

# MHDR Rugged HDMI

## Product Specification S6089C Rev 1.4

Amphenol

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**About Amphenol Commercial Products**  
Amphenol's commercial connector products are used in a variety of end user applications including networking, telecom, server & computer, storage & HDD, consumer electronics and entertainment, professional audio & Industrial & Military/Aerospace.

### Related Products

MUSB/MUSBR OPTIONS:

#### MUSBR



MUSBR-A511-40  
TYPE A, VERTICAL,  
LOW PROFILE

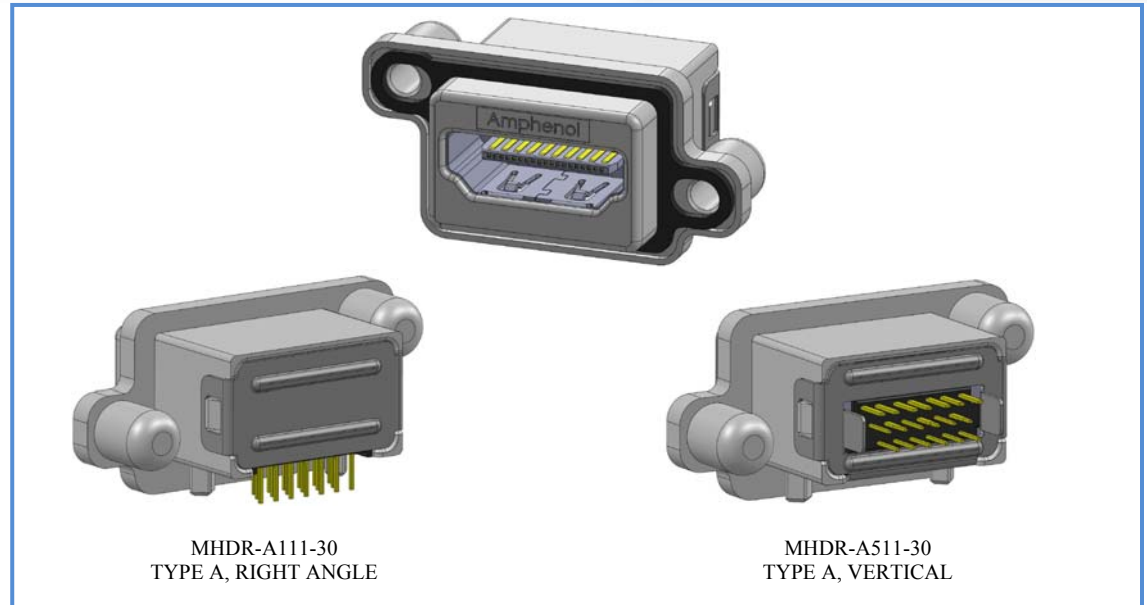
#### MUSB



MUSB-D111-30  
TYPE B, RIGHT ANGLE



MUSB-C111-30  
TYPE A, STACKED,  
RIGHT ANGLE



MHDR-A111-30  
TYPE A, RIGHT ANGLE

MHDR-A511-30  
TYPE A, VERTICAL

### Overview

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

Availability: Right angle PCB tail version as well as vertical mount receptacle are presently available. The right angle is also available on an interposer card with a right angle locking connector on the opposite side.

### 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 2.0. This supports 4K video up to 60 frames per second. Connectors provide water and dust protection complying with IP67 per IEC 60529.

### Applications

Intended for use in applications such as:

- Portable computers
- Outdoor Audiovideo equipment
- Portable broadcast equipment
- Medical equipment
- Digital cameras/camcorders

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## Related Products

### MDBR



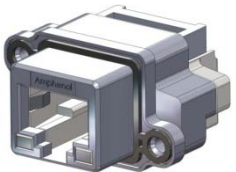
9 POSITION CONNECTOR SHOWN

### MUSBK



MUSB-K152-30 SERIES MICRO-AB RIGHT ANGLE, PCB TAIL

### MRJR



MRJR-538X-01 SHOWN RIGHT ANGLE, PCB TAIL, 8 POSITION RJ45

## Connector Electrical Characteristics

Parameter	Type A
Current rating:	0.5A min per contact
Contact resistance:	10 mΩ max
Insulation resistance:	1000 MΩ min
DWV:	500V AC @ sea level
Impedance:	100Ω +/-15%
Total data rate:	18Gbit/s

## 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

### Drawing Numbers:

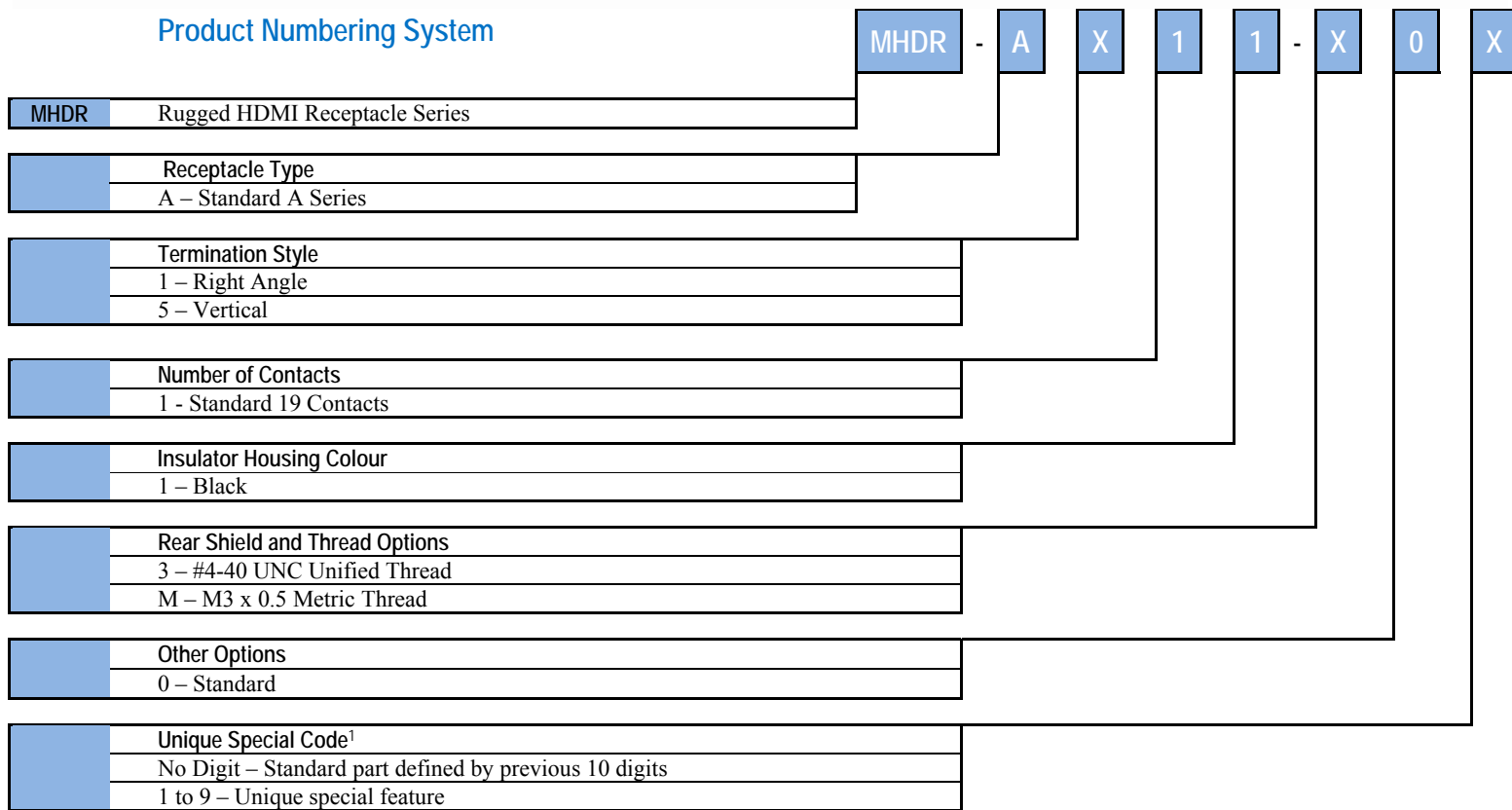
P-MHDR-A111-X0  
 P-MHDR-A311-X0  
 P-MHDR-A311-M01  
 P-MHDR-A511-X0

MHDR series rugged HDMI, Type A, Right Angle PCB Tail  
 MHDR series rugged HDMI, Type A, on PCB with matching HDMI  
 MHDR series rugged HDMI, Type A, on PCB with matching HDMI with locking tab.  
 MHDR series rugged HDMI, Type A. Vertical PCB Tail

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

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Product Numbering System



Notes:

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

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