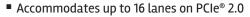
# Amphenol



# MXM 3.0/4.0 Connectors

### LOW POWER, SMALL FORM FACTOR, HIGH-PERFORMANCE GRAPHICS ADAPTER

Amphenol's MXM connector is a high-density PCIe<sup>®</sup> solution that supports next-generation server system architectures. These are non-proprietary, industry-standard sockets. This helps to upgrade the graphics processor in a device, without changing the whole system or relying on proprietary vendor upgrades. With 0.50mm pitch and 314 contacts, the MXM 3.0/4.0 connectors support 16 lanes PCI Express<sup>®</sup> signal performance with smaller board space. Typical applications include notebook computers, blade and standard rack-mount servers, mobile workstations and alternative form factor PCs including all-in-one home theater, and small form factor PCs.



- Supports up to 8 DDR2, DDR3, GDDR3 or GDDR5
- Up to 4 Dual-MODE Display Ports supporting DVI and HDMI
- Single 24-bit dual-link LVDS, dual-link DVI and HDMI
- Single VGA and TV-out



#### **FEATURES**

- Connector with 314 contacts and 0.50mm pitch
- Compliant with PCIe<sup>®</sup> 3.0 and PCIe<sup>®</sup> 4.0
- Small Form Factor 0.50mm pitch solution
- Various connector height options
- Supports both single and double-sided modules

#### **BENEFITS**

- Fully compliant with MXM 3.0 specification
- Serves multiple high-speed peripheral applications
- Saves board space
- Reduces overall height profile
- Enables higher data rate transmission

## **TECHNICAL INFORMATION**

#### MATERIAL

- Contact Base Metal: Copper Alloy
- Contact Area Finish: Gold over Nickel
- Solder Area Finish: Tin over Nickel
- Housing Material: High-temperature thermoplastic (UL94V-0) for reflow soldering or thermoplastic (UL94V-0) for wave soldering. Color: Black
- Metal Board Locks: Copper Alloy
- Board Locks Finish: Tin over Nickel

#### **ELECTRICAL PERFORMANCE**

- Contact Resistance: Δ20m max. Initially with 55m max. change after environmental exposures
- Current Rating: 0.5A per pin
- Signal integrity summary
- The part series shown on this datasheet support PCI Express® high speed electrical requirements for 2.5Gb/s (PCIe® Gen 1), 5.0Gb/s (PCIe® Gen 2), 8.0Gb/s (PCIe® Gen 3) and 16.0Gb/s (PCIe® Gen 4) with the exception of those part series specifically noted as PCIe® Gen 1 in the part number tables

#### **MECHANICAL PERFORMANCE**

- Durability Rating: 30 cycles
- PCB Insertion Force: 6.0 kgf max.
- PCB Removal Force: 1.6kgf min.

#### ENVIRONMENTAL

- EIA-364-1000.01. The test groups/sequences and durations are derived from the following requirements:
- Durability (mating/unmating) rating of 30 cycles
- Field Temperature: 65°C
- Field Life: Five years
- Temperature Life (preconditioning): 75 hours at 105°C
- Temperature Life: 120 hours at 105°C
- Mixed Flowing Gas: 7 days
- Useful Field Life: Three (3) years

#### **SPECIFICATIONS**

#### Industry

- PCI Express<sup>®</sup> Card Electromechanical Specification
- PCI Express<sup>®</sup> Module Electromechanical Specification
- For more information on the applicable PCI-SIG specifications
- Visit--- <u>www.pcisig.com</u>
- AFCI
- GS-12-1531 PCI Express<sup>®</sup> group of connectors

#### **APPROVALS & CERTIFICATION**

UL and CSA approvals

#### PACKAGING

Hard or soft tray

#### **TARGET MARKETS/APPLICATIONS**



PC-Notebook Servers Workstations

### PART NUMBERS

Description	Part Numbers
MXM 3.0, 0.50mm pitch, 5.0mm stacked height, 314 pin	10151114-00XTLF
MXM 4.0, 0.50mm pitch, 2.7mm stacked height, 314 pin	10160446-00XRLF

5SIOMXM0300920EA4