

Mini Cool Edge IO Connector

NEXT-GENERATION HIGH SPEED INTERCONNECT SOLUTION – UP TO 56G PAM4

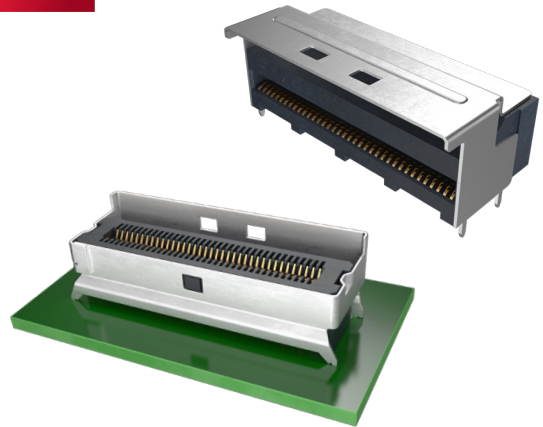
Amphenol ICC introduces the next-generation OverPass™ solution – Mini Cool Edge IO. The 0.60mm pitch connector come with a slim form factor design, capable of transmitting high-speed signal up to 56G PAM4, and allowing much greater signal path lengths while maintaining SI performance when compared to 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 – 56Gb/s PAM4 Capability
- Supports both cable and card edge connection

FEATURES

- 0.60mm pitch, vertical and right angle configurations
- Up to 56Gb/s PAM4, over 1.0 meter transmission distance
- Supports both cable and card edge applications with one identical connector
- Optional 85Ω or 100Ω impedance and various pin number options –meeting PCIe/NVMe/SAS/SFP(+)/QSFP specifications

NEW


TARGET MARKETS



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 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

ELECTRICAL PERFORMANCE

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

MECHANICAL PERFORMANCE

- Durability: 50 mating cycles
- Mating Force: 0.6N/pin max.
- Unmating Force: 0.06N/pin min.

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 & CERTIFICATION

- UL

SPECIFICATIONS

- Amphenol Product Specification: PS-7681

PACKAGING

- Carrier Tape

TARGET MARKETS/APPLICATIONS



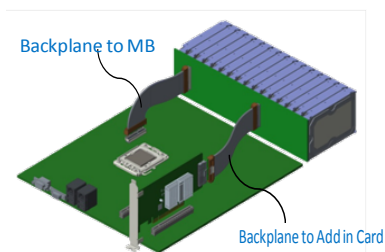
Baseband
Commercial Systems
Networking
Radio Units



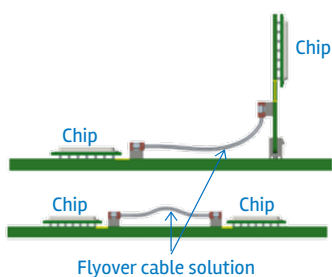
High-end Computing System
Server and Storage Systems

Amphenol OverPass™ Applications

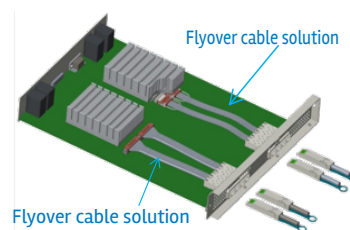
Miplane to MB Flyover



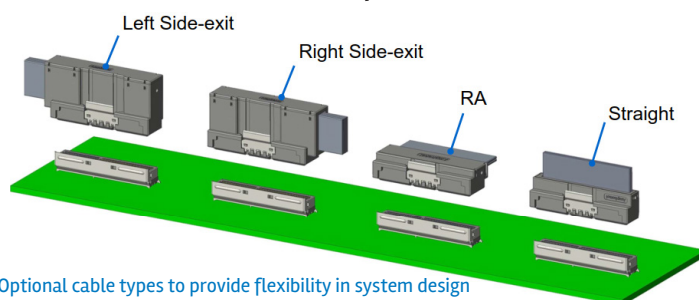
Chip to Chip Flyover



Chip to External IO Flyover

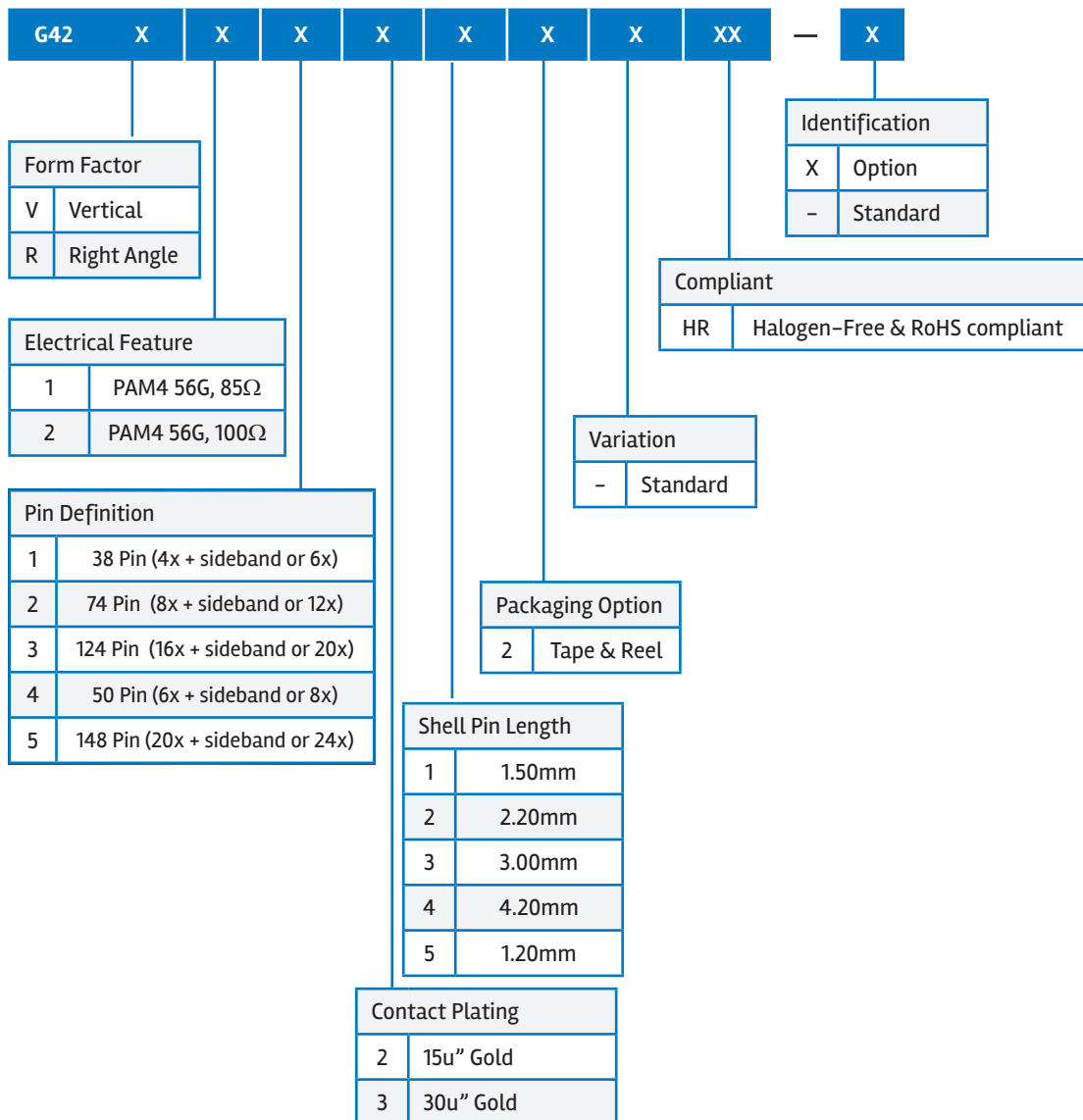


Cable Options



Optional cable types to provide flexibility in system design

PART NUMBER SELECTOR



PART NUMBERS

Note: 1.20mm, 2.20mm, 3.00mm, 4.20mm shell DIP length options are available upon request. Please contact your local sales representative.

Speed	Impedance	Form Factor	No. of Pins	Contact Finish	Shell DIP Length 1.50 mm			
56G PAM4	85Ω	Vertical	38	Gold 15u"	G42V11212HR			
			38	Gold 30u"	G42V11312HR			
			50	Gold 15u"	G42V15212HR			
			50	Gold 30u"	G42V15312HR			
			74	Gold 15u"	G42V12212HR			
			74	Gold 30u"	G42V12312HR			
			124	Gold 15u"	G42V14212HR			
			124	Gold 30u"	G42V14312HR			
			148	Gold 15u"	G42V16212HR			
			148	Gold 30u"	G42V16312HR			
	100Ω	Right Angle	Right Angle	74	Gold 15u"	G42R12212HR		
				74	Gold 30u"	G42R12312HR		
				124	Gold 15u"	Coming Soon		
				124	Gold 30u"	Coming Soon		
		Vertical	Vertical	38	Gold 15u"	G42VA1212HR		
				38	Gold 30u"	G42VA1312HR		
				50	Gold 15u"	G42VA5212HR		
				50	Gold 30u"	G42VA5312HR		
				74	Gold 15u"	G42VA2212HR		
				74	Gold 30u"	G42VA2312HR		
				124	Gold 15u"	G42VA4212HR		
				124	Gold 30u"	G42VA4312HR		
				148	Gold 15u"	G42VA6212HR		
				148	Gold 30u"	G42VA6312HR		
				Right Angle	Right Angle	74	Gold 15u"	G42RA2212HR
						74	Gold 30u"	G42RA2312HR
						124	Gold 15u"	Coming Soon
						124	Gold 30u"	Coming Soon