

QSFP DD Connectors

Amphenol ICC's QSFP DD interconnect system is comprised of a 76 position, 0.8mm pitch connector built for use in high speed serial applications. Each port supports up to 400Gb/s in aggregate over an 8 x 50Gb/s electrical interface. The cage and connector design provides backwards compatibility to QSFP28 modules which can be inserted into a QSFP DD port and connected to 4 of the 8 electrical channels. It is one of the industry's leading multi-lane pluggable form factors used across Ethernet, Fibre Channel and InfiniBand.

- Operating at 56Gb/s PAM-4 for up to 400Gb/s aggregated bandwidth solution
- QSFP series double density product with 8 channels per port
- Backwards mating compatible with QSFP
- Multiple connector and heat sink configurations



TARGET MARKETS



FEATURES

- Electrical interface employs 8 lanes that support 25Gb/s NRZ modulation or 56Gb/s PAM4, providing solutions up to 400Gb/s aggregate bandwidth
- Enables up to 14.4Tb/s aggregate bandwidth in a single switch slot
- Backwards mating compatible with QSFP
- Supports passive & active copper and optical solutions products
- Multiple connector configurations
- MSA supported standard interface
- Multiple heat sink options
- RoHS compliant

BENEFITS

- Enables 200G and 400G aggregate bandwidth per port
- A single switch slot can have 36 ports QSFP DD
- Allows for use of either QSFP or QSFP DD products in any port
- Enables use of DAC, short and long range optical
- Single (1x1), ganged (1xN) and stacked (2xN) connector and cage configurations
- Amphenol offering meets or exceeds MSA defined product specifications
- Allows user to choose from multiple options to maximize heat dissipation
- Environmentally friendly

TECHNICAL INFORMATION

MATERIAL

- Housing: Black color, glass reinforced, lead free solder reflow process compatible thermo plastic
- Contacts base material: High performance copper alloy
- Plating solder tails: Matte tin
- Plating mating area: Gold
- Resonance dampening feature: Conductive polymer

MECHANICAL PERFORMANCE

- Durability: 100 mating cycles
- Mating Force: 90N max.
- PCB thickness (Cage): 1.44mm min. for singlemounted (1xN)
- Belly to belly (Cage): 2.35mm min. for 1xN
- Unmating force (Cage): 50N max.
- Insertion force to PCB (Cage):
 - 780N for 1x1 port
 - 1000N for 1x2 Ports
 - 1700N for 1x4 Ports
 - 2400N for 1x6 Ports
 - 3000N for 2x1 Ports

ELECTRICAL PERFORMANCE

- Operating Voltage: 30VDC per contact
- Operating Current: 0.5A per signal contact
- Differential Impedance: $100\Omega \pm 10\Omega$

ENVIRONMENTAL

- Operating and storage temperature: -40° to +85°C
- RoHS & halogen free

TOOLING INFORMATION

- Cage mounting: Thru bezel
- EMI options: Spring fingers
- Configurations:
 - 1XN (N=1,2,3,4,5,6)
 - 2XN (N=1,2)

TARGET MARKETS/APPLICATIONS



Cellular infrastructure
Network Interface Cards
SAN–Storage Attached Networks



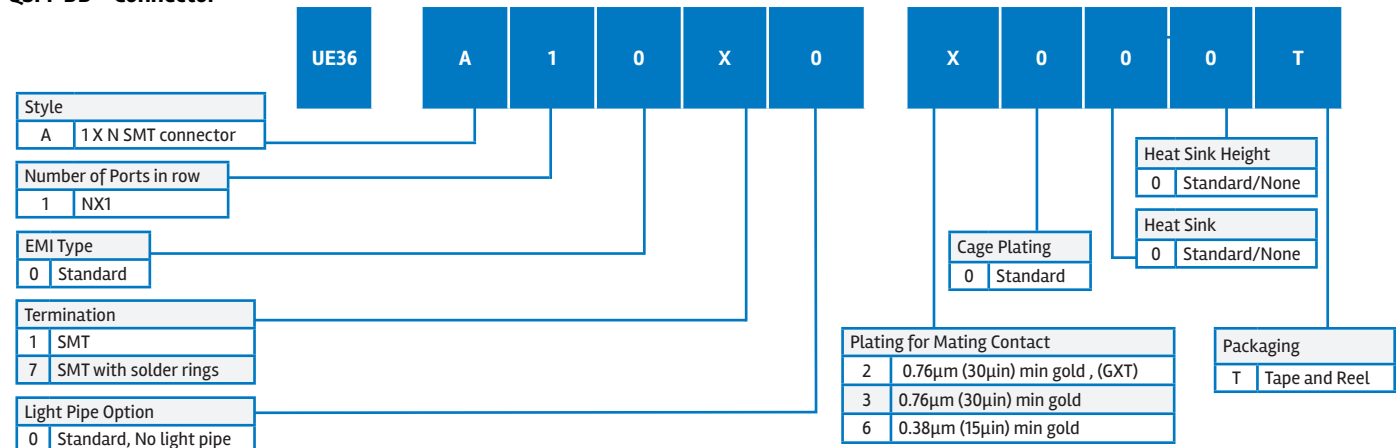
Hubs
Switch
Servers



Test and Measurement Equipment

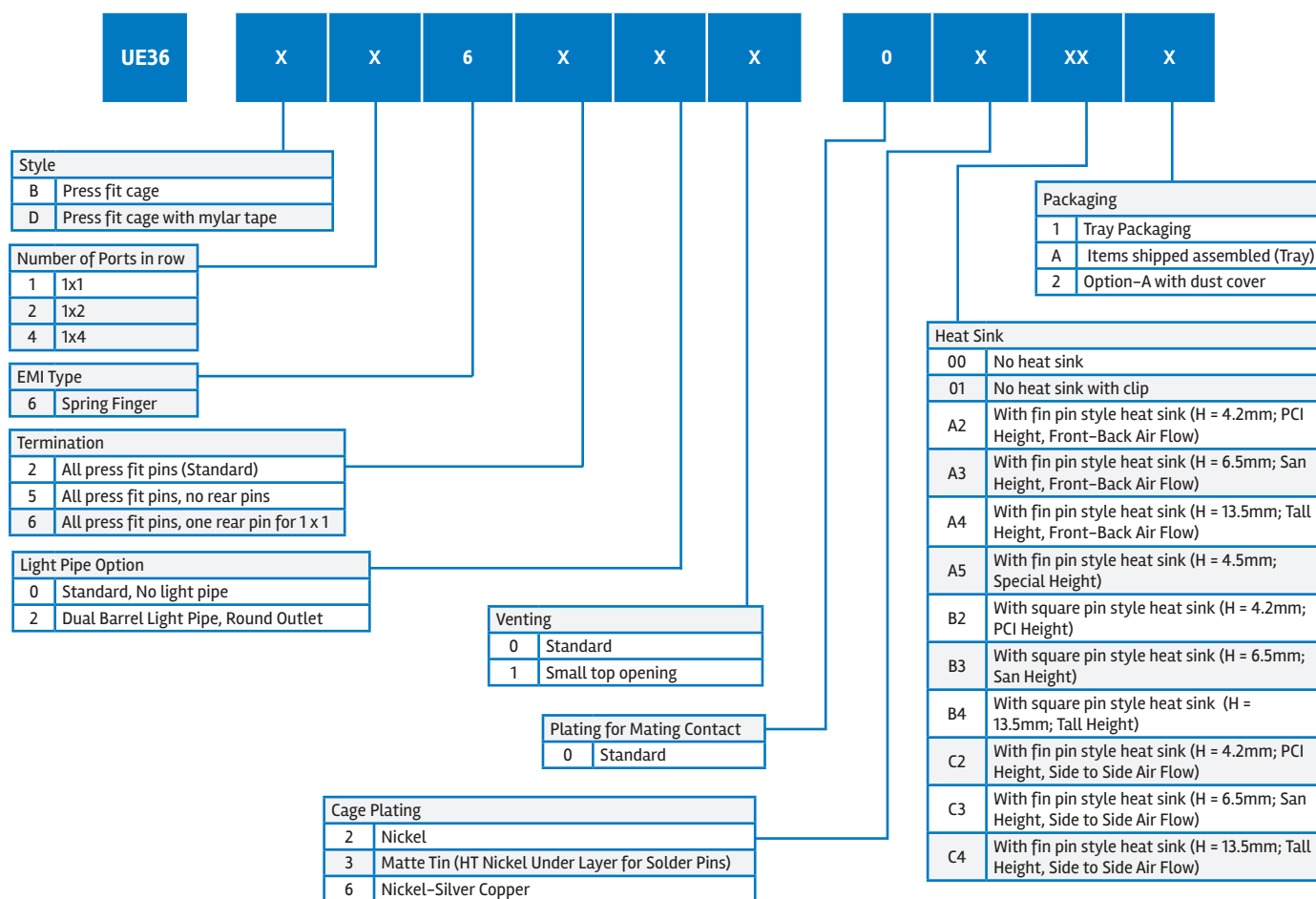
PART NUMBER SELECTOR

QSFP DD – Connector



► QSFP DD Connectors

QSFP DD – 1xN Cages



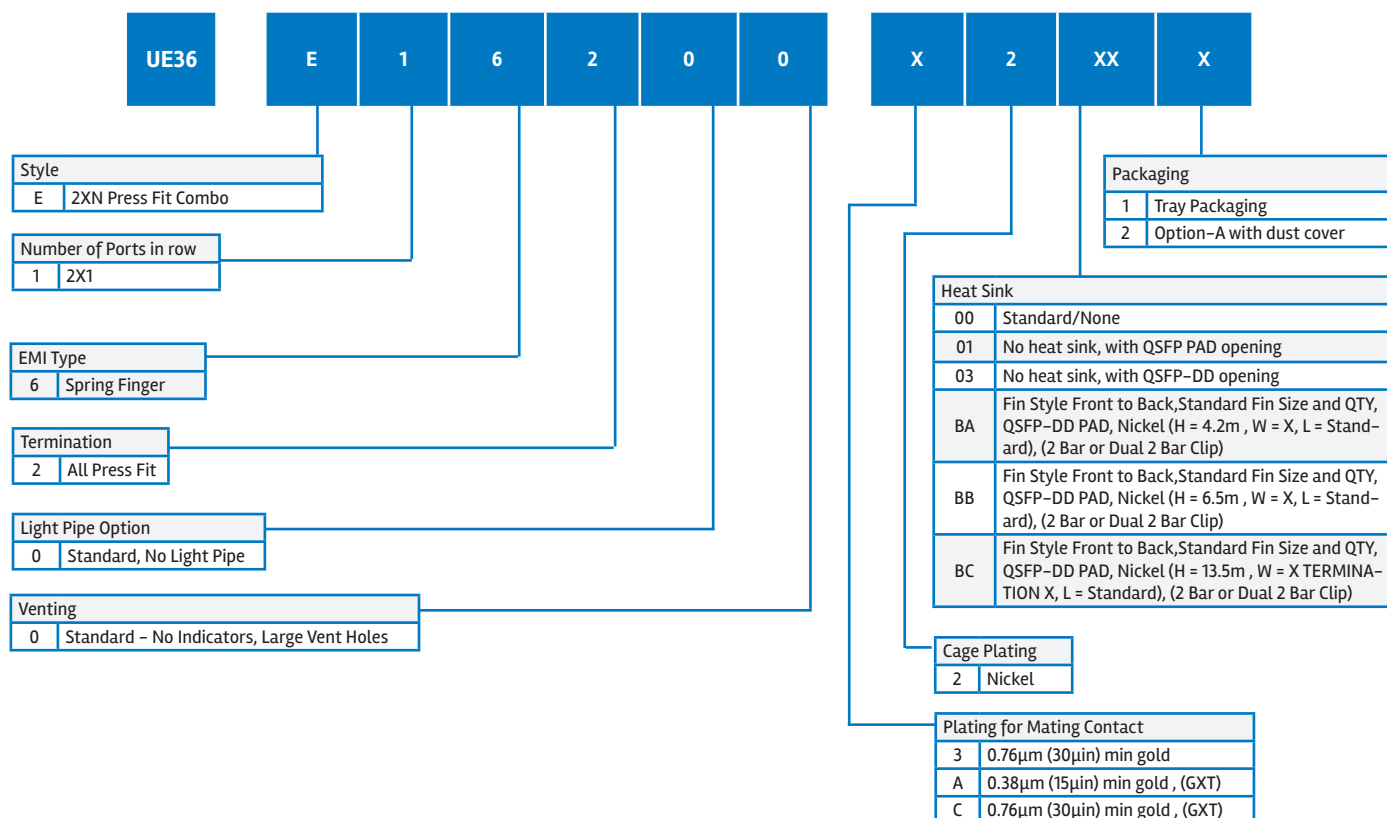
Packaging

1	Tray Packaging
A	Items shipped assembled (Tray)
2	Option-A with dust cover

Heat Sink

00	No heat sink
01	No heat sink with clip
A2	With fin pin style heat sink (H = 4.2mm; PCI Height, Front-Back Air Flow)
A3	With fin pin style heat sink (H = 6.5mm; San Height, Front-Back Air Flow)
A4	With fin pin style heat sink (H = 13.5mm; Tall Height, Front-Back Air Flow)
A5	With fin pin style heat sink (H = 4.5mm; Special Height)
B2	With square pin style heat sink (H = 4.2mm; PCI Height)
B3	With square pin style heat sink (H = 6.5mm; San Height)
B4	With square pin style heat sink (H = 13.5mm; Tall Height)
C2	With fin pin style heat sink (H = 4.2mm; PCI Height, Side to Side Air Flow)
C3	With fin pin style heat sink (H = 6.5mm; San Height, Side to Side Air Flow)
C4	With fin pin style heat sink (H = 13.5mm; Tall Height, Side to Side Air Flow)

QSFP DD – Stacked



Packaging

1	Tray Packaging
2	Option-A with dust cover

Heat Sink

00	Standard/None
01	No heat sink, with QSFP PAD opening
03	No heat sink, with QSFP-DD opening
BA	Fin Style Front to Back, Standard Fin Size and QTY, QSFP-DD PAD, Nickel (H = 4.2m , W = X, L = Standard), (2 Bar or Dual 2 Bar Clip)
BB	Fin Style Front to Back, Standard Fin Size and QTY, QSFP-DD PAD, Nickel (H = 6.5m , W = X, L = Standard), (2 Bar or Dual 2 Bar Clip)
BC	Fin Style Front to Back, Standard Fin Size and QTY, QSFP-DD PAD, Nickel (H = 13.5m , W = X TERMINATION X, L = Standard), (2 Bar or Dual 2 Bar Clip)