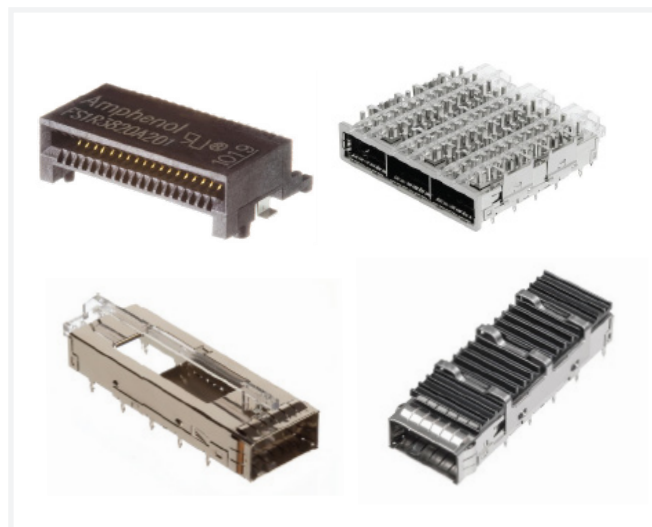


ExpressPort® QSFP+

Amphenol ICC's ExpressPort® QSFP+ interconnect system is comprised of a 38 position 0.8mm pitch SMT connector, and a press-fit cage. With four channels of data in one pluggable, the system interface is capable of transferring data up to 16Gb/s per Channel, and replacing up to 4 standard SFP+ receptacles. These features result in greater port density and overall cost savings over traditional SFP+ products. Supporting standards include, Gigabit Ethernet, InfiniBand, and SONET/SDH with different data rate options. ExpressPort® QSFP+ includes cages in single, ganged and stacked configurations with multiple heat sink options supporting various thermal requirements and port status with light pipes options.



TARGET MARKETS



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
- Plating Mating Area: Gold
- Resonance Dampening Feature: Conductive Polymer

MECHANICAL PERFORMANCE

- Durability: 250 mating cycles
- Mating Force: 40 N max.
- Contact Normal Force: 50 grams min.
- PCB Thickness Single Side (Cage): 1.44 mm (0.057in.) min.
- PCB Thickness Belly to Belly (Cage): 2.85 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: -40° to +85° C
- RoHS & Halogen-Free

TOOLING INFORMATION

- Cage Mounting: Behind Bezel, Thru Bezel, Hybrid
- EMI Options: Spring Fingers, Gasket
- Configurations:
 - 1XN (N=1,2,3,4,6)
 - 2XN (N=1,2,3)

TARGET MARKETS/APPLICATIONS



Network Interface Cards
SAN-Storage Attached Networks



Hubs
HBA
Router
Switch
Servers

ExpressPort® QSFP+

ExpressPort® QSFP+ (Connector)

FS1	R38	X	0	XX	XX	Special – QSFP+ (16 Gbps)
Style	R38	38 Position (QSFP 10G, ExpressPort® QSFP+ 12G+ & 16G)				00 No Resonance Dampening, No Hold Down Tabs
						01 No Resonance Dampening, Hold Down Tabs
Plating Option						Special – QSFP+ (16 Gbps)
2	30 μ" (0.76 μm) Gold Plating on Mating Area; Matte Tin Plating on Termination		Option 1	Option 2		10 Resonance Dampening, No Hold Down Tabs
3	15 μ" (0.38 μm) Gold Plating on Mating Area; Matte Tin Plating on Termination		10 TBD	10 QSFP Connector 11 QSFP+ Connector		11 Resonance Dampening, Hold Down Tabs

ExpressPort® Stacked QSFP+

U90	B	X	0	5	4	X	X	1	X	X	0	Connector Footprint
Style	B	Standard										0 Standard
Number of Ports in row												Vent Holes
1	2x1											0 Large Vent Holes & EMI Cover
2	2x2											2 Small Vent Holes & EMI Cover
3	2x3											4 Rectangular Vent Holes & EMI Cover
Heat Sink Option (No light pipe available)												EMI Gasket Option
0	No Heat Sink Option											1 Chomerics 1273 Conductive Elastomer
												12 Chomerics S6305 Conductive Elastomer
Application												Packaging
5	Options Available – Consult Factory											1 Tray
Cage & Connector Contact Plating												Light Pipe Option
4	30 μ" (0.76 μm) Gold Over 50 μ" (1.27 μm) to 150 μ" (3.81 μm) of Nickel; 15 μ" (0.38 μm) to 60 μ" (1.52 μm) of Matte Tin											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
												Dust Cover Option
												0 Without Dust Cover
												D With Dust Cover

ExpressPort® QSFP+ Cages

U90	X	X	X	1	1	X	X	X	Packaging
Style									1 Tray (Shipped Unassembled for Single Port)
A	One Row Cage 0°, Through the Bezel (No Light Pipe)								T Tape & Reel (1X1 Only)
C	One Row Cage 1°, Through the Bezel (1X1 Only No Light Pipe)								A Tray Heat Sink & Clip or Light Pipe Shipped Assembled
D	One Row Cage 0°, Hybrid with Elastomeric Gasket								Light Pipe Option
G	One Row Cage 0°, Behind the Bezel								0 Without Light Pipe
H	One Row Cage 0°, Through the Bezel with Optional Light Pipe								1 Round 1.4mm Outlet Light Pipe
K	One Row Cage 0°, Through the Bezel with No Heat Sink Opening								3 Square 2.6x2.6mm Outlet Light Pipe, No EMI Gasket
L	One Row Cage 0°, No Pins on Back Wall								Dust Cover Option
P	One Row Cage 0°, Behind the Bezel with Low Profile Heat Sink and Clip								0 Without Dust Cover
R	One Row Cage 0°, Through the Bezel with Low Profile Heat Sink								D With Dust Cover (Shipped Loose)
T	One Row Cage 0°, Through the Bezel with Low Profile Heat Sink and Clip with Optional Light Pipe								Plating
W	One Row Cage 1°, Through the Bezel with No Rear Pin (1X1 Only No Light Pipe)								1 Nickel
Number of Ports in row									Application
1	1X1								1 Press-Fit Pins (2.5mm Long)
2	1X2								Heat Sink Option
3	1X3								D Pin-Fin Style(Black Anodized) Heat Sink & Clip (H = 6.5 mm)
4	1X4								E Pin-Fin Style(Black Anodized) Heat Sink & Clip (H = 4.2 mm)
6	1X6								F Pin-Fin Style(Black Anodized) Heat Sink & Clip (H = 13.5 mm)
									N Pin-Fin Style(Nickel Plated) Heat Sink & Clip (H = 6.5 mm)
									P Pin-Fin Style(Nickel Plated) Heat Sink & Clip (H = 4.2 mm)
									R Pin-Fin Style(Nickel Plated) Heat Sink & Clip (H = 13.5 mm)
									Heat Sink Option
									1 No Heat Sink or Clip Shipped
									2 Fin Style(Black Anodized) Heat Sink & Clip (H = 6.5 mm)
									3 Fin Style(Black Anodized) Heat Sink & Clip (H = 4.2 mm)
									4 Fin Style(Black Anodized) Heat Sink & Clip (H = 13.5 mm)
									5 Pin Style(Nickel Plated) Heat Sink & Clip (H = 6.5 mm)
									6 Pin Style(Nickel Plated) Heat Sink & Clip (H = 4.2 mm)
									7 Pin Style(Nickel Plated) Heat Sink & Clip (H = 13.5 mm)

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