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)
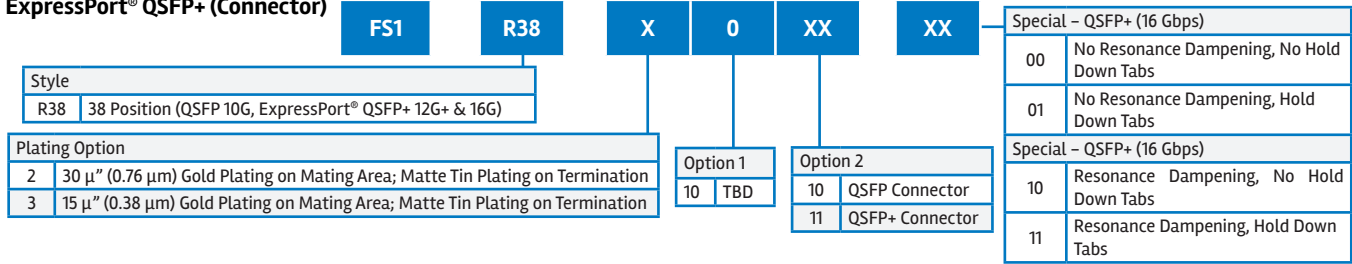
TARGET MARKETS/APPLICATIONS

Network Interface Cards
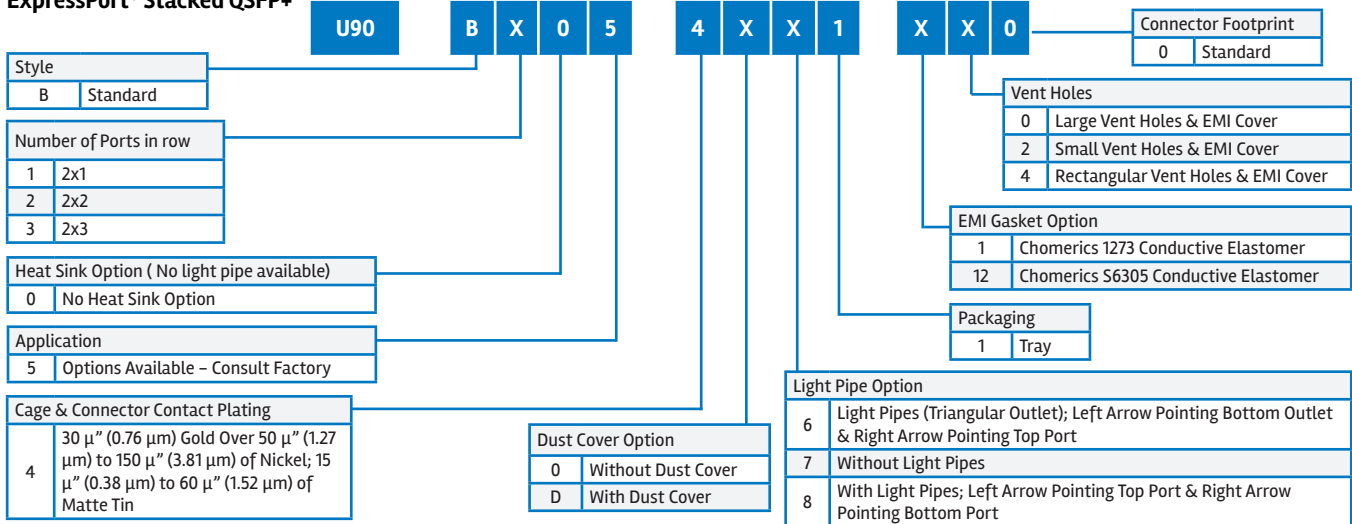SAN–Storage Attached Networks
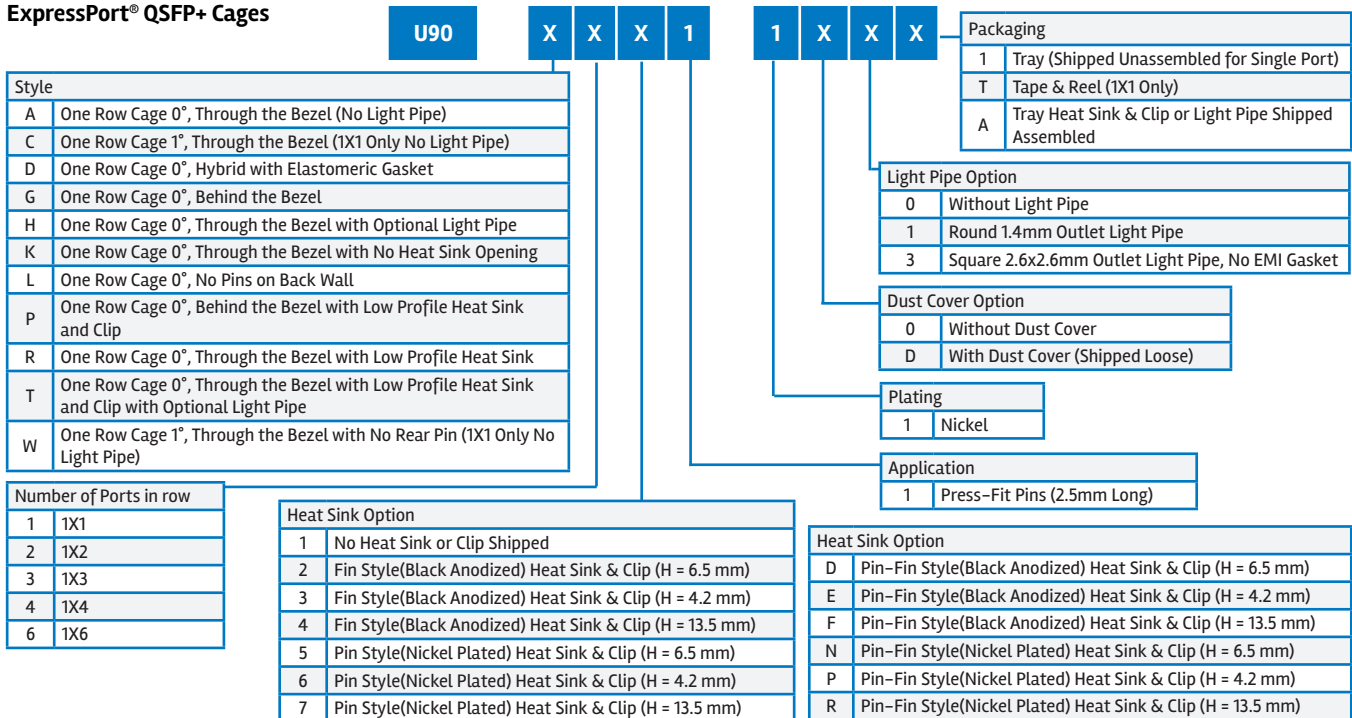
Hubs
HBA
Router
Switch
Servers

▶ ExpressPort® QSFP+

ExpressPort® QSFP+ (Connector)

FS1 R38 X 0 XX   XX

Style	
R38	38 Position (QSFP 10G, ExpressPort® QSFP+ 12G+ & 16G)

Plating Option	
2	30 μ" (0.76 μm) Gold Plating on Mating Area; Matte Tin Plating on Termination
3	15 μ" (0.38 μm) Gold Plating on Mating Area; Matte Tin Plating on Termination

Option 1	
10	TBD

Option 2	
10	QSFP Connector
11	QSFP+ Connector

Special – QSFP+ (16 Gbps)	
00	No Resonance Dampening, No Hold Down Tabs
01	No Resonance Dampening, Hold Down Tabs

Special – QSFP+ (16 Gbps)	
10	Resonance Dampening, No Hold Down Tabs
11	Resonance Dampening, Hold Down Tabs

ExpressPort® Stacked QSFP+

U90 B X 0 5 4 X X 1 X X 0

Style	
B	Standard

Number of Ports in row	
1	2x1
2	2x2
3	2x3

Heat Sink Option (No light pipe available)	
0	No Heat Sink Option

Application	
5	Options Available – Consult Factory

Cage & Connector Contact Plating	
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

Dust Cover Option	
0	Without Dust Cover
D	With Dust Cover

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

Packaging	
1	Tray

EMI Gasket Option	
1	Chomerics 1273 Conductive Elastomer
12	Chomerics S6305 Conductive Elastomer

Vent Holes	
0	Large Vent Holes & EMI Cover
2	Small Vent Holes & EMI Cover
4	Rectangular Vent Holes & EMI Cover

Connector Footprint	
0	Standard

ExpressPort® QSFP+ Cages

U90 X X X 1 1 X X X

Style	
A	One Row Cage 0°, Through the Bezel (No Light Pipe)
C	One Row Cage 1°, Through the Bezel (1X1 Only No Light Pipe)
D	One Row Cage 0°, Hybrid with Elastomeric Gasket
G	One Row Cage 0°, Behind the Bezel
H	One Row Cage 0°, Through the Bezel with Optional Light Pipe
K	One Row Cage 0°, Through the Bezel with No Heat Sink Opening
L	One Row Cage 0°, No Pins on Back Wall
P	One Row Cage 0°, Behind the Bezel with Low Profile Heat Sink and Clip
R	One Row Cage 0°, Through the Bezel with Low Profile Heat Sink
T	One Row Cage 0°, Through the Bezel with Low Profile Heat Sink and Clip with Optional Light Pipe
W	One Row Cage 1°, Through the Bezel with No Rear Pin (1X1 Only No Light Pipe)

Number of Ports in row	
1	1X1
2	1X2
3	1X3
4	1X4
6	1X6

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)

Heat Sink Option	
D	Pin-Fin Style(Black Anodized) Heat Sink & Clip (H = 6.5 mm)
E	Pin-Fin Style(Black Anodized) Heat Sink & Clip (H = 4.2 mm)
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)

Application	
1	Press-Fit Pins (2.5mm Long)

Plating	
1	Nickel

Dust Cover Option	
0	Without Dust Cover
D	With Dust Cover (Shipped Loose)

Light Pipe Option	
0	Without Light Pipe
1	Round 1.4mm Outlet Light Pipe
3	Square 2.6x2.6mm Outlet Light Pipe, No EMI Gasket

Packaging	
1	Tray (Shipped Unassembled for Single Port)
T	Tape & Reel (1X1 Only)
A	Tray Heat Sink & Clip or Light Pipe Shipped Assembled

HSIOEXPRESSPORTQSFP0118EA4

Mouser Electronics

Authorized Distributor

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