



# 0.40mm (.016") Pitch HDMI\* Type D Micro Connectors

**Molex leads the industry as the first manufacturer of the HDMI Micro Type D connector, the world's smallest standard I/O interconnect to deliver high-definition video and images from digital cameras and mobile devices to flat-panel screens**

Molex's HDMI Type D Micro connector is the hand-held industry's smallest, commoditized I/O solution for consumer electronics and portable hand-held device makers worldwide. Developed by the HDMI Consortium, the new HDMI connector standard was designed to meet growing demands of high-definition (HD) and high-resolution content of the digital still camera, mobile and smart phone markets. Based on a single digital connection, the new technology supports transfer and viewing of HD videos, very high-resolution photos, and downloaded HD content from these handheld devices onto large HD displays. The current Type C (Mini) HDMI connector is too large to support the newer and more compact designs of such handheld devices.

Molex was chosen to lead in the HDMI Type D connector development and proposal of the connector design and specification, making it the first connector manufacturer to offer a complete solution to early adopters of this new technology.

The Molex HDMI Type D Micro connector meets all mechanical and electrical requirements of the HDMI 1.4 Specification and is only half the size of the current Type C (Mini) connector. It offers significant space-saving and real estate advantages and is the industry's only I/O solution that allows customers to surpass HD consumer demand. Despite its smaller size, the new Type D connector delivers equivalent mechanical strength and electrical characteristics of its larger Type C predecessor.

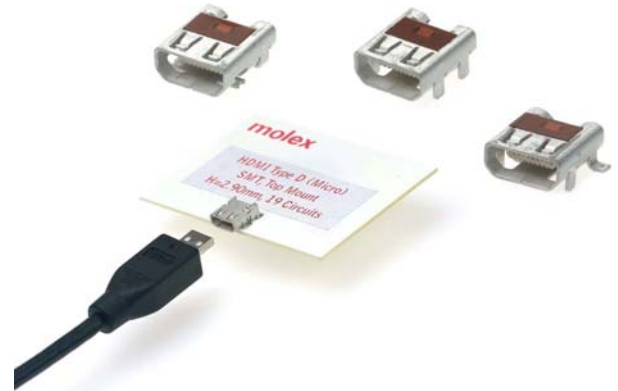
Molex's HDMI Type D I/O interconnect family of products include SMT receptacles of three different mount designs, Category 2 HDMI Type D-to-Type A cable assemblies with a variety of cable lengths and wire gauge options, and a HDMI Type D Plug-to-Type A Receptacle adapter cable. For more information, visit our website at [www.molex.com](http://www.molex.com).

**46765**

## SMT Right Angle Receptacles

**68786**

## Type D-to-Type A Cable Assemblies and Cable Adapter



| FEATURES  | BENEFITS  |
|---|---|
| <ul style="list-style-type: none"> <li>Satisfy HDMI 1.4 Specification mechanical and electrical requirements</li> </ul> | <ul style="list-style-type: none"> <li>Customers enjoy all features and benefits of the HDMI 1.4 Specification</li> </ul>   |
| <ul style="list-style-type: none"> <li>0.40mm (.016") pitch dual-row receptacle</li> </ul>                              | <ul style="list-style-type: none"> <li>Half the size of the current Type C (Mini) HDMI receptacle</li> </ul>  |
| <ul style="list-style-type: none"> <li>5,000 mating cycles for receptacles</li> </ul>                                   | <ul style="list-style-type: none"> <li>Meets durability requirements for mobile applications</li> </ul>   |
| <ul style="list-style-type: none"> <li>Full SMT, through hole and hybrid shell options available</li> </ul>             | <ul style="list-style-type: none"> <li>Offers multiple PCB mounting configurations and flexibility to suit customer applications and design requirements</li> </ul> |
| <ul style="list-style-type: none"> <li>Friction lock on receptacle shell</li> </ul>                                     | <ul style="list-style-type: none"> <li>Offers excellent retention force and tactile feel when mating</li> </ul>   |
| <ul style="list-style-type: none"> <li>Rear receptacle-shell-over-housing design</li> </ul>                             | <ul style="list-style-type: none"> <li>Prevents damage to PCB receptacle from over-insertion of the cable plug</li> </ul>   |
| <ul style="list-style-type: none"> <li>Receptacle terminal hold-down feature</li> </ul>                                 | <ul style="list-style-type: none"> <li>Prevents terminal stubbing</li> </ul>  |

### SPECIFICATIONS (Receptacles)

**Reference Information**  
 Packaging: Embossed Tape on Reel  
 Mates With: Series 68786 HDMI Type D-to-Type A Cable Assemblies and Adapter Cable  
 Designed In: mm

**Electrical**  
 Voltage (max.): 30V  
 Current (max.): 0.8A at 25°C  
 Contact Resistance (max.): 10 milliohms  
 Dielectric Withstanding Voltage:  
     Unmated: 250V AC (rms)  
     Mated: 150V AC (rms)  
 Insulation Resistance:  
     Unmated: 100 Megaohms min.  
     Mated: 10 Megaohms min.

**Mechanical**  
 Mating Force (max.): 44.1N  
 Unmating Force (min.): 5N initial  
 Durability: 5,000 cycles

**Physical**  
 Housing: LCP, 30% Glass-filled  
 Contact: Brass Alloy  
 Plating:  
     Contact Area — 0.76µm (30µ") Gold  
     Solder Tail Area — 0.05µm (2µ") Gold Flash  
     Underplating — 2.00µm (80µ") Nickel  
 Operating Temperature: -30 to +85°C

### SPECIFICATIONS (Cable Assemblies)

**Reference Information**  
 Mates With: Series 46765 HDMI Type D Micro Connectors and Molex HDMI Type A Connectors

**Electrical**  
 Cable Impedance : 100 ohms ± 15%  
 Propagation Delay (max.): 2.42ns per cable

**Mechanical**  
 Cable Flex: 100 cycles in each of two planes  
 Wrenching Strength: 0-20N (Plug or Receptacle) (Mated Connectors) 20-40N (Receptacle)  
 Cable Pull-out Force (min.): 40N

**Physical**  
 Operating Temperature: 0 to +50°C

\*High Definition Multimedia Interface and HDMI are trademarks of HDMI Licensing, LLC.

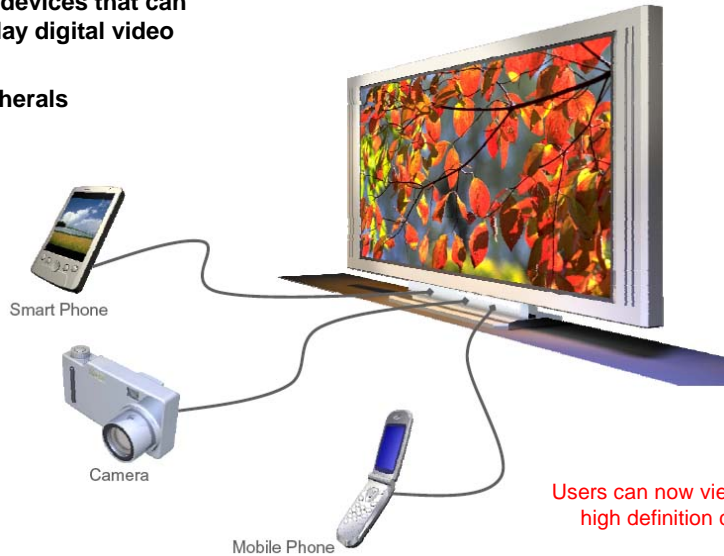
## MARKETS AND APPLICATIONS



# 0.40mm (.016") Pitch HDMI Type D Micro Connectors

### Regional Markets, Applications

- Mobile phones
- Smart phones
- Compact handheld devices that can record, store and play digital video
- Car Navigation
- Adaptors and Peripherals
- Ethernet Channel



Users can now view high resolution photos and downloaded high definition content on large high definition displays

**46765**

**SMT Right Angle Receptacles**

**68786**

**Type D-to-Type A Cable Assemblies and Adapter Cable**

## ORDERING INFORMATION

### Connectors

| Order No.  | Mounting Configurations                                   | Description  |
|------------|---|--|
| 46765-0001 | SMT   | 0.40mm (.016") Pitch HDMI* Type D Micro Connector, Right Angle Receptacle, SMT, with Kapton Tape, 19 Circuits, Lead free                             |
| 46765-1001 | SMT with through hole shell tabs                          | 0.40mm (.016") Pitch HDMI* Type D Micro Connector, Right Angle Receptacle, SMT, with Through Hole Shell Tabs and Kapton Tape, 19 Circuits, Lead free |
| 46765-2001 | Hybrid SMT (with both vertical and horizontal shell tabs) | 0.40mm (.016") Pitch HDMI* Type D Micro Connector, Right Angle Receptacle, SMT, Hybrid Type Mount, with Kapton Tape, 19 Circuits, Lead free          |

### Cable Assemblies

| Order No.  | AWG | Cable Length (mm) | Description  |
|------------|-----|-------------------|--|
| 68786-0001 | 34  | 1000              | HDMI Type D-to-Type A Cable Assembly, CAT 2, AWG 34, 1.0m (3.28'), Lead free                     |
| 68786-0002 | 34  | 1500              | HDMI Type D-to-Type A Cable Assembly, CAT 2, AWG 34, 1.5m (4.92'), Lead free                     |
| 68786-0003 | 32  | 2000              | HDMI Type D-to-Type A Cable Assembly, CAT 2, AWG 32, 2.0m (6.56'), Lead free                     |
| 68786-0004 | 34  | 100               | HDMI Type D-to-Type A Cable Assembly, CAT 2, AWG 34, 0.1m (3.94'), Lead free                     |
| 68786-0005 | 34  | 200               | HDMI Type D-to-Type A Cable Assembly, CAT 2, AWG 34, 0.2m (7.87'), Lead free                     |
| 68786-0006 | 36  | 1500              | HDMI Type D-to-Type A Cable Assembly, CAT 2, AWG 36, 1.5m (4.92'), Lead free                     |
| 68786-0007 | 32  | 200               | HDMI Type D Plug-to-HDMI Type A Receptacle Cable Adapter, CAT 2, AWG 32, 0.2m (7.87'), Lead free |

Remarks: For custom requirements of Micro HDMI cable assemblies, please contact a Molex sales person

: Molex HDMI cable assemblies with HEAC (HDMI Ethernet and Audio Return Channel) are available if required. Speak to a Molex sales person for any applications requiring this.

