

UltraPort™ QSFP+

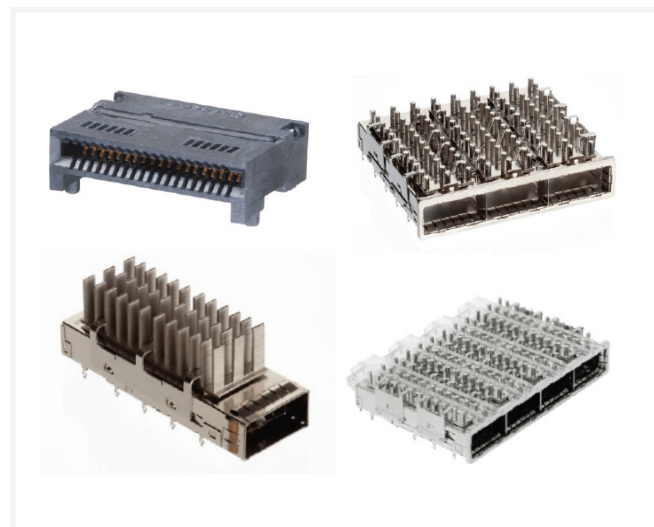
QSFP28 with Stamped and Formed Contact Design

Amphenol ICC's UltraPort™ QSFP+ interconnect system comprises of a 38-position, 0.8mm pitch connector built for use in high speed serial applications. Each port offers 4 channels to increase port density which allows more board real estate and cost optimized solutions. The UltraPort™ QSFP+ connector supports next generation 100G+ applications and transmits up to 28Gb/s per channel. It features a stamped and formed contact design providing improved mechanical durability. The resonance dampening features of the design allows superior signal integrity. The design minimizes crosstalk and transmission line impedance discontinuity across the connector interface.

- Electrical interface employs 4 lanes that operates up to 28 Gb/s per channel
- Passive copper and optical solutions
- Stamped and formed contact design provides improved mechanical durability
- The resonance dampening features minimize crosstalk and transmission line impedance discontinuity across the connector interface

FEATURES

- Electrical interface employs 4 lanes that operate up to 28 Gb/s per channel
- Passive copper and optical solutions
- Stamped and formed contact design
- Resonance dampening features



TARGET MARKETS



BENEFITS

- 100Gb/s aggregated bandwidth solution
- Support various application requirements
- Improved mechanical durability
- Minimizes crosstalk and transmission line impedance discontinuity and provides enhanced signal integrity

TECHNICAL INFORMATION

MATERIAL

- Housing: Black color, Glass reinforced, Lead Free Solder Reflow Process Compatible Thermo Plastic
- Contacts Base Material: Phosphor Bronze
- Plating Solder Tails: Matte tin or Gold flash options
- Plating Mating Area: Gold
- Resonance Dampening Feature: Conductive Polymer

MECHANICAL PERFORMANCE

- Durability: 250 mating cycles
- Mating Force: 60 N max.
- Contact Normal Force: 0.5 N min./PIN
- PCB Thickness Single Side (Cage): 1.44 mm (0.057in.) min.
- PCB Thickness Belly to Belly (Cage): 2.35 mm (0.093in.) min.
- Unmating Force (Cage): 30 N max.
- Insertion Force to PCB (Cage):
 - 780 N for 1 port
 - 1000 N for 2 Ports
 - 1700 N for 4 Ports
 - 2400 N for 6 Ports

ELECTRICAL PERFORMANCE

- Operating Voltage: 30 VDC per contact
- Operating Current: 0.5 A per contact
- Differential Impedance: 100Ω +/- 10Ω

ENVIRONMENTAL

- Operating and (Storage) Temperature: -20° to +85° C
- RoHS & Halogen-Free

TOOLING INFORMATION

- Heat Sinks and Light Pipes: Available
- Configurations:
 - 1XN (N=1,2,3,4,6)
 - 2XN (N=1,2,3)

TARGET MARKETS/APPLICATIONS



Cellular Infrastructure
Network Interface Cards



Hubs
Switch
Servers
Storage



Test and Measurement Equipment

UltraPort™ QSFP+ Connector

FS1	Z38	X	0	Z	6	60	Special Option
Style		Z38		38 Position		60	
Plating Option		Option 1		Option 2		Option 3	
2		30 μ" (0.76 μm) Gold Plating on Mating Area; 100 μ" (2.54 μm) Matte Tin on Tails Over Nickel Underplate		0		Standard	
3		15 μ" (0.38 μm) Gold Plating on Mating Area; 100 μ" (2.54 μm) Matte Tin on Tails Over Nickel Underplate		Z		Standard	
		6		Standard		Resonance Dampening, No Hold Down Tabs	

UltraPort™ QSFP+ Cages

U95	X	X	X	1	1	X	X	X	Packaging
Style				1				Tray (Light Pipe and/or Heat Sink Shipped Unassembled if Ordered)	
A				0° One Rear Pin (1X1 Only) through the bezel				A	
L				0°, No Rear Pin through the bezel				Tray (Light Pipe and/or Heat Sink Shipped Assembled)	
T				0°, Two Rear Pin (1XN: One Rear Pin, 1X1: Two Rear Pin) through the bezel					
W				1°, No Rear Pin (1X1 Only) through the bezel					
Number of Ports in row								Light Pipe Option	
1				1X1				0	
2				1X2				1	
3				1X3				Dual Barrel Light Pipe – Round Outlet	
4				1X4				4	
6				1X6				Quad Barrel Light Pipe – Round Outlet	
								7	
								Single Barrel Light Pipe – Round Outlet	
								F	
								Quad Barrel Light Pipe – Square Outlet	
Heat Sink Option								Dust Cover Option	
0				No Heat Sink or Clip Shipped, Closed Top With Vent Holes				0	
1				No Heat Sink or Clip Shipped				Without Dust Cover	
5				Round Pin Style (Nickel Plated) Heat Sink & Clip (H = 6.5mm) – N/A with Quad Light Pipe				D	
6				Round Pin Style (Nickel Plated) Heat Sink & Clip (H = 4.2mm) – N/A with Quad Light Pipe				With Dust Cover (Shipped Loose)	
7				Round Pin Style (Nickel Plated) Heat Sink & Clip (H = 13.5mm) – N/A with Quad Light Pipe					
A				Square Pin Style (Nickel Plated) Heat Sink & Clip (H = 6.5mm)				Plating	
B				Square Pin Style (Nickel Plated) Heat Sink & Clip (H = 4.2mm)				1	
C				Square Pin Style (Nickel Plated) Heat Sink & Clip (H = 13.5mm)				Nickel	
N				Pin-Fin Style (Nickel Plated) Heat Sink & Clip (H = 6.5mm)				Application	
P				Pin-Fin Style (Nickel Plated) Heat Sink & Clip (H = 4.2mm)				1	
R				Pin-Fin Style (Nickel Plated) Heat Sink & Clip (H = 13.5mm)				Press-Fit Pins	
Y				Extruded Custom Heat Sink for Front to Back Air Flow (Nickel Plated) & Clip (H = 6.94mm)					
W				Extruded Custom Heat Sink for Front to Back Air Flow (Nickel Plated) & Clip (H = 8.72mm)					

UltraPort™ Stacked QSFP+

U95	Z	X	0	5	4	X	X	1	X	X	1	Connector Footprint	
Style		Z		Standard		1		Standard				Vent Holes	
Number of Ports in row		2		2X2		2		Small Vent Holes				EMI Gasket Option	
1		2X1		2		2		Small Vent Holes				1	
3		2X3		2		2		Rectangular Vent Holes				2	
												Through the Bezel	
Heat Sink Option		0		No Heat Sink or Clip Shipped								L	
Application		5		Press-Fit Pins (2mm Long)								Longer Spring Finger	
Cage & Connector Contact Plating		4		30 μ" (0.76 μm) Gold over 50 μ" (1.27 μm) to 3.81 μm of Nickel; 15 μ" (0.38 μm) to 1.52 μm of Matte Tin over 50 μ" (1.27 μm) to 3.81 μm of Nickel on Press-Fit Tail Area; Nickel Plating for Cage								Packaging	
												1	
												Tray	
												Light Pipe Option	
												6	
												Light Pipes (Triangular Outlet); Left Arrow Pointing Bottom Outlet & Right Arrow Pointing Top Port	
												7	
												Without Light Pipes	
												8	
												With Light Pipes; Left Arrow Pointing Top Port & Right Arrow Pointing Bottom Port	

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