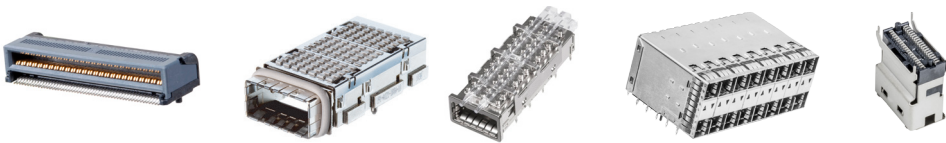


High Speed I/O Connectors Product Catalog

Now You're Connected | International Edition



ABOUT AHSI®

For over 80 years, Amphenol has been a premier provider of advanced technology interconnect products to the world's leading electronics companies.

From our very first product in 1932 — tube sockets for radios — to our current broad array of interconnect products, antennas, sensors and high speed connectors, we have consistently strived to create leading-edge, innovative products for a diverse range of customers across a multitude of industries and end markets. Through our close collaboration with these customers, Amphenol has become the interconnect partner of choice in enabling the electronics revolution.

We supply a wide range of superior value product solutions to the entire spectrum of the computer systems market, from data centers and wireless infrastructure, to super computers. Our technical solutions are also used in specialized products for advanced industrial applications. We draw on the extensive global resources of Amphenol to find solutions to our customers demanding requirements.

Our engineers design innovative combinations of industry standard connectors and application specific components to create assembly systems that set the standards for performance, reliability, and cost effectiveness. Our engineering, materials, and manufacturing organizations meet the high standards imposed by ISO 9001 as well as many customer specific quality systems. Our performance has earned us a "ship to stock" reputation and world class performance awards from many major OEMs.

We look forward to working with you.

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Ultraport SlimSAS™

Product Description

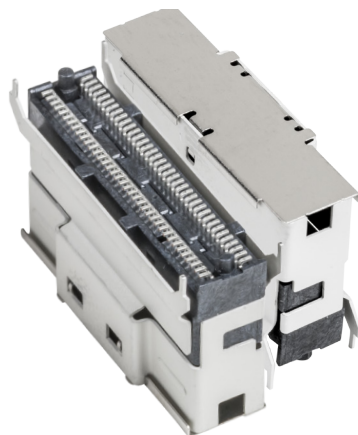
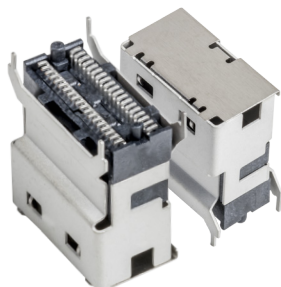
Ultraport SlimSAS™ addresses issues in next generation storage devices such as bulk cable, form factor restrictions and the introduction of multi-lane storage devices. Compliant with T10/Serial Attached SCSI (SAS-4) standard and also attuned with all known protocols, the interconnect system is a 38 or 74 position, 0.6 mm pitch receptacle designed for unshielded I/O connectors. This 0.6mm contact pitch is denser than existing solutions, allowing for more board real-estate. The connector supports an 85 Ω differential impedance and allows for internal and external system strategy and flexibility. This ribbon cable friendly interface is available in many assembly options and has over-molded contact design and PCB locating posts. The Ultraport SlimSAS™ offers superior signal integrity performance versus the standard Mini-SAS.

Applications

Servers
Switches
Routers
Data Center
Storage Racks
Storage Controllers
HBA (Host Bus Adapter) Servers
RAIDS (Redundant Array of Individual Disks)

SFF Supported Standards

Connector SFF-8654

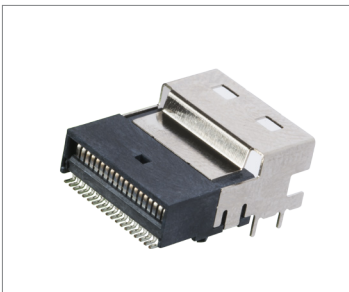


Product Specifications - UltraPort Slim SAS™

CONNECTOR	
Materials Specifications	
Housing	Black color, Glass reinforces, Lead Free Solder Reflow Process Compatible Thermo Plastic
Contacts Base Material	High Performance Copper Alloy
Contact Normal Force	50 grams nominal
Plating Solder Tails	Matte tin
Plating Mating Tails	Gold
Resonance Dampening Feature	Conductive Polymer
Operating Temperature	-40° to +85° C
Electrical Specifications	
Maximum Voltage	30 VDC per contact
Maximum Current	0.5 A per contact
Differential impedance	85 Ω +/- 10 Ω
Mechanical Specifications	
Durability	250 mating cycles min.
Latch Retention Force	50 N min.
Connector Insertion Force	55.5 N
Connector Withdrawal Force	49 N Max
Options	
Packaging	Tape and Reel Or Tray
Latch Internal Plug Retention	4X Right Angle 4X Vertical 8X Right Angle 8X Vertical 12X Right Angle 12X Vertical
Configurations	SMT/Pin-In-Hole Options Available
Environmental Specifications Options	
RoHS	Yes
Halogen Free	Yes
Flammability Rating	UL 94V-0

Ordering Information

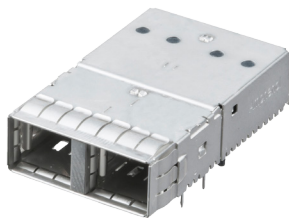
Ultraport SlimSAS™ Connector												U10	X	0	XX	X	X	X	T	
U10	SERIES DESIGNATION											PACKAGING							T	
X	STYLE											T - Tape & Reel								
A - 8X Right Angle													OPTION 1							X
B - 8X Vertical																				
C - 4X Right Angle																				
D - 4X Vertical																				
E - 4X Vertical Low profile																				
F - 8X Vertical													LATCH ANCHOR OPTION - RIGHT ANGLE							X
G - 12X Vertical																				
J - 12X Right Angle																				
K - 12X Vertical																				
0	IMPEDANCE											LATCH ANCHOR OPTION - VERTICAL							X	
0 - 85 Ohm																				
XX	NUMBER OF POSITIONS											CONTACT PLATING							X	
38 - 38 Pins																				
74 - 74 Pins													2 - 30 μ" (0.76 μm) Gold Plating over Nickel							
													3 - 15 μ" (0.38 μm) Gold Plating over Nickel							



Product Description

The XCede® I/O interconnect system is comprised of a 32 position, variable pitch connector built for use in high speed serial applications. Each port offers 4 channels to increase port density which contributes to more board real estate and immense cost savings. The XCede® I/O connector supports next generation 100G+ applications and transmits up to 25 Gbps/serial-lane. It features a stamped and formed contact design providing improved mechanical durability and resonance dampening features for superior performance. The design minimizes crosstalk and transmission line impedance discontinuity across the connector interface.

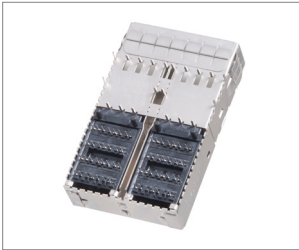
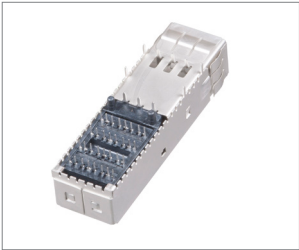
Applications
Servers
Storage
Network Interface
Test and measurement equipment
Cellular infrastructure
Hubs and Servers
Supported Standards
Multiprotocol



Product Specifications - XCede® I/O	
CONNECTOR	
Materials Specifications	
Housing	Black color, Glass-reinforced, lead-free solder reflow process compatible thermoplastic
Contacts Base Material	Phosphor Bronze
Contact Normal Force	50 grams
Plating Solder Tails	Matte tin over Nickel
Plating Mating Tails	Gold
Resonance Dampening Feature	Conductive Polymer
Operating Temperature	-40°C to +85°C
Electrical Specifications	
Maximum Voltage	30 VDC per contact
Maximum Current	0.5 A per contact
Differential impedance	100 Ω +/- 10 Ω
Insulation Resistance	1e3 M Ω min. between adjacent contacts
DMV	300 V AC
Mechanical Specifications	
Mating Force	55.5 N max.
Durability	250 mating cycles min.
Latch Retention Force	50 N min.
Options	
Packaging	Tape and Reel
Configurations	1X1, 1X2
Latch Internal Plug Retention	Pin-In-Hole Options Available
Environmental Specifications Options	
RoHS	Yes
Halogen Free	Yes
Flammability Rating	UL 94V-0

Ordering Information

XCede® I/O Connector		UE86-G	X	636	0	0	X	3	T	
UE86-G	SERIES DESIGNATION				PACKAGING					T
					T - Tape & Reel					
X	NUMBER OF PORTS				OPTION 1					3
	1 - 1 Port				3 - Standard					
	2 - 2 Port									
636	CAGE OPTION				OPTION 1					X
	636 - Pin in Paste				2 - Ni, High Gold 50 μ" (1.27 μm)					
					3 - Ni, Standard Gold 30 μ" (0.76 μm)					
					DUST COVER OPTION					0
					0 - Standard					
					LIGHT PIPE OPTION					0
					0 - Standard					



Product Description

RCx is a simple, high density, low cost, passive connector and cable system specifically designed for intra-rack connectivity of 25 Gb, 50 Gb and 100 Gb Ethernet allowing for a seamless intra-rack switch to adapter deployments. The streamlined design eliminates the need to include provision for active electrical components such as EEPROMs, optics, retimers, or management ICs. RCx is density optimized and can accommodate more than 128 25 G lanes in a RU faceplate. That leads two RCx2 receptables to fit on a half-height PCIe card faceplate or two Rcx4 to fit on a full-height PCIe card faceplate. Versatile, the 4-lane RCx4 receptacle can be used as a 4-lane port, or can be bifurcated to be used as multiple 2-lane and 1-lane ports.

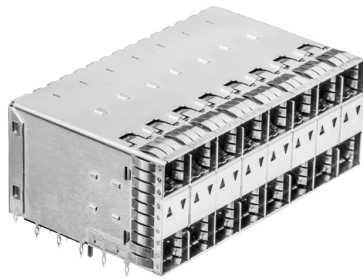
Applications		Supported Standards
Blade Server	Servers	802.3 by (25GE)
Computing Systems	Controlled Cards	802.3 by (100GE)
Networking Equipment	DAS-Direct Attached Storage	CEI-56G-PAM4-LR
Router/Switch	SAN-Storage Attached Networks	
Storage Systems	NIC cards	

Product Specifications - RCx			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass-reinforced, lead-free solder reflow process compatible thermoplastic	PCB Thickness	1.57 mm (0.062 in.)
Contacts Base Material	Phosphor Bronze		
Contact Normal Force	50 grams		
Plating Solder Tails	Matte tin over Nickel		
Plating Mating Area	Gold		
Operating and (Storage) Temperature	-40 °C to +85 °C		
Electrical Specifications			
Operating Voltage	30 VDC per contact		
Operating Current	0.5 A per contact		
Differential impedance	100 Ω +/- 10 Ω		
Mechanical Specifications			
Mating Force	62N maximum (RCx1, RCx2 and RCx4)	Unmating Force	30N max (RCx1, RCx2, RCx4)
Durability	250 mating cycle		
Options			
Configurations	1X1, 1x2, 1x4, 2x4, 2x8		
Environmental Specifications			
RoHS	Yes		
Halogen Free	Yes		

Ordering Information

RCx Connector & Cage

RCx Connector & Cage		UE12	X	1	X	X	0	X	X	X	0	X
UE12	SERIES DESIGNATION											
X	STYLE											
A - 1XN SMT Connector												
B - 1XN Press-Fit Cage (Spring Finger EMI)												
E - 2XN Press-Fit Combo (Spring Finger EMI)												
1	NUMBER OF PORTS IN ROW											
1 - 1 to N - N in Row												
X	NUMBER OF AUX PINS PER EACH ROW											
0 - N/A												
6 - Spring Finger												
X	TERMINATION											
0 - SMT												
1 - All Press-Fit												
</												



Product Description

CFP2 series offers a 104 position, 0.6mm pitch connector designed to be compatible with 100 Gbps Form Factor Pluggable (CFP) Multi-Source Agreement for Ethernet and other applications. It is used in multi-hundred Gbps systems and is comprised of insert molding assemblies for top contacts and Press-Fit cage assemblies. Rated for 25 Gbps per channel with resonance dampening for improved signal integrity, CFP2 has up to 60% lower power consumption versus CFP. An optional riding heat sink ensures proper thermal dissipation. Compliant with IEEE and ITU-T applications, the CFP2 footprint is compatible with other industry suppliers.

Applications	Supported Standards
Carrier Networks and Data Centers	CFP2 MSA
Large Data Center Campus Connectivity	
Metro Area Networks	

Product Specifications - CFP2			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinforced , Lead Free Solder Reflow Process Compatible Thermo Plastic	PCB Thickness	3.00 mm (0.118 in.)
Contacts Base Material	Phosphor Bronze		
Contact Normal Force	40 grams		
Plating Mating Area	Gold		
Plating Solder Tails	Matte tin		
Resonance Dampening Feature	Conductive Polymer		
Operating Temperature	-40° to +85° C		
Electrical Specifications			
Operating Voltage	3.3 VDC per contact		
Operating Current	3.75A per contact		
Differential impedance	100 Ω +/- 10 Ω		
Mechanical Specifications			
Mating Force	80 N	Unmating Force	50 N
Durability	200 mating cycle	Insertion Force to PCB	2 port- 2000N max
Options			
Packaging	Tape and Reel	Packaging	Tray
EMI Options	Available		
Configurations	1 X1, 1X2		
Environmental Specifications			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		

Ordering Information

CFP2 Connector

CFP2 Connector		UXX	B	104	X	0	0	T	
UXX	SERIES DESIGNATION				PACKAGING				T
	U99 - CFP2 Host Connector				T - Tape & Reel (U99)				
	U56 - CFP2 Plug Connector				1 - Tray (U56)				
B	STYLE				OPTION 2				0
	B - CFP2				0 - Standard				
104	NUMBER OF POSITIONS				OPTION 1				0
	104 - 104 Positions				0 - Standard				
					CONTACT PLATING				X
					2 - 30 μ" (0.76 μm) Minimum Of Gold On Mating End With 100 μ" (2.54 μm) Minimum Of Matte Tin On Solder Termination, 50 To 75 Micro Inches Of Nickel Under Plate All Over				
					3 - 15 μ" (0.38 μm) Minimum Of Gold On Mating End With 100 μ" (2.54 μm) Minimum Of Matte Tin On Solder Termination, 50 To 75 Micro Inches Of Nickel Under Plate All Over				

CFP2 Cage

CFP2 Cage

U98	B	X	X	X	1	X	X	1
U98	SERIES DESIGNATION							1
B	STYLE B - CFP2 Cage							
X	NUMBER OF PORT IN ROW 1 - NX1 2 - NX2							X
X	HEAT SINK OPTION 1 - No Heat Sink or Clip Shipped 2 - Standard Side to Side Fin, Aluminum Alloy, 10.75mm High, (Black Anodized) with Clip 4 - Side to Side Fin, Aluminum Alloy, 7.75mm High, (Black Anodized) with Clip D - Front to Back Fin, Aluminum Alloy, 10.75mm High, (Nickel Plated) with Clip M - Front to Back Fin, Aluminum Alloy, 10.75mm High, (Black Anodized) with Clip							X
X	INSULATING TAPE OPTION 1 - Standard (No Insulating Tape) 2 - With Insulating Tape on Bottom Cage							1
PACKAGING 1 - Tray								1
CONNECTOR COVER 0 - With Connector Cover, No Kickout Spring A - Without Connector Cover or Kickout Spring B - Without Connector Cover, With Kickout Spring C - With Connector Cover & Kickout Spring								X
OPTIONAL DUST COVER 0 - Without Dust Cover D - With Dust Cover (Shipped Loose)								X
PLATING 1 - Nickel								1



Product Description

CFP4 series offers a 56 position, 0.6mm pitch connector and is used in multi-hundred Gbps systems. It is comprised of insert molding assemblies for top side contacts and Press-Fit cage assemblies. Rated for 25 Gbps per channel with resonance dampening for improved signal integrity, CFP4 has up to 60% lower power consumption versus CFP. The CFP4 series includes a plug connector on the mating interface to improve accuracy and aid in delivering high speed performance. CFP4 has the ability to be a customized solution with an optional riding heat sink that ensures proper thermal dissipation. It is also compliant with IEEE and ITU-T applications.

Applications	Supported Standards
Carrier Networks and Data Centers	CPF4 MSA
Large Data Center Campus Connectivity	
Metro Area Networks	

Product Specifications - CFP4			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinforced , Lead Free Solder Reflow Process Compatible Thermo Plastic	PCB Thickness	3.00 mm (0.118 in.)
Contacts Base Material	Phosphor Bronze		
Contact Normal Force	40 grams		
Plating Mating Area	Matte tin or Gold flash options		
Plating Solder Tails	Gold		
Resonance Dampening Feature	Conductive Polymer		
Operating Temperature	-40° to +85° C		
Electrical Specifications			
Operating Voltage	30 VDC per contact		
Operating Current	0.5 A per contact		
Mechanical Specifications			
Mating Force	60 N	Unmating Force	50 N
Durability	250 mating cycle	Insertion Force to PCB	180 N min.
Options			
Packaging	Tape and Reel	Packaging	Tray
Configurations	1X1, 1X2, 1X4		
Environmental Specifications			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		

Ordering Information

CFP4 Host Connector

U99

C

056

X

0

0

T

U99

SERIES DESIGNATION

C

STYLE

C - CFP4

056

NUMBER OF POSITIONS

056 - 56 Positions

PACKAGING

T - Tape & Reel

OPTION 2

0 - Standard

OPTION 1

0 - Standard

CONTACT PLATING

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

CFP4 Cage

U98

C

X

X

X

1

X

X

1

U98

SERIES DESIGNATION

C

STYLE

C - CFP4

X

NUMBER OF PORT IN ROW

1 - NX1

2 - NX2

4 - 1X4

X

HEAT SINK OPTION

1 - No Heat Sink & No Clip Shipped

2 - Fin, Side to Side, Aluminum Alloy, Black Anodize Coating - 14mm

6 - Fin, Side to Side, Aluminum Alloy, Black Anodize Coating - 11mm

B - Post, Aluminum Alloy, Black Anodized - 11mm

M - Fin, Front to Back, Aluminum Alloy, Black Anodize Coating - 14mm

X

INSULATING TAPE OPTION

1 - Standard (No Insulating Tape)

2 - With Insulating Tape on Bottom Cage

PACKAGING

1 - Tray

CONNECTOR COVER OPTION

B - Without Connector Cover

C - With Connector Cover

DUST COVER OPTION

0 - Without Dust Cover

D - With Dust Cover (Shipped Loose)

PLATING

1 - Nickel

Product Description

Amphenol's SFP product family supports applications for up to 6 Gbps per channel. The connector accepts multiple transceivers per INF-8074i and combines, transmits, and receives functions in a low cost, compact format. The assemblies are designed to maximize valuable space on the PCB. The cages have a two-piece construction with enhanced transceiver mating tabs available in a Press-Fit version or a solder tail version. Light pipes are designed to deliver a "link" or "no link" status using LEDs attached on the PCB.

Applications		SFF Supported Standards
Storage	Cellular Infrastructure	Connector SFF-8071
Network Interface	Hubs and Servers	Cage SFF-8432
Test and Measurement Equipment	Switches	Ganged SFF-8433

Product Specifications - SFP			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinforced , Lead Free Solder Reflow Process Compatible Thermo Plastic	PCB Thickness	
Contacts Base Material	Phosphor Bronze	Solder-Post and Press-Fit	1.45 mm (0.057in.)
Contact Normal Force	100 grams	“Belly to Belly”	3.00 mm (0.118in.)
Plating Solder Tails	Matte tin or Gold flash options		
Plating Mating Area	Gold		
Operating & Storage Temperature	-55° C to 85° C		
Electrical Specifications			
Operating Voltage	30 VDC per contact		
Operating Current	0.5 A per contact		
Differential Impedance	100 Ω +/-10 Ω		
Mechanical Specifications			
Mating Force	50 N max.	Unmating Force	11.50 N max.
Durability	250 mating cycles	Insertion Force to PCB	500 N for 1 port (1x1 cage) 1000 N for 2 port (1x2 cage) 2100 N for 4 port (1x4 cage) 3000 N for 6 port (1x6 cage)
Options			
Packaging	Tape and Reel	Packaging	Tray, Tape and Reel Available for Single Port
EMI Options, Heat Sink and Clip	Available		
Configurations	1XN (N = 1,2,3,4,6) 2XN (N = 1,2,4,5,6,8)		
Environmental specifications			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		

Ordering Information

SFP Connector

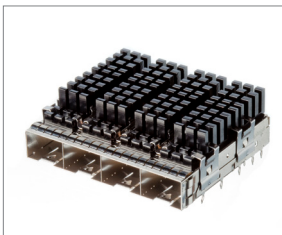
UE75	SERIES DESIGNATION	UE75	A	20	X	0	0	0	T
A	STYLE								PACKAGING
	A - R/A Single Surface Mount Connector								T - Tape & Reel (500/Reel)
20	NUMBER OF POSITIONS								OPTION 3
	20 - 20 Positions								0 - Standard
X	CONTACT PLATING								OPTION 2
	2 - 30 μ" (0.76 μm) Gold Plating on Mating Area; Gold Flash on Termination								0 - Standard
	3 - 30 μ" (0.76 μm) Gold Plating on Mating Area; Matte Tin on Termination								OPTION 1
	5 - 15 μ" (0.38 μm) Gold Plating on Mating Area; Gold Flash on Termination								0 - Standard
	6 - 15 μ" (0.38 μm) Gold Plating on Mating Area; Matte Tin on Termination								

SFP Cage

U77	SERIES DESIGNATION	U77	X	X	X	X	X	X	X	X
X	STYLE								PACKAGING	X
	A - 1 Row									
	C - 1 Row Cage; Light Pipe Combo (Top)									
	E - 1 Row Cage; Heat Sink Combo (Fin)									
	F - 1 Row Cage; 1° Angle (1X1 Only)									
X	NUMBER OF PORTS IN ROW								OPTION 1	X
	1 - Single in Row									
	2 - Inline 1X2									
	4 - Inline 1X4									
	6 - Inline 1X6									
X	CHASSIS GROUNDING								DUST COVER	X
	1 - Metal Grounding Tabs									
	2 - Inner & Outer Flexible Spring Fingers									
X	HEAT SINK / LIGHT PIPE								PLATING	X
	1 - No Heat Sink / Light Pipe									
	2 - Heat Sink									
	3 - Light Pipe (1XN Cage Only)									
X	PCB MOUNTING									
	X - Various Options Available - Consult Factory									

SFP 2XN Cage/Connector Combo

UEXX	SERIES DESIGNATION	UEXX	X	X	X	2	X	X	X	X	1
	UE78 - Standard SFP Cage & Connector										PACKAGING
	UE86 - Standard SFP Cage & Connector with Light Pipes										1 - Tray (Stacked)
X	STYLE										PLATING OPTION: CAGE
	B - Stacked Connector/Cage Combo - UE78 Series										1 - Bright Tin (for Wave Soldering)
	D - 2XN, Small Light Pipe Openings - UE86 Series										2 - Nickel
	K - 2XN, Large Light Pipe Openings - UE86 Series										3 - Matte Tin (for SMT Soldering)
	L - 2XN, Low Profile Combo (No Light Pipe) - UE78 Series										PLATING OPTION: CONNECTOR
X	NUMBER OF PORTS IN ROW										X - Various Options Available - Consult Factory
	1 - 2X1										DUST COVER
	2 - 2X2										0 - Without Dust Cover
	4 - 2X4										D - With Dust Cover (Shipped Loose)
	5 - 2X5										HEAT SINK/LIGHT PIPE
	6 - 2X6										0 - No Heat Sink / Light Pipe
	8 - 2X8										X - Various Options - Consult Factory
X	EMI SHIELDING										PCB MOUNTING
	1 - Standard										7 - Standard
	2 - Bottom Insulating Tape, No Mid Ground Pins										X - Various Options - Consult Factory
	3 - No Mid Ground Pins										
2	OPTION 1										
	2 - Standard										



ExpressPort® SFP+

Product Description

The ExpressPort® SFP+ interconnect system provides data transfer speeds of up to 16 Gbps. The design of the ExpressPort® SFP+ connector minimizes impedance discontinuities and reflections at high data rates and provides a 10 to 20 dB improvement in Near-End Crosstalk. The ExpressPort® SFP+ unique cage construction features EMI shielding available in the form of metal spring fingers or elastomeric gaskets. Additional features available include light pipes, heat sinks and many other custom features.

Applications	SFF Supported Standards
Storage	Connector SFF-8071
Network Interface	Cage SFF-8432
Test and Measurement Equipment	Ganged SFF-8433
Cellular Infrastructure	
Hubs and Servers	
Switches	

Product Specifications - ExpressPort® SFP+			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black or nature color, Glass-reinforced, lead-free solder reflow process compatible thermoplastic	PCB Thickness	
Contacts Base Material	Phosphor Bronze	Single Side Mount	1.57 mm (0.062 in.)
Contact Normal Force	100 grams	“Belly to Belly”	3.00 mm (0.118 in.)
Plating Solder Tails	Matte tin or gold flash options		
Plating Mating Area	Gold		
Resonance Dampening Feature	Conductive Polymer		
Operating & Storage Temperature	-55° to +85°C		
Electrical Specifications			
Operating Voltage	30 V DC per contact		
Operating Current	0.5 A per contact		
Differential Impedance	100 Ω +/-10 Ω		
Mechanical Specifications			
Mating Force	50 N max.	Unmating Force	11.50 N max.
Durability	250 mating cycles	Insertion Force to PCB	1000 N for 2 port 2100 N for 4 port 3000 N for 6 port
Card Entry Slot	1.0mm-thick integrated circuit cards		
Options			
Packaging	Tape and Reel	Packaging	Tray, Tape and Reel Available for Single Port
EMI Options, Heat Sink and Clip	Available		
Configurations	1xN (N = 1,2,3,4,5,6,8) 2xN (N = 1,2,3,4,5,6,8)		
Environmental Specifications			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		

Ordering Information

ExpressPort® SFP+ Connector

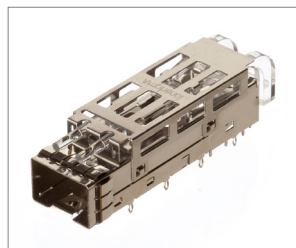
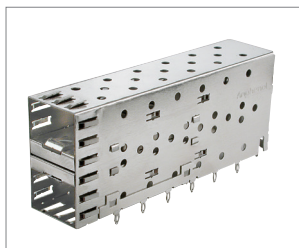
UE76 A 20 X 0 X 0 T	
UE76	SERIES DESIGNATION
A	STYLE A - R/A Single Surface Mount Connector
20	NUMBER OF POSITIONS 20 - 20 Positions
X	CONTACT PLATING 2 - 30 μ" (0.76 μm) Gold Plating on Mating Area; Gold Flash on Termination 3 - 30 μ" (0.76 μm) Gold Plating on Mating Area; Matte Tin on Termination 5 - 15 μ" (0.38 μm) Gold Plating on Mating Area; Gold Flash on Termination 6 - 15 μ" (0.38 μm) Gold Plating on Mating Area; Matte Tin on Termination
	PACKAGING T - Tape & Reel (500/Reel)
	OPTION 3 0 - Standard
	OPTION 2 0 - Standard 1 - Resonance Cancellation Features
	OPTION 1 0 - Standard

ExpressPort® SFP+ Cage

U77 X X X X X X X X X X	
U77	SERIES DESIGNATION
X	STYLE A - 1 Row C - 1 Row Cage; Light Pipe Combo (Top) E - 1 Row Cage; Heat Sink Combo (Fin) F - 1 Row Cage; 1° Angle (1X1 Only)
X	NUMBER OF PORTS IN ROW 1 - Single in Row 2 - Inline 1X2 3 - Inline 1X3 4 - Inline 1X4 5 - Inline 1X5 6 - Inline 1X6 8 - Inline 1X8
X	CHASSIS GROUNDING 3 - Metal Spring Fingers (No Bottom Latch Cover) 4 - Elastomeric Gasket 6 - Metal Spring Fingers (1 Piece Design Bottom Latch Cover) 7 - Metal Spring Fingers with Insulating Tape
X	HEAT SINK / LIGHT PIPE 1 - No Heat Sink / Light Pipe 2 - Heat Sink 3 - Light Pipe (1XN Cage Only)
X	PCB MOUNTING X - Various Options Available - Consult Factory
	PACKAGING 1 - Tray (ACC Re-Packed) T - Tape & Reel (1X1 Only)
	OPTION 1 0 - Standard 7 - Cage with Extra Bottom Spring Fingers, No Bottom Mid G-Pins 8 - Cage with Half-Moon Mid G-Pins 9 - Cage with Extra Bottom Spring Fingers & Half Moon Mid G-Pins
	DUST COVER 0 - Without Dust Cover D - With Dust Cover (Shipped Loose)
	PLATING 1 - Bright Tin (for Wave Solder) 2 - Nickel 3 - Matte Tin (for Reflow 245°)

ExpressPort® SFP+ 2XN (Cage/Connector)

UE86 X X X X X X X X X 1	
UE86	SERIES DESIGNATION
X	STYLE B - 2XN, No Light Pipe D - 2XN, Small Light Pipe Openings K - 2XN, Large Light Pipe Openings L - 2XN, Low Profile Combo (No Light Pipe) S - 2XN, Thermally Enhanced
X	NUMBER OF PORTS IN ROW 1 - 2X1 2 - 2X2 3 - 2X3 4 - 2X4 5 - 2X5 6 - 2X6 8 - 2X8
X	CHASSIS GROUNDING 4 - Elastomeric Gasket 5 - Elastomeric Gasket, Bottom Insulating Tape 6 - Metal Spring Fingers 7 - EMI Fingers, Bottom Insulating Tape
X	MOUNTING TYPE: CONNECTOR 2 - Standard Press-Fit Pins (12Gbps) 5 - Small Press-Fit Pins for High Speed Termination (16Gbps) A - Press-Fit Pins (10Gbps)
X	MOUNTING TYPE: CAGE 7 - Standard 2XN A - Narrow Flange C - Enhanced EMI
	PACKAGING 1 - Tray
	PLATING OPTION: CAGE 1 - Bright Tin 2 - Nickel 3 - Matte Tin
	PLATING OPTION: CONNECTOR X - Various Options Available - Consult Factory
	DUST COVER 0 - Without Dust Cover D - With Dust Cover (Shipped Loose)
	LIGHT PIPE OPTION 0 - No Light Pipe 1 - 4 Light Pipes/2X1 2 - 2 Inner Light Pipes/2X1 3 - 2 Outer Light Pipes/2X1



UltraPort™ SFP+

Product Description

The UltraPort™ SFP+ interconnect system is comprised of a 20-position hot swappable I/O connector enclosed in a metal cage mounted to a host PCB. It supports 28Gbps applications with a backward compatibility for next generation Ethernet and Fibre Channel applications. UltraPort™ SFP+ connector shares the same unique mating interface and EMI cage dimensions as the SFP+ form factor. The cages are built for use with several board thicknesses and assembly processes to accommodate server and switch applications for cost optimized solutions. The connector accepts multiple transceivers per INF-8081 and combines, transmits, and receives functions in a low cost, compact and flexible format. Stacked versions (2XN) consist of a 2-row cage with integrated connectors. We offer a wide variety of cage configurations, which have a two-piece construction with enhanced transceiver mating tabs available in press-fit or solder tail versions.

Applications		Supported Standards	
Servers/Storage	Cellular infrastructure	Connector SFF-8071 (16Gbps), SFF-8402 (28Gbps), INF-8081	
Medical diagnostic equipment	Telecommunications hardware	Cage SFF-8432	
Test and measurement equipment		Ganged SFF -8433	

Product Specifications - UltraPort® SFP+			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinforced, Lead Free Solder Reflow Process Compatible Thermo Plastic	PCB Thickness	
Contacts Base Material	Phosphor Bronze	Single Side Mount	1.57 mm (0.062 in.)
Contact Normal Force	40 grams Minimum.	“Belly to Belly”	3.00 mm (0.118 in.)
Plating Solder Tails	Matte tin or Gold flash options		
Plating Mating Area	Gold		
Resonance Dampening Feature	Conductive Polymer		
Operating & Storage Temperature	-55 C° to 85 C°		
Electrical Specifications			
Operating Voltage	30 V DC per contact		
Operating Current	0.5 A per contact		
Differential Impedance	100 Ω +/-10 Ω		
Mechanical Specifications			
Mating Force	50 N max.	Unmating Force	11.50 N max.
Durability	250 mating cycles	Insertion Force to PCB	1000 N for 2 port 2100 N for 4 port 3000 N for 6 port
Options			
Packaging	Tape and Reel	Packaging	Tray, Tape and Reel Available for Single Port
Configurations	1 X N (N=1,2,3,4,5,6) 2 X N (N=1,2,4,5,6,8)		
Environmental Specifications			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		

Ordering Information

UltraPort™ SFP+ Connector

UltraPort™ SFP+ Connector

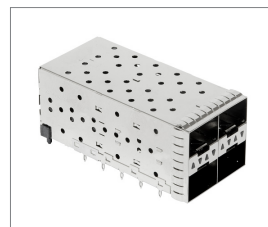
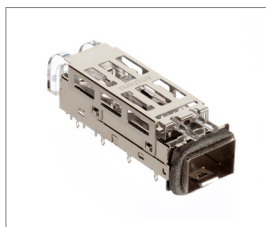
UE76	3GA	20	X	6	0	0	T
UE76	SERIES DESIGNATION			PACKAGING			T
3G	OPTION			T - Tape & Reel			
	3GA - 3rd Generation			OPTION 3			0
20	NUMBER OF PORTS IN ROW			0 - Standard			
	20 - 20 SMT Connector			OPTION 2			0
X	PLATING			OPTION 1			6
	2 - 30 μ" (0.76 μm) Gold at Mating Area Gold Flash in Termination			6 - Standard			
	3 - 30 μ" (0.76 μm) Gold at Mating Area 3.0-7.62 μm Matte Tin in Termination			8 - 1XN belly to belly with 2XN			
	5 - 15 μ" (0.38 μm) Gold at Mating Area Gold Flash in Termination						
	6 - 15 μ" (0.38 μm) Gold at Mating Area 3.0-7.62 μm Matte Tin in Termination						

UltraPort™ SFP+ Cage

UltraPort™ SFP+ Cage										U77	3G	X	N	X	1	X	X	X	7	X				
U77	SERIES DESIGNATION																							
3G	OPTION																							
	3G - 3rd Generation																							
X	STYLE																							
	A - Ganged Cage (One Row)																							
	C - Ganged Cage with Light Pipe (2 per port)																							
	D - Ganged Cage with Light Pipe (1 per port)																							
	E - One Row Cage and Heat Sink Combo																							
	N - One Row Cage and Heat Sink Combo (2 Light Pipes per port)																							
N	NUMBER OF PORTS IN ROW																							
	1 - 1X1																							
	2 - 1X2																							
	3 - 1X3																							
	4 - 1X4																							
	5 - 1X5																							
	6 - 1X6																							
	8 - 1X8																							
X	EMI CHASSIS GROUNDING																							
	4 - Gasket																							
	6 - Spring Finger																							

UltraPort™ Stacked SFP+

UltraPort™ Stacked SFP+										
UE86	SERIES DESIGNATION					X	X	X	6	1
3X	OPTION					PACKAGING				
	3G - 3rd Generation					1 - Tray				
	3T - Thermoenhancement					PLATING OPTION: CAGE				
						6 - Pre-Plating				
X	NUMBER OF PORTS IN ROW					PLATING OPTION: CONNECTOR				
	1 - 2X1					X - Various Options Available - Consult Factory				
	2 - 2X2									
	4 - 2X4									
	5 - 2X5									
	6 - 2X6									
	8 - 2X8									
X	CHASSIS EMI OPTION					DUST COVER OPTION				
	4 - Gasket					0 - Without Dust Cover				
	6 - Spring Fingers					D - With Dust Covers				
2	MOUNTING TYPE : CONNECTOR					LIGHT PIPE OPTION				
	2 - Standard Press-Fit Pins					X - Various Options Available - Consult Factory				
0	MOUNTING TYPE : CAGE									
	0 - Standard Cage									



ExpressPort® QSFP+/eQSFP+

Product Description

The 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 28 Gbps/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.

Applications	SFF Supported Standards	
Data Servers	ExpressPort QSFP+	eQSFP+
Router/Switches	Connector SFF-8682	Connector SFF-8672
Hubs	Cage SFF-8683	Cage SFF-8683
SAN, NIC cards		
HBA'S		

Product Specifications - ExpressPort® QSFP+			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinfor ced , Lead Free Solder Reflow Process Compatible Thermo Plastic	PCB Thickness	1.44 mm MIN for single mounted. (1xN)
Contacts Base Material	Phosphor Bronze	Belly to Belly	2.85 mm MIN for 1xN. 1.57 mm MIN for 2xN.
Contact Normal Force	50 grams min.		
Plating Solder Tails	Matte tin		
Plating Mating Area	Gold		
Resonance Dampening Feature	Conductive Polymer		
Operating & Storage Temperature	-40° to +85° C		
Electrical Specifications			
Operating Voltage	30 VDC per contact		
Operating Current	0.5 A per contact		
Differential Impedance	100 Ω +/-10 Ω		
Mechanical Specifications			
Mating Force	40 N Maximum	Unmating Force	30 N Maximum
Durability	250 mating cycles	Insertion Force to PCB	780 N for 1 port 1000 N for 2 Ports 1700 N for 4 Ports 2400 N for 6 Ports
Options			
Packaging	Tape and Reel	Packaging	Tray
EMI Options	Gasket, Spring Fingers		
Cage Mounting	Behind Bezel, Thru Bezel, Hybrid		
Configurations	1XN (N=1,2,3,4,6) 2XN (N=1,2,3)		
Environmental Specifications			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		

Ordering Information

ExpressPort® QSFP+ (Connector)

ExpressPort® QSFP+ (Connector)						FS1	R38	X	0	XX	XX
FS1	SERIES DESIGNATION										
R38	STYLE										
R38 - 38 Position (QSFP 10G, ExpressPort® QSFP+ 12G+ & 16G)											
X	PLATING										
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											
0	OPTION 1										
0 - Standard											
						SPECIAL - QSFP+ (12 Gbps & UP)					
						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					
						OPTION 2					
						00 - QSFP Connector					
						A2 - QSFP+ Connector					

ExpressPort® Stacked QSFP+

U90	SERIES DESIGNATION	U90	B	X	0	5	4	X	X	1	X	X	0
B	STYLE	B - Standard											
X	NUMBER OF PORTS IN ROW	1 - 2X1 2 - 2X2 3 - 2X3											
0	HEAT SINK OPTION (No Light Pipe Available)	0 - No Heat Sink Option											
5	APPLICATION	5 - Options Available - Consult Factory											
4	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 Over 50 μ" (1.27 μm) to 150 μ" (3.81 μm) of Nickel on Press-Fit Tail Area; Nickel Plating for Cage											
CONNECTOR FOOTPRINT													0
0 - Standard													
VENT HOLES													X
0 - Large Vent Holes & EMI Cover													
2 - Small Vent Holes & EMI Cover													
4 - Rectangular Vent Holes & EMI Cover													
EMI GASKET OPTION													X
1 - Chomerics 1273 Conductive Elastomer													
2 - Chomerics S6305 Conductive Elastomer													
PACKAGING													1
1 - Tray													
LIGHT PIPE OPTION													X
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													X
0 - Without Dust Cover													
D - With Dust Cover													

ExpressPort® QSFP+ Cages

ExpressPort® QSPF+ Cages										U90	X	X	X	1	1	X	X	X
U90	SERIES DESIGNATION																	
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)																		
X	NUMBER OF PORTS IN ROW																	
1 - 1X1																		
2 - 1X2																		
3 - 1X3																		
4 - 1X4																		
6 - 1X6																		
X	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)																		
PACKAGING																		X
1 - Tray (Shipped Unassembled for Single Port)																		
T - Tape & Reel (1X1 Only)																		
A - Tray Heat Sink & Clip or Light Pipe Shipped Assembled																		
LIGHT PIPE OPTION																		X
0 - Without Light Pipe																		
1 - Round 1.4mm Outlet Light Pipe																		
3 - Square 2.6x2.6mm Outlet Light Pipe, No EMI Gasket																		
DUST COVER OPTION																		X
0 - Without Dust Cover																		
D - With Dust Cover (Shipped Loose)																		
PLATING																		1
1 - Nickel																		
APPLICATION																		1
1 - Press-Fit Pins (2.5mm Long)																		
HEAT SINK OPTION																		X
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)																		

ExpressPort® eQSFP+ Series

FS1	SERIES DESIGNATION	FS1	M	38	X	0	00	00
M	STYLE	M - 100 Ohm						
38	NUMBER OF POSITIONS	38 - 38 Positions						
X	PLATING	2 - 30 μ" (0.76 μm) Gold over 100 μ" (2.54 μm) min of Matte Tin on Solder Termination, 50 μ" (1.27 μm) - 75 μ" (1.91 μm) of Nickel Under Plate All Over 3 - 15 μ" (0.38 μm) Gold over 100 μ" (2.54 μm) min of Matte Tin on Solder Termination, 50 μ" (1.27 μm) - 75 μ" (1.91 μm) of Nickel Under Plate All Over						
SPECIAL OPTION								00
00 - QSFP+ Connector No Shorting Bars, No Hold Down Tabs								
OPTION 1								00
00 - Standard								
ME - New Connector								
KEYING								0
0 - No Key								

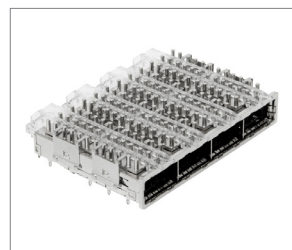
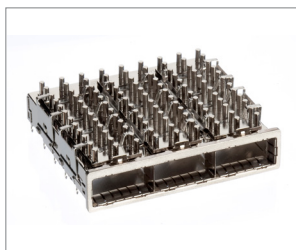
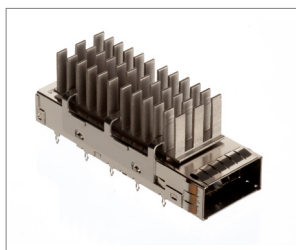
UltraPort™ QSFP+

Product Description

The UltraPort™ QSFP+ interconnect system is comprised 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 for more board real estate and cost optimized solutions. The UltraPort™ QSFP+ connector supports next generation 100G+ applications and transmits up to 28 Gbps/Channel. It features a stamped and formed contact design providing improved mechanical durability. The resonance dampening features of the design allows for superior signal integrity performance. The design minimizes crosstalk and transmission line impedance discontinuity across the connector interface.

Applications		SFF Supported Standards
Storage	Cellular infrastructure	Connector SFF-8662
Network Interface	Hubs and Servers	Cage SFF-8663
Test and measurement equipment	Switches	

Product Specifications - UltraPort® QSFP+			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinforced , Lead Free Solder Reflow Process Compatible Thermo Plastic	PCB Thickness	2.35 mm (0.093in.)
Contacts Base Material	Phosphor Bronze		
Contact Normal Force	50 grams min.		
Plating Solder Tails	Matte tin or Gold flash options		
Plating Mating Area	Gold		
Resonance Dampening Feature	Conductive Polymer		
Operating & Storage Temperature	-20° to +85° C		
Electrical Specifications			
Operating Voltage	30 VDC per contact		
Operating Current	0.5 A per contact		
Differential Impedance	100 Ω +/- 10 Ω		
Mechanical Specifications			
Mating Force	40 N Maximum	Unmating Force	30 N Maximum
Durability	250 mating cycles	Insertion Force to PCB	780 N for 1 port 1000 N for 2 Ports 1700 N for 4 Ports 2400 N for 6 Ports
Options			
Packaging	Tape and Reel	Packaging	Tray
Heat Sinks and Light Pipes	Available		
Configurations	1XN (N=1,2,3,4,6) 2XN (N=1,2,3)		
Environmental Specifications			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		



Mini-SAS

Product Description

The Mini-SAS external I/O connector system consists of a die-cast metal cage and a Compact Multi-Lane SMT connector. It supports Fiber Channel and InfiniBand standards, making it the perfect solution to the ever-growing demand of high-speed mass storage systems, servers, and storage area networks. Providing four serial send/receive channels per port, this connector system provides signal speeds of 6 Gbps per channel. The cage is mounted separately to the body so that the stress imposed by insertion and removal of the cable plug does not affect the signal/body solder joints. Mini-SAS satisfies the requirements of the INCITS T10 SAS 2.0 and SAS 2.1, and provides reverse keying for active copper cables per SAS 2.0 and SAS 2.

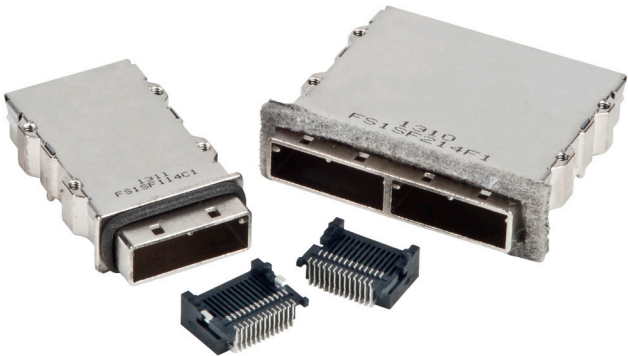
Applications			SFF Supported Standards	
RAID	Router/Switch	Blade server	Connector SFF-8086	
Workstations	Patch panels	Servers	Cage SFF-8088	
Rack-mount server	Routers	Storage rack		

Product Specifications - Mini-SAS			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinforced , Lead Free Solder Reflow, Process Compatible Thermo Plastic	PCB Thickness	1.8 mm (0.070 in.) min.
Contacts Base Material	Phosphor Bronze	Base Material	Zinc alloy
Contact Normal Force	100 grams	Plating	Nickel
Plating Solder Tails	Matte tin		
Plating Mating Area	Gold		
Operating Temperature	-40° to +85° C		
Electrical Specifications			
Operating Voltage	30 VDC per contact		
Operating Current	0.5 A per contact		
Differential impedance	100 Ω +/-10 Ω		
Mechanical Specifications			
Mating Force	55.5 N Max.	Unmating Force	49.0 N max.
Durability	250 mating cycles		
Options			
Packaging	Tape and Reel	Packaging	Tray
Light Pipe Options	Available		
Environmental Specifications Options			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		

Ordering Information

Mini-SAS Connector		FS1	R26	X	0	0	X
FS1	SERIES DESIGNATION						
R26	STYLE						
	R26 - 26 Position						
		OPTION					X
		0 - Standard Connector					
		1 - Connector with Hold Down Tabs					
		OPTION 2					0
		0 - Standard Connector					
		OPTION 3					0
		0 - Standard					
		PLATING					X
		2 - 30 μ" (0.76 μm) Gold Plating on Mating Area; 100 μ" (2.54 μm) Matte Tin on Tails Over Nickel Underplate					
		3 - 15 μ" (0.38 μm) Gold Plating on Mating Area; 100 μ" (2.54 μm) Matte Tin on Tails Over Nickel Underplate					

Mini-SAS Cage							
FSX	SERIES DESIGNATION			1	X	XX	XX
	FS1 - Standard						
	FS2 - With SAS 2.0 Guide Keyway						
	FSA - With SAS 2.1 Guide Keyway						
S	STYLE						
	S - Shell						
XX	SIZE						
	01 - 1X, 1°						
	F1 - 1X, 0°						
	02 - 2X, 1°						
	F2 - 2X, 0°						
	F4 - 4X, 0°						
1	PLATING						
	1 - Nickel						
X	KEYING OPTION						
	0 - No Key						
	1 - Key #1						
	2 - Key #2						
	4 - Key #4 Universal SAS Port						
	6 - Key #6						
	7 - Key #7						
	24 - Key #2 & #4 (SAS Out)						
	46 - Key #4 & #6 (SAS In)						
	D22 - Left Port Key #2 & #4 / Right Port Key #2 & #4						
	D66 - Left Port Key #4 & #6 / Right Port Key #4 & #6						
	D26 - Left Port Key #2 & #4 / Right Port Key #4 & #6						
	D62 - Left Port Key #4 & #6 / Right Port Key #2 & #4						
				LIGHT PIPE OPTION			
				LP - 2 Barrel Light Pipes (1 Light Pipe/Port)			
				OPTION 1			
				C1 - Conductive Elastomer Gasket, 8mm Long Mounting Screw, No Lock Washer			
				C2 - Conductive Elastomer Gasket, No Mounting Screw			
				C3 - Conductive Elastomer Gasket, 10mm Long Mounting Screw with Lock Washer			
				E1 - Stainless Steel Gasket, 8mm Long Mounting Screw, No Lock Washer			
				E2 - Stainless Steel Gasket, No Mounting Screw			
				E3 - Stainless Steel Gasket, 10mm Long Mounting Screw, With Lock Washer			
				F1 - Foam Gasket, 8mm Long Mounting Screw, No Lock Washer			
				F2 - Foam Gasket, No Mounting Screw			
				F3 - Foam Gasket, 10mm Long Mounting Screw, With Lock Washer			



Applications		
RAID	Router/Switch	Blade server
Workstations	Patch panels	Servers
Rack-mount server	Routers	Storage rack

SFF Supported Standards
Connector Cage Combo SFF-8614

Product Specifications - Mini-SAS HD			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinforced , Lead Free Solder Reflow, Process Compatible Thermo Plastic	PCB Thickness	3.00 mm (0.118in.) min.
Contacts Base Material	Phosphor Bronze		
Contact Normal Force	50 grams Minimum		
Plating Press-Fit Area	Matte tin or Gold flash options		
Plating Mating Area	Gold		
Operating Temperature	-40°C to +85°C		
Electrical Specifications			
Operating Voltage	30 VDC per contact		
Operating Current	0.5 A per contact		
Differential impedance	100 Ω +/- 10 Ω		
Mechanical Specifications			
Mating Force	62 N max.	Unmating Force	30 N max.
Durability	250 mating cycles		
Options			
Packaging	Tray		
Configurations	1X1, 1X2, 1X4		
Environmental Specifications Options			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		



Ordering Information

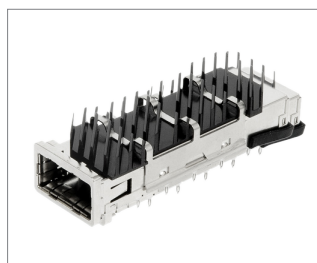
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Product Description

XFP is a 30 position 0.8 mm pitch SMT receptacle designed to support 10 Gigabit Fibre Channel and Gigabit Ethernet with the ability to extend performance to 14 Gbps. It is constructed from a metal frame and the cage assembly is to be bezel-mounted to an I/O panel with compliant pins for pressing onto the host PCB. Its single row cage configuration requires less space and is a cost optimized alternative to parallel-optics VSR. XFP also requires less than one-third the power and physical space of an MSA interconnect with parallel interface. It has a single footprint for all links and is hot-pluggable. The cage assembly has several EMI shielding options such as an elastomeric gasket, which blocks EMI emissions coming from the transceiver when installed.

Applications	Supported Standards
Data networking equipment	Connector/Cage INF-8077
Storage	
Telecommunication networks	

Product Specifications - XFP			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinforced , Lead Free Solder Reflow, Process Compatible Thermo Plastic	PCB Thickness	
Contacts Base Material	Phosphor Bronze	Single Side Mounting	1.57 mm (0.062 in.)
Contact Normal Force	100 grams	Double Side Mounting	3.00 mm (0.118 in.)
Plating Solder Tails	Matte tin or gold flash options		
Plating Mating Area	Gold		
Operating & StorageTemperature	-40° to +85° C		
Electrical Specifications			
Operating Voltage	30 VDC per contact		
Operating Current	0.5 A per contact		
Differential impedance	100 Ω +/-10 Ω		
Mechanical Specifications			
Mating Force	40 N max.	Unmating Force	30 N max.
Durability	250 mating cycles	Insertion Force to PCB	133 N min.
Options			
Packaging	Tape and Reel	Packaging	Tray, Tape and Reel
Configurations	1x1		
Environmental Specifications			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		



Ordering Information

XFP Connector

UE75	A	30	X	0	0	X	T
SERIES DESIGNATION UE75 - Standard XFP Connector	STYLE A - R/A Single Surface Mount	NUMBER OF POSITIONS 30 - 30 Positions (Single XFP)					
PACKAGING T - Tape & Reel							T
LUBRICANT OPTION 0 - Non Lubricated 1 - Lubricant Added							X
OPTION 2 0 - Standard							0
OPTION 1 0 - Standard							0
CONTACT PLATING 2 - 30 µ" (0.76 µm) Gold Plating on Mating Area; Gold Flash on Termination 3 - 30 µ" (0.76 µm) Gold Plating on Mating Area; Matte Tin Plating on Termination 5 - 15 µ" (0.38 µm) Gold Plating on Mating Area; Gold Flash on Termination 6 - 15 µ" (0.38 µm) Gold Plating on Mating Area; Matte Tin Plating on Termination							X

XFP Cage

XFP Cage										
U79	SERIES DESIGNATION				2	X	X	X		
A	STYLE									
A - 1 Row										
1	NUMBER OF PORTS IN ROW									
1 - Single in Row										
X	HEAT SINK OPTION									
0 - No Heat Sink, Only Clip is Shipped										
1 - No Heat Sink or Clip Shipped										
2 - Standard Height Fin Heat Sink (7 mm) & Clip										
3 - PCI Height Fin Heat Sink (4.2 mm) & Clip										
4 - Tall Fin Heat Sink (13.5 mm) & Clip										
G - 45° Standard Height Fin Heat Sink (7mm) & Clip										
1	OPTION 1									
1 - Standard										
PACKAGING										X
1 - Tray (Heat Sink & Clip Shipped Separately)										
T - Tape & Reel (Heat Sink & Clip Shipped Separately)										
B - Tray (Clip Shipped Assembled to Cage)										
A - Tray (Heat Sink & Clip Assembled to Cage)										
OPTION 1										X
0 - Standard										
1 - High Conductivity Rear Lower EMI Gasket										
2 - Insulating Tape Attached to Bottom Cage Wall										
DUST COVER OPTION										X
0 - Without Dust Cover										
D - With Dust Cover (Shipped Loose)										
PLATING										2
2 - Nickel										

Product Description

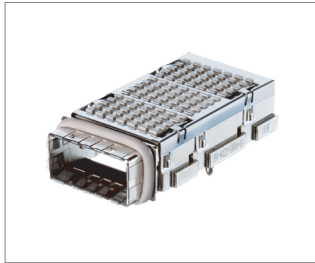
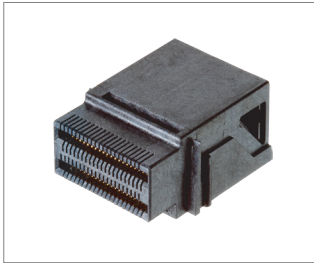
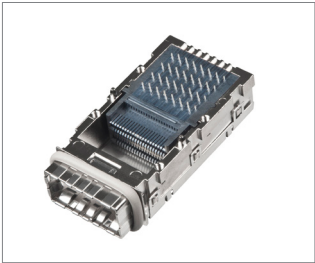
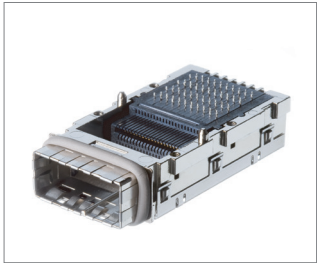
The CXP connector comes in a one-piece Press-Fit assembly that provides a one-step placement to the board to accommodate single, ganged or stacked connector configurations in extremely high-density requirements. The CXP system has twelve channels for up to 20 Gbps, resulting in 240 Gbps of total bandwidth. This allows our CXP to go beyond the 100 Gigabit Ethernet IEEE 802.3ba and the InfiniBand CXP12x QDR standards. It also enables pluggable copper or optical cables to increase the flexibility of system-level hardware for end users. The low profile CXP optical 4.50mm round cable assemblies offer improved fiber management over traditional flat cables for connecting CXP transceivers.

Applications				Supported Standards
Blade server	Router/Switch	Controller Cards	NIC cards	Connector Cage Combo SFF-8617
Computing systems	Storage systems	DAS – Direct Attached Storage		
Networking equipment	Servers	SAN – Storage Attached Networks		

Product Specifications - CXP			
CONNECTOR		CAGE	
Materials Specifications			
Housing	Black color, Glass reinforced , Lead Free Solder Reflow, Process Compatible Thermo Plastic	PCB Thickness	Down to 1.57 mm (0.062 in.)
Contacts Base Material	Phosphor Bronze		
Contact Normal Force	50 grams min.		
Plating Press-Fit Area	Matte tin		
Plating Mating Area	Gold		
Spring Clip	Copper Alloy, Nickel plating		
Operating & Storage Temperature	-40° to +85° C		
Electrical Specifications			
Operating Voltage	30 VDC per contact		
Operating Current	0.5 A per contact		
Differential Impedance	100 Ω +/- 10 Ω		
Mechanical Specifications			
Mating Force	150 N max.	Unmating Force	50 N max.
Durability	250 mating cycles	Insertion Force to PCB	150 N max.
Options			
Packaging	Tray		
EMI Options, Heat Sink and Clip	Available		
Configurations	1X1		
Environmental Specifications			
RoHS	Yes		
Halogen Free	Yes		
Flammability Rating	UL 94V-0		

Ordering Information

CXP Cage/Connector Combo												
U91	SERIES DESIGNATION	X	1	X	X	1	X	X	X	3	X	
X	STYLE											
A - One Row 0°, Standard Footprint												
D - One Row 0°, Enhanced Footprint												
1	NUMBER OF PORTS IN A ROW											
1 - 1X1												
X	HEAT SINK OPTION											
1 - No Heat Sink or Clip Shipped												
2 - Square Pin (Black Oxide) Heat Sink, & Clip												
5 - Round Pin (Black Oxide) Heat Sink, & Clip												
A - Square Pin (Nickel Plated) Heat Sink, & Clip												
D - Round Pin (Nickel Plated) Heat Sink, & Clip												
G - Square Pin (Chromate Passivation) Heat Sink, & Clip												
K - Round Pin (Chromate Passivation) Heat Sink, & Clip												
X	KEYING											
0 - No Key												
1 - Key #1 (Left) InfiniBand™												
2 - Key #2 (Right) Ethernet												



OSFP

Product Description

The OSFP interconnect system has 60 contacts per port and supports 16 high speed pairs. With a 0.6mm contact pitch, 4 rows of contacts and a horizontal port pitch of 23.38mm, the OSFP footprint is optimized for signal integrity performance. The stacked connector is enhanced for low crosstalk and has ground commoning for resonance dampening. It is also designed for 1U applications. An integrated heat sink for optimal thermal performance is a feature of the design.

Applications		Supported Standards
Storage	Cellular infrastructure	OSFP MSA
Network Interface	Hubs and Servers	
Test and measurement equipment	Switches	

Product Specifications - OSFP	
CONNECTOR	
Materials Specifications	
Housing	Black color, Glass reinforced , Lead Free Solder Reflow Process Compatible Thermo Plastic
Contacts Base Material	Copper Alloy C7025
Contact Normal Force	40 grams min.
Plating Solder Tails	Matte tin over Nickel
Plating Mating Area	Gold
Resonance Dampening Feature	Carbon fibre reinforced
Operating & Storage Temperature	-20° to +85° C
Electrical Specifications	
Operating Voltage	30 VDC per contact
Operating Current	0.5 A per signal contact 1.5 A per low speed power contact
Differential Impedance	100 Ω +/- 10 Ω
Mechanical Specifications	
Mating Force	40 N max.
Unmating Force	40 N max.
Durability	250 mating cycles
Options	
Packaging	Tape and Reel or Tray
Configurations	1x1, 1x4, 2x6
Environmental Specifications	
RoHS	Yes
Halogen Free	Yes
Flammability Rating	UL 94V-0



OSFP 1XN Connector

UE62A	1	0	1	0	X	X	00	T
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UE62A	OSFP SERIES A - 1X1 SMT CONNECTOR	PACKAGING T - Tape and Reel	T
1	NUMBER OF PORTS IN ROW 1 - Single Connector	OPTIONS 00 - Standard	0
0	OPTIONS 0 - Standard	CONNECTOR PLATING 0 - Standard SMT Connector 1 - Connector with Solder Ring for B-B Application	X
1	TERMINATION 1 - SMT	PLATING FOR MATING CONTACT 2 - 30 u" Gold Mating, Gold Flash on Terminals 3 - 30 u" Gold Mating, 120-300 u" Matte Tin on Terminals 5 - 15 u" Gold Mating, Gold Flash on Terminals 6 - 15 u" Gold Mating, 120-300 u" Matte Tin on Terminals	X
0	OPTIONS 0 - Standard		

OSFP 1XN Cage

UE62B	X	X	2	0	X	X	00	1
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UE62B	OSFP SERIES B - 1XN Inline Cages	
1	NUMBER OF PORTS IN ROW 1 - 1x1 Cage 2 - 1x2 Cage 4 - 1x4 Cage	
X	CAGE EMI OPTIONS 6 - Spring Fingers	
2	CAGE PIN STYLE 2 - Press Fit	
0	OPTIONS 0 - Standard	

	PACKAGING 1 - Tray Packaging	1
	OPTIONS 00 - Standard	0
	CAGE PLATING 2 - Nickel Plating	X
	OPTIONS 0-Standard	X

OSFP 2xN Cage

UE62M X X 2 0 X X X0 1

UE62M	OSFP SERIES M - 2XN Press Fit Combo	PACKAGING 1-Tray Packaging	1
1	NUMBER OF PORTS IN ROW 1 - 2x1 Combo 2 - 2x2 Combo 4 - 2x4 Combo 6 - 2x6 Combo	CAGE PLATING OPTIONS 20 - Nickel Plating 30 - Matte Tin Plating	0
X	CAGE EMI OPTIONS 6 - Spring Fingers	CONNECTOR PLATING 3 - 30 u" Gold Mating, 120-300 u" Matte 6 - 15 u" Gold Mating, 120-300 u" Matte	X
2	TERMINATION 2 - Press Fit	COMBO STYLE 0 - Std 0.25 Thick Cage B - Overhanging/Recessed	X
0	OPTIONS 0 - Standard		

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Any of the terms and provisions of Buyer's order, which are inconsistent with these Conditions of Sale, shall not be binding on the Seller and shall not be considered applicable to any sale made pursuant to this Quotation. No waiver, alteration or modification of any of the provisions on the face herein shall be binding unless in writing and signed by an executive officer of the Seller or by the Marketing Manager.

WARRANTY

Seller warrants for one year from date of shipment that the goods and services furnished hereunder will be in full conformity with sellers specifications, drawings, samples or data (or those of the buyer accepted in writing), and will be free from defects in material and workmanship. SELLER EXPRESSLY DISCLAIMS ANY and ALL OTHER OR ADDITIONAL WARRANTIES (EXCEPT OF TITLE, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, RELATING TO FITNESS, MERCHANTABLE QUALITY, OR OTHERWISE. Seller will in no case be responsible for special or consequential damages, including, but not by way of limitation, cost of removal of goods, or re-installation of goods, seller's liability being limited to the repair or replacement of defective goods.

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Shipping dates are approximate and are based upon prompt receipt of all necessary information.

Seller shall not be liable for delay in delivery due to cGoldses beyond its reasonable control such as acts of God, acts of the Buyer, acts of civil or military Goldthority, priority, fires, strikes, floods, epidemics, quarantine restrictions, war, riot, and delays in transportation. In the event of delay due to such cGoldses, the date of delivery shall be extended for a period equal to the time lost by reason of delay.

RE-SCHEDULING

Seller is committed to offering the best possible service and will make every attempt to accommodate Buyer's delivery change requests. However, Seller reserves the right to hold firm the acknowledged delivery date within a 60 day window of the scheduled shipment.

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Seller reserves the right to invoice items scheduled to be shipped on any order more than six months from the order entry date at prices prevailing at the time of shipment.

QUANTITIES

Seller reserves the right to over or under ship the quantities shown herein by 5% in the case of components and by 10% in the case of cable and wire products, where manufacturing processes make it difficult to provide the exact quantity specified.

USE OF DATA

Any specifications, drawings, technical information or other data furnished by Seller to Buyer shall remain Seller's property, shall be kept confidential by Buyer and shall be returned at Seller's request.

PATENT INDEMNITY

Buyer shall hold Seller harmless against any expense or loss resulting from infringement of patents or trademarks arising from compliance with Buyer's design, specifications or instructions.

TERMS OF PAYMENT

All goods are shipped F.O.B. Seller's shipping point, and title, risk of loss or damage, and other incidents of ownership shall pass to Buyer upon delivery of goods to carrier at said shipping point. Any and all claims for loss, damage or shortages in transit should be made directly to the carrier, and any actual packaging shortages must be reported by Buyer to Seller within 10 days after receipt of merchandise. No deductions for any loss, damage or shortage in transit will be allowed on invoice. Payment is due Net 30 days from date of shipment. If, in the judgment of Seller, the financial condition of Buyer at any time does not justify continuance of production or shipment on the terms of payment specified, Seller may require full or partial payment in advance. Prorated payments shall become due as shipments are made. If shipments are delayed by the Buyer, payments shall become due from date when the Seller is prepared to make shipment. If manufacture is delayed by the Buyer, payment shall be made based on the contract price and the percentage of completion. Goods held for the Buyer shall be at the risk and expense of the Buyer.

TAXES

Unless otherwise stated Seller's prices do not include Federal, Provincial or similar taxes. Consequently in addition to the price specified herein, the amount of any present or future sales, use, excise or similar tax applicable to the sale of the products herein shall be paid by Buyer, or in lieu thereof Buyer shall provide Seller with a tax exemption certificate acceptable to the taxing Goldthorities.

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On products classified as non-standard, that is, products fabricated to individual customer requirements, drawings, specifications and/or customer design as contracted to standard products offered by Seller for general sale, Seller reserves the right to fabricate the entire quantity ordered in one production run, although shipments will be made in accordance with the Buyers requested schedule. In the event of cancellation of such non-standard products, any components, sub-assemblies and/or finished assemblies on hand or in production in quantities equivalent to the full production run for the entire quantity ordered plus normal overrun, shall be considered as part of applicable cancellation charges. The Buyer may cancel his order only upon payment of reasonable cancellation charges, which shall take into account expenses already incurred, and commitments made by the Seller. Returns will not be accepted unless Goldthorized by Seller which Goldthorization shall not be unreasonably withheld. All products manufactured to Buyers specifications or special requirements are not subject to return.

TOOLING

All tools required to produce the products covered by this quotation are to remain the property of Seller.

CLAIMS

All claims must be made within 30 days of receipt of goods. No claim for special or consequential damage will be considered.

Order Information:
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