

# micro-LinkOVER™ Above PCB Connector System

## CUTTING EDGE NEAR-CHIP TERMINATION IN AMPHENOL'S OVERPASS™ PORTFOLIO

micro-LinkOVER™ is an above PCB twinaxial connector system that provides system designers and layout engineers a cost effective approach to unlock the design flexibility needed to manage the technical challenges of PAM4 56G and 112G systems and beyond. Supporting data rates from 10G to more than 112G PAM4 per lane with high signal-to-noise ratio and low VSWR. micro-LinkOVER's direct to PCB compression mount solution eliminates the need for any lossy paddle cards, minimizing transitions and losses on system budgets. Its modular design allows for multiple form factors in dense footprints to fit in crowded real estate environments. micro-LinkOVER is an ideal solution for 100G/200G/400G Systems, Infiniband™, PCIe®, Chip-to-Chip links, and 5G systems.

- Performance up to 112G+ PAM4 per lane (demonstrated 100G baud per lane)
- Signal-to-noise performance of >30dB of insertion loss to crosstalk at 50GHz
- Eliminates complicated and lossy trace routing
- Designed specifically for differential pairs/routing
- Extremely short trace routing from IC to connector



### FEATURES

- Utilizes Ardent's patented compression mount contacts
- SKEWCLEAR® drainless parallel pair twinax
- High density footprint with 2.40mm pitch (cable)
- Passive copper connector system

### BENEFITS

- Performance up to 112G+ PAM4 per lane (demonstrated 100G baud per lane)
- Signal-to-noise performance of >30dB of insertion loss to crosstalk at 50GHz
- Eliminates complicated and lossy trace routing
- Designed specifically for differential pairs/routing
- Extremely short trace routing from IC to connector
- Lowers power requirements significantly compared to optical engines

## TECHNICAL INFORMATION

### MECHANICAL PERFORMANCE

- Form Factor: 16 Differential Pair (24 Differential Pair, 32 Differential Pair in Development)
- Pitch (Signal): 0.54mm
- Pitch (Cable): 2.4mm
- Cable Length: 203mm-1000mm, Custom
- Mounting Options: Screw Mount, SMT
- Mating Force (g): 150 per pair
- Mounting Screw Torque (in-lbs): 0.5
- Cable Type: Spectra-Strip 32 AWG Drainless, FEP, 95Ω

### ELECTRICAL PERFORMANCE

- Frequency Range/Data Rates: Supports 56Gb/s and 112Gb/s PAM4, PCIe® Gen 5, 100G/200G/400G Systems
- Return Loss, 14 GHz (dB) (8" Twinax, two terminations, 2mm stripline on each end): <-17
- Return Loss, 28 GHz (dB) (8" Twinax, two terminations, 2mm stripline on each end): <-13
- Insertion Loss, 14 GHz (8" Twinax, two μLO terminations) (db): >-2
- L2 Powersum Crosstalk, 14GHz (dB): >-4.5
- L2 Powersum Crosstalk, 28GHz (dB): <-65
- Impedance (ohms): 95±5
- Intrapair Skew (ps): <2
- Insertion Loss, 14 GHz (Twinax Cable Only) (db/ in): -0.19
- Insertion Loss, 28 GHz (Twinax Cable Only) (db/ in): -0.28

### PACKAGING

- Please contact us for packaging information.

### SPECIFICATION

- 16 Differential Pair SMT Application Specification - AS-001

### APPROVALS AND CERTIFICATIONS

- RoHS
- Halogen free

### ENVIRONMENTAL

- Meets EIA-364 Specifications. Please contact us for more details.

### TARGET MARKETS/APPLICATIONS



100G/200G/400G Systems  
5G  
Infiniband™  
PCIe®  
Data centers  
Backside PCB Interconnect  
Backplanes  
Future-proofing for 400G designs  
Chip-to-Chip link

## CONFIGURATIONS

End 1	End 2
micro-LinkOVER	micro-LinkOVER
micro-LinkOVER	QSFP DD
micro-LinkOVER	OSFP
micro-LinkOVER	Paladin