.4 Specification incorporates S/PDIF capability into the cable)
- Contributes to a ‘greener’ environment and delivers aesthetic advantages to the networked home-entertainment systems with less cables used

*HDMI, the HDMI Logo, and High Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries
†CAT2 (short form for Category 2) speed supports cable transmission rates of up to 340 MHz cable transmission; compared with Category 1 speed of 74.25 MHz
‡ Blu-ray, $UPnP, **IPTV, †† LiquidHD, ‡‡DLNA, §§Dolby Digital, ***DTS, †††PCM Audio are trademarks, registered trademarks or service marks are properties of their respective owners in the United States and/or other countries.

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HDMI® Micro Connectors

68786 Micro HDMI-to-HDMI Cable Assemblies with HDMI Ethernet Channel and Audio Return Channel functions

Micro HDMI-to-HDMI Cable Assembly with HDMI Ethernet Channel and Audio Return Channel functions
MARKETS AND APPLICATIONS

- Networked home-entertainment systems
- HD TVs
- Gaming consoles
- Digital recorders
- Blu-ray disc players
- Set-top-boxes
- Internet-enabled electronic devices
- Notebooks
- Netbooks

ORDERING INFORMATION

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