Overview
This Product Specification defines the general use and performance parameters for Amphenol’s MHDR connector.

Availability: Right angle PCB tail version is presently available. This is also available on interposer card with a right angle locking connector on the opposite side. A vertical PCB tail version along with protective dust covers are planned.

Usage
These connectors provide a High Definition Multimedia Interface for transmitting digital audiovisual signals. Receptacles will mate with any standard type A HDMI plug. Electrical performance complies with HDMI specification version 1.4a. Protection is provided for IP67 applications per IEC 60529.

Applications
Intended for use in applications such as:
- Portable computers
- Outdoor Audiovisual equipment
- Portable broadcast equipment
- Medical equipment
- Digital cameras/camcorders
Connector Electrical Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current rating</td>
<td>0.5A min per contact</td>
</tr>
<tr>
<td>Contact resistance</td>
<td>10 mΩ max</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>1000 MΩ min</td>
</tr>
<tr>
<td>DWV:</td>
<td>500V AC @ sea level</td>
</tr>
<tr>
<td>Impedance:</td>
<td>100Ω +/-15%</td>
</tr>
<tr>
<td>Total data rate</td>
<td>10.2Gbit/s</td>
</tr>
</tbody>
</table>

Connector Mechanical Characteristics

- Thermal Shock: 10 cycles @ -55° to +125° C
- Physical Shock: 50G for 11ms (3 cycles in 3 axes)
- Humidity: Per ANSI/EIA-364-31B
- Vibration: Per ANSI/EIA-364-28 Condition III

Process Characteristics

- Recommended soldering process: wave soldering with peak temperature of 260°C for 10 seconds.
- Recommended Torque for #4-40 or M3 Panel Mount Screws: 0.45 to 0.65 Nm (4 – 5.75 in-lbs).
- Solder tails suitable for PCB thickness of 1.52mm (.062”)
- Mating Cycles: 10,000 cycles

Material Requirements

MHDR connectors are RoHS compliant.

- Unless otherwise specified, the materials for each component shall be:
  - Contacts: Copper alloy with 30µ" (0.76µm) min gold over 50µ" (1.27µm) min nickel
  - Housing: Engineering thermoplastic, UL94V-0 rated, black.
  - Shell: Die cast zinc alloy with nickel plating

Operating temperature -55° to +85° C

Available Documents

<table>
<thead>
<tr>
<th>Drawing Numbers:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-MHDR-A111-X0</td>
<td>MHDR series rugged HDMI, Type A, Right Angle PCB Tail</td>
</tr>
<tr>
<td>P-MHDR-A311-X0</td>
<td>MHDR series rugged HDMI, Type A, on PCB with matching HDMI</td>
</tr>
<tr>
<td>P-MHDR-A311-M01</td>
<td>MHDR series rugged HDMI, Type A, on PCB with matching HDMI with locking tab.</td>
</tr>
</tbody>
</table>

Contact factory, authorized Amphenol representative or website [www.amphenolcanada.com](http://www.amphenolcanada.com) for additional configurations.
Product Numbering System

**MHDR** - Rugged HDMI Receptacle Series

**Receptacle Type**
- A – Standard A Series

**Termination Style**
- 1 – Right Angle
- 5 – Vertical

**Number of Contacts**
- 1 - Standard 19 Contacts

**Insulator Housing Colour**
- 1 – Black

**Rear Shield and Thread Options**
- 3 – #4-40 UNC Unified Thread
- M – M3 x 0.5 Metric Thread

**Other Options**
- 0 – Standard

**Unique Special Code**
- No Digit – Standard part defined by previous 10 digits
- 1 to 9 – Unique special feature

Notes:
1) Consult with Amphenol for additional termination styles, contact tail lengths, mounting styles, non-conductive gaskets or other special requirements.