

PCIe® Gen 6 Mini Cool Edge IO Connector

NEXT-GENERATION HIGH-SPEED INTERCONNECT SOLUTION – UP TO 64G PAM4 FOR PCIe® GEN 6

Amphenol introduces the next-generation OverPass™ solution – Mini Cool Edge IO. The 0.60 mm pitch connector comes with a slim form factor design, capable of transmitting high-speed signals up to 64 G PAM4/PCIe® Gen 6 and allowing much greater signal path lengths while maintaining SI performance when compared to conventional PCB routing methods.

Mini Cool Edge IO not only provides a SI performance-ready signal transmission but also a new way of system design that is cost-effective, highly modular, scalable, and extremely easy to repair.

- High-speed – 64 Gb/s PAM4/PCIe® Gen 6 capability
- Supports both cable and card edge connection



TARGET MARKETS



FEATURES

- 0.60 mm pitch, vertical and right-angle configurations
- Up to 64 Gb/s PAM4, PCIe® Gen 6, over 1.0 meter transmission distance
- Supports both cable and card edge applications with one identical connector
- 85 Ω impedance and various pin number options – meeting PCIe®/NVMe/SAS specifications

BENEFITS

- Slim form factor for compact data center system designs
- Extends transmission range far more over the conventional PCB routes
- Provides flexibility in system design to meet highly modular, scalable, and easy-to-repair requirements
- Saves system material cost, engineering, and certification expenses with a high succession of system design

TECHNICAL INFORMATION

MATERIAL

- Contact Base Metal: Copper Alloy
- Contact Area Finish: Gold over Nickel
- Solder Area Finish: Tin over Nickel
- Housing & Spacer: High-temperature thermoplastic (UL 94V-0)
- Shorting Bar: Conductive plastic
- Cage: Stainless steel, Nickel plating overall

MECHANICAL PERFORMANCE

- Durability: 250 mating cycles
- Mating Force: 0.6 N/pin max.
- Unmating Force: 0.06 N/pin min.

ELECTRICAL PERFORMANCE

- Contact Resistance: 30 m max. initial; 15 m max. change after test
- Dielectric Withstanding Voltage: 300 VDC

PACKAGING

- Carrier Tape

ENVIRONMENTAL

- Humidity: EIA-364-31, Method III, Subject unmated specimens to 24 cycles between 25 °C/ 80%RH and 65 °C/ 50% RH
- Temperature Life: EIA-364-17, Method A Test Condition 2, Test Time Condition C, Subject mated specimens to 105 °C for 168 hours
- Thermal Shock: EIA-364-32, Method A Test condition 1, -55 °C to 85 °C (10 cycles)

APPROVALS AND CERTIFICATIONS

- UL

TARGET MARKETS/APPLICATIONS

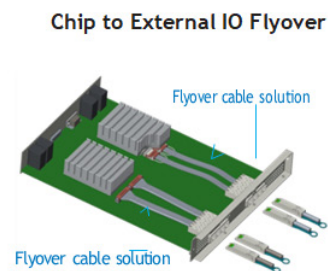
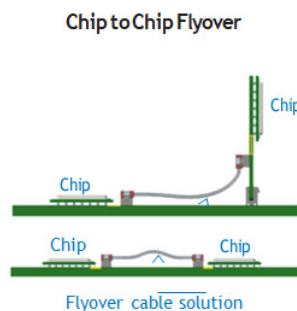
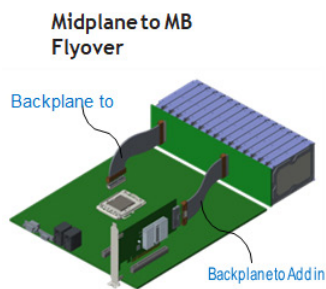


Baseband
Commercial Systems
Networking
Radio Units

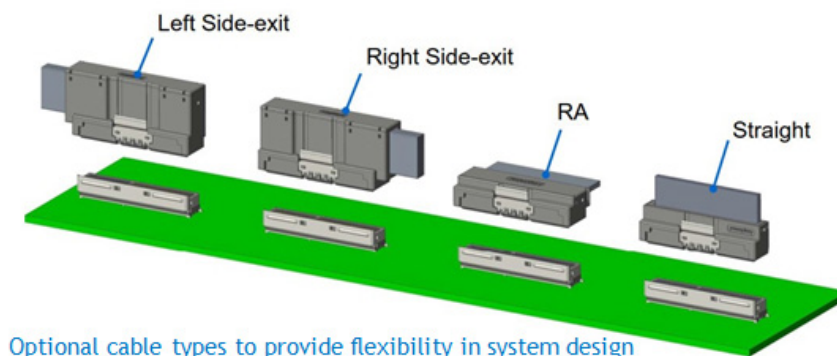


High-End Computing System
Server and Storage Systems

AMPHENOL OVERPASS™ APPLICATIONS



Cable Options



PART NUMBER SELECTOR

Find part number details using the search box on www.amphenol-cs.com

GH10	V	1	X	X	X	X	X	HR
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Mini Cool Edge IO Integrated Connector

Vertical Type

Connector Speed	
1	PCIe® Gen 6

Channel / Pin Qty	
1	38P (4X+SB)
2	74P (8X+SB)
4	124P (16X+SB)
6	148P (16X+SB)
A	38P (6X)
B	74P (12X)
C	124P (20X)
D	148P (24X)

Contact Finish	
2	15 µin Gold
3	30 µin Gold

Complaint Code	
HR	Halogen-free & RoHS

Variation Code	
Blank	Standard
W	Housing Color: Natural

Packing Code	
2	Tape and Reel (With Cap)
3	Tape and Reel (W/O Cap)
5	Tape and Reel with Customized

Shell Pin Length Option (DIM.A)	
1	1.50 mm
2	2.20 mm
3	3.00 mm
4	4.20 mm
5	1.20 mm

PART NUMBER SELECTOR

Find part number details using the search box on www.amphenol-cs.com

GH10	R	1	X	X	X	X	X	HR
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Mini Cool Edge IO Integrated Connector

Right-angle Type

Connector Speed
1 PCIe® Gen 6

Channel / Pin Qty	
1	38P (4X+5B)
2	74P (8X+5B)
4	124P (16X+5B)
6	148P (16X+5B)
A	38P (6X)
B	74P (12X)
C	124P (20X)
D	148P (24X)

Contact Finish
2 15 µin Gold
3 30 µin Gold

Complaint Code
HR Halogen-free & RoHS

Variation Code
Blank Standard

Packing Code
2 Tape and Reel

Shell Pin Length Option (DIM.A)	
1	1.50 mm
2	2.20 mm
3	3.00 mm
4	4.20 mm
5	1.20 mm

WHERE INNOVATION CONNECTS

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CM10PCI66MC100925EA4