High Speed Pluggable I/O Solutions

Industry Standard I/O Connectors

General I/O Connectors

Cable Assemblies

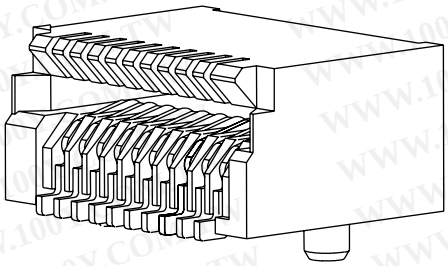
*HDMI is a trademark of HDMI Licensing, LLC
†DisplayPort is a trademark of Video Electronics Standards Association (VESA)
‡InfiniBand is a trademark of the InfiniBand™ Trade Association

Visit www.molex.com to access more part numbers and product information, download sales drawings, product specifications, 3D models, place sample requests, and more.

0.80mm (.031") Pitch Small Form-Factor Pluggable (SFP/SFP+) Receptacle

74441

Right Angle, SMT



Features and Benefits

- Connector used in conjunction with pluggable transceiver modules allows you to mate copper cable or optical cable assemblies without changing host board
- Card entry slot to accept 1.00mm (.039") thick integrated circuit board (located inside pluggable module)
- Alignment posts provide stability for placement on the PCB
- Standoffs allow easy PCB cleaning after soldering
- SMT receptacle provides option for placement on either side of PCB
- Meets MSA standards

Reference Information

Packaging: Tape and reel
Mates With: 73929 Copper patch cable, 74720 Copper pluggable module and optical pluggable module
Use With: 73927 cage assembly
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Retention to Housing: 4.4N (1.0 lb)
Mating Force: 22N (5.0 lb)
Unmating Force: 8.8N (2.0 lb)
Normal Force: 0.8N (80g)
Durability: 200 cycles

Physical

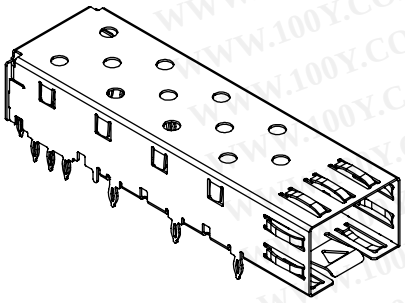
Housing: High-temperature thermoplastic
Contact: Copper Alloy
Plating: Contact Area—See table
Solder Tail Area—Gold flash or 2.54mm Tin
Underplating—2.54µm Nickel
PCB Thickness: 1.00mm (.039")

Circuits	Order No.	Plating	Version
20	74441-0001	0.38µm (25µ") Gold	SFP, SFP+
	74441-0010	0.76µm (30µ") Gold	
	74441-0021	0.76µm (30µm") Gold, lubricated	
30	74441-0007	0.38µm (25µ") Gold	XFP
	74441-0017	0.76µm (30µ") Gold	
	74441-0027	0.76µm (30µm") Gold, lubricated	
70	74441-0003	0.38µm (25µ") Gold	Xenpak, X2, XPAK
	74441-0013	0.76µm (30µ") Gold	
	74441-0023	0.76µm (30µm") Gold, lubricated	

www.molex.com/product/sfp.html

1X SFP (Small Form-factor Pluggable) EMI Cage

74737



Features and Benefits

- Press-fit, solder post and PCI pin styles enable use with various PCB thicknesses and assembly processes
- Two-point spring contacts offer optimal EMI grounding
- One-piece, stamped and formed cage is able to meet RoHS requirements by eliminating solder
- Built in tabs allow addition of lightpipe cover

Reference Information

Packaging: Tray
Mates With: 73929, 73930, 74742, 74743 and 74720
Use With: 74441
Designed In: Millimeters

Mechanical

Insertion Force to PCB: 3.25 lbF per press-fit pin
Retention Force to PCB: 1.6 lbF per press-fit pin
Durability: 1 cycle

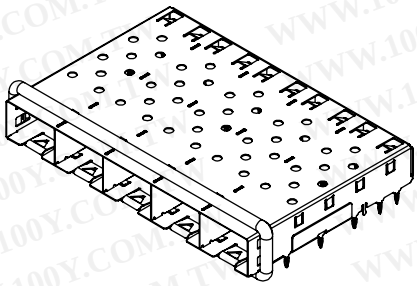
Physical

Cage Housing: C770 Alloy
Plating: Nickel
PCB Thickness: 1.57mm (.062") min.

Order No.	Description	Lead-free
74737-0004	Press-fit (.090") legs, Belly-to-Belly	Yes
74737-0009	Press-fit (.120") legs	
74737-0010	Solder post (0.133" legs), wave solder for 0.093" PCB	
74737-0012	Press-fit (.090") legs with 74737-0009 leg style	
74737-0014	Press-fit (0.120" legs) with Kapton tape	
74737-0016		

Multi-Port SFP (Small Form-factor Pluggable) EMI Cage

74722/74728/74723/74747
Ganged



Features and Benefits
- Ganged SFP design offers significant PCB width savings over the single cage solution
- 360˚ conductive elastomeric gasket and multiple ground pin locations provide advanced shielding to the bezel
- Press-fit pin design accommodates belly-to-belly applications to ensure best use of PCB real estate
- Built in tabs allow addition of ganged lightpipe covers

Reference Information
Packaging: Tray
Mates With: 73929, 73930, 74742, 74743, 74720
Use With: 74441 connector and 74726, 74727, 74728, 74729, 74748 lightpipe covers
Designed In: Millimeters

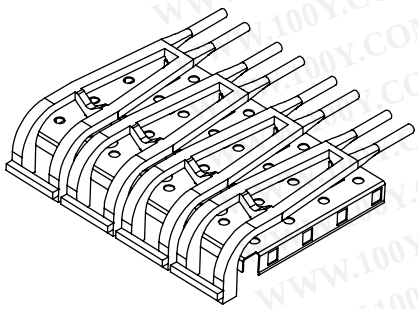
Mechanical
Durability: 1 cycle

Physical
Cage housing: C770 Alloy
Plating: Nickel
PCB Thickness: 1.57mm (.062") min.

Order No.	Description	Mounting	Lead-free
74722-0001	1 by 2 Ganged Cage—Belly to Belly	Press-fit	Yes
74722-0004	Single Side 1 by 2		
74728-0415	1 by 4 Ganged Cage—Belly to Belly		
74728-0420	Single Side 1 by 4		
74723-0001	1 by 5 Ganged Cage		
74747-0001	1 by 6 Ganged Cage		

SFP (Small Form-factor Pluggable) Lightpipe Covers for Single and Multi-Port EMI Cages

74726/74727/74728/ 74729/74748



Features and Benefits
- Lightpipes compensate for misalignment and help ensure uniform panel illumination
- Mechanically attaching lightpipes to the lightpipe cover reduces assembly time and eliminates processing issues
- Cage mounted tabs ensure proper cover placement
- Application notes on individual sales drawings help decrease design time and costs by providing recommended LEDs

Reference Information
Packaging: Tray
Mates With: 74722, 74723, 74728, 74737 and 74747 cages
Designed In: Millimeters

Mechanical
Durability: 1 cycle—Lightpipes to cover

Physical
Lightpipe: Polycarbonate, UL 94V-0
Lightpipe Cover: C770 Alloy
Lightpipe Cover Plating: Nickel

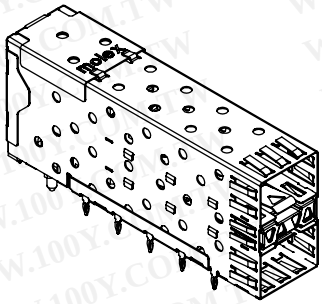
Order No.	Description	Lightpipe Location*	Lead-free
74726-0001	1 by 1	Rear Mount	Yes
74726-0002		Side Mount	
74727-0001	1 by 2	Rear Mount	
74727-0002		Side Mount	
74728-0001	1 by 4	Rear Mount	
74729-0001	1 by 5		
74748-0001	1 by 6		
74748-0002	1 by 6, low profile		

*Note: Low profile lightpipes are available for all rear-mounted locations; shortened lightpipes (by 0.052") are available for rear-mounted locations

0.80mm (.031") Pitch 2-by-1 SFP Stacked Multi-Port Connector

75640/75462

25.50mm (1.004") Height With Press-Fit PC Tails With and Without Lightpipes



Features and Benefits

- Integrates 2 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information

Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

Physical

Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

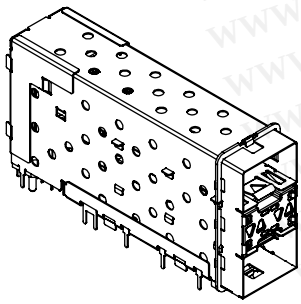
Order No.	Lightpipes	Tail Plating
75640-0001	2 per port	Tin/Lead
75640-5001		Tin
75640-0002	1 per port, inner	Tin/Lead
75640-5002		Tin
75640-0003	1 per port, outer	Tin/Lead
75640-5003		Tin
75462-0001	None	Tin/Lead
75462-5001		Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes.

0.80mm (.031") Pitch 2-by-1 SFP Stacked Multi-Port Connector

75310/75786

29.30mm (1.153") Height With Lightpipes



Features and Benefits

- Integrates 2 SFP ports and LED lightpipes into 1 connector
- Design capable of transmission speeds well beyond the 4.25 Gbps Next Generation Fibre Channel interface
- Fully shielded with gasket for EMI protection
- Lightpipes for port status and activity feedback

Reference Information

Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP Transceivers or Cables
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A max
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Mating Force: 40N max
Unmating Force: 11.5N max
Durability: 200 cycles

Physical

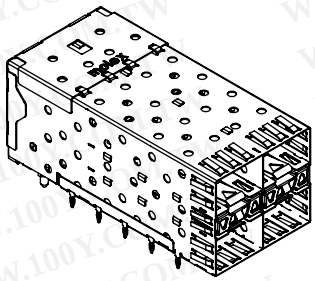
Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

Order No.	PC Tail	Tail Plating	Lead-free
75310-0001	Solder	Tin	Yes
75786-0001	Press-Fit	Tin-Lead	No
75786-5001		Tin	Yes

0.80mm (.031") Pitch 2-by-2 SFP Stacked Multi-Port Connector

75714/75759

25.50mm (1.004") Height With Press-Fit PC Tails With and Without Lightpipes



Order No.	Lightpipes	Tail Plating
75714-0001	2 per port	Tin/Lead
75714-5001		Tin
75714-0002	1 per port, inner	Tin/Lead
75714-5002		Tin
75714-0003	1 per port, outer	Tin/Lead
75714-5003		Tin
75759-0001	None	Tin/Lead
75759-5001		Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes.

Features and Benefits

- Integrates 4 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information

Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

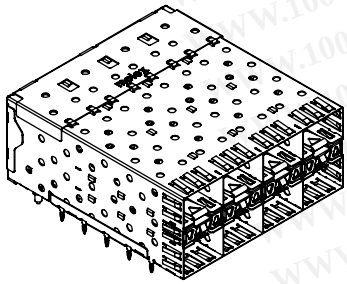
Physical

Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

0.80mm (.031") Pitch 2-by-4 SFP Stacked Multi-Port Connector

75450/75454

25.50mm (1.004") Height With Press-Fit PC Tails With and Without Lightpipes



Order No.	Lightpipes	Tail Plating
75450-0001	2 per port	Tin/Lead
75450-5001		Tin
75450-0002	1 per port, inner	Tin/Lead
75450-5002		Tin
75450-0003	1 per port, outer	Tin/Lead
75450-5003		Tin
75454-0001	None	Tin/Lead
75454-5001		Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes.

Features and Benefits

- Integrates 8 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information

Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

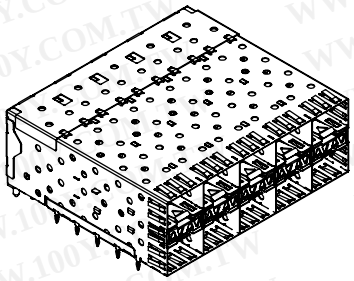
Physical

Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

0.80mm (.031") Pitch 2-by-5 SFP Stacked Multi-Port Connector

75734/75733

25.50mm (1.004") Height With Press-Fit PC Tails With and Without Lightpipes



Features and Benefits

- Integrates 10 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information

Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

Physical

Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

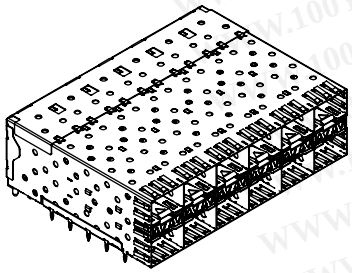
Order No.	Lightpipes	Tail Plating
75734-0001	2 per port	Tin/Lead
75734-5001		Tin
75734-0002	1 per port, inner	Tin/Lead
75734-5002		Tin
75734-0003	1 per port, outer	Tin/Lead
75734-5003		Tin
75733-0001	None	Tin/Lead
75733-0001		Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes.

0.80mm (.031") Pitch 2-by-6 SFP Stacked Multi-Port Connector

75451/75477

25.50mm (1.004") Height With Press-Fit PC Tails With and Without Lightpipes



Features and Benefits

- Integrates 12 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information

Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A max
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

Physical

Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

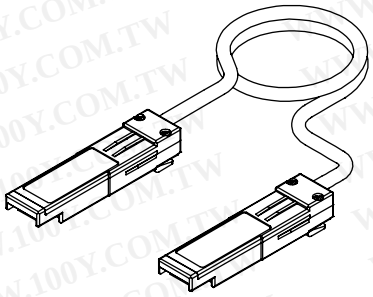
Order No.	Lightpipes	Tail Plating
75451-0001	2 per port	Tin/Lead
75451-5001		Tin
75451-0002	1 per port, inner	Tin/Lead
75451-5002		Tin
75451-0003	1 per port, outer	Tin/Lead
75451-5003		Tin
75477-0001	None	Tin/Lead
75477-0001		Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes.

1.27mm (.050") Pitch SFP (Small Form-Factor Pluggable) Copper Cable Assembly

73929

Passive



Features and Benefits

- Compliant with SFP MSA
- Fibre Channel data rates to 2.125 Gbps
- Gigabit Ethernet data rates to 2.5 Gbps
- InfiniBand* data rates to 2.5 Gbps
- Hot pluggable
- Intuitive "squeeze and pull" latching mechanism
- Supports Serial ID functionality

Reference Information

Packaging: Bag and box
UL File No.: E72548 vol. 1C
Mates With: 74441
Use With: 73927, 74722, 74728, 74729, 74737 and 74748
Designed In: Millimeters

Electrical

Voltage: 3.3V
Current: Passive—30mA max.
Active—175mA max.

Mechanical

Durability: 250 cycles

Physical

Housing: Zinc diecast
Contact: Gold flash
Housing Plating: Nickel

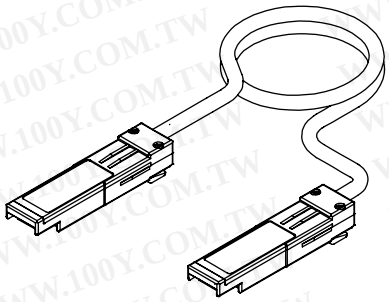
Length	Order No.	Circuitry	Lead-free
1.0m (3.28')	73929-0001	Passive	Yes
3.0m (9.84')	73929-0002		
5.0m (16.40')	73929-0003		
2.0m (6.56')	73929-0006		
0.5m (1.64')	73929-0011		

* InfiniBand is a trademark of the InfiniBand Trade Association.

4 Gbps SFP (Small Form-factor Pluggable) Copper Cable Assembly

74742
Passive

74743
Active



Features and Benefits
- Improved PCB design helps match impedance to reduce reflection at higher speeds
- Serial ID allows serial identification of each SFP transceiver
- Compliant with SFP MSA and designed to meet FC, IB and GE standards
- Unique thumblatch provides intuitive squeeze and pull latching mechanism

Reference Information
Packaging: Bag
UL File No.: E72548 vol. 1C
Mates With: 74441
Use With: 73927, 74722, 74723, 74728, 74737 and 74747
Designed In: Millimeters

Electrical
Voltage: 3.3V
Current: Passive—30mA max.
Active—175mA max.

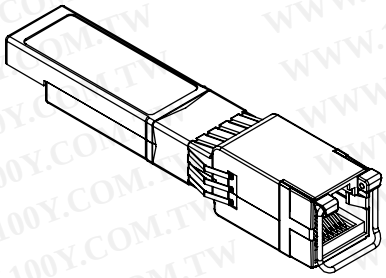
Mechanical
Durability: 250 cycles

Physical
Housing: Zinc diecast
Housing Plating: Nickel
PCB Contact: Gold

Length	Order No.	Circuitry	Lead-free
1.0m (3.28')	74742-0001	Passive	Yes
2.0m (6.56')	74742-0002		
3.0m (9.84')	74742-0003		
1.0m (3.28')	74743-0001	Active	
2.0m (6.56')	74743-0002		
3.0m (9.84')	74743-0003		
4.0m (13.12')	74743-0004		
5.0m (16.40')	74743-0005		
6.0m (19.68')	74743-0006		
7.0m (22.97')	74743-0007		
8.0m (26.25')	74743-0008		
9.0m (29.53')	74743-0009		
10.0m (32.80')	74743-0010		
11.0m (36.09')	74743-0011		
12.0m (39.37')	74743-0012		
13.0m (42.65')	74743-0013		
14.0m (45.93')	74743-0014		
15.0m (49.51')	74743-0015		

1000 BaseT RJ-45 SFP (Small Form-Factor Pluggable) Copper Transceiver

74741



Order No.	Options	Lead-free
74741-0005	Auto Negotiation On, LOS GRD	Yes
74741-0006	Auto Negotiation On, LOS Toggle	

Features and Benefits

- 1000 Base-T compliant, meets IEEE802.3z, ab
- SFP MSA compliant
- Hot pluggable, eliminating the need to power down to remove or install
- Auto negotiation software selectable
- Side-to-Side latching for increased density
- Serial ID allows individual identification of each SFP transceiver

Reference Information

Packaging: Bag
Mates With: 74441
Use With: 74737 and 73927
Designed In: Millimeters

Electrical

Voltage: 3.3V
Current: 285mA

Mechanical

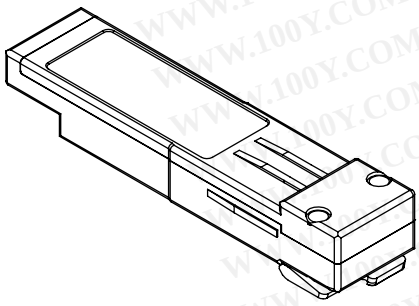
Transceiver Retention to Cage: 90N min.
Mating Force: <9N nom.
Unmating Force: <9N nom.
Durability: 50 cycles

Physical

Housing: Zinc diecast
Housing Plating: Nickel
PCB Thickness: 1.0mm (.039")

SFP (Small Form-factor Pluggable) EMI plug

74720



Order No.	Lead-free
74720-0510	Yes

Features and Benefits

- Mates to components which are compliant with SFP MSA mechanical specifications
- Raised plug wedges assure electrical contact with surrounding SFP EMI cage
- Diecast housing provides superior EMI performance
- Spring-loaded latch releases with simple squeeze and pull action

Reference Information

Packaging: Tray
Use With: 73927, 74722, 74723, 74728, 74729, 74737 and 74747 SFP cage series
Designed In: Millimeters

Mechanical

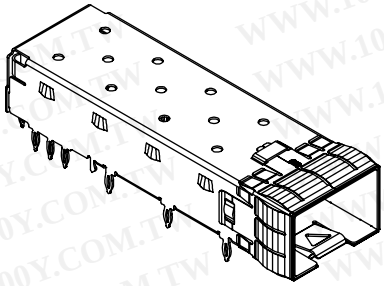
Durability: 250 cycles

Physical

Housing: Zinc diecast
Plating: Nickel

SFP+ Cage

74754
Single Port



Features and Benefits
- Press-fit, solder post and PCI pin styles enable use with various PCB thicknesses and assembly processes
- One piece stamped and formed cage is able to meet RoHS requirements by eliminating solder
- Newly designed spring finger gasket provides optimal EMI grounding

Reference Information
Packaging: Tray
Mates With: 74754 cable and 74763 loopback
Use With: 74441 connector
Designed In: Millimeters

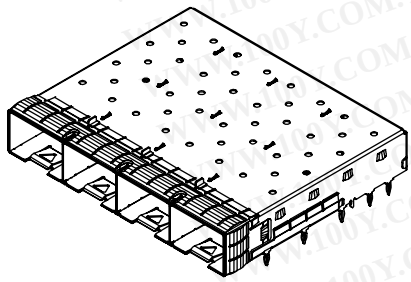
Mechanical
Durability: 1 cycle

Physical
Housing: Copper Alloy
Plating: Nickel
PCB Thickness: 1.57mm (.062") min.

Order No.	Pin/Leg Style	Pin/Leg Length	Lead-free
74754-0101	Press Fit	3.05 (.120)	Yes
74754-0102	Press Fit (Belly-to-belly)	2.29 (.090)	
74754-0103	Solder Post	3.38 (.133)	
74754-0104	Press Fit	3.05 (.120)	
74754-0105	Press Fit	3.05 (.120)	
74754-0106	Solder Post	PCI	

SFP+ Cage

74754
Ganged



Features and Benefits
- Newly designed spring finger gaskets offer optimal EMI grounding
- 360˚ gaskets and underbelly EMI fingers provide multiple points of contact to break up EMI
- Ganged SFP design offers significant PCB width savings over single cage solutions
- Ganged cages accommodate belly-to-belly applications for best use of PCB real estate

Reference Information
Packaging: Tray
Mates With: 74754 and 74765
Use With: 74441 connector and 74754 lightpipe covers
Designed In: Millimeters

Mechanical
Durability: 1 cycle

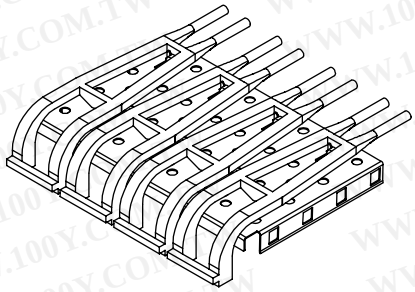
Physical
Cage housing: Copper Alloy
Plating: Nickel
PCB Thickness: 1.57mm (.062") min.

Order No.	Port Size	Bezel Gasket Material	Mounting	Lead-free
74754-0210	1 by 2	Elastomer	Press fit pins	Yes
74754-0220		Metal spring fingers		
74754-0410	1 by 4	Elastomer		
74754-0420		Metal spring fingers		
74754-0510	1 by 5	Elastomer		
74754-0520		Metal spring fingers		
74754-0610	1 by 6	Elastomer		
74754-0620		Metal spring fingers		

SFP+ Lightpipe Covers

74754

For Single and Multiport EMI Cages Low Profile



Features and Benefits

- Lightpipes compensate for misalignment and help ensure uniform panel illumination
- Mechanically attaching lightpipes to the lightpipe cover reduces assembly time and eliminates processing issues
- Cage mounted tabs ensure proper cover placement

Reference Information

Packaging: Tray
Mates With: 74754 cages
Designed In: Millimeters

Mechanical

Durability: 1 cycle—Lightpipe to cover

Physical

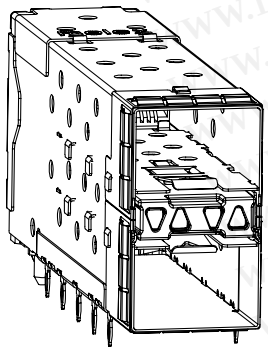
Lightpipe: UL 94V-0
Lightpipe Cover: Copper Alloy
Lightpipe Cover Plating: Nickel

Order No.	Description	Lightpipe Location	Lead-free
74754-0011	1 by 1	Rear Mount	Yes
74754-0021	1 by 2		
74754-0041	1 by 4		
74754-0051	1 by 5		
74754-0061	1 by 6		

0.80mm (.031") Pitch 2-by-1 SFP+ Stacked Multi-Port Connector

76090/76100/76044/76064

Press-Fit, Metal or Elastomeric Gasket With and without Lightpipes



Features and Benefits

- Integrates 2 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information

Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

Physical

Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

Elastomeric Gasket

Order No.	Lightpipes	Tail Plating
76090-0001	2 per port	Tin/Lead
76090-5001		Tin
76090-0002	1 per port, inner	Tin/Lead
76090-5002		Tin
76090-0003	1 per port, outer	Tin/Lead
76090-5003		Tin
76100-0001	None	Tin/Lead
76100-5001	None	Tin

Metal Gasket

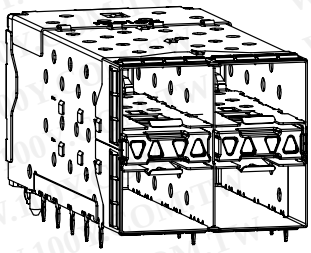
Order No.	Lightpipes	Tail Plating
76044-0001	2 per port	Tin/Lead
76044-5001		Tin
76044-0002	1 per port, inner	Tin/Lead
76044-5002		Tin
76044-0003	1 per port, outer	Tin/Lead
76044-5003		Tin
76064-0001	None	Tin/Lead
76064-5001	None	Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes

0.80mm (.031") Pitch 2-by-2 SFP+ Stacked Multi-Port Connector

76091/76101/76045/76065

Press-Fit, Metal or Elastomeric Gasket With and without Lightpipes



Features and Benefits
- Integrates 4 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information
Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical
Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

Physical
Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

Elastomeric Gasket

Order No.	Lightpipes	Tail Plating
76091-0001	2 per port	Tin/Lead
76091-5001		Tin
76091-0002	1 per port, inner	Tin/Lead
76091-5002		Tin
76091-0003	1 per port, outer	Tin/Lead
76091-5003		Tin
76101-0001	None	Tin/Lead
76101-5001	None	Tin

Metal Gasket

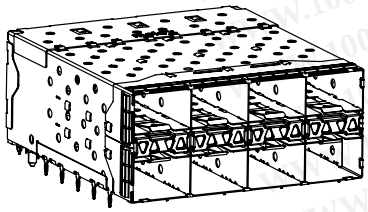
Order No.	Lightpipes	Tail Plating
76045-0001	2 per port	Tin/Lead
76045-5001		Tin
76045-0002	1 per port, inner	Tin/Lead
76045-5002		Tin
76045-0003	1 per port, outer	Tin/Lead
76045-5003		Tin
76065-0001	None	Tin/Lead
76065-5001	None	Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes

0.80mm (.031") Pitch 2-by-4 SFP+ Stacked Multi-Port Connector

76092/76102/76046/76066

Press-Fit, Metal or Elastomeric Gasket With and without Lightpipes



Features and Benefits
- Integrates 8 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information
Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical
Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

Physical
Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

Elastomeric Gasket

Order No.	Lightpipes	Tail Plating
76092-0001	2 per port	Tin/Lead
76092-5001		Tin
76092-0002	1 per port, inner	Tin/Lead
76092-5002		Tin
76092-0003	1 per port, outer	Tin/Lead
76092-5003		Tin
76102-0001	None	Tin/Lead
76102-5001	None	Tin

Metal Gasket

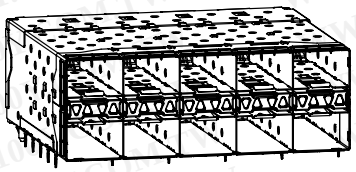
Order No.	Lightpipes	Tail Plating
76046-0001	2 per port	Tin/Lead
76046-5001		Tin
76046-0002	1 per port, inner	Tin/Lead
76046-5002		Tin
76046-0003	1 per port, outer	Tin/Lead
76046-5003		Tin
76066-0001	None	Tin/Lead
76066-5001	None	Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes

0.80mm (.031") Pitch 2-by-5 SFP+ Stacked Multi-Port Connector

76093/76103/76047/76067

Press-Fit, Metal or Elastomeric Gasket
With and without Lightpipes



Features and Benefits
- Integrates 10 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information
Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical
Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

Physical
Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

Elastomeric Gasket

Order No.	Lightpipes	Tail Plating
76093-0001	2 per port	Tin/Lead
76093-5001		Tin
76093-0002	1 per port, inner	Tin/Lead
76093-5002		Tin
76093-0003	1 per port, outer	Tin/Lead
76093-5003		Tin
76103-0001	None	Tin/Lead
76103-5001	None	Tin

Metal Gasket

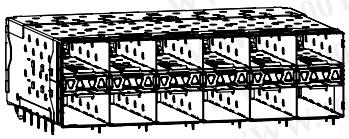
Order No.	Lightpipes	Tail Plating
76047-0001	2 per port	Tin/Lead
76047-5001		Tin
76047-0002	1 per port, inner	Tin/Lead
76047-5002		Tin
76047-0003	1 per port, outer	Tin/Lead
76047-5003		Tin
76067-0001	None	Tin/Lead
76067-5001	None	Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes

0.80mm (.031") Pitch 2-by-6 SFP+ Stacked Multi-Port Connector

76094/76104/76048/76068

Press-Fit, Metal or Elastomeric Gasket
With and without Lightpipes



Features and Benefits
- Integrates 12 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information
Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical
Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

Physical
Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

Elastomeric Gasket

Order No.	Lightpipes	Tail Plating
76094-0001	2 per port	Tin/Lead
76094-5001		Tin
76094-0002	1 per port, inner	Tin/Lead
76094-5002		Tin
76094-0003	1 per port, outer	Tin/Lead
76094-5003		Tin
76104-0001	None	Tin/Lead
76104-5001	None	Tin

Metal Gasket

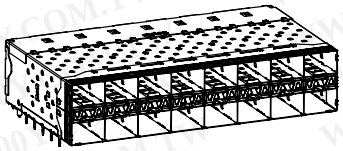
Order No.	Lightpipes	Tail Plating
76048-0001	2 per port	Tin/Lead
76048-5001		Tin
76048-0002	1 per port, inner	Tin/Lead
76048-5002		Tin
76048-0003	1 per port, outer	Tin/Lead
76048-5003		Tin
76068-0001	None	Tin/Lead
76068-5001	None	Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes

0.80mm (.031") Pitch 2-by-8 SFP+ Stacked Multi-Port Connector

76352

Press-Fit, Metal Gasket With Lightpipes



Features and Benefits

- Integrates 16 SFP ports and LED lightpipes into 1 connector
- Press-fit termination to PCB
- Fully shielded for EMI protection
- Lightpipes for port status and activity feedback

Reference Information

Product Specification: PS-75310-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: SFP transceivers or cables
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Mating Force: 40N max.
Unmating Force: 11.5N max.
Durability: 200 cycles

Physical

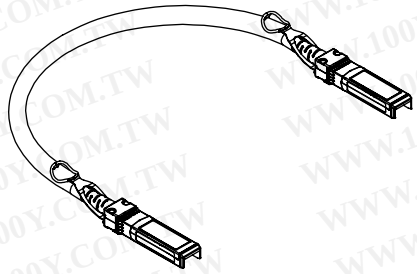
Housing: Thermoplastic
Contact: Copper Alloy
Plating: Contact Area—Gold
Tail Area—See table
Underplating—Nickel
PCB Thickness: 2.40mm (.093")

Order No.	Lightpipes	Tail Plating
76352-0001	2 per port	Tin/Lead
76352-5001		Tin
76352-0002	1 per port, inner	Tin/Lead
76352-5002		Tin
76352-0003	1 per port, outer	Tin/Lead
76352-5003		Tin

Note: Please refer to sales drawing for footprint differences between versions with and without lightpipes

0.80mm (.031") Pitch SFP+ Cables

74752
Copper Patch Cables



Features and Benefits
- Copper cable data transmission meets customer requirements for speeds up to 10 Gbps and up to 20 meters
- Redesigned pull latch enables belly-to-belly cable use
- Identical dimensions to SFP enable backwards compatibility
- EMI girdle provides superior EMI performance

Reference Information
Packaging: Box
Mates With: 74441
Use With: 74754, 76044, 76045, 76046, 76047, 76048, 76090, 76091, 76092, 76093 and 76094
Designed In: Millimeters

Electrical
Voltage: 3.3V
Current: 30mA max.

Mechanical
Durability: 250 cycles

Physical
Housing: Zinc die cast
Plating: Nickel
PCB contact: Gold

Order No.	Length	Cable Gauge	Lead-free
74752-1051	0.50m (1.64')	30	Yes
74752-1101	1.0m (3.28')		
74752-1301	3.0m (9.84')		
74752-1501	5.0m (16.40')		
74752-1701	7.0m (22.96')		
74752-2051	0.50m (1.64')	28	
74752-2101	1.0m (3.28')		
74752-2301	3.0m (9.84')		
74752-2501	5.0m (16.40')		
74752-2701	7.0m (22.96')		

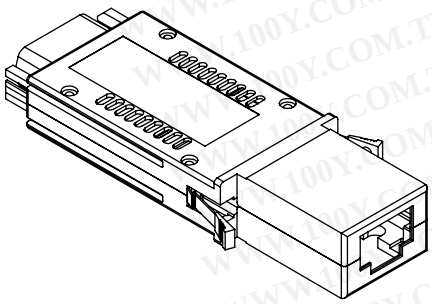
Order No.	Length	Cable Gauge	Lead-free
74752-3051	0.50m (1.64')	26	Yes
74752-3101	1.0m (3.28')		
74752-3301	3.0m (9.84')		
74752-3501	5.0m (16.40')		
74752-3701	7.0m (22.96')		
74752-4051	0.50m (1.64')	24	
74752-4101	1.0m (3.28')		
74752-4301	3.0m (9.84')		
74752-4501	5.0m (16.40')		
74752-4701	7.0m (22.96')		

Passive cables available in lengths up to 20m depending on cable gauge

www.molex.com/product/sfp-plus.html

1000 BaseT RJ-45 GBIC Copper Transceiver

74740



Features and Benefits
- 1000 Base-T compliant, meets IEEE802.3z, ab
- GBIC SFF-8053 Rev 5.5 compliant for improved intermatability
- Hot pluggable, eliminating the need to power down to remove or install
- Auto negotiation software selectable
- Link monitor detects loss of signal
- Serial ID allows individual identification of each GBIC transceiver

Reference Information
Packaging: Bag
Mates With: 74065
Use With: 73847
Designed In: Millimeters

Electrical
Voltage: 5V
Current: 350mA

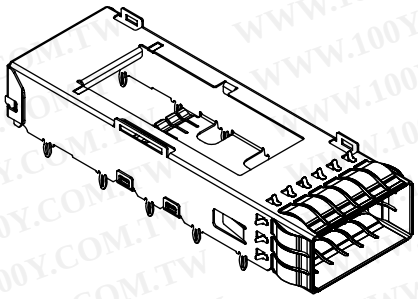
Mechanical
Durability: 250 cycles

Physical
Housing: Zinc diecast
Housing Plating: Nickel
PCB Thickness: 1.57mm (.062")

Order No.	Options	Lead-free
74740-0001	Auto Negotiation On, LOS GRD	Yes
74740-0002	Auto Negotiation On, LOS Toggle	
74740-0003	Auto Negotiation Off, LOS Toggle	

QSFP Cages

74750
EMI Cage



Features and Benefits
- MSA QSFP cages accept copper cables and fiber optic modules
- Spring finger and elastomer gasket options offer design flexibility and optimal EMI grounding
- Blocking keys prevent mis-mating by XFP modules

Reference Information
Packaging: Tray
Mates With: 74757 and 74763
Use With: 75586
Designed In: Millimeters

Mechanical
Insertion Force to PCB: 100 lbf max.
Durability: 1 cycle

Physical
Housing: Copper Alloy
Plating: Nickel

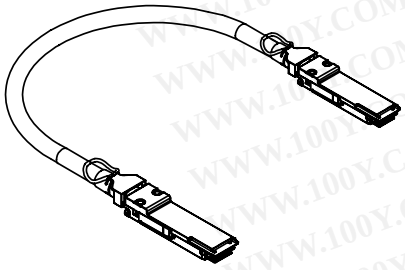
Cages			
Order No.	Gasket Style	Pin Placement	Lead-free
74750-0021	EMI Spring Finger	Two rear press fit	Yes
74750-0022	Elastomer		
74750-0023	EMI Spring Finger	No rear pins	
74750-0025	Elastomer		

Light Pipes	
74750-0030	Single light pipe
74750-0031	Dual light pipe

Heat Sink	Heat Sink Clip
74750-0300	74750-0305

0.80mm (.031") Pitch QSFP Cables

74757
Copper Patch Cables



Features and Benefits
- Cables meet QSFP MSA standard
- Data rates scale up to 10 Gbps per lane providing higher bandwidth than SFP
- Unique pull to release latch enables belly-to-belly cable use and higher port density

Reference Information
Packaging: Bag
Mates With: 75586
Use With: 74750
Designed In: Millimeters

Electrical
Voltage: 3.3V
Current: 30mA max.

Mechanical
Contact Insertion Force: 40N (9.0 lbf) max.
Contact Retention to Housing: 90N (20.2 lbf) min.
Durability: 250 mating cycles

Physical
Back shell Housing: Zinc die cast
Plating: Nickel
PCB contact: Gold

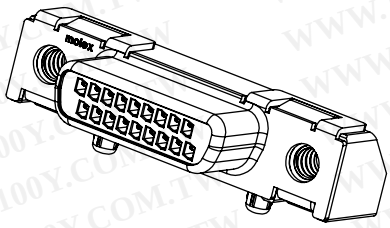
Order No.	Length	Cable Gauge	Lead-free
74757-1101	1.0m (3.28')	30	Yes
74757-1301	3.0m (6.56')		
74757-1501	5.0m (16.40')		
74757-9001	10.0m (32.80')		
74757-9006	15.0m (49.20')		
74757-2101	1.0m (3.28')	28	
74757-3301	3.0m (6.56')		
74757-3501	5.0m (16.40')		
74757-9003	10.0m (32.80')		
74757-9007	15.0m (49.20')		

Order No.	Length	Cable Gauge	Lead-free
74757-3101	1.0m (3.28')	26	Yes
74757-3301	3.0m (6.56')		
74757-3501	5.0m (16.40')		
74757-9004	10.0m (32.80')		
74757-9008	15.0m (49.20')		
74757-4101	1.0m (3.28')	24	
74757-4301	3.0m (6.56')		
74757-4501	5.0m (16.40')		
74757-9005	10.0m (32.80')		
74757-9009	15.0m (49.20')		

1.27mm (.050") Pitch PCIe 1X Receptacle

74150

SMT, Right Angle



Features and Benefits

- Complies with the PCI SIG specifications
- Supports 2.5 Gbps data transfer rate for Gen I and 5.0 Gbps data transfer rates for Gen II
- Inline SMT leads on 0.64mm (.025") pitch provide direct PCB routing
- High cycle LFH™ shrouded contact system provides 2 points of contact for optimal signal integrity
- Optional jack posts available in 4-40 or M3 threads for use with jackscrews for positive mating retention

Reference Information

Packaging: Embossed tape
Mates With: 74155 plug
Use With: 74962 jackposts
Designed In: Millimeters

Electrical

Voltage: 40V
Current: 1.5A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.
Differential Impedance:
2.5 Gbps: 100 ± 10 ohms at 150psec risetime
5.0 Gbps: 100 ± 18 ohms at 75psec risetime

Mechanical

Contact Insertion Force: 0.60N (0.13 lbf) per circuit
Insertion Force to PCB: 44.50N (10.00 lbf) total
Mating Force: 11.17N (2.51 lbf) per circuit
Unmating Force: 6.7N (1.5 lbf) per circuit
Normal Force: 75 grams
Durability: 1,500 cycles

Physical

Housing: Black LCP, UL 94V-0
Contact: Copper Alloy
Plating: 15µ" min. Select Gold
Shield: Deep-drawn Steel

Circuits	Order No.	Threaded inserts*	Lead-free
18	74150-0001	4-40	Yes

* Also available with M3 threaded inserts

1.27mm (.050") Pitch PCIe 1X Plug

74155

Wire Terminated Cable Plug

Features and Benefits

- Complies with the PCI SIG specifications
- Supports 2.5 Gbps data transfer rate for Gen I and 5.0 Gbps data transfer rates for Gen II
- First-mate/last-break pins B1 and A9 prevent damage to electrical circuitry when "hot plug" mating
- LFH™ contact design provides shallow mating angle, reducing insertion forces
- Terminates to 24 to 32 AWG high-performance wire through soldering or resistance welding
- Standard and custom cable assemblies available, 74576 series

Reference Information

Packaging: Tubes
Mates With: 74150 receptacle
Designed In: Millimeters

Electrical

Voltage: 40V
Current: 1.5A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 200 Megohms min.
Differential Impedance:
2.5Gbps: 100 ± 10 ohms at 150psec risetime
5.0Gbps: 100 ± 18 ohms at 75psec risetime

Mechanical

Contact Insertion Force: 0.60N (0.13 lbf) per circuit
Insertion Force to PCB: 44.50N (10.00 lbf) total
Mating Force: 11.17N (2.51 lbf) per circuit
Unmating Force: 6.7N (1.5 lbf) per circuit
Normal Force: 75 g
Durability: 1,500 cycles

Physical

Housing: Black LCP, UL 94V-0
Contact: Copper Alloy
Plating: 15µ" min. Select Gold
Shield: Deep-drawn Steel

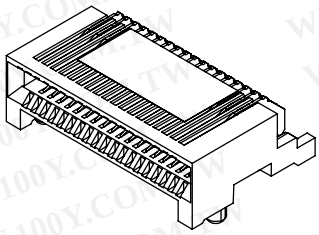
Circuits	Order No.	Description	Lead-free
18	74155-0001	Plug assembled with pre-trimmed tails	Yes

Also available in Nickel-plated tails for terminations requiring welding

0.80mm (.031") Pitch iPass™ Wire-to-Board Host Connector

75586

Right Angle, SMT



Features and Benefits

- Designed for placement beneath guide frame for external applications
- High-temperature thermoplastic for lead-free processing
- Alignment posts provide stability for placement on the PCB
- Standoffs allow for easy PCB cleaning after soldering
- SMT design allows for ease of routing and provides the option for placement on both sides of the PCB

Reference Information

Product Specification: PS-75586-001
Packaging: Tape and reel
Mates With: 74546 and 74547
Use With: 74540 and 74548
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A max.
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 4.5N min.
Mating Force: 2.36N per circuit
Unmating Force: 0.15N per circuit
Normal Force: 0.49N min.
Durability: 250 cycles

Physical

Housing: Black glass-filled high-temperature thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—Gold
Solder Tail Area—Tin
Underplating—Nickel

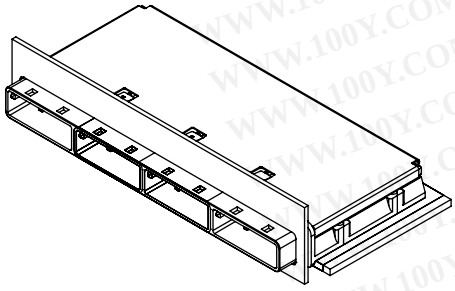
Circuits	Order No.	Plating	Lead-free
26	75586-0004	0.38 (15µ") Gold	Yes
	75586-0009	0.76 (30µ") Gold	
36	75586-0003	0.38 (15µ") Gold	
	75586-0008	0.76 (30µ") Gold	
38	75586-0010	0.38 (15µ") Gold	
	75586-0011	0.76 (30µ") Gold	
50	75586-0001	0.38 (15µ") Gold	
	75586-0006	0.76 (30µ") Gold	
68	75586-0002	0.38 (15µ") Gold	
	75586-0007	0.76 (30µ") Gold	

www.molex.com/product/iPass.html

(1.18") Pitch Cage-to-Cage (0.75") Pitch Port-to-Port iPass™ Wire-to-Board Multi-port Guide Frame

74548

SAS/SATA



Features and Benefits

- Multiple guide rail configurations provide board design flexibility
- Diecast guide rail provides robust chassis-to-chassis interface
- Guide frame gaskets provide improved EMI performance
- Screw attachment for the guide rail to PCB provides a durable I/O connection during the cable management process

Reference Information

Packaging: Tray
Mates With: 74547
Use With: 75586
Designed In: Millimeters

Mechanical

Retention to PCB: Threaded Screw—M2

Physical

Housing: Zinc diecast
Housing Plating: Nickel over Tin

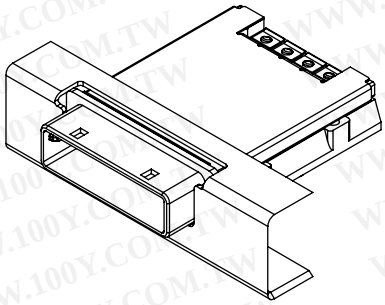
Order No.	Port Size	Key	Lead-free
74548-0117	1 by 4 EMI Guide Housing Assembly 1 Degree—SAS	2	Yes
74548-0118	1 by 2 EMI Guide Housing Assembly 1 Degree—SAS		
74548-0119	1 by 1 EMI Guide Housing Assembly 1 Degree—SAS		
74548-0120	1 by 4 EMI Guide Housing Assembly 1 Degree—SAS	6	
74548-0121	1 by 2 EMI Guide Housing Assembly 1 Degree—SAS		
74548-0122	1 by 1 EMI Guide Housing Assembly 1 Degree—SAS		
74548-0123	1 by 4 EMI Guide Housing Assembly 1 Degree—SRiO	3	
74548-0124	1 by 2 EMI Guide Housing Assembly 1 Degree—SRiO		
74548-0125	1 by EMI Guide Housing Assembly 1 Degree—SRiO		

Order No.	Port Size	Key	Lead-free
74548-0217	1 by 4 EMI Guide Housing Assembly 0 Degree—SAS	2	Yes
74548-0218	1 by 2 EMI Guide Housing Assembly 0 Degree—SAS		
74548-0219	1 by 1 EMI Guide Housing Assembly 0 Degree—SAS		
74548-0220	1 by 4 EMI Guide Housing Assembly 0 Degree—SAS	6	
74548-0221	1 by 2 EMI Guide Housing Assembly 0 Degree—SAS		
74548-0222	1 by 1 EMI Guide Housing Assembly 0 Degree—SAS		
74548-0223	1 by 4 EMI Guide Housing Assembly 0 Degree—SRiO	3	
74548-0224	1 by 2 EMI Guide Housing Assembly 0 Degree—SRiO		
74548-0225	1 by EMI Guide Housing Assembly 0 Degree—SRiO		

0.80mm (.031") Pitch iPass™ Wire-to-Board Guide Frame

74540

X4 and X8 PCIe



Features and Benefits

- Diecast guide frame provides robust cable-to-chassis interface
- Guide frame gaskets provide improved EMI performance
- Multiple guide frame configurations provide board design flexibility
- Alignment posts provide stability for placement on the PCB
- Screw attachment for the guide frame provides sturdy, durable connection to the PCB

Reference Information

Packaging: Tray
Mates With: 74546
Use With: 75586
Designed In: Millimeters

Mechanical

Retention to PCB: Threaded Screw—M2

Physical

Housing: Zinc diecast
Plating: Nickel over Tin

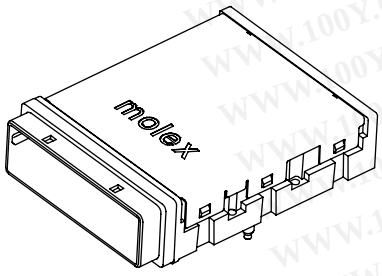
Circuits	Lane	Order No.	Application	Lead-free
38	4X	74540-0401	PCIe add-in cards	Yes
		74540-0501	Standard host boards	
68	8X	74540-0101	PCIe add-in cards	
		74540-0201	Standard host boards	

www.molex.com/hpc/

0.80mm (.031") Pitch iPass™ Wire-to-Board Integrated Connector Assembly

75581

Compliant Pin, Right Angle X16 PCIe



Features and Benefits

- Integrated press-fit connector assembly with cage provides one-step placement to PCB
- Four integral screw mount hold downs applied from the bottom of the PCB provide optimal retention of the die cast assembly to the PCB without taking up additional real estate
- Low profile height (13.13mm) fits standard and low profile PCIe add-in cards
- Two robust guide pins located on each side help to align assembly to PCB
- Front elastomeric gasket provides improved EMI protection to face plate
- Eight ground pad alleys are located at the rear of the die cast assembly to provide ease of routing off top layers of PCB

Reference Information

Product Specification: PS-75586-001
Packaging: Tray
Mates With: 74546
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 2.36N per circuit
Unmating Force: 0.15N per circuit
Normal Force: 0.49N min.
Durability: 250 Cycles

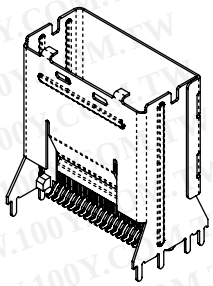
Physical

Housing: Black glass-filled high-temperature thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—Gold
Solder Tail Area—Tin
Underplating—Nickel
PCB Thickness: .070" min.

Circuits	Order No.	Plating	Lead-free
136	75581-0001	0.38 (15µ") Gold	RoHs compliant by exemption
	75581-0002	0.76 (30µ") Gold	

0.80mm (.031") Pitch iPass™ Wire-to-Board Host Connector/Shell Kit

75784
Vertical



Features and Benefits
- SMT host connector is packaged with vertical shell for one-step placement to the PCB
- Pre-positioning device aligns the connector to the shell and acts as disposable cap for robotic placement to PCB
- Four keying options prevent mismating
- Retention-fit, through hole and SMT shell configurations provide processing flexibility
- Multiple solder tail lengths accommodate PCB thickness from 1.57 to 3.18mm
- Tape-and-reel packaging for robotic placement to PCB

Reference Information
Product Specification: PS-75783-001
Packaging: Tape and reel
Mates With: 79536, 79576 and 74562
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 0.5A max.
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical
Contact Retention to Housing: 4.5N min.
Insertion Force to PCB: 25N max.
Mating Force: 2.36N per circuit
Unmating Force: 0.15N per circuit
Normal Force: 0.49N min.
Durability: 25 cycles

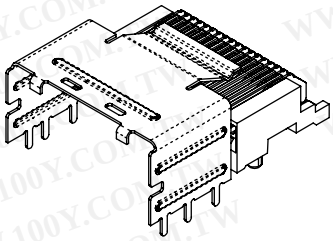
Physical
Housing: Black glass-filled high-temperature thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—0.38µm (15µ") and 0.76µm (30µ") Gold
Solder Tail Area—Tin
Underplating—Nickel

Circuits	Order No.	Shell PCB	PC Tail Length	Shell Key	Lead-free
26	75784-0009	Retention-fit	1.96mm	Dual	Yes
	75784-0031	Through Hole			
	75784-0012	SMT			
36	75784-0109	Retention-fit	1.96mm		
	75784-0131	Through Hole	1.96mm		
	75784-0139	Through Hole	2.79mm		
	75784-0147	Through Hole	3.18mm		
	75784-0155	Through Hole	3.56mm		
	75784-0112	SMT	1.96mm		
50	75784-0209	Retention-fit	1.96mm		
	75784-0231	Through Hole			
	75784-0212	SMT			
68	75784-0309	Retention-fit	1.96mm		
	75784-0331	Through Hole			
	75784-0312	SMT			

Note: See Sales Drawing for 0.76µm (30µ") ordering information

0.80mm (.031") Pitch iPass™ Wire-to-Board Host Connector/Shell Kit

75783
Right Angle



Features and Benefits
- SMT host connector is packaged with right angle shell for one-step placement to the PCB
- Pre-positioning device aligns the connector to the shell and acts as disposable cap for robotic placement to PCB
- Four keying options prevent mismating
- Retention-fit, through hole and SMT shell configurations provide processing flexibility
- Multiple solder tail lengths accommodate PCB thickness from 1.57 to 3.18mm
- Tape-and-reel packaging for robotic placement to PCB

Reference Information
Product Specification: PS-75783-001
Packaging: Tape and reel
Mates With: 79536, 79576 and 74562
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 0.5A max.
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical
Contact Retention to Housing: 4.5N min. per circuit
Insertion Force to PCB: 25N max.
Mating Force: 2.36N per circuit
Unmating Force: 0.15N per circuit
Normal Force: 0.49N min.
Durability: 25 cycles

Physical
Housing: Black glass-filled high-temperature thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—0.38µm (15µ") and 0.76µm (30µ") Gold
Solder Tail Area—Tin
Underplating—Nickel

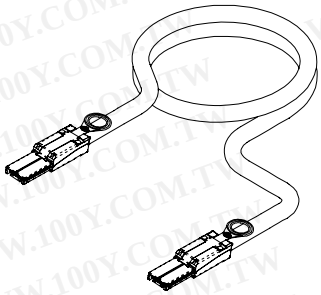
Circuits	Order No.	Shell PCB	PC Tail Length	Shell Key	Lead-free
26	75783-0009	Retention-fit	1.96mm	Dual	Yes
	75783-0031	Through Hole			
	75783-0012	SMT			
36	75783-0109	Retention-fit	1.96mm		
	75783-0131	Through Hole	1.96mm		
	75783-0139	Through Hole	2.79mm		
	75783-0147	Through Hole	3.18mm		
	75783-0155	Through Hole	3.56mm		
	75783-0112	SMT	1.96mm		
50	75783-0209	Retention-fit	1.96mm		
	75783-0231	Through Hole			
	75783-0212	SMT			
68	75783-0309	Retention-fit	1.96mm		
	75783-0331	Through Hole			
	75783-0312	SMT			

Note: See Sales Drawing for 0.76µm (30µ") ordering information

0.80mm (.031") Pitch iPass™ External Cable Mini Multi-Lane Cable Assembly

74547

Double-ended, 26-Circuit



Features and Benefits

- Reduced plug width provides the ability to support a higher number of ports in the same space as the SFF-8470 solution
- High performance paddle card design provides improved signal integrity through impedance matching and reduced crosstalk
- Cable snout gasket provides improved EMI performance
- Loopback module available for SAS, CX4

Reference Information

Mates With: 75586
Use With: 74548
Designed In: Millimeters

Electrical

Voltage: 30V AC
Current: 1.0A

Mechanical

Latch-to-Cage Retention Force: 88.96N (20 lbf)
Mating Force: 68.95N (15.5 lbf)
Unmating Force: 62.28N (14 lbf)
Durability: 250 cycles

Physical

Housing: Zinc diecast
Housing Plating: Nickel over Zinc
PCB Contact: Gold over Nickel

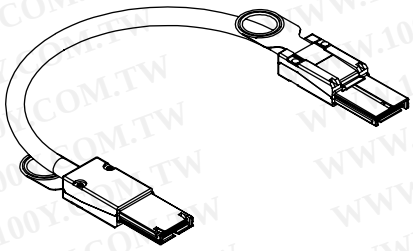
Length	Order No.	Protocol	Key	Lead-free
1.0m (3.28')	74547-0101	SFF-8088 SAS	2,4	Yes
3.0m (9.84')	74547-0103			
6.0m (19.68')	74547-0106			
1.0m (3.28')	74547-0201		4,6	
3.0m (9.84')	74547-0203			
6.0m (19.68')	74547-0206			
1.0m (3.28')	74547-0301		2,4,6	
3.0m (9.84')	74547-0303			
6.0m (19.68')	74547-0306			
3.0m (9.84')	74547-0399			
1.0m (3.28')	74547-0120		2,4-4,6	
3.0m (9.84')	74547-0122			
6.0m (19.68')	74547-0125			
1.0m (3.28')	74547-0001	SFF-8088 SATA	1, 4	
3.0m (9.84')	74547-0003			
6.0m (19.68')	74547-0006			
1.0m (3.28')	74547-0401		7	
3.0m (9.84')	74547-0403			
6.0m (19.68')	74547-0406			
1.0m (3.28')	74547-5001	SRiO	3	
3.0m (9.84')	74547-5003			
6.0m (19.68')	74547-5006			
1.0m (3.28')	74547-7001	CX4	2, 7	
5.0m (16.4')	74547-7005			
10.0m (32.80')	74547-7010			
15.0m (49.20')	74547-7015			
	74547-0699	Loopback		

Note: Additional lengths available on sales drawing shown on website.

0.80mm (.031") Pitch iPass™ PCIe Cable

74546

4X, 8X, 16X PCIe



Features and Benefits

- Reduced plug width allows customers to populate (4)x4 ports and (2)x8 ports on a standard PCIe card
- Lower external plug profile reduces cable bend radius versus standard 4x LaneLink™ cable assemblies
- Flexible latch pull provides an intuitive latch and unlatch mechanism

Reference Information

Packaging: Box
Mates With: 75586
Use With: 74540
Designed In: Millimeters

Electrical

Voltage: 30V AC
Current: 1.0A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 240V
Insulation Resistance: 40 Megohms min.

Mechanical

Latch to Cage Retention Force: 20 lbf min.
Durability: 250 cycles

Physical

Housing: Zinc diecast
PCB Contact: Gold over Nickel
Housing Plating: Nickel over Zinc

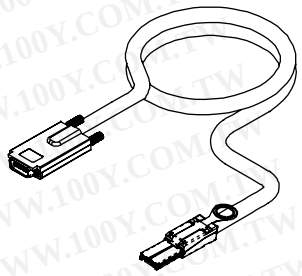
Length	Order No.	Lane/Circuits	Lead-free
1.0m (3.28')	74546-0401	4X/38	Yes
7.0m (22.96')	74546-0407		
1.0m (3.28')	74546-0801	8X/68	
7.0m (22.96')	74546-0807		
1.0m (3.28')	74546-1601	16X/136	
7.0m (22.96')	74546-1607		

Note: Additional lengths available on sales drawing shown on website.

0.80mm (.031")/ 0.50mm (.020") Pitch iPass™ to LaneLink™ External Mini Multi-Lane to External Multi-Lane Cable Assembly

74547

26 Circuit External iPass to 4X LaneLink Cable



Features and Benefits

- Sturdy jackscrew hardware provides user with guaranteed mating to the PCB connector
- Diecast backshell provides EMI protection
- High-performance paddle card design provides improved signal integrity through impedance matching and reduced crosstalk
- Cable snout gasket provides improved EMI performance

Reference Information

iPass
Mates With: 75586
Use With: 74548
Designed In: Millimeters

LaneLink
Mates With: 91659
Use With: 74735 and 74739
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.0A

Mechanical

iPass
Latch-to-Cage Retention Force: 88.96N (20 lbf)
Mating Force: 68.95N (15.5 lbf)
Unmating Force: 62.28N (14 lbf)
Durability: 250 cycles

LaneLink
Mating Force: 55.5N (12.48 lbf)
Unmating Force: 49.0N (11.02 lbf)
Durability: 250 cycles

Physical

iPass
Housing: Zinc diecast
Housing Plating: Nickel over Zinc
PCB Contact: Gold over Nickel

LaneLink
Housing: Zinc diecast
Contact: Gold flashw
Housing Plating: Nickel

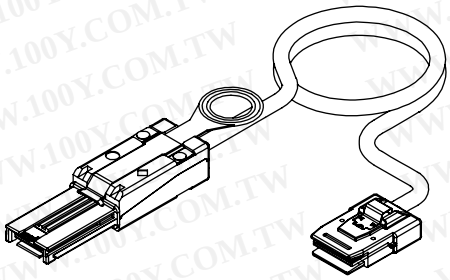
Protocol	Order No.	Length	Key	Lead-free
SAS	74547-2021	1.0m (3.28')	2, 4	Yes
	74547-2023	3.0m (9.84')		
	74547-2026	6.0m (19.68')		
	74547-2041	1.0m (3.28')	4, 6	
	74547-2043	3.0m (9.84')		
	74547-2046	6.0m (19.68')		
	74547-2051	1.0m (3.28')	2, 4, 6	
	74547-2053	3.0m (9.84')		
	74547-2056	6.0m (19.68')		
SATA	74547-2001	1.0m (3.28')	1, 4	
	74547-2003	3.0m (9.84')		
	74547-2006	6.0m (19.68')		
	74547-2061	1.0m (3.28')	7	
	74547-2063	3.0m (9.84')		
	74547-2066	6.0m (19.68')		
CX4	74547-7010	1.0m (3.28')	2.7	
	74547-7050	5.0m (16.4')		
	74547-7100	10.0m (32.80')		
	74547-7150	15.0m (49.20')		

Note: Additional lengths on sales drawing shown on website.

0.80mm (.031")/ 0.80mm (.031") Pitch iPass™ External Mini Multi-Lane to Internal Mini Multi-Lane Cable Assembly

74547

External 26-Circuit SAS to Internal 36-Circuit SAS (SFF-8088 to SFF-8087)



Length	Order No.	Lead-free
0.5m (1.64')	74547-3301	Yes
1.0m (3.28')	74547-3302	

Features and Benefits
- Interface adapter cable provides ability to mate between various SAS and SATA interconnects
- iPass cable plug offers streamlined narrow latch pull design allowing for more dense cable management
- Reduced plug width provides the ability to support a higher number of ports in the same space as the SFF-8470 solution

Reference Information
Packaging: Bag
Mates With: External—75586
Internal—75783, 75784
Use With: External—74548
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 0.5A

Mechanical
Latch-to-Cage Retention Force: 88.96N (20 lbf)

External SFF-8088
Mating Force: 68.95N (15.5 lbf)
Unmating Force: 62.28N (14.0 lbf)
Durability: 250 cycles

Internal SFF-8087
Latch-to-Cage Retention Force: 4.45N (1.00 lbf) per circuit
Mating Force: 1.25N (.28 lbf) per circuit
Unmating Force: 25N (0.6 lbf) per circuit
Durability: 25 cycles

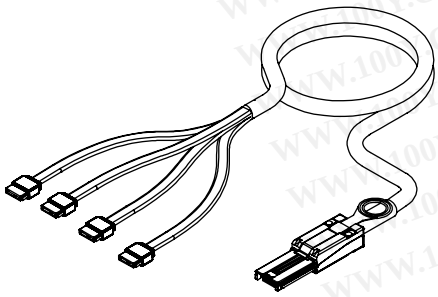
Physical
External SFF-8088
Housing: Zinc Die Cast
Housing Plating: Nickel
PCB Contact: Gold
Operating Temperature: -20 to +85˚C

Internal SFF-8087
Housing: Black glass-filled high-temperature thermoplastic, UL 94V-0
Contact: Copper Alloy

0.80mm (.031")/ 1.27mm (.050") Pitch iPass™ External Mini Multi-Lane to Internal 1X SATA Cable Assembly

74557

26-Circuit SAS External to (4) 1X SATA (SF-8088 to 1X SATA)



Length	Order No.	Pinout	Pinout Orientation	Lead-free
0.5m (1.64')	74557-0001	Straight	Transmit P0 to P1-P4	Yes
1.0m (3.28')	74557-0002			
0.5m (1.64')	74557-0003	Straight—pinout 2		
1.0m (3.28')	74557-0004			

Length	Order No.	Pinout	Pinout Orientation	Lead-free
0.5m (1.64')	74557-1001	Crossover	Transmit P0 to P1-P4	Yes
1.0m (3.28')	74557-1002			
0.5m (1.64')	74557-1003	Crossover—pinout 2		
1.0m (3.28')	74557-1004			

Features and Benefits
- Interface adapter cable provides ability to mate between various SAS and SATA interconnects
- iPass cable plug offers streamlined narrow latch pull design allowing for more dense cable management
- Reduced plug width provides the ability to support a higher number of ports in the same space as the SFF-8470 solution

Reference Information
Packaging: Bag
Mates With: Internal—47080, 67490, 67800
External—75586
Use With: External—74548
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 0.5A

Mechanical
External SFF-8088
Latch-to-Cage Retention Force: 88.96N (20 lbf)
Mating Force: 68.95N (15.5 lbf)
Unmating Force: 62.28N (14 lbf)
Durability: 250 cycles

Internal SATA
Mating Force: 45N per circuit (10.12 lbf)
Unmating Force: 10N per circuit (2.25 lbf)
Durability: 500 cycles

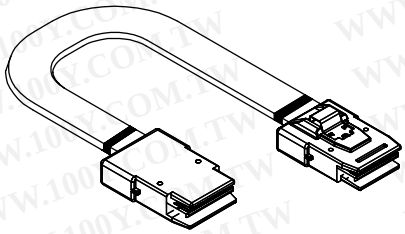
Physical
External SFF-8088
Housing: Zinc diecast
Housing Plating: Nickel
PCB Contact: Gold

Internal SATA
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

0.80mm (.031") Pitch iPass™ Internal Mini Multi-Lane Cable Assembly

79576
Double-ended 36-Circuit SAS (SFF-8087)

74573
Right Angle (SFF-8087)



Features and Benefits
- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths which allows the customer to use the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to receptacle
- Reduced mechanical size offers up to 4 times the port density of the current x4 solution

Reference Information
Packaging: Bag
Mates With: 75783 and 75784
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 1.0A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 240V
Insulation Resistance: 40 Megohms min.

Mechanical
Latch-to-Cage Retention Force: 44.48N (10.00 lbf)
Mating Force: 55.60N (12.5 lbf)
Unmating Force: 48.93N (11.00 lbf)
Durability: 25 cycles

Physical
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

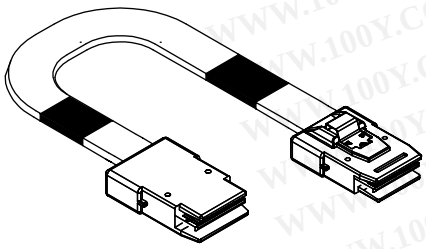
Length	Order No.	Sidebands	Application	Lead-free
0.5m (1.64')	79576-2102	Yes	Controller to Backplane	Yes
1.0m (3.28')	79576-2104			
0.5m (1.64')	79576-2112		Controller to Controller	
1.0m (3.28')	79576-2114			
0.5m (1.64')	74573-2102		Controller to Backplane	
	74573-2112		Controller to Controller	

Note: Additional lengths shown on website.

www.molex.com/hpc/

0.80mm (.031") Pitch iPass™ Internal Cable Assembly

74596
Double Ended 50 Circuit



Features and Benefits
- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths, which allows the customer to use the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to the receptacle
- Interface adapter cables provide the ability to mate between the various standard SAS and SATA interconnects
- One 50 circuit cable utilizes less board space than two 26 circuit cables

Reference Information
Packaging: Bag
Mates With: 75783 and 75784
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 1.0A

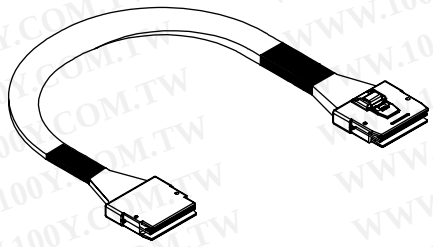
Mechanical
Latch to Cage Retention: 30N (6.74 lbf) min.
Mating Force: 82.5N (18.55 lbf)
Unmating Force: 32.5N (7.31 lbf)
Durability: 50 cycles

Physical
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" Gold over Nickel

Order No.	Length	Application	Sidebands	Lead-free
74596-5000	0.152m (0.50')	Controller to Backplane	No	Yes
74596-5001	0.300m (0.98')			
74596-5002	0.500m (3.28')			
74596-5003	0.600m (1.97')			
74596-5004	1.00m (3.28')			

0.80mm (.031") Pitch iPass™ Internal Cable Assembly

74586
Double Ended 68 Circuit



Features and Benefits
- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths, which allows the customer to use the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to the receptacle
- Interface adapter cables provide the ability to mate between the various standard SAS and SATA interconnects
- One 68 circuit cable utilizes less board space than two 36 circuit cables

Reference Information
Packaging: Bag
Mates With: 75783 and 75784
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 1.0A

Mechanical
Latch to Cage Retention: 30N (6.74 lbf) min.
Mating Force: 105N (23.61 lbf)
Unmating Force: 37 (7.31 lbf)
Durability: 50 cycles

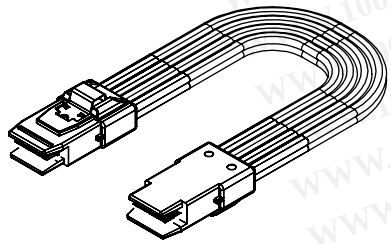
Physical
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" Gold over Nickel

Order No.	Length	Application	Sidebands	Lead-free
74586-2100	0.152m (0.50')	Controller to Backplane	Yes	Yes
74586-2101	0.300m (0.98')			
74586-2102	0.500m (3.28')			
74586-2103	0.600m (1.97')			
74586-2104	1.00m (3.28')			
74586-2110	0.152m (0.50')	Controller to Controller	Yes	
74586-2111	0.300m (0.98')			
74586-2112	0.500m (3.28')			
74586-2113	0.600m (1.97')			
74586-2114	1.00m (3.28')			
74586-2120	0.152m (0.50')	N/A	No	
74586-2121	0.300m (0.98')			
74586-2122	0.500m (3.28')			
74586-2123	0.600m (1.97')			
74586-2124	1.00m (3.28')			

www.molex.com/product/iPass.html

0.80mm (.031") Pitch iPass™ Internal Mini SAS Cable Assembly

79575
Double-ended 26-Circuit SAS (SFF-8087)



Features and Benefits
- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths, which allows the customer to use the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to the receptacle
- Reduced mechanical size offers up to 4 times the port density of the current x4 solution

Reference Information
Packaging: Bag
Mates With: 75783 and 75784
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 1.0A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 240V
Insulation Resistance: 40 Megohms min.

Mechanical
Latch-to-Cage Retention Force: 44.48N (10.00 lbf)
Mating Force: 55.60N (12.5 lbf)
Unmating Force: 48.93N (11.00 lbf)
Durability: 25 cycles

Physical
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

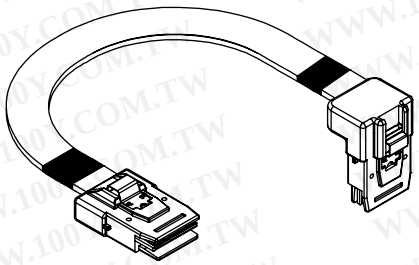
Circuits	Length	Order No.	Lead-free
26	0.152m (0.49')	79575-2000	Yes
	0.3m (0.98')	79575-2001	
	0.5m (1.64')	79575-2002	
	0.6m (1.96')	79575-2003	
	1.0m (3.28')	79575-2004	

Note: Additional lengths on sales drawing shown on website.

0.80mm (.031") Pitch iPass™ Internal Mini SAS Cable Assembly

74573

90 Degree, Right Angle
36 Circuit



Features and Benefits

- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths, which allows the customer to use the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to the receptacle
- Interface adapter cables provide the ability to mate between the various standard SAS and SATA interconnects

Reference Information

Packaging: Bag
Mates With: 75783 and 75784
Designed In: Millimeters

Electrical

Voltage: 30V AC
Current: 1.0A

Mechanical

Latch to Cage Retention Force: 30N (6.74 lbf)
Mating Force: 55.60N (12.5 lbf)
Unmating Force: 48.93N (11.00 lbf)
Durability: 50 cycles

Physical

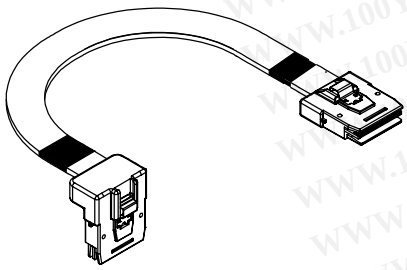
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

Order No.	Length	Application	Sidebands	Lead-free
74573-2100	0.152m (0.50')	Controller to Backplane	Yes	Yes
74573-2101	0.300m (0.98')			
74573-2102	0.500m (1.64')			
74573-2103	0.600m (1.97')			
74573-2104	1.00m (3.28')			
74573-2110	0.152m (0.50')	Controller to Controller	Yes	
74573-2111	0.300m (0.98')			
74573-2112	0.500m (1.64')			
74573-2113	0.600m (1.97')			
74573-2114	1.00m (3.28')			
74573-2120	0.152m (0.50')	None	No	
74573-2121	0.300m (0.98')			
74573-2122	0.500m (1.64')			
74573-2123	0.600m (1.97')			
74573-2124	1.00m (3.28')			

0.80mm (.031") Pitch iPass™ Internal Cable Assembly

111018

90 Degree, Right Angle
50 Circuit



Features and Benefits

- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths, which allows the customer to use the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to the receptacle
- Interface adapter cables provide the ability to mate between the various standard SAS and SATA interconnects

Reference Information

Packaging: Bag
Mates With: 75783 and 75784
Designed In: Millimeters

Electrical

Voltage: 30V AC
Current: 1.0A

Mechanical

Latch to Cage Retention Force: 30N (6.75 lbf) min.
Mating Force: 82.5N (18.55 lbf)
Unmating Force: 32.5N (7.31 lbf)
Durability: 50 cycles

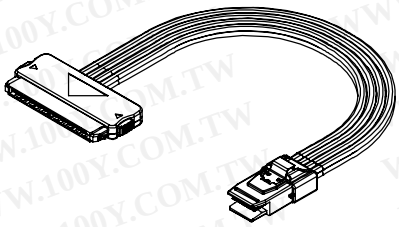
Physical

Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" Gold over Nickel

Order No.	Length	Application	Sidebands	Lead-free
111018-0000	0.152m (0.50')	Controller to Backplane	No	Yes
111018-0001	0.300m (0.98')			
111018-0002	0.500m (3.28')			
111018-0003	0.600m (1.97')			
111018-0004	1.00m (3.28')			

0.80mm (.031")/ 1.27mm (.050") Pitch iPass™ Internal 26 Circuit Mini SAS to Internal Multi-Lane Cable Assembly

79575
SFF-8484



Features and Benefits
- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths which allows use of the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to receptacle
- Interface adapter cables provide the ability to mate between the various standard SAS and SATA interconnects

Reference Information
Packaging: Bag
Mates With: Mini SAS—75783, 75784
SFF-8484—87968, 87862, 87959, 87861, 87969
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 1.0A

Mechanical
26 Circuit
Latch to Cage Retention Force: 44.48N (10.00 lbf)
Mating Force: 55.60N (12.5 lbf)
Unmating Force: 48.93N (11.00 lbf)
Durability: 25 cycles

8484
Mating Force Internal: 45N (10.12 lbf) max.
Unmating Force Internal: 20N (4.5 lbf) min. with latch engaged
Durability: 50 cycles

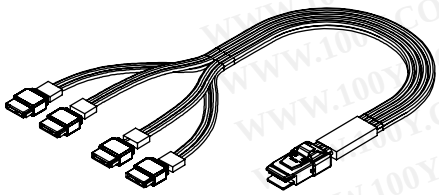
Physical
26 Circuit
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

8484
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel and Copper Alloy

Order No.	Orientation	Length	Lead-Free
79575-5002	Vertical	0.5m (1.64')	Yes
79575-5004		1.0m (3.28')	

0.80mm (.031")/ 1.27mm (.050") Pitch iPass™ Internal Mini SAS to Serial ATA Cable Assembly

79575
26-Circuit to (4) 1X SATA



Features and Benefits
- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths, which allows the customer to use the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to the receptacle
- Interface adapter cables provide the ability to mate between the various standard SAS and SATA interconnects

Reference Information
Packaging: Bag and box
Mates With: SATA—47080, 67490, 67800
SAS—75783 and 75784
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 1.0A

Mechanical
26 Circuit
Latch-to-Cage Retention Force: 44.48N (10.00 lbf)
Mating Force: 55.60N (12.5 lbf)
Unmating Force: 48.93N (11.00 lbf)
Durability: 25 cycles

SATA
Mating Force Internal: 45N per circuit (10.12 lbf)
Unmating Force Internal: 10N per circuit (2.25 lbf)
Durability: 500 cycles

Physical
26 Circuit
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

SATA
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

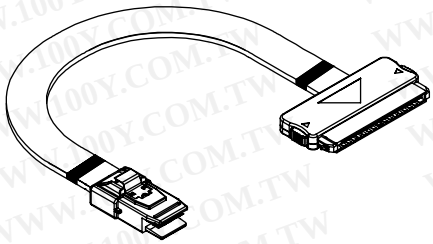
Length	Order No.	Application	Lead-free
0.5m (1.64')	79575-3002	Backplane to Controller	Yes
1.0m (3.28')	79575-3004		

Note: Additional lengths on sales drawing shown on website.

0.80mm (.031")/ 1.27mm (.050") Pitch iPass™ Internal Mini Multi-Lane to Internal Multi-Lane Cable Assembly

79576
(SFF-8088 to SFF-8484)

74562
(SFF-8088 to Right Angle SFF-8484)



Features and Benefits
- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths which allows the customer to use the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to receptacle
- Interface adapter cables provide the ability to mate between the various standard SAS and SATA interconnects

Reference Information
Packaging: Bag and box
Mates With: SFF-8088—75783, 75784
SFF-8484—87861, 87862, 87959, 87968 and 87969
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 1.0A

Mechanical
SFF-8088
Latch-to-Cage Retention Force: 44.48N (10.00 lbf)
Mating Force: 55.60N (12.5 lbf)
Unmating Force: 48.93N (11.00 lbf)
Durability: 25 cycles

SFF-8484
Mating Force Internal: 45N (10.12 lbf) max.
Unmating Force Internal: 20N (4.5 lbf) min. with latch engaged
Durability: 50 cycles

Physical
SFF-8088
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

SFF-8484
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel and Copper Alloy

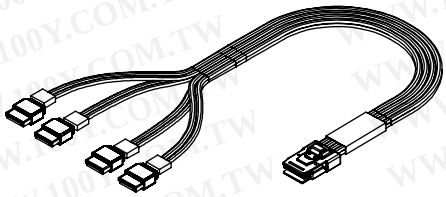
Length	Order No.	Orientation	Application—Sidebands	Lead-free
0.5m (1.64')	79576-5002	Vertical	iPass on Backplane	Yes
1.0m (3.28')	79576-5004			
0.5m (1.64')	79576-9002		iPass on Controller	
1.0m (3.28')	79576-9004			
0.5m (1.64')	79576-5022		No Side Bands	
1.0m (3.28')	79576-5024			
0.5m (1.64')	74562-5002	Right Angle	iPass on Backplane	
1.0m (3.28')	74562-5004			
0.5m (1.64')	74562-5102		No Side Bands	
1.0m (3.28')	74562-5104			

Note: Additional lengths available on sales drawing shown on website.

0.80mm (.031")/ 1.27mm (.050") Pitch iPass™ Internal Mini Multi-Lane to Serial ATA Cable Assembly

79576/79536

36-Circuit to (4) 1X SATA (SFF-8087 to 1X SATA)



Features and Benefits

- All internal iPass assemblies are capable of supporting SAS/SATA generation I and II bandwidths, which allows the customer to use the same connector/cable solution for next generation systems
- Positive and passive latching ensures that the plug remains mated to the receptacle
- Interface adapter cables provide the ability to mate between the various standard SAS and SATA interconnects

Reference Information

Packaging: Bag and box
Mates With: 1X SATA—47080, 67490, 67800
36-Circuit SATA—75783 and 75784
Designed In: Millimeters

Electrical

Voltage: 30V AC
Current: 1.0A

Mechanical

SFF-8087
Latch-to-Cage Retention Force: 44.48N (10.00 lbf)
Mating Force: 55.60N (12.5 lbf)
Unmating Force: 48.93N (11.00 lbf)
Durability: 25 cycles

SATA
Mating Force Internal: 45N per circuit (10.12 lbf)
Unmating Force Internal: 10N per circuit (2.25 lbf)
Durability: 500 cycles

Physical

SFF-8087
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

SATA
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

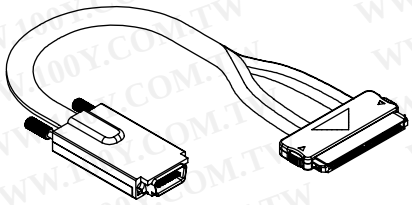
Length	Order No.	Application	Sidebands	Lead-free
0.5m (1.64')	79576-3002	iPass on Backplane	No	Yes
1.0m (3.28')	79576-3007			
0.5m (1.64')	79576-3003	iPass on Controller		
1.0m (3.28')	79576-3005			
0.5m (1.64')	79536-3013	iPass on Backplane	Yes	
1.0m (3.28')	79536-3015			
0.5m (1.64')	79536-3003	iPass on Controller		
1.0m (3.28')	79536-3005			
0.5m (1.64')	79536-3023			
1.0m (3.28')	79536-3025			

Note: Additional lengths available on sales drawing shown on website.

0.50mm (.020")/ 1.27mm (.050") Pitch LaneLink™ to iPass™ Cable Assembly External Multi-Lane 4X to Mini SAS 4i, 4X Jackscrew Cable Assembly

74527

4X SAS LaneLink to SAS iPass Cable (SFF-8470 to SFF-8484)



Features and Benefits

- Interface adapter cable provides the ability to mate between various SAS and SATA interconnects with existing systems that use SFF-8470
- Jackscrew options complies with SFF-8470, which meets SFF committee standard specifications
- Internal plug offers positive and passive latching to ensure plug remains latched to receptacle

Reference Information

Packaging: Bag and box
Mates With: External—91659
Internal—87861, 87862, 87959, 87968, 87969
Designed In: Millimeters

Electrical

Voltage: 0.5A
Current: 30V AC

Mechanical

External SFF-8470
Mating Force External: 55.5N (12.48 lbf)
Unmating Force Internal: 49.0N (11.02 lbf)
Durability: 250 cycles

Internal SFF-8484
Latch to Cage Retention Force: 44.48N (10.0 lbf)
Mating Force Internal: 55.60N (12.50 lbf)
Unmating Force Internal: 48.93N (11.0 lbf)
Durability: 25 cycles

Physical

External SFF-8470
Housing: Zinc diecast
Contact: Gold flash
Housing Plating: Nickel

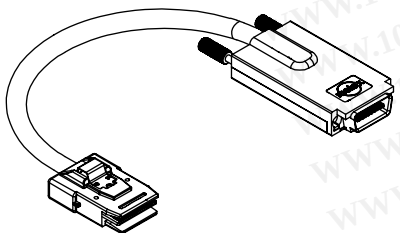
Internal SFF-8484
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

Length	Order No.	Description	Pinout Orientation	Lead-free
0.5m (1.64')	74527-4001	Straight (P1 to P1) pinout	Transmit to Transmit	Yes
1.0m (3.28')	74527-4002			
0.5m (1.64')	74527-4101	Crossover (P1 to P4) pinout	Transmit to Receive	
1.0m (3.28')	74527-4102			

0.50mm (.020")/ 0.80mm (.031") Pitch LaneLink™ to iPass™ External Multi-Lane to Internal Mini-Multi Lane 4X Jackscrew Cable Assembly

74527

4X SAS LaneLink to 36-Circuit SAS iPass Cable (SFF-8470 to SFF-8087)



Features and Benefits

- Interface adapter cable provides the ability to mate between various SAS and SATA interconnects with existing systems that use SFF-8470
- Jackscrew options complies with SFF-8470, which meets SFF committee standard specifications
- Internal plug offers positive and passive latching to ensure plug remains latched to receptacle

Reference Information

Packaging: Bag
Mates With: External—91659
Internal—75783, 75784
Use With: 74735 and 74739
Designed In: Millimeters

Electrical

Voltage: 0.5A
Current: 30V AC

Mechanical

External SFF-8470
Mating Force: 55.5N (12.48 lbf)
Unmating Force: 49.0N (11.0 lbf)
Durability: 250 cycles

Internal SFF-8087
Mating Force: 55.60N (12.50 lbf)
Unmating Force: 48.93N (11.0 lbf)
Latch to Cage Retention Force: 44.48N (10 lbf)
Durability: 25 cycles

Physical

External SFF-8470
Housing: Zinc diecast
Contact: Gold flash
Housing Plating: Nickel

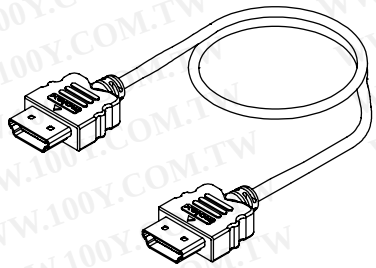
Internal SFF-8087
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

Length	Order No.	Lead-free
0.5m (1.64')	74527-6021	Yes
1.0m (3.28')	74527-6022	

High Definition Multimedia Interface* (HDMI) Shielded I/O Cable Assembly/Adapter

88768
HDMI to HDMI
HDMI to DVI

88764
HDMI Adapters



Features and Benefits
- Compact, user-friendly design meets consumer equipment needs
- 5 Gbps bandwidth supports uncompressed audio/video in a single cable
- HDMI-DVI cables DVI backward compatible
- Fully shielded ESD protection

Reference Information
Product Specification: PS-88768-001 and PS-88768-002
Packaging: Bag or custom-specified
Mates With: HDMI and DVI header
Designed In: Millimeters

Electrical
Voltage: 40V
Current: 0.5A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 300 AC (rms)
Insulation Resistance: 100 Megohms min.

Mechanical
Insertion Force: 44.1N max.
Withdraw Force: 39.2N max.
9.2N min.
Durability: 10000 cycle

Physical
Contact: Copper Alloy
Plating: Contact Area—0.75µm (30µ") min. Gold
Underplating: Nickel
Wire Gauge: 28, 30 AWG

Cable Assembly Lengths (mm)	Wire Gauge (AWG)	Order No.	Description	Lead-free
1000	28	88768-3500	HDMI to DVI	Yes
2000		88768-3510		
3000		88768-3520		
5000		88768-3530		
1000	30	88768-3600		
2000		88768-3610		
3000		88768-3620		
1000	28	88768-9800	HDMI to HDMI	
2000		88768-9810		
3000		88768-9820		
5000		88768-9830		
1000	30	88768-9900		
2000		88768-9910		
3000		88768-9920		

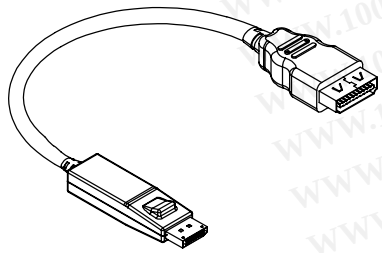
Order No.	Adapters Description	Lead-free
88764-2000	HDMI Male to DVI Female	Yes
88767-0600	HDMI Female to DVI Male	
88764-5900	HDMI Female to P&D (M1) Male	

*High Definition Multimedia Interface and HDMI are trademarks of HDMI Licensing, LLC.

www.molex.com/product/io/hdmi.html

0.50mm (.012") Pitch DisplayPort* Cable Adapter

74766



Features and Benefits
- Meets VESA DisplayPort 1.1a, HDMI† 1.0, DVI-D 1.0 and VGA industry standards
- Meets IEC-61000-4-2 ESD
- Sleek mechanical design allows multiple cable adapters to be used close together
- Five inches of cable provide exceptional flexibility to use the adapter in many different applications

Reference Information
Packaging: Bag
Mates With: 47623, 47272, 105020, 105019 and 105080
Designed In: Millimeters

Electrical
Voltage: 3.3V
Current: 300mA max.

Mechanical
Insertion Force: 44.1N (9.91 lbf) max.
Unmating Force with latches: 49N (11.02 lbf)
Durability: 100 cycles

Physical
Housing: Black Thermoplastic UL 94V-0
Contact Plating: Gold
Wire Gauge: 32 Awg

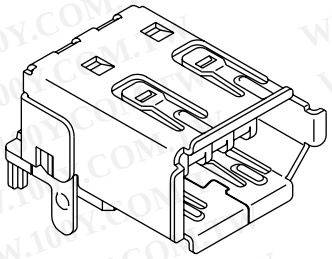
Order No.	Legacy Side	Lead-free
74766-0005	HDMI	Yes
74766-0006	Single link DVI	
74766-8005	HDMI	
74766-8006	Single link DVI	

*DisplayPort is a trademark of Video Electronics Standards Association (VESA)
†HDMI is a trademark of HDMI Licensing, LLC

www.molex.com/product/displayport.html

2.00mm (.079") Pitch IEEE 1394-1995 Shielded I/O PCB Socket

53462
Right Angle, Flat, SMT With Kinked Metal Pegs



Circuits	Order No.	Lead-free
6	53462-0629	Yes

Note: Molex's IEEE 1394 connector and cable products are licensed for use exclusively with the 1394 BUS technology. Use of this product contrary to this restriction will constitute a violation of certain license restrictions and may pose a serious safety hazard.

Features and Benefits
- Size 6 circuits
- Provides the interface for speeds up to 400 Mbps
- Full metal shielding for ESD protection
- High-temperature plastic housing for SMT processing
- Rugged Gold-plated leaf contacts withstand up to 1500 cycles
- Polarized shell design and friction lock grounding fingers ensure plug retention

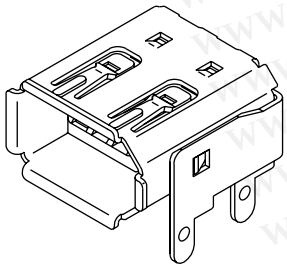
Reference Information
Packaging: Tray
Mates With: 59233-700X, 88763-25XX and 88763-26XX
Designed In: Millimeters

Electrical
Voltage: 40V
Current: 1.5A
Contact Resistance: Terminal—30 milliohms max.(6 pin)
50 milliohms max. (4 pin)
Shell—50 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 1 Gigaohm min. (4 pin)
100 Megohms min. (6 pin)

Physical
Housing: Black glass-filled 4/6 nylon, UL 94V-0 or equivalent
Shell: Phosphor Bronze, Tin over Nickel plating
Contact: Brass
Plating: Contact area—Gold over Nickel
Solder Tail Area—Tin over Nickel

2.00mm (.079") Pitch IEEE 1394-1995 Shielded I/O PCB Socket

53984
Right Angle Flat



Circuits	Order No.	Lead-free
6	53984-0671	Yes

Note: Molex's IEEE 1394 connector and cable products are licensed for use exclusively with the 1394 BUS technology. Use of this product contrary to this restriction will constitute a violation of certain license restrictions and may pose a serious safety hazard.

Features and Benefits
- Size 6 circuits
- Provides the interface for speeds up to 400 Mbps
- Four metal PCB retention pegs for additional hold-down
- High-temperature plastic housing for SMT processing
- Rugged Gold-plated leaf contacts withstand up to 1500 cycles
- Polarized shell design and friction lock grounding fingers ensure plug retention

Reference Information
Packaging: Tray
Mates With: 59233-70XX, 88763-25XX and 88763-26XX
Designed In: Millimeters

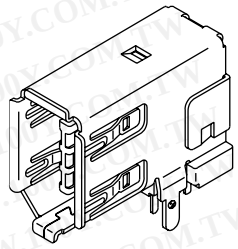
Electrical
Voltage: 40V
Current: 1.5A
Contact Resistance: Terminal—30 milliohms max. (6 pin)
50 milliohms max. (4 pin)
Shell—50 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 1 Gigaohm (4 pin)
100 Megohms (6 pin)

Physical
Housing: Black glass-filled 4/6 nylon, UL 94V-0 or equivalent
Shell: Phosphor Bronze, Tin over Nickel plating
Contact: Brass
Plating: Contact area—Gold over Nickel
Solder Tail Area—Tin over Nickel

2.00mm (.079") Pitch IEEE 1394-1995 Shielded I/O PCB Socket

53460

Right Angle, Upright With Kinked Metal Pegs



Circuits	Order No.	Lead-free
6	53460-0629	Yes

Note: Molex's IEEE 1394 connector and cable products are licensed for use exclusively with the 1394 BUS technology. Use of this product contrary to this restriction will constitute a violation of certain license restrictions and may pose a serious safety hazard.

Features and Benefits

- Size 6 circuits
- Provides the interface for speeds up to 400 Mbps
- Full metal shielding for ESD protection
- High-temperature plastic housing for SMT processing
- Rugged Gold-plated leaf contacts withstand up to 1500 cycles
- Polarized shell design and friction lock grounding fingers ensure plug retention

Reference Information

Packaging: Tray
Mates With: 59233-700X, 88763-25XX and 88763-26XX
Designed In: Millimeters

Electrical

Voltage: 40V
Current: 1.5A
Contact Resistance: Terminal—30 milliohms max. (6 pin)
50 milliohms max. (4 pin)
Shell—50 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 1 Gigaohm (4 pin)
100 Megohms (6 pin)

Physical

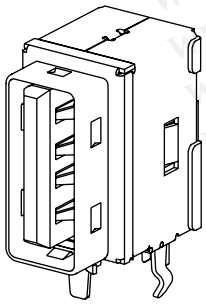
Housing: Black glass-filled 4/6 nylon, UL 94V-0 or equivalent
Shell: Phosphor Bronze, Tin over Nickel plating
Contact: Brass
Plating: Contact area—Gold over Nickel
Solder Tail Area—Tin over Nickel

www.molex.com/product/1394.html

Universal Serial Bus (USB) Shielded I/O Type 'A' Receptacle

89485

Single Upright Right Angle



Circuits	Order No.	Plating	Lead-free
4	89485-8000	Gold Flash	Yes
	89485-8001	30µ" Gold	

Features and Benefits

Small footprint saves PCB real estate

- Metal shell with back-shield offers all-round EMI/RFI shielding
- Staked-housing provides excellent solder tail alignment facilitating PCB mounting
- Dimples at inlet serve as locking feature and plug retention
- Panel grounding pins for ESD protection
- Kinked boardlocks provide strong board retention

Reference Information

Product Specification: PS-89485
Packaging: Tray
Mates With: USB 'A' Plug
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.0A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 750V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 35N max.
Withdrawal Force: 10N min.
Durability: 1500 cycles

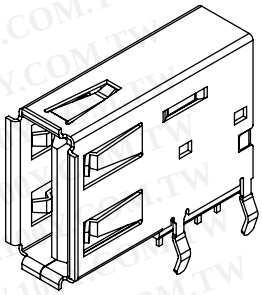
Physical

Housing: Black high-temperature, glass fiber-filled nylon, UL 94V-0
Contact: Phosphor Bronze
Metal Shell: Steel Alloy
Plating: Gold Flash or 30µ" Gold

Universal Serial Bus (USB) I/O Receptacle

48204

Type A, Surface Mount Right Angle, Shielded



Order No.	Lead-free
48204-0001	Yes

Features and Benefits

- Small footprint saves PCB real estate
- Metal shell with back shield offers all-around EMI/RFI shielding
- Spring-beam shell contacts offer plug retention force
- Four beveled metal pins provide strong board retention

Reference Information

Product Specification: PS-48204-001
Packaging: Tray
Designed in: Millimeters

Electrical

Voltage: 30V
Current: 1.5A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 35.00N
Unmating Force: 10.00N
Durability: 1500 cycles

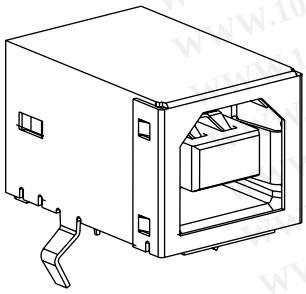
Physical

Housing: Glass-filled high-temperature thermoplastic, UL 94V-0
Contact: Phosphor Bronze
Plating: Contact Area—30µ" Gold
Solder Tail Area—Tin
Underplating: Nickel

Universal Serial Bus (USB) Shielded I/O Type 'B' Receptacle

67068

Single Right Angle, Kinked Version



Circuits	Order No.	Housing Color	Plating	Lead-free
4	67068-8000	Black	Gold Flash	Yes
	67068-8001		30µ" Gold	
	67068-9000	White	Gold Flash	
	67068-9001		30µ" Gold	

Features and Benefits

- Metal shell with back-shield provides all round EMI/RFI shielding
- Staked-housing provides excellent solder tail alignment facilitating PCB mounting
- Multiple internal grounding fingers
- Stand-offs for anti-solder bridging
- Kinked boardlocks provide strong board retention

Reference Information

Product Specification: PS-67998-0000
UL File No.: E29179
CSA File No.: LR19980A
Packaging: Tray
Mates With: USB 'B' Plug
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.0A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 750V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 35N max.
Withdrawal Force: 10N min.
Durability: 1500 cycles min.

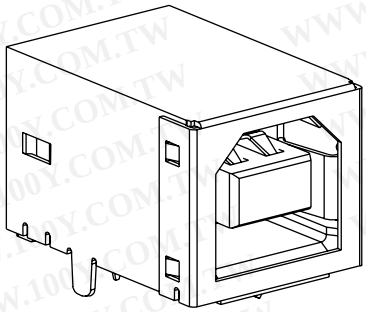
Physical

Housing: Black or white glass fiber-filled polyester, UL 94V-0
Contact: Phosphor Bronze
Metal Shell: Copper Alloy
Plating: Gold Flash or 30µ" Gold

Universal Serial Bus (USB) Shielded I/O Type 'B' Receptacle

67068

Single Right Angle with Straight Tabs



Features and Benefits

- Straight tabs suited for pick-and-place feeder
- Metal shell provides full EMI/RFI shielding
- Staked housing provides excellent solder-tail alignment facilitating PCB mounting
- Housing stand-offs for anti-solder bridging
- Housing available in black or white

Reference Information

Product Specification: PS-67998-0000
Packaging: Tray or tube
Mates With: USB 'B' Plug
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.0A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 750V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 35N max.
Unmating Force: 10N min.
Durability: 1500 cycles

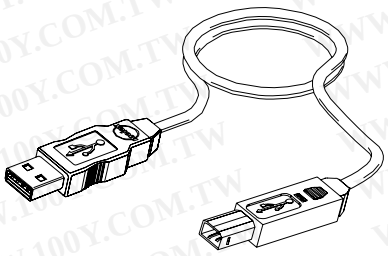
Physical

Housing: Black or white glass fiber-filled polyester, UL 94V-0
Contact: Phosphor Bronze
Metal Shell: Copper Alloy
Plating: Gold Flash or 30µ" Gold

Circuits	Order No.		Packaging	Plating	Lead-free
	Black	White			
4	67068-8010	67068-9010	Tray	Gold Flash	Yes
	67068-8011	67068-9011		30µ" Gold	
	67068-8110	67068-9110	Tube	Gold Flash	
	67068-8111	67068-9111		30µ" Gold	

Universal Serial Bus (USB) Shielded I/O Cable Assembly

88732 'A-to-B' Full-Rated
'A-to-B' High Rated
88728 'A-to-Pigtail' Full-Rated
88738 'A-to-Pigtail' Sub-Channel



Features and Benefits
- Connector-to-connector polarization ensures proper mating
- Friction grip on over-molded body provides easy mating/unmating
- 5 standard cable lengths available for design flexibility
- Full shield provided EMI/RFI protection
- Other cable lengths and custom designs available

Reference Information
Product Specification: PS-87525
Packaging: Bag or custom-specified
Mates With: USB 'A' receptacle and USB 'B' receptacle
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 1.0A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 750V AC
Insulation Resistance: 1000 Megohms min.

Mechanical
Mating Force: 35N max.
Withdrawal Force: 10N min.
Durability: 1500 cycles min.

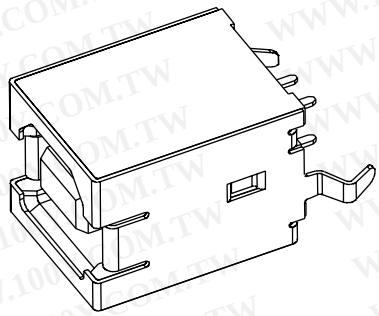
Physical
Contact: Copper Alloy
Plating: Contact Area—0.75µm (30µ") min. Gold
Underplating: Nickel

Order No.	Description	Cable Assembly Lengths (mm)	Lead-free
88738-8000	USB Type A to Pigtail Sub-Channel	810 White	Yes
88738-8001		810 Beige	
88738-8100		1310 White	
88738-8101		1310 Beige	
88738-8200		2080 White	
88738-8201		2080 Beige	
88738-8300		3330 White	
88738-8301		3330 Beige	
88738-8400		5000 White	
88738-8401		5000 Beige	
88728-3200	USB Type A to Pigtail Full-Rated	810 White	
88728-3202		810 Black	
88728-3300		1310 White	
88728-3302		1310 Black	
88728-3400		2080 White	
88728-3402		2080 Black	
88728-3500		3330 White	
88728-3502		3330 Black	
88728-3600		5000 White	
88728-3602		5000 Black	

Order No.	Description	Cable Assembly Lengths (mm)	Lead-free
88732-8000	USB Type A to Type B Full-Rated USB1.1	1000 White	Yes
88732-8002		1000 Black	
88732-8100		1800 White	
88732-8102		1800 Black	
88732-9000		820 White	
88732-9002		820 Black	
88732-9100		1320 White	
88732-9102		1320 Black	
88732-9200		2090 White	
88732-9202		2090 Black	
88732-9300		3340 White	
88732-9302		3340 Black	
88732-9400		5000 White	
88732-9402		5000 Black	
88732-9020	USB Type A to Type B Full-Rated USB2.0	820 White	
88732-9120		1320 Black	
88732-9220		2090 White	

Universal Serial Bus (USB) Shielded I/O Type 'B' Receptacle

67171
Vertical



Features and Benefit
- Dual kinked boardlocks provide secure PCB retention
- Housing stand-off for anti-solder bridging
- Housing available in black or white

Reference Information
Product Specification: PS-67998-0000
Packaging: Tray
Mates With: USB 'B' Plug
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 1.0A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 750V AC
Insulation Resistance: 1000 Megohms min.

Mechanical
Mating Force: 35N max.
Unmating Force: 10N min.
Durability: 1500 cycles

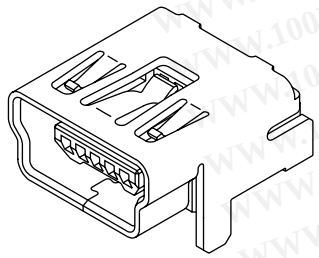
Physical
Housing: Black or white glass fiber-filled polyester, UL 94V-0
Contact: Phosphor Bronze
Metal Shell: Copper Alloy
Plating: Gold Flash or 30µ" Gold

Circuits	Order No.		Plating	Lead-free
	Black	White		
4	67171-2000	67171-3000	Gold Flash	Yes
	67171-2001	67171-3001	30µ" Gold	

www.molex.com/product/io/usb.html

mini-B™ USB On-the-Go (OTG) Shielded I/O Receptacle

54819



Features and Benefits
- Approximately 1/8 the size of standard USB-B connectors
- Fully compliant with current USB 2.0 specifications
- Compact and lightweight design meets various portable and mobile equipment needs
- Operates at speeds up to 480 Mbps
- Rugged durability up to 5,000 cycles

Reference Information
Product Specification: PS-54819-010
Packaging: Tray
Mates With: 59204-9405, 59205-3301
Designed In: Millimeters

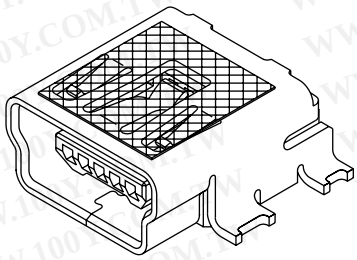
Electrical
Voltage: 30V
Current: 1.0A
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 100V AC/1 min.
Insulation Resistance: 100 Megohms min.

Physical
Housing: Black glass-filled Polyphthal Amide, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—0.75µm (30µ") min. Gold
Solder Tail Area—Tin
Underplating—Nickel
Shield Case: Copper Alloy, Tin over Nickel plating

Circuits	Order No.	Lead-free
5	54819-0519	Yes

mini-B™ USB On-the-Go (OTG) Shielded I/O Receptacle

54819
With Cover Tape SMT



Features and Benefits
- Approximately 1/8 the size of standard USB-B connectors
- Fully compliant with current USB 2.0 specifications
- Compact and lightweight design meets various portable and mobile equipment needs
- Operates at speeds up to 480 Mbps
- Rugged durability up to 5,000 cycles

Reference Information
Product Specification: PS-54819-010
Packaging: Embossed tape
Mates With: 59204-9405, 59205-3301
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 1.0A
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 100V AC/1 min.
Insulation Resistance: 100 Megohms min.

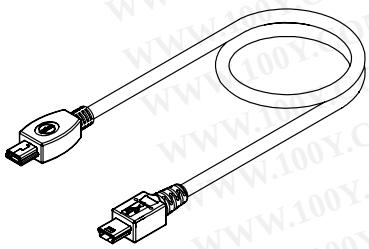
Physical
Housing: Black glass-filled Polyphthal Amide, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—0.75µm (30µ") min. Gold
Solder Tail Area—Tin
Underplating—Nickel
Shield Case: Copper Alloy, Tin over Nickel plating
Cover Tape: Polyimide

Circuits	Order No.	Carrier Tape Width	Lead-free
5	54819-0572	24.00 (.945)	Yes

Universal Serial Bus (USB) On-The-Go (OTG) Shielded I/O Cable Assembly

88732
Standard USB A to Mini B

88753
Mini A to Mini B



Features and Benefits
- Approximately 1/8 the size of standard USB-B connectors
- Connector-to-connector polarization ensures proper mating
- Full shield provides EMI/RFI protection
- Meets USB 2.0 specifications
- Compact and lightweight design meets various portable and mobile equipment needs
- Rugged durability up to 5,000 cycles
- Other cable lengths and custom designs available

Reference Information
Product Specification: PS-87525
Packaging: Bag or custom-specified
Mates With: USB A, Mini AB and Mini B receptacle
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 1.0A
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 100V AC/min.
Insulation Resistance: 100 Megohms min.

Mechanical
Mating Force: 35N max.
Unmating Force: 10N min.
Durability: USB A—1500 cycles
Mini A and Mini B—5000 cycles

Physical
Contact: Copper Alloy
Plating: Contact Area—0.75µm (30µ") min. Gold
Underplating: Nickel
Wire Gauge: 28 AWG

Cable Assembly Lengths (mm)	Order No.	Description	Lead-free
800 White	88732-8510	USB A to Mini B, USB 1.1	Yes
800 Black	88732-8512		
1000 White	88732-8610		
1000 Black	88732-8612		
1500 White	88732-8710		
1500 Black	88732-8712		
1800 White	88732-8810		
1800 Black	88732-8812		
2000 White	88732-8910		
2000 Black	88732-8912		
800 White	88732-8500	USB A to Mini B, USB 2.0	
800 Black	88732-8502		
1000 White	88732-8600		
1000 Black	88732-8602		
1500 White	88732-8700		
1500 Black	88732-8702		
1800 White	88732-8800		
1800 Black	88732-8802		
2000 White	88732-8900		
2000 Black	88732-8902		

Cable Assembly Lengths (mm)	Order No.	Description	Lead-free
800 White	88753-8110	USB Mini A to Mini B, USB 1.1	Yes
1000 White	88753-8210		
1200 White	88753-8310		
1500 White	88753-8410		
1800 White	88753-8510		
2000 White	88753-8610		
800 White	88753-8100	USB Mini A to Mini B, USB 2.0	
800 Black	88753-8102		
1000 White	88753-8200		
1000 Black	88753-8202		
1200 White	88753-8300		
1200 Black	88753-8302		
1500 White	88753-8400		
1500 Black	88753-8402		
1800 White	88753-8500		
1800 Black	88753-8502		
2000 White	88753-8600		
2000 Black	88753-8602		

InfiniBand* I/O Interconnect Solutions

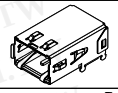
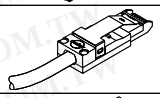
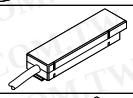
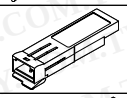
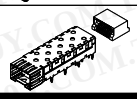
The InfiniBand architecture is a new I/O technology created by key computer manufacturers to address the neeed for greater scalability, reliability, availability and performance in and around servers. This channel-based, switched fabric technology connects servers pointo-to-point with remote storage and networking devices and other servers.

The channel-based architecture allows the I/O ports to operate independently from the system memory, rather than through a shared bus configuration. Connections are made through host-channel adapters (HCAs) and target-channel adapters (TCAs), which can be on PCI cards, PCI express cards or InfiniBand carriers.

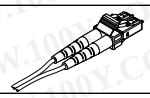
The InfiniBand specification is designed to support bandwithds of 2.5 Gbps in each single-directional link (5.0 Gbps bi-directionally). Scaling in bandwidth and frequency is done in links of 1-bit, 4-bit and 12-bit bi-directional connections (1X, 4X and 12X).
The specification supports both copper and fiber implementations.

The InfiniBand specification provides a reference design for new form factor carriers designed to plug directly to a backplane in rack-style applications. The I/O panel on the carrier accommodates both copper and optical connections in range of high-density options.

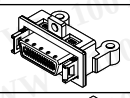
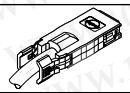
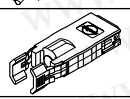
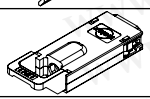
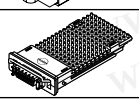
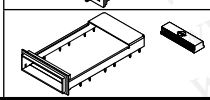
Copper—2 Differential Pair

	Data Link	Product	Description	Series
1X		HSSDC2 Board-Mount Receptacle Single Row HSSDC2 Board-Mount Receptacle Dual Row	Right Angle, InfiniBand Key	74703 74780
		HSSDC2 Cable Assembly Single Row, Loop Back HSSDC2 Cable Assembly Dual Row, Loop Back	Various Lengths, Equalized or Unequalized	73939 74514
		Cage-to-Cage SFP Patch Cables	Various Lengths, 0.3m to 10.0m	73929
		HSSDC2 Pluggable SFP Modules, Loop Back, Dust Plug	Active and Passive Transceivers	74720
		SFP Cages SFP Host Connectors SFP Cage and Connector Kit	Press-Fit, Solder Post and PCI Compliant 20-Position Right Angle SMT Press-Fit Cage with 20-Position Right Angle SMT Host Connector	73927 74441 75082

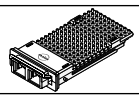
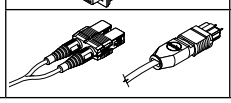
Optical

	Data Link	Product	Description	Series
1X		Dual LC Optical Cables	Cable Assemblies, Connectors and Adapters	86025

Copper—8 Differential Pair

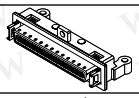
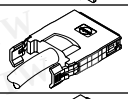
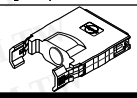
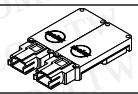
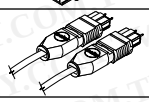
	Data Link	Product	Description	Series
4X		LaneLink™ Board-Mount Receptacle	Screw Mount or Solder Post with Latches	91804
		Cable Assemblies: 4X-to-4X, 4X-to-(4)1X, (3)4X-to-12X	Equalized or Unequalized with Latches	92903
		Squeeze Release Plug Kit	Plug Connector, Back Shells Equalized or Unequalized with Latches	91534
		Lanyard Plug Kit	Plug Connector, Back Shells Equalized or Unequalized with Lanyard Pull-Velcase System	91942
		Pluggable Module	XPAK Form Factor LaneLink I/O CX4	74732
		Guide Frame for Pluggable Modules Host Connector	Press-Fit, Solder Post and PCI Compliant 70-Position Right Angle SMT	74732 74441

Optical

	Data Link	Product	Description	Series
4X		Pluggable Module	XPAK Form Factor Dual SC I/O LX4	86993
		Dual SC Optical Cables MPO Optical Cables	Single or Multimode Single 12 Fiber Ribbon Cable Assemblies	86290 86282

* InfiniBand is a trademark of the InfiniBand™ Trade Association

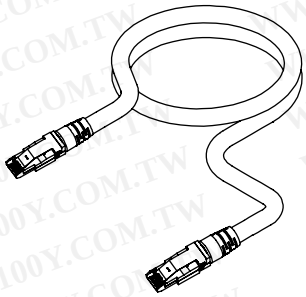
InfiniBand* I/O
Interconnect Solutions

Copper—24 Differential Pair				
	Data Link	Product	Description	Series
12X		LaneLink™ Board-Mount Receptacle	Screw Mount or Solder Post with Latches	91525
		Cable Assemblies: 12X-to-12X, 12X-to-(12)1X, 12X-to-(3)4X	Equalized or Unequalized with Latches	92903
		Plug Kit	Plug Connector, Back Shells Equalized or Unequalized with Latches	91534
Optical				
	Data Link	**Product**	**Description**	**Series**
12X		ParaLink-P™ Pluggable Module	12 Channel Parallel Optical Link, TX and RX	86991
		MPO Optical Cables	Dual 12 Fiber Ribbon Cable Assemblies	86282

* InfiniBand is a trademark of the InfiniBand™ Trade Association

1.27mm (.050") Pitch HSSDC2 Copper Cable Assembly

73939



Features and Benefits

- Compliant with HSSDC2 MSA
- Data rates up to 2.5 Gbps
- Keyed for Fibre Channel and InfiniBand* receptacles to prevent mismating
- Positive latching to prevent accidental disengagement
- 360˚ shielding

Reference Information

Packaging: Bag
Mates With: 74703
Use With: 74720
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A

Mechanical

Mating Force: 6.7 lbf max.
Unmating Force: 3.37 lbf max.
Durability: 250 cycles

Physical

Housing: Zinc diecast
Housing plating: Nickel

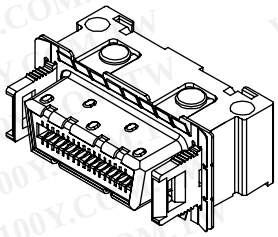
Length	Order No.		Lead-free
	HSSDC2—Fibre Channel	HSSDC2—InfiniBand	
0.5m (1.64')	73939-1001	73939-2001	Yes
1.0m (3.28')	73939-1002	73939-2002	
2.0m (6.56')	73939-1003	73939-2003	
3.0m (9.84')	73939-1004	73939-2004	
5.0m (16.4')	73939-1005	73939-2005	
10m (32.80')	73939-1006	73939-2006	

* InfiniBand is a trademark of the InfiniBand Trade Association.

0.50mm (.020") Pitch LaneLink™ Receptacle

91804

4x Latch



Features and Benefits

- Landing area allows for automatic placement
- Optional panel mount enables screw-attach of diecast frame to panel, providing additional strain relief
- Solder post options available (2 or 4 posts)
- Latching mechanism complies with InfiniBand* and Ethernet
- Rear EMI shield available
- Locking panel available

Reference Information

Product Specification: PS-91525-001
Packaging: Tray or tape and reel
Mates With: 91635 and 92903
Use With: 91789 EMI shield and 91532 locking panel
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A
Contact Resistance: 80 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Insertion Force: 5.00N (1.12 lb)
Mating Force: 55.50N (12.48 lb) max.
Unmating Force: 7.00N (1.57 lb) min.
Normal Force: 0.50N (0.11 lb)
Durability: 250 cycles

Physical

Housing: Glass-filled LCP, UL 94V-0
Contact: Phosphor Bronze
Plating: Contact Area—Gold over Palladium Nickel
Solder Tail Area—Tin
Underplating: Nickel

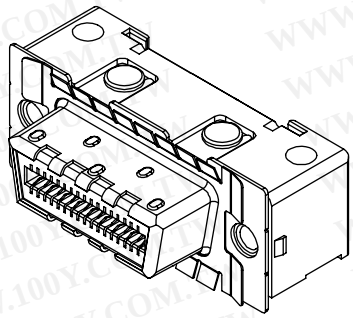
Order No.	Rear Mounts	Solder Posts	Panel Mount	Packaging	Lead-free
91804-0411	No	No	No	Tray	Yes
91804-0413	Yes				
91804-0415			Yes		
91804-0417	No				
91804-0451		2 (Note 1)	No		
91804-0453	Yes	4 (Note 1)			
91804-0455		4 (Note 1)	Yes		
91804-0457	No	2 (Note 1)			
91804-0461		2 (Note 2)	No		
91804-0463	Yes	4 (Note 2)			
91804-0465		4 (Note 2)	Yes		
91804-0467	No	2 (Note 2)			
91804-0491		2 (Note 3)	No		
91804-0493	Yes	4 (Note 3)			
91804-0495		4 (Note 3)	Yes		
91804-0497	No	2 (Note 3)			
91804-8411		No	No	Tape and Reel	
91804-8413	Yes				
91804-8415			Yes		
91804-8417	No				
91804-8451		2 (Note 1)	No		
91804-8453	Yes	4 (Note 1)			
91804-8455		4 (Note 1)	Yes		
91804-8457	No	2 (Note 1)			
91804-8461		2 (Note 2)	No		
91804-8463	Yes	4 (Note 2)			
91804-8465		4 (Note 2)	Yes		
91804-8467	No	2 (Note 2)			
91804-8491		2 (Note 3)	No		
91804-8493	Yes	4 (Note 3)			
91804-8495		4 (Note 3)	Yes		
91804-8497	No	2 (Note 3)			

*InfiniBand is a trademark of the InfiniBand™ Trade Association.
Note 1: Solder post length 2.30mm (.092")
Note 2: Solder post length 3.30mm (.132")
Note 3: Solder post length 4.30mm (.172")

0.50mm (.020") Pitch LaneLink™ Receptacle

91803

4x Jackscrew



Features and Benefits

- Landing area allows for automatic placement
- Optional panel mount enables screw-attach of diecast frame to panel, providing additional strain relief
- Solder post options available (2 or 4 posts)
- Jackscrew mechanism complies with SAS, SATA and Fibre Channel
- Rear EMI shield available

Reference Information

Product Specification: PS-91525-001
Packaging: Tray or tape and reel
Mates With: 91659 and 92903
Use With: 91789 EMI cover and 91619 Standoff
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A
Contact Resistance: 80 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Insertion Force: 5.00N (1.12 lb)
Mating Force: 55.50N (12.48 lb) max
Unmating Force: 7.00N (1.57 lb) min
Normal Force: 0.50N (0.11 lb)
Durability: 250 cycles

Physical

Housing: Glass-filled LCP, UL 94V-0
Contact: Phosphor Bronze
Plating: Contact Area—Gold over Palladium Nickel
Solder Tail Area—Tin
Underplating—Nickel

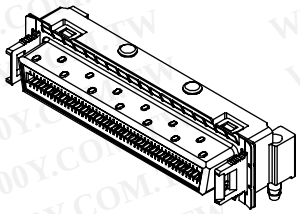
Order No.	Rear Mounts	Solder Posts	Packaging	Lead-free
91803-0411	No	No	Tray	Yes
91803-0413	Yes			
91803-0415	No	2 (Note 1)		
91803-0417	Yes	4 (Note 1)		
91803-0465	No	2 (Note 2)		
91803-0467	Yes	4 (Note 2)		
91803-0495	No	2 (Note 3)		
91803-0497	Yes	4 (Note 3)		
91803-8411	No	No	Tape and Reel	
91803-8413	Yes			
91803-8415	No	2 (Note 1)		
91803-8417	Yes	4 (Note 1)		
91803-8465	No	2 (Note 2)		
91803-8467	Yes	4 (Note 2)		
91803-8495	No	2 (Note 3)		
91803-8497	Yes	4 (Note 3)		

Note 1: Solder post length 2.30mm (.092")
Note 2: Solder post length 3.30mm (.132")
Note 3: Solder post length 4.30mm (.172")

0.50mm (.020") Pitch LaneLink™ Receptacle

91525

12x Latch



Features and Benefits

- Diecast frame with latches provides strain relief of cable to receptacle and isolates cable loads from SMT tails
- Optional panel mount enables screw-attach of diecast frame to panel, providing additional strain relief
- Solder post options available (2 or 4 posts)
- Latching mechanism complies with InfiniBand* and Ethernet
- Latching panel available

Reference Information

Product Specification: PS-91525-001
Packaging: Tray or Tape and reel
Mates With: 92903 and 91635
Use With: 91532 locking panel
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A
Contact Resistance: 80 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 73N (16.41 lb) max.
Unmating Force: 10.5N (2.36 lb) min.
Normal Force: 0.50N (0.11 lb)
Durability: 250 cycles

Physical

Housing: Glass-filled LCP, UL 94V-0
Contact: Phosphor Bronze
Plating: Contact Area—Gold over Palladium Nickel
Solder Tail Area—Tin
Underplating: Nickel

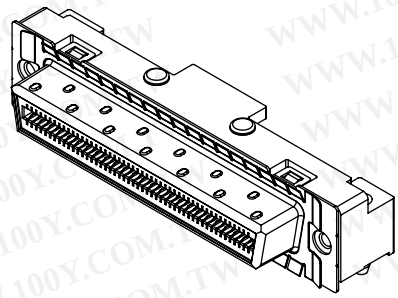
Order No.	Rear Mounts	Panel Mount	Solder Posts	Packaging	Lead-free
91525-1211	No	No	No	Tray	Yes
91525-1213	Yes	No			
91525-1215	Yes	Yes			
91525-1217	No	Yes			
91525-1251	No	No	2 (Note 1)		
91525-1253	Yes	No	4 (Note 1)		
91525-1255	Yes	Yes	4 (Note 1)		
91525-1257	No	Yes	2 (Note 1)		
91525-1261	No	No	2 (Note 2)		
91525-1263	Yes	No	4 (Note 2)		
91525-1265	Yes	Yes	4 (Note 2)		
91525-1267	No	Yes	2 (Note 2)		
91525-1291	No	No	2 (Note 3)		
91525-1293	Yes	No	4 (Note 3)		
91525-1295	Yes	Yes	4 (Note 3)		
91525-1297	No	Yes	2 (Note 3)		
91525-8211	No	No	No	Tape and Reel	
91525-8213	Yes	No			
91525-8215	Yes	Yes			
91525-8217	No	Yes			
91525-8251	No	No	2 (Note 1)		
91525-8253	Yes	No	4 (Note 1)		
91525-8255	Yes	Yes	4 (Note 1)		
91525-8257	No	Yes	2 (Note 1)		
91525-8261	No	No	2 (Note 2)		
91525-8263	Yes	No	4 (Note 2)		
91525-8265	Yes	Yes	4 (Note 2)		
91525-8267	No	Yes	2 (Note 2)		
91525-8291	No	No	2 (Note 3)		
91525-8293	Yes	No	4 (Note 3)		
91525-8295	Yes	Yes	4 (Note 3)		
91525-8297	No	Yes	2 (Note 3)		

Note 1: Solder post length 2.30mm (.092")
Note 2: Solder post length 3.30mm (.132")
Note 3: Solder post length 4.30mm (.172")
* InfiniBand is a trademark of the InfiniBand(SM) Trade Association.

0.50mm (.020") Pitch LaneLink™ Receptacle

91629

12x Jackscrew



Features and Benefits

- Diecast frame with latches provides strain relief of cable to receptacle and isolates cable loads from SMT tails
- Solder post options available (2 or 4 posts)
- Jackscrew mechanism complies with SAS, SATA and Fibre Channel

Reference Information

Product Specification: PS-91525-001
Packaging: Tray or tape and reel
Mates With: 92903 and 91659
Use With: 91619 Standoff
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A
Contact Resistance: 80 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 73N (16.41 lb) max.
Unmating Force: 10.5N (2.36 lb) min.
Normal Force: 0.50N (0.11 lb)
Durability: 250 cycles

Physical

Housing: Glass-filled LCP, UL 94V-0
Contact: Phosphor Bronze
Plating: Contact Area—Gold over Palladium Nickel
Solder Tail Area—Tin
Underplating: Nickel

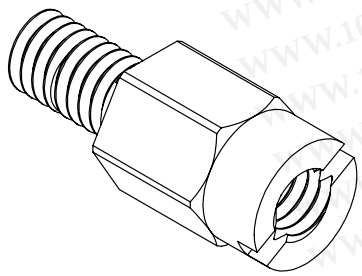
Order No.	Rear Mounts	Solder Posts	Packaging	Lead-free
91629-1211	No	No	Tray	Yes
91629-1213	Yes			
91629-1215	No	2 (Note 1)		
91629-1217	Yes	4 (Note 1)		
91629-1265	No	2 (Note 2)		
91629-1267	Yes	4 (Note 2)		
91629-1295	No	2 (Note 3)		
91629-1297	Yes	4 (Note 3)		
91629-1211	No	No	Tape and Reel	
91629-1213	Yes			
91629-1215	No	2 (Note 1)		
91629-1217	Yes	4 (Note 1)		
91629-1265	No	2 (Note 2)		
91629-1267	Yes	4 (Note 2)		
91629-1295	No	2 (Note 3)		
91629-1297	Yes	4 (Note 3)		

Note 1: Solder post length 2.30mm (.092")
Note 2: Solder post length 3.30mm (.132")
Note 3: Solder post length 4.30mm (.172")

LaneLink™ Standoff

91619

M2-by-0.4mm Internal Thread



Features and Benefits

- Hex and Flathead compatible
- NYLOK™ screw retention to help secure to connector

Reference Information

Mates With: 92903 and 91659
Use With: 91629 and 91803
Packaging: Bag
Designed In: Millimeters

Mechanical

Recommended Torque: 0.3Nm max

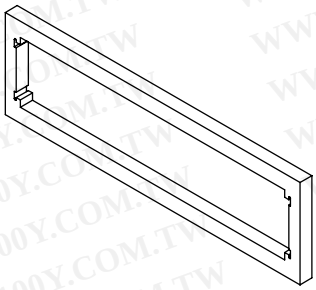
Physical

Contact: Copper Alloy
Plating: Nickel

Order No.	Lead-free
91619-0001	Yes

LaneLink™ Latch Connector

91532
Locking Panel



Features and Benefits
- Locking panel is used to compress the gasket between the connector and the chassis of the application
- Improves the EMI/EMC performance

Reference Information
Packaging: Bag
Use With: 91525 and 91804
Designed In: Millimeters

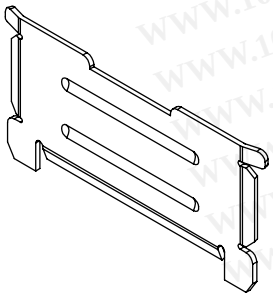
Mechanical
Lock to Mating Part: Self-clinching

Physical
Housing: Stainless Steel

Lanes	Order No.	Panel Mount	Lead-free
4	91532-0005	Yes	Yes
	91532-0007	No	
12	91532-0001	Yes	
	91532-0003	No	

LaneLink™ EMI Cover (Rear)

91789
For 4X Receptacles



Features and Benefits
- Improves EMI/EMC performance
- Inserted after reflow to facilitate solder joint inspection
- Positive locking feature

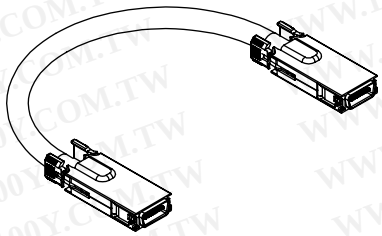
Reference Information
Use with: 91803 and 91804
Packaging: Bag
Designed In: Millimeters

Physical
Material: Stainless steel

Order No.	Lead-free
91789-0001	Yes

0.50mm (.020") Pitch LaneLink™ Cable Assembly for DDR IB

74595/111000
4x/12x Dual Data Rate (DDR) IB



Features and Benefits
- New paddle card design provides improved signal integrity and overall lower cost
- Redesigned back shell reduces EMI emissions
- Data rates of up to 5 Gbps doubles standard InfiniBand* rates
- Multiple latching options provide greater flexibility in system design

Reference Information
Packaging: Bag
Mates With: 4x—91803, 91804
12x—91525
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 0.5A

Mechanical
Mating Force: 4x—55.50N (12.47 lbf)
12x—73.0N (16.41 lbf)
Unmating Force: 4x—49.0N (11.01 lbf)
12x—59.0N (13.26 lbf)
Durability: 250 cycles

Physical
Housing: Zinc die cast
Contact: Gold
Housing Plating: Nickel

Order No.	Length	Cable	Latch Style	Lead-free
74595-1005	0.5m (1.64')	4x	Squeeze	Yes
74595-1010	1.0m (3.28')			
74595-1030	3.0m (9.84')			
74595-1050	5.0m (16.40')			
74595-1100	10.0m (32.80')			
74595-5005	0.5m (1.64')	4x	Lanyard	
74595-5010	1.0m (3.28')			
74595-5030	3.0m (9.84')			
74595-5050	5.0m (16.40')			
74595-5100	10.0m (32.80')			
111000-1005	0.5m (1.64')	12x	Squeeze	
111000-1010	1.0m (3.28')			
111000-1030	3.0m (9.84')			
111000-1050	5.0m (16.40')			
111000-1100	10.0m (32.80')			

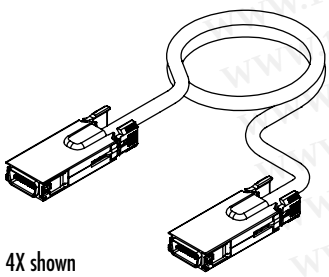
*InfiniBand is a trademark of the InfiniBand Trade Association.

www.molex.com/product/io/lanelink.html

0.50mm (.020") Pitch LaneLink™ InfiniBand* Cable Assembly

74506
4X Cable

74509
12X Cable



4X shown

Features and Benefits
- Squeeze-to-release latch provides user-friendly, positive latch/unlatch from the PCB connector
- Sturdy diecast backshell provides EMI protection
- Total InfiniBand solution with plug and connector (91525)
- Lengths up to 20m with equalization and pre-emphasis (10m standard InfiniBand)
- High performance production test rack provides 100% testing to InfiniBand industry standards

Reference Information
Packaging: Bag
Mates With: 91525
Use With: 74735 and 74739
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 0.5A

Mechanical
Mating Force: 55.5N (12.48 lbf)
Unmating Force: 49.0N (11.02 lbf)
Durability: 250 cycles

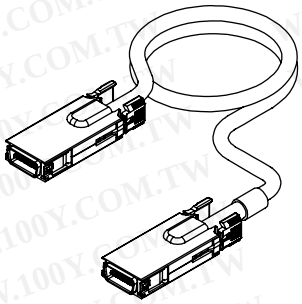
Physical
Housing: Zinc diecast
Contact: Gold flash
Housing Plating: Nickel

Length	Order No.	Cable	Equalized	Lead-free
0.5m (1.64')	74506-3001	4x	No	Yes
1.0m (3.28')	74506-3002			
8.0m (26.24')	74506-3105		Yes	
10.0m (32.80')	74506-3107			
0.5m (1.64')	74509-0001	12x	No	
1.0m (3.28')	74509-0002			

Note: Additional lengths available on sales drawing shown on website.
* InfiniBand is a trademark of the InfiniBand Trade Association.

0.50mm (.020") Pitch LaneLink™ 10 Gbase—CX4 Cable Assembly

74526
4X



Length	Order No.	Lead-free
1.0m (3.28')	74526-1002	Yes
15.0m (49.20')	74526-1007	

Note: Additional lengths available on sales drawing shown on website.

Features and Benefits
- Squeeze-to-release latch provides user-friendly, positive latch/unlatch from the PCB connector
- Sturdy diecast backshell provides EMI protection
- Total CX4 solution with plug and connector (91525)
- Standard 4x interface mates with XPAK (74739), and X2 (74735) copper transceivers
- Lengths greater than 15m can be achieved with the use of pre-emphasis on the board-side silicon
- High performance production test rack provides 100% eye pattern testing

Reference Information
Packaging: Bag
Mates With: 91525
Use With: 74735 and 74739
Designed In: Millimeters

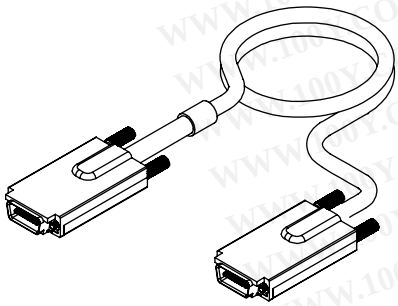
Electrical
Voltage: 30V AC
Current: 0.5A

Mechanical
Mating Force: 55.5N (12.49 lbf)
Unmating Force: 49.0N (11.02 lbf)
Durability: 250 cycles

Physical
Housing: Zinc diecast
Contact: Gold flash
Housing Plating: Nickel

0.50mm (.020") Pitch LaneLink™ SAS and SATA I/O External Multilane Cable Assembly

74527 – SAS
74530 – SATA I/O
4X LaneLink™ Cable



Length	Order No.	Product Family	Lead-free
0.5m (1.64')	74527-3001	SAS	Yes
1.0m (3.28')	74527-3002		
3.0m (9.84')	74527-3004		
5.0m (16.4')	74527-3006		
0.5m (1.64')	74530-0001	SATA	
1.0m (3.28')	74530-0002		
3.0m (9.84')	74530-0003		
5.0m (16.4')	74530-0005		

Note: Additional lengths available on sales drawing shown on website.

Features and Benefits
- Sturdy jackscrew hardware provides user with guaranteed mating to the PCB connector
- Diecast back shell provides EMI protection
- Total SAS and SATA I/O system solution with industry-standard compatible interface and connector (91659)
- Molex LaneLink cable is SFF8470 compliant
- Lengths greater than 15m can be achieved with the use of pre-emphasis on the board side silicon
- High performance production test rack provides 100% eye pattern testing to SAS/SATA standards

Reference Information
Packaging: Bag
Mates With: 91659
Use With: 74735 and 74739
Designed In: Millimeters

Electrical
Voltage: 30V AC
Current: 0.5A

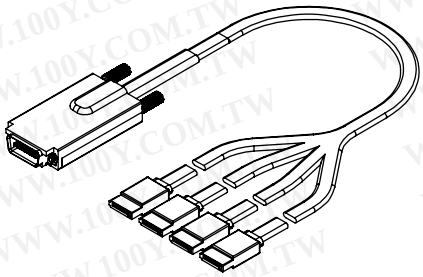
Mechanical
Mating Force: 55.5N (12.48 lbf)
Unmating Force: 49.0N (11.02 lbf)
Durability: 250 cycles

Physical
Housing: Zinc diecast
Contact: Gold flash
Housing Plating: Nickel

0.50mm (.020")/ 1.27mm (.050") Pitch LaneLink™ to SATA Cable Assembly External Multi-Lane 4X to 1X SATA Style 4X Jackscrew

74527

4X SAS LaneLink to (4)X1 SATA Cable (SFF-8470 to IX SATA)



Features and Benefits

- Interface adapter cable provides the ability to mate between various SAS and SATA interconnects with existing systems that use SFF-8470
- Jackscrew option complies with SFF-8470, which meets SFF committee standard specifications
- Latch version of internal plug provides secure mating to the receptacle via the receptacles metal latch and the latching windows of the plug

Reference Information

Packaging: Bag
Mates With: Internal—47080, 67490, 67800
External—91659
Designed In: Millimeters

Electrical

Voltage: 30V AC
Current: 0.5A

Mechanical

External SFF-8470
Mating Force: 55.5N (12.48 lbf)
Unmating Force: 49.0N (11.02 lbf)
Durability: 250 cycles

Internal SATA
Mating Force: 45N per circuit (10.12 lbf)
Unmating Force: 10N per circuit (2.25 lbf)
Durability: 500 cycles

Physical

External SFF-8470
Housing: Zinc diecast
Housing Plating: Nickel
PCB Contact: Gold

Internal SATA
Housing: Black glass-filled thermoplastic, UL 94V-0
Contact: 30µ" min. Gold over Nickel

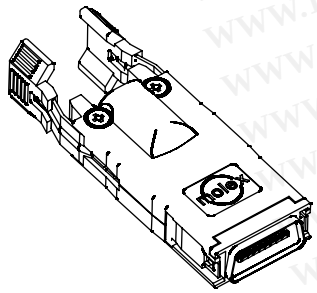
Length	Order No.	Description	Pinout Orientation	Lead-free
0.5m (1.64')	74527-0001	Straight (P1 to P1) pinout	Transmit to Transmit	Yes
1.0m (3.28')	74527-0002			
0.5m (1.64')	74527-1001	Crossover (P1 to P4) pinout	Transmit to Receive	
1.0m (3.28')	74527-1002			

www.molex.com/hpc/

0.50mm (.020") Pitch LaneLink™ Latch Plug kit

91635

4x and 12x



Features and Benefits

- Paddle card
- Latch levers provide user-friendly positive latch opening before unplugging cable connector from receptacle
- Audible click confirms mating to receptacle
- 100 ohms impedance
- 8 and 24 differential pair available

Reference Information

Product Specification: PS-91525-001
Packaging: Bag
Mates with: 91525 and 91804
Designed in: Millimeters

Electrical

Voltage: 30V
Current: 0.5A
Contact Resistance: 80 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 12x—73N (16.41 lb) max.
Unmating Force: 12x—10.5N (2.36 lb) min.
Normal Force: 0.50N (0.11 lb)
Durability: 250 cycles

Physical

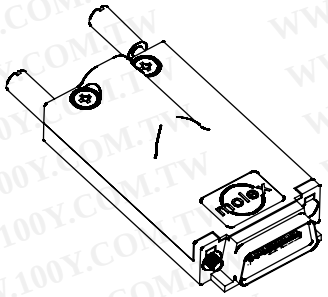
Contact: Phosphor Bronze
Plating: Contact Area—Gold over Palladium Nickel
Solder Tail Area—Tin
Underplating: Nickel

Lanes	Order No.	Wire Gauge	Lead-free
4	91635-1020	24 AWG	Yes
	91635-1021	26 AWG	
	91635-1022	28 AWG	
12	91635-1010	24 AWG	
	91635-1011	26 AWG	
	91635-1012	28 AWG	

0.50mm (.020") Pitch LaneLink™ Jack Screw Plug Kit

91659

4x and 12x



Features and Benefits

- Paddle card
- 100 ohms impedance
- 8 and 24 differential pair available

Reference Information

Product Specification: PS-91525-001
Packaging: Bag
Mates With: 91629 and 91803
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A
Contact Resistance: 80 milliohms max.
Dielectric Withstanding Voltage: 300V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 12x—73N (16.41 lb) max.
Unmating Force: 12x—10.5N (2.36 lb) min.
Normal Force: 0.50N (0.11 lb)
Durability: 250 cycles

Physical

Contact: Phosphor Bronze
Plating: Contact Area—Gold over Palladium Nickel
Solder Tail Area—Tin
Underplating: Nickel

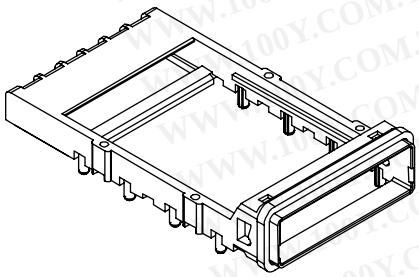
Lanes	Order No.	Wire Gauge	Lead-free
4	91659-1020	24 AWG	Yes
	91659-1021	26 AWG	
	91659-1022	28 AWG	
12	91659-1010	24 AWG	
	91659-1011	26 AWG	
	91659-1012	28 AWG	

www.molex.com/product/io/lanelink.html

XPAK 10 Gbps

74732

XPAK Guide Rail



Features and Benefits

- Cable transmits 10 Gbps data up to 15m over copper cable, enabling high speed data transmission
- Transceiver is able to be installed or removed without powering down
- Transceiver is compliant with XPAK MSA and designed to meet Gigabit Ethernet standards IEEE 802.3ak for CX4 and IEEE 802.3ae for XAUI
- Positive latching on the guide frame provides proper transceiver retention
- Threaded screw holes help increase retention to the PCB
- Guide rail compliance with MSA standard ensures proper mating with industry standard products

Reference Information

Packaging: Transceiver—Bag
Guide Frame—Tray
Transceiver Mates With: Host Connector (74441)
CX4 Cable Assembly (74526)
Designed In: Millimeters

Electrical

Transceiver
Voltage: 3.3V at 567mA, 1.5V at 1554mA
Current: 3.3V at 567mA, 1.5V at 1554mA

Mechanical

Transceiver
Mating Force: Min.—20N (4.5 lbf)
Max.—40N (9 lbf), 80N (18 lbf) max. allowed by MSA
Unmating Force: Min.—8N (1.79 lbf)
Max.—35N (7.9 lbf)
Durability: 100 cycles

Physical

Transceiver
Housing: Zinc
PCB contact: 0.76µm (30µ") Gold
PCB Thickness: 1.00mm (.393") ± 0.10mm (.004")

Guide Frame
Housing: Zinc Alloy
Plating: Nickel

Order No.	Description	Lead-free
74732-0220	Guide Rail	Yes

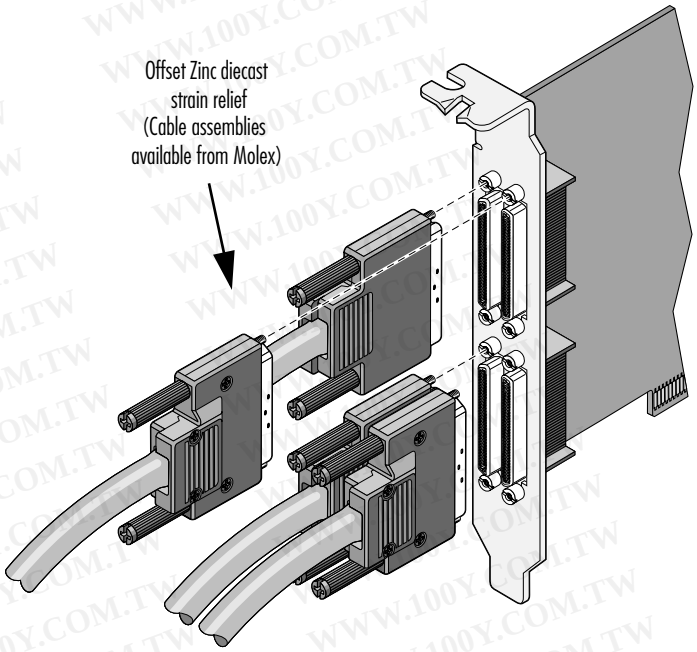
Ultra+™ VHDCI Connector System

Molex's 0.80mm (.031") Ultra+ VHDCI Connector System is a leader among the next generation of high density connectors. These 68-circuit connectors are designed for high performance memory transfer applications, supporting the latest SCSI-style interfaces. They offer greatly increased density compared to existing SCSI connectors styles. They are also well suited for other high density I/O needs.

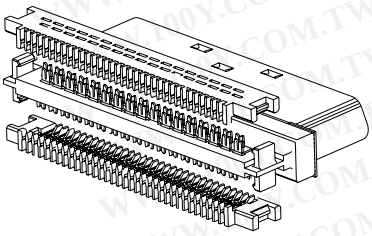
These connectors enable two side-by-side ports, allowing cards to support up to 30 drives. Stacked receptacles support up to 60 drives. They offer a tremendous advantage over the current SCSI-3 connectors that allow only one port on standard add-in cards.

Molex's Ultra+ VHDCI connectors feature easy-to-use cable assembly and superior leaf/ribbon style contacts. They meet the Small Form Factor and EIA Standards.

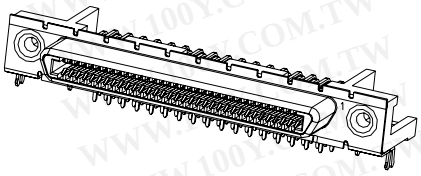
Molex also has standard high density SCSI-3 connectors for use with the new Ultra+ VHDCI cable formats.



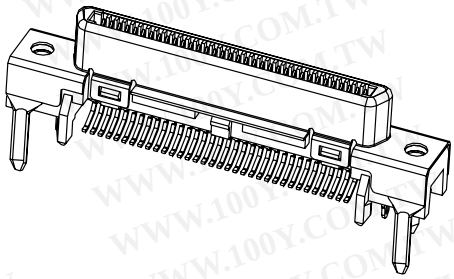
Typical 4-Port Add-In Card



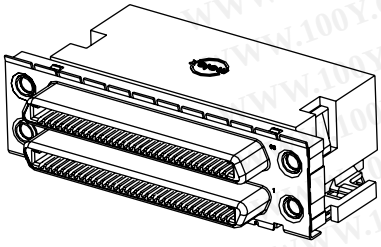
71425
IDT Plug



71430
Right Angle Receptacle



73776
Vertical SMT Receptacle



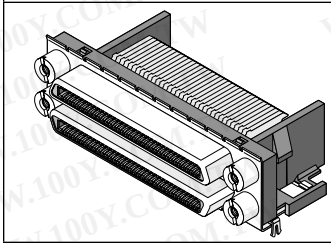
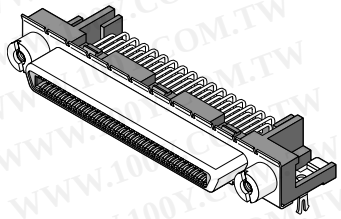
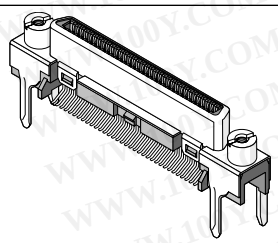
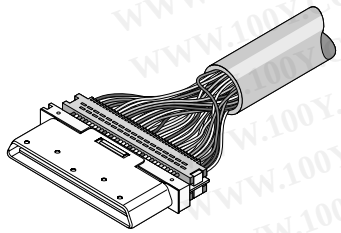
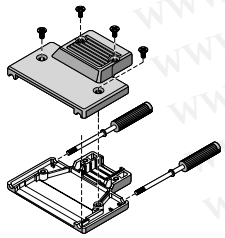
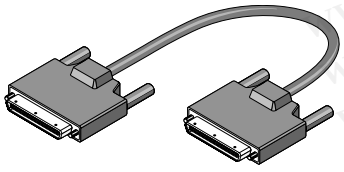
74337
Right Angle
Dual Stack

0.80mm (.031") Pitch Ultra+™ VHDCI Connector System

Molex's Ultra+ VHDCI connector system is a leader among the next generation of high-density I/O interconnects. These 68-circuit connectors are designed for high performance memeory transfer applications, supporting the latest SCSI-style interfaces. They offer greatly increased density compared to existing SCSI connector styles. They are also well suited for other high-density I/O needs.

These connectors enable 2 side-by-side ports on typical system add-in cards. The newest version of the VHDCI product line, the stacked receptacle, supports twice the density of the standard right-angle receptacle. Our multiple contact points for improved EMI/RFI performance.

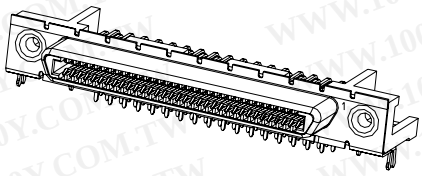
All of the VHDCI connectors feature superior leaf/ribbon style contacts and meet EIA and SFF industry standard specifications to ensure intermatability with conforming products.

Product	Description	Specifications	Series
	Stacked Right Angle Receptacle, Though Hole, With Enhanced Shield	2.08-3.44mm (.082-.135") PC Tail Lenghts, With or Without Screwlocks or Cover	74337
	Right Angle Receptacle, Though Hole, With or Without Enhanced Shield	2.08-2.71mm (.082-.107") PC Tail Lenghts, Available With or Without Screwlocks	71430
	Vertical Receptacle, SMT	Recommended PCB Thickness: 2.36mm (.093") PCB Ground Tabs Provide Mechanical Support, Available With or Without Screwlocks	73776
	IDT Plug Kit, With Lacing Covers	Uses 28 and 30 AWG Ultra+ Cable	71425
	Strain Relief Kit, Offset Zinc Diecast, Black or Nickel Finish	Complete Kit Includes: Upper Shell, Lower Shell, 2 Jackscrews, 2 Long Screws, and 2 Short Screws	73796
	Cable Assemblies, Various Lengths	VHDCI to VHDCI	79918
		VHDCI to SCSI	79913

0.80mm (.031") Pitch Ultra+™ VHDCI Receptacle

71430

Right Angle, Through Hole



Features and Benefits

- Enhanced shield with multiple contact points for improved EMI/RFI shielding
- Conforms to EIA/SFF specifications to ensure intermateability with conforming products
- Shield design can eliminate reflow solder ground connection
- One-piece shield offers maximum ground integrity Surface Mount Compatible

Reference Information

Product Specification: PSX-71425-9999
Packaging Type: Tube
UL File No.: E29179
CSA File No.: LR 19980-520
Mates With: 71425
Designed In: Millimeters

Electrical

Voltage: 30V
Current: .5A
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 250V
Insulation Resistance: 500 Megohms min.

Mechanical

Mating Force: .54N (55g)
Unmating Force: .15N (15g)
Durability: 500 cycles max.

Physical

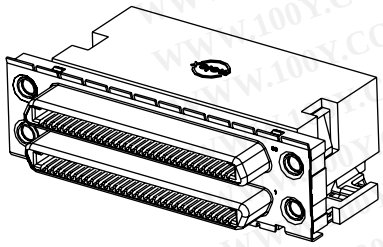
Housing: Black high-temperature thermoplastic, UL 94V-0
Contact: Phosphor Bronze
Plating: Gold flash over Palladium Nickel

Circuits	Order No.	PCB Thickness	PC Tail Length	Enhanced Ground Tabs	Screwlocks 71433-0002	Lead-free
68	71430-0005	1.60	2.08 (.082)	Yes	No	Yes
	71430-0007			No	Yes, loose	
	71430-0008			Yes	Yes, loose	
	71430-0011				No	
	71430-0101			No	No	
	71430-0004	2.36	2.71 (.107)	Yes	No	
	71430-0006			No	Yes, installed on part	
	71430-0009			Yes	Yes, installed on part	
	71430-0010				No	
	71430-0016			No	Yes, loose	
	71430-0019			Yes	Yes, loose	
	71430-0268			No	No	

0.80mm (.031") Pitch Ultra+™ VHDCI Wire-to-Board Receptacle

74337

Right Angle, Stacked, Through Hole



Features and Benefits

- Conforms to EIA/SFF specifications to ensure intermateability with conforming parts
- Gold flash over Palladium Nickel plating for a high durability/reliability interface
- Dual-stack, single-piece design provides space savings with one-step PCB processing
- Optional cover to protect from contact damage during handling
- One-piece enhanced face shield for improved EMI/RFI performance and simple ground termination process

Reference Information

Product Specification: PS-71425-9999
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980-5
Mates With: Ultra and VHDCI plug kit 71425
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 0.5A
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 250V AC
Insulation Resistance: 500 Megohms min.

Mechanical

Mating Force: 0.49N (0.11 lb)
Unmating Force: 0.15N (0.03 lb)
Durability: 500 cycles

Physical

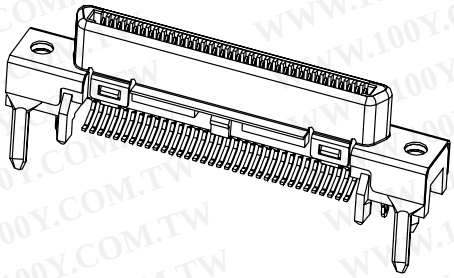
Housing: Black high-temperature thermoplastic, UL 94V-0
Contact: Phosphor Bronze
Plating: Gold flash over Palladium Nickel
PCB Thickness: 1.57 and 2.36mm (.062 and .093")

Circuits	Order No.		PCB Thickness	PC Tail Length	Cover	Screwlocks 71433-0002	Lead-free
	Snap Fit	Press Fit					
136	74337-0011	74337-0050	1.60	2.30 (.090)	Yes	No	Yes
	74337-0012	*74337-0051*		2.08 (.082)			
	74337-0015	74337-0060		2.30 (.090)	No		
	74337-0016	74337-0061		2.08 (.082)			
	74337-0037	74337-0066		2.30 (.090)	Yes	Yes, loose	
	74337-0038	74337-0053		2.08 (.082)			
	74337-0039	74337-0054		2.30 (.090)	No		
	74337-0040	74337-0063		2.08 (.082)			
	74337-0070	74337-0064	2.36	3.44 (.135)	Yes	No	
	74337-0071	74337-0052			No		
	74337-0072	74337-0062			Yes	Yes, loose	
	74337-0073	74337-0055			No		
	74337-1038	74337-0065	1.60	2.08 (.082)	Yes	Installed on Part	
		74337-1054					

* Without enhanced shield and ground tabs

0.80mm (.031") Pitch Ultra+™ VHDCI

73776
Vertical, SMT



Features and Benefits
- Compatible with IR/vapor phase reflow process
- Conforms to EIA/SFF specifications to ensure intermateability with conforming products
- Through hole solder lead provides mechanically robust interface
- One-piece shield offers maximum ground integrity

Reference Information
Product Specification: PSX-71425-9999
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980-520
Mates With: 71425
Designed In: Millimeters

Electrical
Voltage: 30V
Current: .50A max.
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 250V
Insulation Resistance: 500 Megohms min.

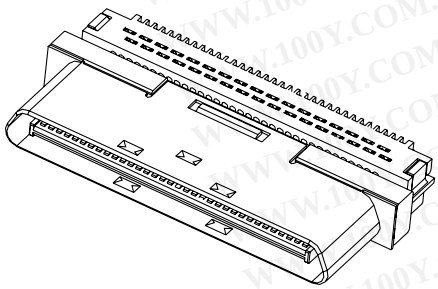
Mechanical
Mating Force: 54N (55g)
Unmating Force: 15N (15g)
Durability: 500 cycles max.

Physical
Housing: Black high-temperature thermoplastic, 94V-0
Contact: Phosphor Bronze
Plating: Gold flash over Palladium Nickel

Circuits	Order No.	Description	Lead-free
68	73776-0101	Without screwlock kit	Yes
	73776-0201	With screwlock kit 71433-0002 included	

0.80mm (.031") Pitch Ultra+™ VHDCI Plug Kit

71425
IDT



Features and Benefits
- Cable assemblies available from Molex
- 73796 backshell kit available
- Conforms to EIA/SFF specifications to ensure intermateability with conforming products
- Semi-automatic tooling available, which maximizes termination efficiency
- Insert molded design for rugged mating interface
- Narrow terminated profile that permits 2 wire termination process for all applications
- Works for both straight and offset cable applications
- Designed to terminate 30 gauge, 34 pair ultra style cables

Reference Information
Product Specification: PSX-71425-9999
Tooling Information: Raptor 2 or manual termination press
UL File No.: E29179
CSA File No.: LR 19980-520
Mates With: 71430, 73776 and 74337
Assembled with: 73796
Designed In: Millimeters

Electrical
Voltage: 30V
Current: .5A
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 250V
Insulation Resistance: 500 Megohms min.

Mechanical
Mating Force: .54N (55g)
Unmating Force: .15N (15g)
Durability: 500 min.

Physical
Housing: 94V-0, thermoplastic
Contact: Phosphor Bronze
Plating: Gold Flash over Palladium Nickel

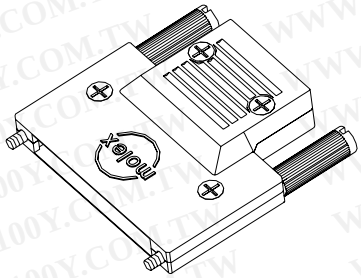
Circuits	Order No.	Lead-free
68	71425-3001	Yes

Includes plug and wire covers

0.80mm (.031") Pitch Ultra+™ VHDCI Strain Relief

73796

Offset Zinc Die Cast



Order No.		Lead-free
Black	Nickel	
73796-3001	73796-3002	Yes

Kit comes complete: 1 upper shell, 1 lower shell, 2 jackscrews and 2 assembly screws
Note: Backshell can be provided with custom logo, consult Molex

Features and Benefits

- Eliminates need for overmolding
- Can be used for both offset and straight cable exit applications
- No secondary operations needed to strain relieve
- Reduces overall labor, eliminates pre-shot, copper wrap, solder and final overmold assembly processes
- Assembly compatible with 4 port PCI bracket applications

Reference Information

Termination Specification Procedure: SD-73796-007
Assembled With: 71425
Designed In: Millimeters

Physical

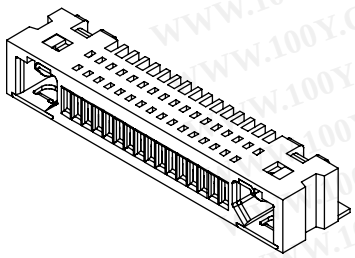
Housing: Zinc
Plating: Nickel or black non-conductive coating

www.molex.com/product/vhdci.html

0.80mm (.031") Pitch HandyLink™ Receptacle

44828

SMT, Right Angle



Order No.	No. of Positions Loaded	Voided Pins	Lead-free
44828-1162	16	None	Yes
44828-1163	15	15	

Features and Benefits

- Data rates compatible with USB 2.0 and IEEE 1394-1995 speeds, rated to 622 Mbs
- Rugged durability rated to 20,000 mating cycles
- Available in 2 to 16 circuit configurations, voided pinouts available to suit various applications
- Polarization feature and passive latching mechanism ensures proper mating with plug, cradle and cable
- Robust, insert molded sealed design supports IP54 protection requirements
- SMT leads allow population to both sides of PCB

Reference Information

Product Specification: PS-44828-001
Packaging: Embossed tape
UL File No.: E29179
CSA File No.: LR19980
TUV File No.: Pending
Mates With: 45593, 45339, 45560 and 36697
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 5 mA max.
Insulation Resistance: 1000 Megohms min.

Mechanical

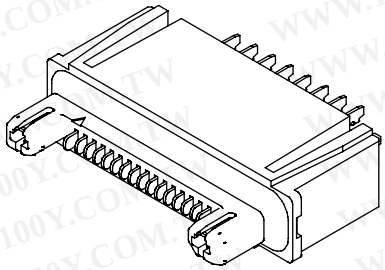
Contact Insertion Force: 0.5N min.
Contact Retention to Housing: 2.5N min.
Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Normal Force: 0.5N min.
Durability: 20,000 cycles

Physical

Housing: Black LCP, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel
Solder Tail Area—Tin

0.80mm (.031") Pitch HandyLink™ Plug

45339
Wire-terminated Cable Plug



Features and benefits
- Data rates compatible with USB 2.0 and 1EEE 1394-1995 speeds, rated to 622 Mbs
- Rugged durability rated to 20,000 mating cycles
- Available in 2 to 16 circuit configurations, voided pinouts available to suit various applications
- Polarization feature and passive latching mechanism ensures proper mating with receptacle
- First-mate/last-break pins 1 and 16 provide grounding protection during hot plugging. Other FMLB positions available upon request
- Standard and custom cable assemblies available, 36697 series

Reference Information
Product Specification: PS-44828-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
TUV File No.: Pending
Mates With: 44828 receptacle
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

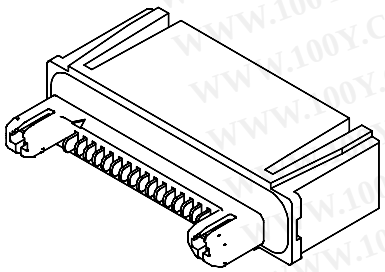
Mechanical
Contact Insertion Force: 0.5N min.
Contact Retention to Housing: 2.5N min.
Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Normal Force: 0.5N min.
Durability: 20,000 cycles

Physical
Housing: Black LCP, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel
Solder Tail Area—Tin
Wire Range: 22-34 AWG

Order No.	No. of Positions Loaded	Voided Pins	Lead-free
45339-1600	16	None	Yes
45339-1601	2	2 to 15	
45339-1602	8	2 to 8 and 15	
45339-1603	9	2 to 7 and 15	
45339-1604	10	7,10,11,14,15,16	
45339-1605	15	15	
45339-1606	14	7, 8	
45339-1607	5	1 to 3 and 8 to 15	

0.80mm (.031") Pitch HandyLink™ PCB Plug

45593
Through Hole, Vertical



Features and Benefits
- Data rates compatible with USB 2.0 and IEEE 1394-1995 speeds, rated to 622 Mbs
- Rugged durability rated to 20,000 mating cycles
- Available in 2 to 16 circuit configurations, voided pinouts available to suit various applications
- Polarization feature and passive latching mechanism ensure proper mating with receptacle
- First mate, last break pins 1 and 16 provide grounding protection during hot plugging. Other FMLB positions available upon request
- Additional solder tail lengths available upon request

Reference Information
Product Specification: PS-44828-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
TUV File No.: Pending
Mates With: 44828 receptacle
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

Mechanical
Contact Insertion Force: 0.5N min.
Contact Retention to Housing: 2.5N min.
Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Normal Force: 0.5N min.
Durability: 20,000 cycles

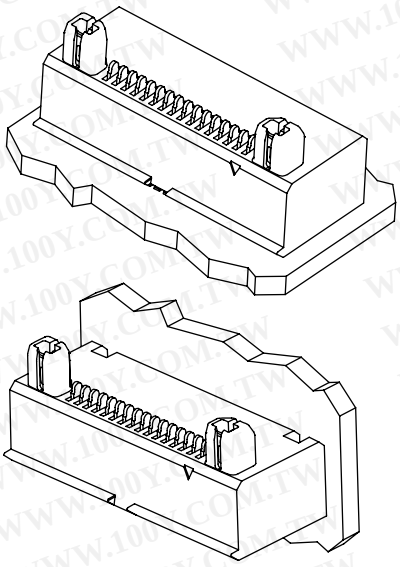
Physical
Housing: Black LCP, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—Gold over palladium Nickel
Solder Tail Area—Tin

Order No.	No. of Positions Loaded	Voided Pins	Lead-free
45593-1600	16	None	Yes
45593-1601	2	2 to 15	
45593-1602	8	2 to 8 and 15	
45593-1603	9	7,8,10,11,14,15	
45593-1604	10	7,10,11,14,15,16	
45593-1605	15	15	
45593-1606	14	7, 8	
45593-1607	5	1 to 3 and 8 to 15	

0.80mm (.031") Pitch HandyLink™ Cradle Connector

45560

SMT, Perpendicular and Parallel Versions



Features and Benefits

- Data rates compatible with USB 2.0 and IEEE 1394-1995 speeds, rated to 622 Mbs
- Rugged durability rated to 15,000 mating cycles
- Available in 2 to 16 circuit configurations, voided pinouts available to suit various applications
- Polarization feature and passive latching mechanism ensures proper mating with receptacle
- Robust design offered in both perpendicular and parallel mounting to the PCB for design flexibility in docking applications
- Optional screw mount hold down to PCB provides additional mechanical stability to PCB

Reference Information

Product Specification: PS-44828-001
Packaging: Embossed tape
UL File No.: E29179
CSA File No.: LR19980
TUV File No.: Pending
Mates With: 44828 receptacle
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Insertion Force: 0.5N min.
Contact Retention to Housing: 2.5N min.
Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Normal Force: 0.5N min.
Durability: 15,000 cycles

Physical

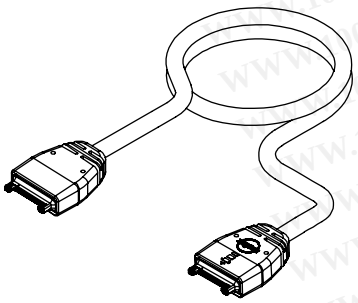
Housing: Black LCP, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel
Solder Tail Area—Tin

Order No.	Description	No. of Positions Loaded	Lead-free
45560-0160	Perpendicular to PCB (vertical)	16	Yes
45560-0161	Parallel to PCB (right angle)		

0.80mm (.031") Pitch HandyLink™ Cable Assembly

36697

HandyLink to HandyLink With Straight Overmolds



Features and Benefits

- Data rates compatible with USB 2.0 and 1394-1995 speeds, rated to 622Mbs
- Rugged durability rated to 20,000 mating cycles
- Polarization feature and passive latching mechanism ensures proper mating with receptacle
- First-mate/last-break pins 1 and 16 provide grounding protection during hot plugging
- Customizable pinouts and personalized logo area available to suit various applications
- Low profile height and compact width provide the perfect solution for small pluggable hand held devices
- Various cable lengths available for design flexibility

Reference Information

Product Specification: PS-36697-001
Packaging: Bag
Mates With: 44828 receptacle
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Durability: 20,000 cycles

Physical

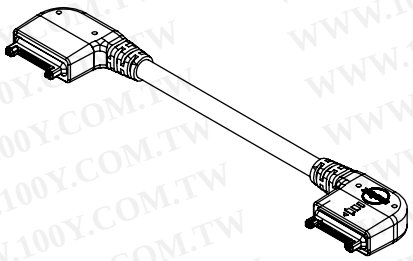
Color: Black
Cable Type: PVC
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel

Circuits	Cable Length	Order No.	Wire Gauge	Lead-free
16	1.0m (3.28 ft)	36697-0001	30 AWG	Yes
	2.0m (6.56 ft)	36697-0002		
	3.0m (9.84 ft)	36697-0003		

0.80mm (.031") Pitch HandyLink™ Cable Assembly

36697

HandyLink to HandyLink With Right Angle Overmolds



Features and Benefits

- Data rates compatible with USB 2.0 and 1394-1995 speeds, rated to 622Mbs
- Rugged durability rated to 20,000 mating cycles
- Polarization feature and passive latching mechanism ensures proper mating with receptacle
- First-mate/last-break pins 1 and 16 provide grounding protection during hot plugging
- Customizable pinouts and personalized logo area available to suit various applications
- Low profile height and compact width provide the perfect solution for small pluggable hand held devices
- Various cable lengths available for design flexibility

Reference Information

Product Specification: PS-36697-001
Packaging: Bag
Mates With: 44828 Receptacle
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Durability: 20,000 cycles

Physical

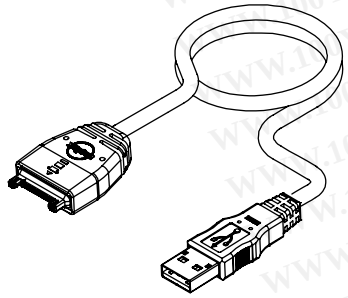
Color: Black
Cable Type: PVC
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel

Circuits	Cable Length	Order No.	Wire Gauge	Lead-free
16	1.0m (3.28 ft)	36697-0010	30 AWG	Yes
	2.0m (6.56 ft)	36697-0011		
	3.0m (9.84 ft)	36697-0012		

0.80mm (.031") Pitch HandyLink™ Cable Assembly

36697

HandyLink Straight Overmold to USB "A" Plug



Features and Benefits

- Data rates compatible with USB 2.0 and IEEE 1394-1995 speeds, rated to 622 Mbs
- Rugged durability rated to 20,000 mating cycles
- Polarization feature and passive latching mechanism ensures proper mating with receptacle
- First-mate/last-break pins 1 and 16 provide grounding protection during hot plugging
- Customizable pinouts and personalized logo area available to suit various applications
- Low profile height and compact width provide the perfect solution for small pluggable hand held devices
- Various cable lengths available for design flexibility

Reference Information

Product Specification: PS-36697-001
Packaging: Bag
Mates With: 44828
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Durability: 20,000 cycles

Physical

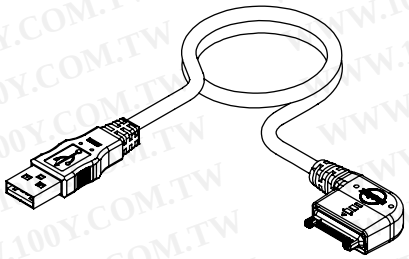
Color: Black
Cable Type: PVC
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel

Circuits	Cable Length	Order No.	Wire Gauge	Lead-free
4, plus 1 ground	1.0m (3.28 ft)	36697-0021	26 and 28 AWG	Yes
	2.0m (6.56 ft)	36697-0022		
	3.0m (9.84 ft)	36697-0023		

0.80mm (.031") Pitch HandyLink™ Cable Assembly

36697

HandyLink Right Angle Overmold to USB "A" Plug



Features and Benefits

- Data rates compatible with USB 2.0 and IEEE 1394-1995 speeds, rated to 622 Mbs
- Rugged durability rated to 20,000 mating cycles
- Polarization feature and passive latching mechanism ensures proper mating with receptacle
- First-mate/last-break pins 1 and 16 provide grounding protection during hot plugging
- Customizable pinouts and personalized logo area available to suit various applications
- Low profile height and compact width provide the perfect solution for small pluggable hand held devices
- Various cable lengths available for design flexibility

Reference Information

Product Specification: PS-36697-001
Packaging: Bag
Mates With: 44828
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Durability: 20,000 cycles

Physical

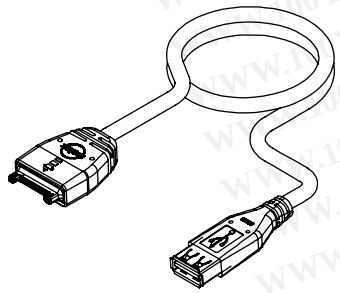
Color: Black
Cable Type: PVC
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel

Circuits	Cable Length	Order No.	Wire Gauge	Lead-free
4, plus 1 ground	1.0m (3.28 ft)	36697-0061	26 and 28 AWG	Yes
	2.0m (6.56 ft)	36697-0062		
	3.0m (9.84 ft)	36697-0063		

0.80mm (.031") Pitch HandyLink™ Cable Assembly

36697

HandyLink Straight Overmold to USB "A" Receptacle



Features and Benefits

- Data rates compatible with USB 2.0 and IEEE 1394-1995 speeds, rated to 622 Mbs
- Rugged durability rated to 20,000 mating cycles
- Polarization feature and passive latching mechanism ensures proper mating with receptacle
- First-mate/last-break pins 1 and 16 provide grounding protection during hot plugging
- Customizable pinouts and personalized logo area available to suit various applications
- Low profile height and compact width provide the perfect solution for small pluggable hand held devices
- Various cable lengths available for design flexibility

Reference Information

Product Specification: PS-36697-001
Packaging: Bag
Mates With: 44828
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Durability: 20,000 cycles

Physical

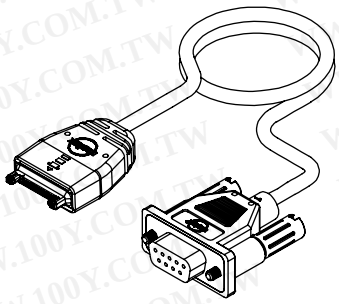
Color: Black
Cable Type: PVC
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel

Circuits	Cable Length	Order No.	Wire Gauge	Lead-free
4, plus 1 ground	1.0m (3.28 ft)	36697-0090	26 and 28 AWG	Yes
	2.0m (6.56 ft)	36697-0091		
	3.0m (9.84 ft)	36697-0092		
	.205m (.672 ft)	36697-0093		

0.80mm (.031") Pitch HandyLink™ Cable Assembly

36697

HandyLink Straight Overmold to DB9



Features and Benefits

- Data rates compatible with USB 2.0 and IEEE 1394-1995 speeds, rated to 622 Mbs
- Rugged durability rated to 20,000 mating cycles
- Polarization feature and passive latching mechanism ensures proper mating with receptacle
- First-mate/last-break pins 1 and 16 provide grounding protection during hot plugging
- Customizable pinouts and personalized logo area available to suit various applications
- Low profile height and compact width provide the perfect solution for small pluggable hand held devices
- Various cable lengths available for design flexibility

Reference Information

Product Specification: PS-36697-001
Packaging: Bag
Mates With: 44828
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Durability: 20,000 cycles

Physical

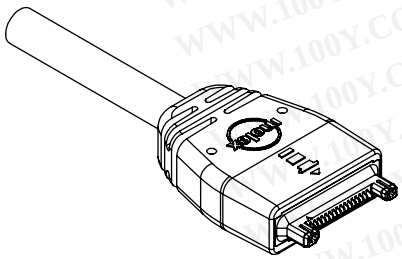
Color: Black
Cable Type: PVC
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel

Circuits	Cable Length	Order No.	Wire Gauge	Lead-free
9	1.0m (3.28 ft)	36697-0041	24 AWG	Yes
	2.0m (6.56 ft)	36697-0042		
	3.0m (9.84 ft)	36697-0043		

0.80mm (.031") Pitch HandyLink™ Cable Assembly

36697

HandyLink Straight Overmold to Pigtail



Features and Benefits

- Data rates compatible with USB 2.0 and IEEE 1394-1995 speeds, rated to 622 Mbs
- Rugged durability rated to 20,000 mating cycles
- Polarization feature and passive latching mechanism ensures proper mating with receptacle
- First-mate/last-break pins 1 and 16 provide grounding protection during hot plugging
- Customizable pinouts and personalized logo area available to suit various applications
- Low profile height and compact width provide the perfect solution for small pluggable hand held devices
- Various cable lengths available for design flexibility

Reference Information

Product Specification: PS-36697-001
Packaging: Bag
Mates With: 44828
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.5A (up to 3.0 depending on circuit configuration)
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 300V
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 20N (4.5 lbf)
Unmating Force: 40N (8.99 lbf)
Durability: 20,000 cycles

Physical

Color: Black
Cable Type: PVC
Contact: Copper Alloy
Plating: Contact Area—Gold over Palladium Nickel

Circuits	Cable Length	Order No.	Wire Gauge	Lead-free
16	1.0m (3.28 ft)	36697-0031	30 AWG	Yes
	2.0m (6.56 ft)	36697-0032		
	3.0m (9.84 ft)	36697-0033		

LFH™ Matrix 50 and 75 Connector Systems

The Low Force Helix (LFH) contact was designed for high-pin-count signal applications where there is a need for reliability and performance. Designed for both cable I/O and board-to-board applications, the system's low insertion forces make it ideal for situations where multiple signal lines need to be terminated or packaged in a limited space. The patented "helix" plug pin interfaces with a split-beam receptacle contact giving a low insertion force with 2-point contact reliability.

Circuit sizes range from 60 to 200 circuits in the Matrix 50 system and 96 to 130 circuits in the Matrix 75 system. Matrix 50 features I/O shielding exclusively, while Matrix 75 offers shielded and unshielded versions. Both systems support vertical and right angle board mounting.

Features and Benefits

- Low insertion forces of 42g per contact
- Redundant contact points for long-term reliability
- Normal forces of 75g per beam
- Contact (Hertz) forces averaging 225K psi
- High cycle life via controlled plating and contact surfaces
- Good electrical performance for high-speed applications
- Blind mate options available
- Docking hardware available for I/O systems
- SMT-compatible materials
- Cable assemblies available through Molex
- Termination of high-performance wire—26 to 36 AWG (depending upon application)
- Solder and weld terminations
- M3 and 4-40 hardware
- I/O system is D-sub size for standard panel cutouts, overmolds and hardware use (60 and 96 circuits)
- 30µ" min. Gold/50µ" min. Nickel plating
- Matrix 50 contact layout is on .050 x .050" spacing.
- Matrix 75 layout is on .075 x .075" spacing.

Mechanical

Please refer to individual product pages for details

Materials

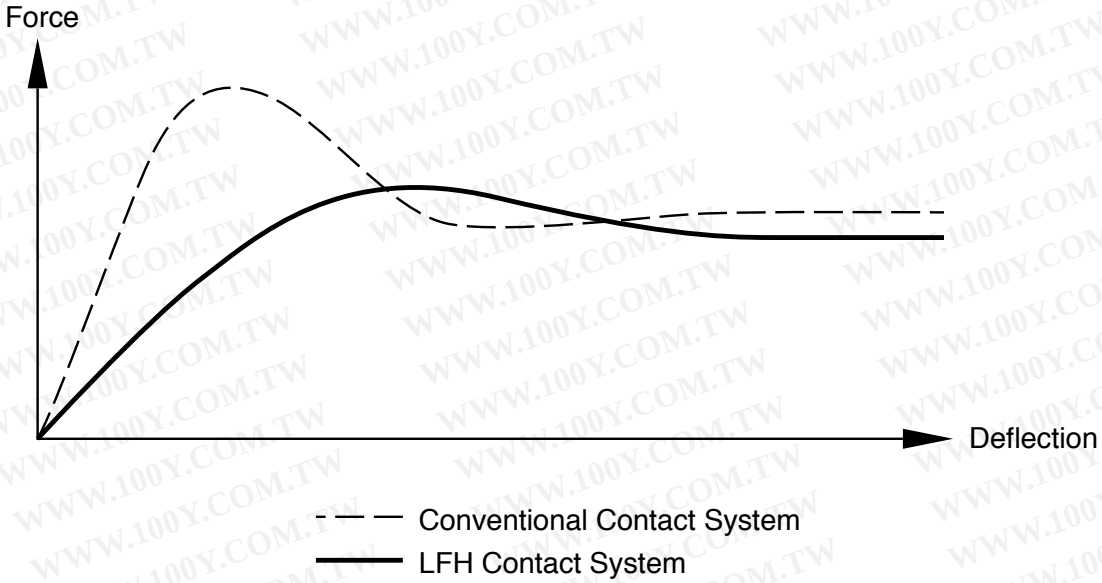
Please refer to individual product pages for details

Environmental/Durability

After Temperature Cycling: <10 milliohms ΔR
After Cycle Humidity: <10 milliohms ΔR
After Flowing Mixed Gas Test: <10 milliohms ΔR
After 5000 Mated Cycles Durability: <10 milliohms ΔR
Please refer to individual product pages for more details

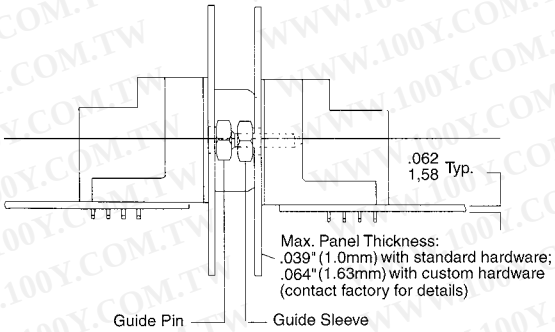
Electrical Characteristics—Matrix 50

Measured at 200 ps rise time for differential signals
Nominal Bandwidth: 3 to 4 GHz
Impedance: 80 to 104 ohms



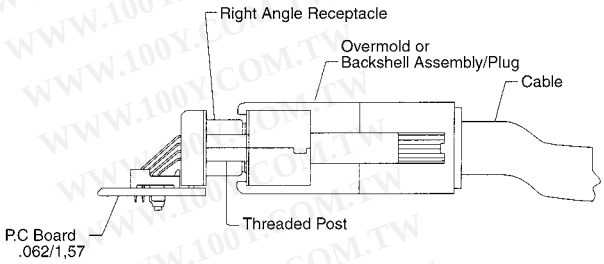
The LFH system's low insertion forces promote high cycle life and extended contact reliability. Compared with conventional contact systems, the patented "helix" LFH interface has a lower initial insertion force with a more gradual ramp up to the full normal force of 75g per beam.

LFH™ Matrix 50 and 75
Typical Applications



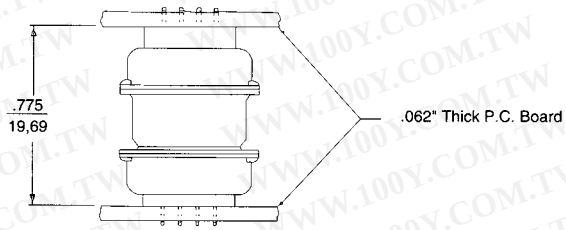
Matrix 50 I/O

Blind Mate Docking
Right Angle Plug to Right Angle Receptacle
60 and 160 Circuit



Matrix 50 I/O

Right Angle Receptacle to Cable Plug
60, 160 and 200 Circuit



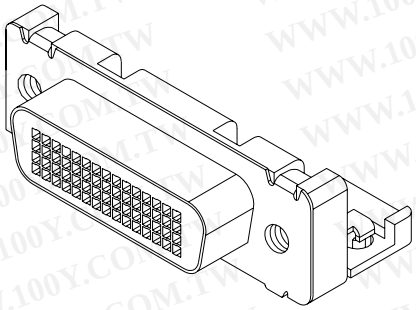
Matrix 75 I/O

Vertical Stacking
96 and 130 Circuit

1.27mm (.050") Pitch LFH™ Matrix 50 Shielded Receptacle

70928

60 Circuit, Right Angle



Features and Benefits

- High-performance, Low Force Helix terminal with contact layout .050 by .050"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- Same size as 15-pin D-sub for standard panel cut-outs and hardware use
- M3 threaded inserts for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information

Product Specification: PS-70928
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 70929
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

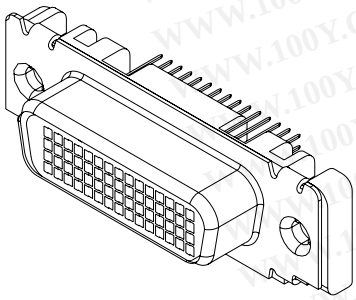
Housing: Glass-filled polymer, UL 94V-0
Contact: Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Circuits	Order No.	PC Tail Length	Lead-free
60	70928-2000	2.01 (.079)	Yes
	70928-2001	2.34 (.092)	
	70928-2002	2.64 (.104)	
	70928-2005	2.01 (.079)	
	70928-2007	3.18 (.125)	

1.27mm (.050") Pitch LFH™ Matrix 50 Shielded Receptacle

70928

60 Circuit, Vertical



Features and Benefits

- High-performance, Low Force Helix terminal with contact layout .050 by .050"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- Same size as 15-pin D-sub for standard panel cut-outs and hardware use
- M3 threaded inserts for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information

Product Specification: PS-70928
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 70929
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

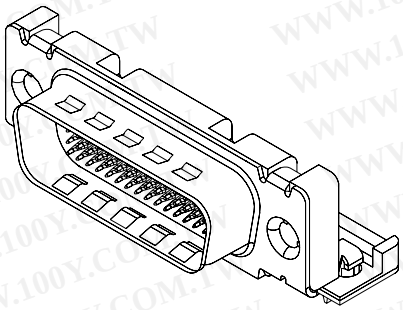
Housing: Glass-filled polymer, UL 94V-0
Contact: Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Circuits	Order No.	PC Tail Length	Lead-free
60	70928-0002	2.34 (.092)	Yes

1.27mm (.050") Pitch LFH™ Matrix 50 Shielded Plug

70929

60 Circuit, Right Angle



Features and Benefits

- High-performance, Low Force Helix terminal with contact layout .050 by .050"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- Same size as 15-pin D-sub for standard panel cut-outs and hardware use
- M3 threaded inserts for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information

Product Specification: PS-70928
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 70928
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

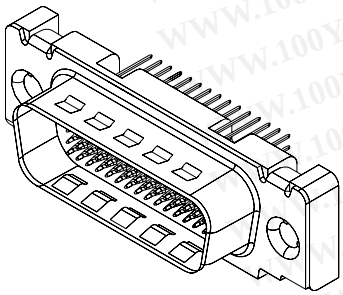
Housing: Glass-filled polymer, UL 94V-0
Contact: Phosphor Bronze Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Circuits	Order No.	PC Tail Length	Lead-free
60	15-92-2250	2.34 (.092)	Yes
	15-92-2253	2.64 (.104)	

1.27mm (.050") Pitch LFH™ Matrix 50 Shielded Plug

70929

60 Circuit, Vertical



Features and Benefits

- High-performance, Low Force Helix terminal with contact layout .050 by .050"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- Same size as 15-pin D-sub for standard panel cut-outs and hardware use
- M3 threaded inserts for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information

Product Specification: PS-70928
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 70928
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

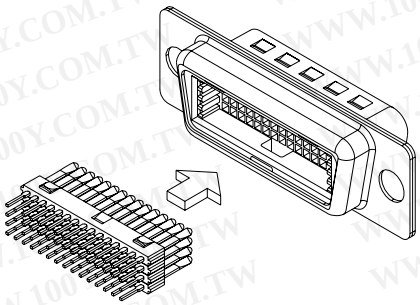
Housing: Glass-filled polymer, UL 94V-0
Contact: Phosphor Bronze Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Circuits	Order No.	PC Tail Length	Lead-free
60	15-92-2251	2.34 (.092)	Yes

1.27mm (.050") Pitch LFH™ Matrix 50 Plug Cable Kit

70929/70984

Subassembly and Terminal Sticks 60 Circuit



Features and Benefits

- Cable assemblies available through Molex-approved suppliers
- Termination of a variety of wire types 28 to 36 AWG (depending on application)
- Wire terminated by direct weld or solder
- 4 terminal sticks required per subassembly (terminal sticks sold separately)
- Same size as 15-pin D-sub for standard overmolding and back shell hardware

Reference Information

Product Specification: PS-70928
Application Specification: PS-70929
Termination Specification: ES-70929
Packaging: Box and tray
UL File No.: E29179 CSA File No.: LR19980
Mates With: 70928
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

Housing: Glass-filled polymer, UL 94V-0
Contact: Plugs—Phosphor Bronze Alloy
Receptacle—Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin/Lead over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Subassembly		
Order No.	**Description**	**Lead-free**
70929-2000*	60-Circuit I/O Plug Connector Subassembly	Yes

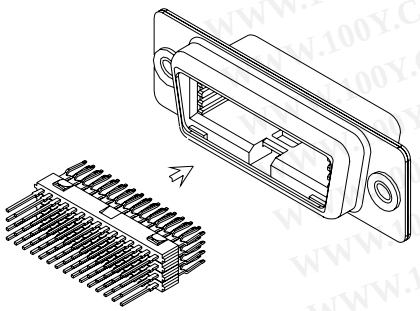
Terminal Sticks—4 Sticks Required per Subassembly			
Order No.	**Description**	**Trim Length**	**Lead-free**
51-24-2021	With Carrier	N/A	Yes
51-24-2022	Trimmed to Length without Carrier	3.30 (.130)	
70984-1007†‡	With Busbar and Carrier	N/A	
70984-1010†			

* Stick Loading Tool 62200-1500 can be used for inserting sticks into subassembly
† Sticks can be trimmed using LFH Stick Preparation Tool Kit 62200-1100
‡ 50µ" Nickel plating on tail area

1.27mm (.050") Pitch LFH™ Matrix 50 Receptacle Cable Kit

71691/70985

Subassembly and Terminal Sticks 60 Circuit



Features and Benefits

- Cable assemblies available from Molex
- Termination of a variety of wire types 28 to 36 AWG (depending on application)
- Wire terminated by direct weld or solder
- 4 terminal sticks required per subassembly (terminal sticks sold separately)
- Same size as 15-pin D-sub for standard overmolding and back shell hardware

Reference Information

Product Specification: PS-70928
Application Specification: PS-71691
Termination Specification: ES-70929
Packaging: Box and tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: 70929
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

Housing: Glass-filled polymer, UL 94V-0
Contact: Receptacle—Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—100µ" min. bright Tin over Copper

Subassembly		
Order No.	**Description**	**Lead-free**
71691-0003*	60-Circuit I/O Receptacle Connector Subassembly	Yes

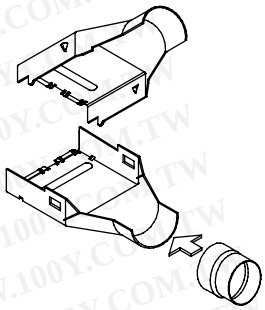
* Stick Loading Tool 62200-1600 can be used for inserting sticks into subassembly

Terminal Sticks—4 Sticks Required per Subassembly			
Order No.	**Description**	**Trim Length**	**Lead-free**
51-25-2011	With Carrier†	N/A	Yes
51-25-2012	Trimmed to Length without Carrier	5.46 (.215)	
51-25-2014		3.30 (.130)	

† Sticks can be trimmed using LFH Stick Preparation Tool Kit 62200-1100

1.27mm (.050") Pitch LFH™ Matrix 50 Hardware

71245
Overmold Can Kit



Overmold Can		
Order No.	Cable Sizes (max.)	Lead-free
71245-2000	11.18 (.440)	Yes
71245-3000	12.57 (.495)	

Features and Benefits
- Use with 60-circuit plug cable kit
- Each can kit includes top and bottom pieces
- Can pieces snap together to provide continuous electrical shielding with connector and cable
- Crimp ferrule 73772 sold separately

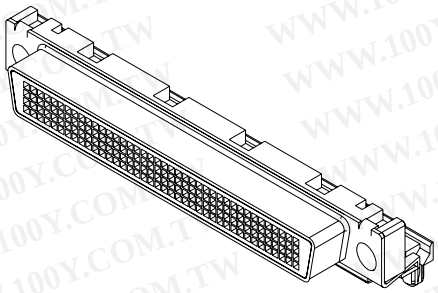
Reference Information
Application Specification: PS-70929
Packaging: Bag
Designed In: Inches

Physical
Plating: Bright Tin over Copper flash

1.27mm (.050") Pitch LFH™ Matrix 50 Shielded Receptacle

71626

160 Circuit, Right Angle



Features and Benefits

- High-performance, Low Force Helix terminal with contact layout .050 by .050"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- M3 threaded insert for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information

Product Specification: PS-71626
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 71624
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

Housing: Glass-filled polymer, UL 94V-0
Contact: Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

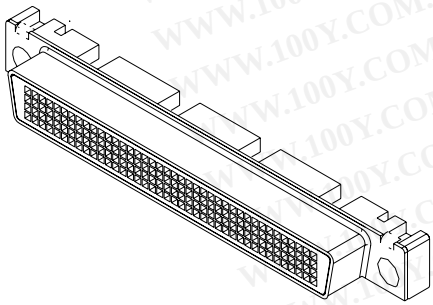
Circuits	Order No.	PC Tail Length	Lead-free
160	51-24-1040	2.34 (.092)	Yes
	51-24-1041	2.01 (.079)	
	71626-2002	3.18 (.125)	
	71626-4000*	2.34 (.092)	

* Guide hardware attached (71629-4000)

1.27mm (.050") Pitch LFH™ Matrix 50 Shielded Receptacle

71626

160 Circuit, Vertical



Features and Benefits

- High-performance, Low Force Helix terminal with contact layout .050 by .050"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- M3 threaded insert with optional board lock for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information

Product Specification: PS-71626
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 71624
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

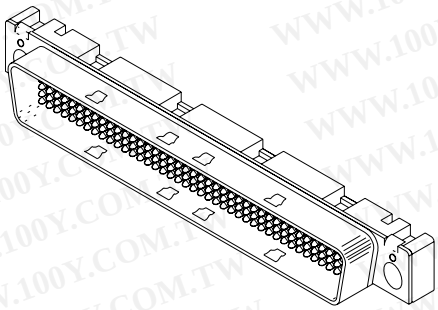
Housing: Glass-filled polymer, UL 94V-0
Contact: Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Circuits	Order No.	Feature	PC Tail Length	Lead-free
160	71626-1001	M3 Threaded Insert with Board Lock	2.34 (.092)	Yes
	71626-1003	M3 Threaded Insert	3.18 (.125)	
	71626-1004	M3 Threaded Insert with Board Lock		
	71626-1006	M3 Threaded Insert	4.49 (.177)	
	71626-1007		5.33 (.210)	
	51-24-1030		2.34 (.092)	

1.27mm (.050") Pitch LFH™ Matrix 50 Shielded Plug

71624

160 Circuit, Right Angle



Features and Benefits

- High-performance, Low Force Helix terminal with contact layout .050 by .050"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- Optional M3 threaded insert for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information

Product Specification: PS-71626
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 71626
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

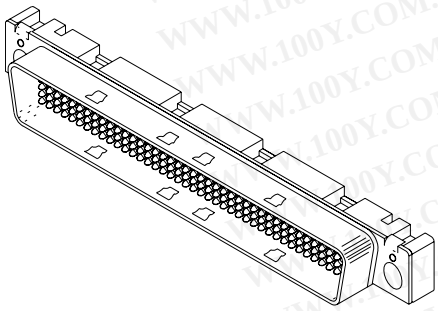
Housing: Glass-filled polymer, UL 94V-0
Contact: Phosphor Bronze Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100mµ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Circuits	Order No.	Description	PC Tail Length	Lead-free
160	51-25-1040	With M3 Threaded Insert	2.34 (.092)	Yes
	71624-2004	Without M3 Threaded Insert		

1.27mm (.050") Pitch LFH™ Matrix 50 Shielded Plug

71624

160 Circuit, Vertical



Features and Benefits

- High-performance, Low Force Helix terminal with contact layout .050 by .050"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- M3 threaded insert with optional board lock for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information:

Product Specification: PS-71626
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 71626
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

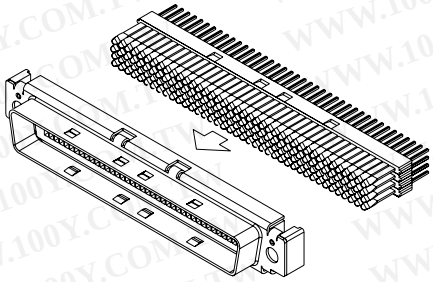
Housing: Glass-filled polymer, UL 94V-0
Contact: Phosphor Bronze Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Circuits	Order No.	Feature	PC Tail Length	Lead-free
160	51-25-1030	M3 Threaded Insert	2.34 (.092)	Yes
	71624-1001	M3 Threaded Insert with Board Lock		
	71624-1003	M3 Threaded Insert	3.18 (.125)	
	71624-1004	M3 Threaded Insert with Board Lock		
	71624-1013	M3 Threaded Insert	4.50 (.177)	

1.27mm (.050") Pitch LFH™ Matrix 50 Plug Cable Kit

71624/70984

Subassembly and Terminal Sticks 160 Circuit



Features and Benefits

- Cable assemblies available from Molex
- Termination of a variety of wire types 28 to 36 AWG (depending on application)
- Wire terminated by direct weld or solder
- 4 terminal sticks required per subassembly (terminal sticks sold separately)

Reference Information

Product Specification: PS-71626
Application Specification: PS-71624
Termination Specification: ES-70929
Packaging: Box and tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: 71626
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical

Housing:
Glass-filled polymer, UL 94V-0
Contact: Plugs—Phosphor Bronze Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over 50µ" Copper

Subassembly		
Order No.	Description	Lead-free
71624-3000[1]	160-Circuit I/O Plug Connector Subassembly	Yes

[1] Stick Loading Tool 62200-1700 can be used for inserting sticks into subassembly

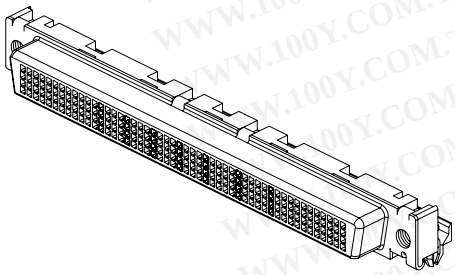
Terminal Sticks—4 Sticks Required per Subassembly			
Order No.	Description	Trim Length	Lead-free
51-25-1020	With Carrier*	N/A	Yes
70984-4009	Trimmed to Length without Carrier	3.30 (.130)	

* Sticks can be trimmed using LFH Stick Preparation Tool Kit 62200-1100

1.27mm (.050") Pitch LFH™ Matrix 50 Shielded Receptacle

71718

200 Circuit, Right Angle



Features and Benefits

- High-performance, Low Force Helix terminal with contact layout .050 by .050"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- M3 threaded inserts for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information

Product Specification: PS-71718
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 71719
Designed In: Inches

Electrical

Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

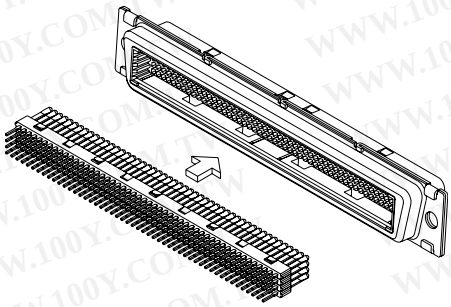
Physical

Housing: Glass-filled polymer, UL 94V-0
Contact: Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Circuits	Order No.	PC Tail Length	Lead-free
200	71718-2000	2.01 (.079)	Yes
	71718-2001	3.05 (.120)	

1.27mm (.050") Pitch LFH™ Matrix 50 I/O Plug Cable Kit

71719/71715
Subassembly and Terminal Sticks 200 Circuit



Features and Benefits
- Cable assemblies available from Molex
- Termination of a variety of wire types 28 to 36 AWG (depending on application)
- Wire terminated by direct weld or solder
- 4 terminal sticks required per subassembly (terminal sticks sold separately)

Reference Information
Product Specification: PS-71719-9999
Application Specification: AS-71719
Termination Specification: AS-71715
Packaging: Box and tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: 71718
Designed In: Millimeters

Electrical
Voltage: 40V
Current: 1.0A max.
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.

Mechanical
Contact Insertion Force: 60g max.
Mating Force: 50g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

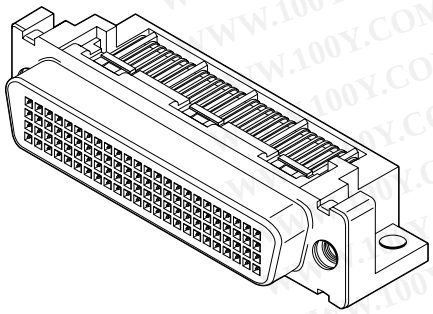
Physical
Housing: Glass-filled polymer. UL94V-0
Contact: Plugs—Phosphor Bronze Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over 50µ" Copper

Subassembly	
Order No.	Description
71719-3000	200 Circuit I/O Plug Connector Assembly

Subassembly		
Order No.	Description	Trim Length
71715-4001	With Carrier	N/A
71715-4002	Trimmed to Length without Carrier	3.30 (.130)

1.90mm (.075") Pitch LFH™ Matrix 75 Shielded Receptacle

70660
96 Circuit Right Angle



Features and Benefits
- High-performance, Low Force Helix terminal with contact layout .075 by .075"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- 96-circuit same size as 50-pin standard D-sub for backshell hardware
- M3 threaded inserts for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information
Product Specification: PS-70660
Packaging: Tube
UL File No.: E291794
CSA File No.: LR19980
Mates With: 70665 or 71995
Designed In: Inches

Electrical
Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 1000V
Insulation Resistance: 100 Megohms min.

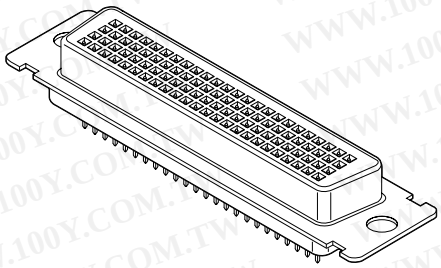
Mechanical
Contact Insertion Force: 84g max.
Mating Force: 60g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical
Housing: Glass-filled polymer, UL 94V-0
Contact: Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—100µ" min. bright Tin over Copper

Circuits	Order No.	PC Tail Length	Lead-free
96	51-26-0000	2.34 (.092)	Yes
	51-26-0003	3.43 (.135)	

1.90mm (.075") Pitch LFH™ Matrix 75 Shielded Receptacle

70660
96 Circuit Vertical



Features and Benefits
- High-performance, Low Force Helix terminal with contact layout .075 by. 075"
- High cycle life from controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- 96-circuit same size as 50-pin standard D-sub for backshell hardware
- Surface Mount Compatible

Reference Information
Product Specification: PS-70660
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 70665 or 71995
Designed In: Inches

Electrical
Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 1000V
Insulation Resistance: 100 Megohms min.

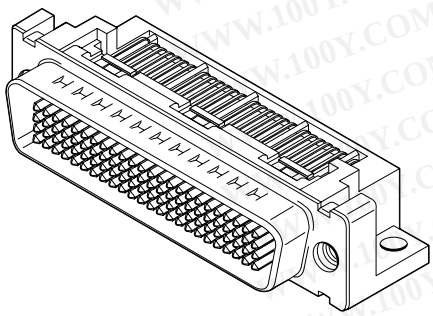
Mechanical
Contact Insertion Force: 84g max.
Mating Force: 60g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical
Housing: Glass-filled polymer, UL 94V-0
Contact: Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—100µ" min. bright Tin over Copper

Circuits	Order No.	PC Tail Length	Lead-free
96	51-26-0001	2.34 (.092)	Yes

1.90mm (.075") Pitch LFH™ Matrix 75 Shielded Plug

70665
96 Circuit Right Angle



Features and Benefits
- High-performance, Low Force Helix terminal with contact layout .075 by .075"
- High cycle life form controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- 96-circuit same size as 50-pin standard D-sub for backshell hardware
- M3 threaded inserts for attaching various hardware options
- Docking hardware 71628 and 71629
- Jackposts 70982
- Surface Mount Compatible

Reference Information
Product Specification: PS-70660
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 70660 or 71990
Designed In: Inches

Electrical
Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 1000V.
Insulation Resistance: 100 Megohms min.

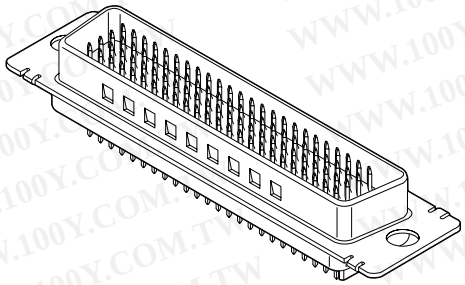
Mechanical
Contact Insertion Force: 84g max.
Mating Force: 60g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical
Housing: Glass-filled polymer, UL 94V-0
Contact: Phosphor Bronze alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—100µ" min. bright Tin over Nickel all over Copper

Circuits	Order No.	PC Tail Length	Lead-free
96	51-26-0011	2.34 (.092)	Yes

1.90mm (.075") Pitch LFH™ Matrix 75 Shielded Plug

70665
96 Circuit Vertical



Features and Benefits
- High-performance, Low Force Helix terminal with contact layout .075 by .075"
- High cycle life form controlled plating and contact surfaces
- Suitable for high-density and high-performance applications
- 96-circuit same size as 50-pin standard D-sub for backshell hardware
- Surface Mount Compatible

Reference Information
Product Specification: PS-70660
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 70660 or 71990
Designed In: Inches

Electrical
Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 1000V.
Insulation Resistance: 100 Megohms min.

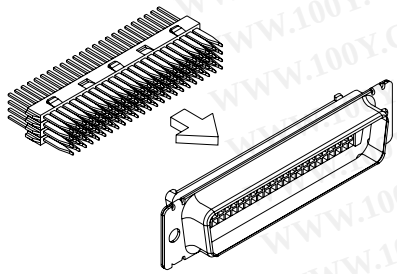
Mechanical
Contact Insertion Force: 84g max.
Mating Force: 60g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

Physical
Housing: Glass-filled polymer, UL 94V-0
Contact: Phosphor Bronze alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—100µ" min. bright Tin over Nickel all over Copper

Circuits	Order No.	PC Tail Length	Lead-free
96	51-26-0011	2.34 (.092)	Yes

1.90mm (.075") Pitch LFH™ Matrix 75 Plug Cable Kit

70665
Subassembly and Terminal Sticks 96 and 130 Circuit



Features and Benefits
- Cable assemblies available from Molex
- Termination of a variety of wiere types 26 to 36 AWG (depending on application)
- Wire terminated by direct weld or solder
- Terminal sticks sold separately
- 96-circuit same size as 50-pin standard D-sub for standard overmolding and back shell hardware

Reference Information
Packaging: Box and tray
Mates With: 70660 or 71990
Designed In: Inches

Electrical
Voltage: 40V
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 1000V.
Insulation Resistance: 100 Megohms min.

Mechanical
Mating Force: 60g nom.
Unmating Force: 20g min.
Durability: 5000 cycles

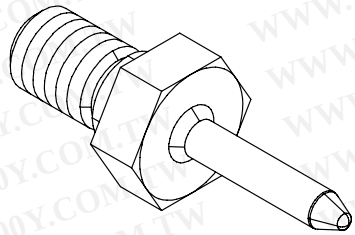
Physical
Housing: Glass-filled polymer, Uk 94V-0
Contact: Plug—Phosphor Bronze Alloy
Receptacle—Beryllium Copper Alloy
Plating: Terminals—30µ" min. Gold over Nickel in contact area, 100µ" min. Tin over Nickel in PC tail area
Shields—150µ" min. bright Tin over Nickel all over Copper flash

Subassemby			
Circuits	Order No.	Description	Lead-free
96	51-26-0012	I/O Plug Connector Subassembly	Yes

Terminal Sticks					
Circuits	Order No.	Description	Trim Length	No. Required per Subassembly	Lead-free
96	51-25-1005	With Carrier	N/A	Four 24-Circuit Sticks	Yes
	51-25-1012	Trimmed to Length without Carrier	3.30 (.130)		
130	51-25-1007	With Carrier	N/A	Five 26-Circuit Sticks	
	71989-2003	Trimmed to Length without Carrier	3.30 (.130)		

LFH™ Matrix 50 and 75 Docking Hardware

71628/71629
Guide Pin and Guide Sleeve



Features and Benefits
- For use with Matrix 50 and 75 products
- Guide pin is heat-treated steel material; guide sleeve is cold-drawn steel material
- Socket size 3/16"
- M3 external thread
- Suitable for docking applications
- Recommended panel thickness is .040" max.

Reference Information
Packaging: Bag
Designed In: Inches

Mechanical
Assembly Torque: 5 in.-lb max.

Physical
Plating: Nickel

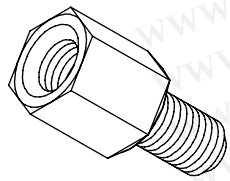
Guide Pin			
Order No.	Dimension		Lead-free
	Mating Pin Length	Thread Length	
71628-3000*	11.68 (.460)	4.37 (.172)	Yes

Guide Sleeve		
Order No.	Dimension	Lead-free
	Thread Length	
71629-4000*	4.37 (.172)	Yes

* Lead-in .050" by 45° (alignment tolerance of 1.5mm radially) for docking applications

LFH™ Matrix 50 and 75 Hardware

70982
Panel Mount Hex Screw Kit



Features and Benefits
- For use with Matrix 50 and 75 products
- Socket size 3/16"
- 4-40 or M3 internal threads
- Recommended panel thickness is .025" max.

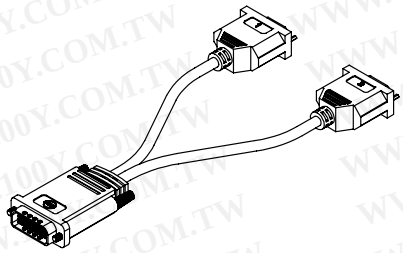
Reference Information
Packaging: Bag
Designed In: Inches

Mechanical
Assembly Torque: 5 in.-lb max.

M3 External Threads					
Kit Order No.	Quantity	Description	Plating	Overall Length	Lead-free
70982-1002	2	4-40 internal threads	Tin	10.01 (.394)	Yes
	4	Washer			
	2	Lockwasher			
		Nut			
70982-1003	1	4-40 internal threads	Yellow Chromate	11.00 (.433)	
70982-1004		M3 internal threads	Tin	10.01 (.394)	
70982-1005		4-40 internal threads	Clear Trivalent Chromate		

DMS-59™
Shielded I/O Cable Assembly

88759
DMS-59 To Dual VGA
DMS-59 To VGA/DVI Analog
DMS-59 To Dual DVI Analog
DMS-59 To Dual DVI Digital



Features and Benefits
- Keyed (void pin number 58) to ensure exclusive mating of receptacle with DMS-59 cable assemblies
- Proven LFH™ (Low Force Helix) high-cycle contact interface system for reliable system life
- Cable assemblies are available in a variety of lengths and configurations

Reference Information
Product Specification: PS-88768-5300
Packaging: Bag
Mates With: DMS-59 receptacle
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 1.0A
Contact Resistance: 50 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 100 Megohms min.

Mechanical
Insertion Force: 53N max.
Withdraw Force: 22N min.
Durability: 5000 cycles

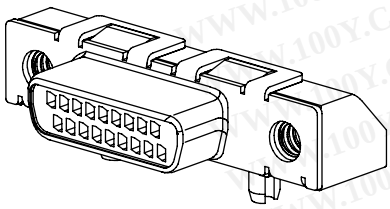
Physical
Housing: White glass-filled LCP, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—0.75µm (30µ") min. Gold
Underplating: Nickel
Wire Gauge: 30 AWG

Cable Length (mm)	Order No.	Cable Assembly Description	Lead-free
200	88768-5200	DMS-59-Male to Two VGA-Female Cable Assembly	Yes
	88768-5300	DMS-59-Male to Two DVI-I-Female Cable Assembly	
	88768-5400	DMS-59-Male to VGA-Female + DVI-I-Female Cable Assembly	
2000	88768-5500	DMS-59-Male to Two DVI-D-Male Single Link Cable Assembly	
3000	88768-5510		

www.molex.com/product/io/dms59.html

1.27mm (.050") Pitch TDP™
Triad Differential Pair Receptacle

74960
SMT, Right Angle



Features and Benefits
- Ideal for LVDS applications requiring differential pair capabilities
- The shieded, dual row interface offers high-speed and 100-ohm controlled impedance with data rates up to 5 Gbs
- Inline SMT leads on 0.64mm (.025") pitch provide direct PCB routing
- High cycle LFH™ shrouded contact system provides 2 points of contact for optimal signal integrity
- Optional jack posts available in 4-40 or M3 threads for use with jackscrews for positive mating retention

Reference Information
Product Specification: PS-74960-000
Packaging: Embossed Tape
Mates With: 75000 plug
Use With: 74962 jackposts
Designed In: Millimeters

Electrical
Voltage: 40V
Current: 1.5A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.
Differential Impedance:
2.5Gbps: 100 ± 10 ohms at 150psec risetime
5.0Gbps: 100 ± 18 ohms at 75psec risetime

Mechanical
Contact Insertion Force: 0.60N (0.13 lbf) per circuit
Insertion Force to PCB: 44.50N (10.00 lbf) total
Mating Force: 11.17N (2.51 lbf) per circuit
Unmating Force: 6.7N (1.5 lbf) per circuit
Normal Force: 75 g
Durability: 5,000 cycles

Physical
Housing: Black LCP, UL 94V-0
Contact: Copper Alloy
Plating: 15µ" min. Select Gold
Shield: Deep-drawn Steel

Circuits	Order No.	Threaded Inserts*	Lead-free
18	74960-2018	4-40	Yes
28	74960-2028		
48	74960-2048		

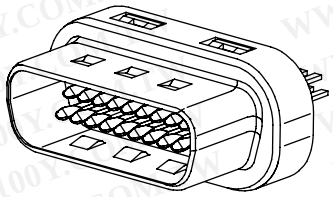
* Also available with M3 threaded inserts

www.molex.com/product/tdp.html

1.27mm (.050") Pitch TDP™ Triad Differential Pair Cable Plug

75000

Wire Terminated



Features and Benefits

- Ideal for LVDS applications requiring differential pair capabilities
- The shielded, dual row interface offers high-speed and 100-ohm controlled impedance with data rates up to 5 Gbs
- First-mate/last-break pins 9 and 10 prevent damage to electrical circuitry when "hot plug" mating
- LFH™ contact design provides shallow mating angle, reducing insertion forces
- Terminates to 24 to 32 AWG high-performance wire through soldering or resistance welding
- Standard and custom cable assemblies available, 79925 series

Reference Information

Product Specification: PS-74960-000
Packaging: Tubes
Mates With: 74960 receptacle
Use With: 75115 backshell
Designed In: Millimeters

Electrical

Voltage: 40V
Current: 1.5A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 100 Megohms min.
Differential Impedance:
2.5Gbps: 100 ± 10 ohms at 150psec risetime
5.0Gbps: 100 ± 18 ohms at 75psec risetime

Mechanical

Contact Insertion Force: 0.60N (0.13 lbf) per circuit
Insertion Force to PCB: 44.50N (10.00 lbf) total
Mating Force: 11.17N (2.51 lbf) per circuit
Unmating Force: 6.7N (1.5 lbf) per circuit
Normal Force: 75g
Durability: 5,000 cycles

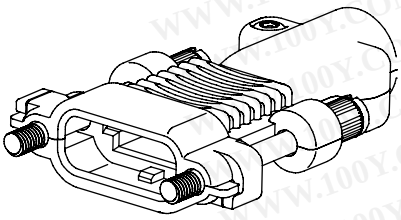
Physical

Housing: Black LCP, UL 94V-0
Contact: Copper Alloy
Plating: 15µ" min. Select Gold
Shield: Deep-drawn Steel

Circuits	Order No.	Description	Lead-free
18	75000-1018	Plug assembled with pre-trimmed tails	Yes
28	75000-1028		
48	75000-1048	Plug assembled with pre-trimmed tails	

1.27mm (.050") Pitch TDP™ Triad Differential Pair Die Cast Backshell

75115



Features and Benefits

- Kit contains two-piece die cast shell and two threaded jackscrews for use with TDP Cable Plug Connector
- User-friendly strain relief eliminates secondary operations
- Ergonomic die-cast shell thumb grip and thumb rest for ease of mating and unmating
- Standard and custom cable assemblies available through Molex, 79925 series

Reference Information

Packaging: Bag
Mates With: 74960
Use With: 75000 and 74155
Designed In: Millimeters

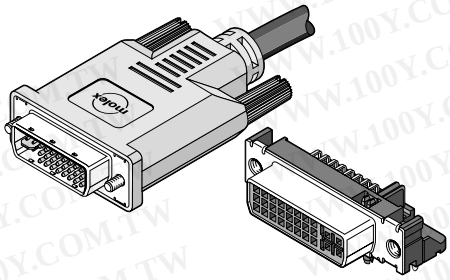
Physical

Plating: Nickel

Circuits	Order No.	Description	Cable Outside Diameter	Lead-free
18	75115-0018	Black finish with 4-40 jackscrew	7.78mm (.310")	Yes
28	75115-0028		8.51mm (.335")	
48	75115-0048		11.18mm (.440")	

Note: Also available with M3 jackscrew option, contact Molex

MicroCross™ DVI Connector Systems



FEATURES

MicroCross Receptacles: DVI-D, DVI-A and DVI-I (74320) Plugs: DVI-D Single Link, DVI-D Dual Link, DVI-A, DVI-I Single Link and DVI-I Dual Link

- MicroCross coax design supports analog video
- LFH™ contact design for high reliability
- DVI video I/O supports the DDWG (Digital Display Working Group) Digital Visual Interface standard
- Right angle and vertical receptacles as well as cable assemblies, adapters and plug components available for a complete system solution
- Surface Mount Compatible
- Saves space on the host unit by integrating functions in one connector
- Staggered contact mating for power, ground and signal sequencing
- Improved bandwidth performance—analog and digital
- Reduced crosstalk
- Impedance controlled for better high speed signal performance
- Field-proven reliability
- Provides a high cycle interface
- Reduces cable assembly need from multiple cables to one
- Fully shielded for RFI/EMI concerns
- Flexible termination capable of many wire sizes and types
- Both video connectors support plug-n-play
- First make, last break
- Protruding receptacle shield for ESD considerations

The Molex MicroCross connector family is based on an innovative use of "crossing" ground blades to provide high-speed electrical performance in a low cost connector format. It was chosen as the interface for the Digital Display Working Group (DDWG) Digital Visual Interface (DVI) standard.

DDWG's DVI standard is grouped into two separate standards, the Digital Visual Interface-Analog/Digital (DVI-I) and the Digital Visual Interface-Digital (DVI-D). This standard provides the future direction for analog and digital video interfaces for the computer industry.

The MicroCross product line is comprised of the DVI-I, the DVI-D and the DVI-A connector systems. The DVI-I supports digital and analog video interfaces whereas the DVI-D only supports a digital video interface. DVI-A supports analog video interface.

DVI provides the solution for higher digital and analog bandwidth requirements for video signaling from the host to the display. Data transfer remains in a digital format, thus eliminating conversion losses and increasing the capacity for high resolution monitors and flat panel displays.

The MicroCross product family fills the needs of the industry for an interconnect system that is low cost, provides a more reliable interface than the existing video I/O connectors, and most importantly, provides increased bandwidth and EMI performance. Where traditional connector designs begin to breakdown at 250 MHz, Molex's MicroCross DVI can provide analog performance to 2.5 GHz. In digital applications, 1.65 Gbps of throughput is provided per data channel and DVI supports 9.9 Gbps over a dual link implementation. Utilizing Molex's LFH redundant contact interface, the MicroCross provides a robust pin and shrouded receptacle design that will take the abuse in handling, provide a low connector insertion force and provide controlled contact interface surfaces, which renders reliability in high life-cycle applications through a variety of environmental conditions.

The MicroCross Product Family Supports the Following Signal Sets:

DVI-I
Analog Video Output (RGB)
DDC
Up to 2 Links of TMDS*
H/V Sync
Hot Plug Detect

DVI-D
DDC
Up to 2 Links of TMDS*
Hot Plug Detect

DVI-A
Analog video output (RGB)
DDC
H/V Sync
Hot Plug Detect

The Electrical Performance of the MicroCross Coax Lines Support:
Impedance: 75W ± 10%
Crosstalk: Less than 2% @ 1V/1n
Bandwidth: 2.5 GHz (analog)

The Electrical Performance of the MicroCross Digital Lines Support:
Impedance: 100W ± 15%
Crosstalk: Less than 5% @ 1.65 Gbps channel data rate
Bandwidth:
DVI Single Link (4.95 Gbps or 1.65 Gbps per data pair) 3 data pairs
DVI Dual Link (9.9 Gbps or 1.65 Gbps per data pair) 6 data pairs
Note: Zero skew within data pairs

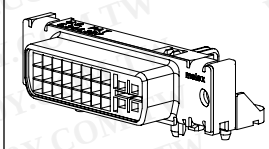
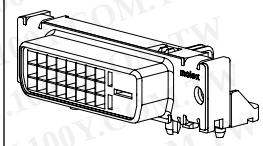
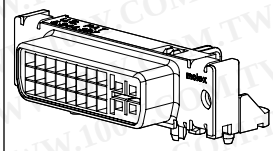
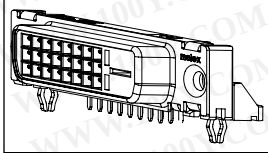
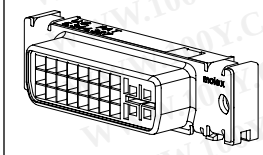
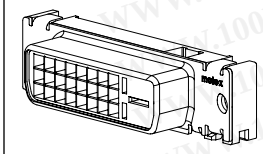
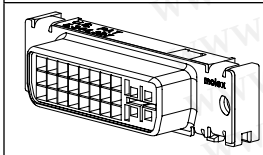
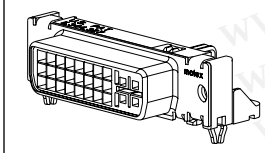
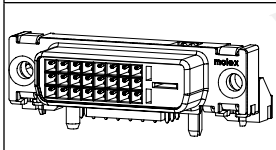
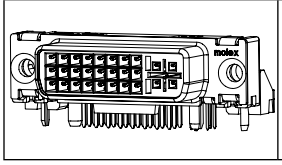
MicroCross™ DVI Connector System Digital Visual Interface Standard

Features

- Through Hole
- Housings: Glass-filled thermoplastic, UL 94V-0
- Contacts: Copper Alloy
- Plating: Gold flash or 30µ" Gold

Specifications

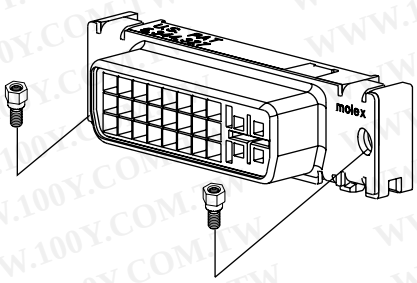
Voltage: 40V
Current: 3.0A

	Description	Options	Order No.	
			Gold Flash	30µ" Gold
	DVI-I Right Angle Digital/Analog Receptacle	PCB Retention: Peg	74320-1004	74320-1000
	DVI-D Right Angle Digital Receptacle	PCB Retention: Peg	74320-4004	74320-4000
	DVI-A Right Angle Analog Receptacle	PCB Retention: Peg	74320-1009	74320-1008
	DVI-D Right Angle Digital ATX Receptacle with Forklocks	PCB Retention: Forklock	74320-9004	74320-9000
	DVI-I Vertical Digital/Analog Receptacle	PCB Retention: Peg	74320-3004	74320-3000
	DVI-D Vertical Digital Receptacle	PCB Retention: Peg	74320-5004	74320-5000
	DVI-A Vertical Analog Receptacle	PCB Retention: Peg	74320-3009	74320-3008
	DVI-I Right Angle Digital/Analog Receptacle with Forklocks	PCB Retention: Forklock	74320-9014	74320-9010
	DVI-D Right Angle Digital Extended Height Receptacle	PCB Retention: Peg	74320-2010	74320-2011
	DVI-I Right Angle Digital/Analog Extended Height Receptacle	PCB Retention: Peg	74320-2020	74320-2021

MicroCross™ DVI-A Analog Visual Interface Receptacle Header and Hardware

74320

Panel Mount Through Hole Vertical



Order No.	Plating	Lead-free
74320-3008	30µ" Gold	Yes
74320-3009	Gold Flash	

Please contact Molex for additional tail length options

Features and Benefits

- Supports analog signal and offers excellent EMI/RFI performance
- Plug and play interface
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface compliant
- The MicroCross coaxial section supports a high bandwidth up to 2.5 GHz analog signal
- Selectively loaded circuits reduce cost

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates with: 88741, 74323 and other plug components
Designed In: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb. min.
Insertion Force to PCB: 10 lb. max.
Mating Force: 10 lb. max.
Unmating Force: 2.2 lb. min.
Durability: 100 cycles

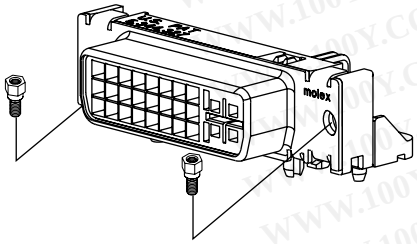
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact—30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI-A Analog Visual Interface Receptacle Header and Hardware

74320

Panel Mount Through Hole Right Angle



Order No.	Plating	Lead-free
74320-1008	30µ" Gold	Yes
74320-1009	Gold Flash	

Please contact Molex for additional tail length options

Features and Benefits

- Supports analog signal and offers excellent EMI/RFI performance
- Plug and play interface
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface compliant
- The MicroCross coaxial section supports a high bandwidth up to 2.5 GHz analog signal
- Selectively loaded circuits reduce cost

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates with: 88741, 74323 and other plug components
Designed In: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb. min.
Insertion Force to PCB: 10 lb. max.
Mating Force: 10 lb. max
Unmating Force: 2.2 lb. min.
Durability: 100 cycles

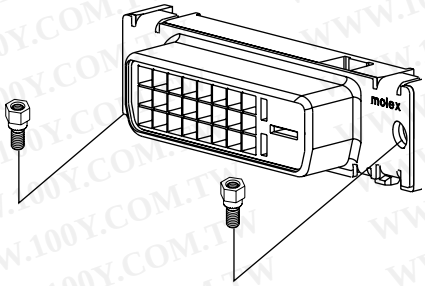
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact—30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI-D Digital Visual Interface Receptacle Header and Hardware

74320

Panel Mount Through Hole Vertical



Order No.	Plating	Lead-free
74320-5000	30µ" Gold	Yes
74320-5004	Gold Flash	

Features and Benefits

- Supports digital signals and offers excellent EMI/RFI performance
- Plug and play interface
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface
- Supports 4.95 Gbps over a single link and 9.9 Gbps performance over a dual link implementation
- Narrow key slot for polarization

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates with: Versions of 88741, 74323 and other plug components
Designed In: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1,000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb. min.
Insertion Force to PCB: 10 lb. max.
Mating Force: 10 lb. max.
Unmating Force: 2.2 lb. min.
Durability: 100 cycles

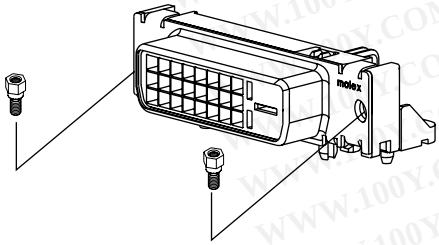
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact—30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI-D Digital Visual Interface Receptacle Header and Hardware

74320

Panel Mount Through Hole Right Angle ATX with Forklocks



Order No.	Plating	Lead-free
74320-9000	30µ" Gold	Yes
74320-9004	Gold Flash	

Please contact Molex for additional tail length options

Features and Benefits

- Supports digital signals and offers excellent EMI/RFI performance
- Plug and play interface
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface
- Supports 4.95 Gbps over a single link and 9.9 Gbps performance over a dual link implementation
- Narrow key slot for polarization

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates with: Versions of 88741, 74323 and other plug components
Designed In: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1,000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb. min.
Insertion Force to PCB: 10 lb. max.
Mating Force: 10 lb. max.
Unmating Force: 2.2 lb. min.
Durability: 100 cycles

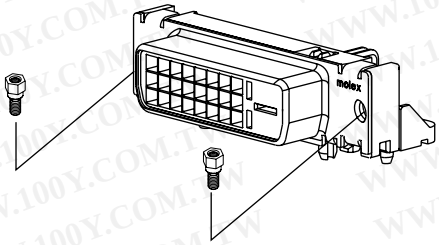
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact—30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI-D Digital Visual Interface Receptacle Header and Hardware

74320

Panel Mount Through Hole Right Angle



Order No.	Plating	Lead-Free
74320-4000	30µ" Gold	Yes
74320-4004	Gold Flash	

Please contact Molex for additional tail length options

Features and Benefits

- Supports digital signals and offers excellent EMI/RFI performance
- Plug and play interface
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface
- Supports 4.95 Gbps over a single link and 9.9 Gbps performance over a dual link implementation
- Narrow key slot for polarization

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: Versions of 88741, 74323 and other plug components
Designed In: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb. min.
Insertion Force to PCB: 10 lb. max.
Mating Force: 10 lb. max.
Unmating Force: 2.2 lb. min.
Durability: 100 cycles

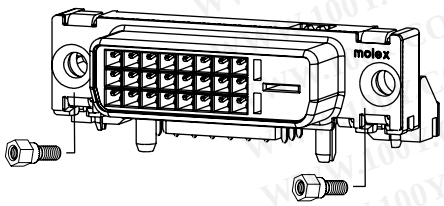
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact—30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI-D Digital Visual Interface Receptacle Header and Hardware

74320

Panel Mount Through Hole Extended Height Right Angle



Order No.	Plating	Lead-free
74320-2010	Gold Flash	Yes
74320-2011	30µ" Gold	

Please contact Molex for additional tail length options

Features and Benefits

- Supports digital signals and offers excellent EMI/RFI performance
- Plug and play interface
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface
- Supports 4.95 Gbps over a single link and 9.9 Gbps over a dual link implementation
- Narrow key slot for polarization

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates with: Versions of 88741, 74323 and other plug components
Designed in: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb min.
Insertion Force to PCB: 10 lb max.
Mating Force: 10 lb max.
Unmating Force: 2.2 lb min.
Durability: 100 cycles

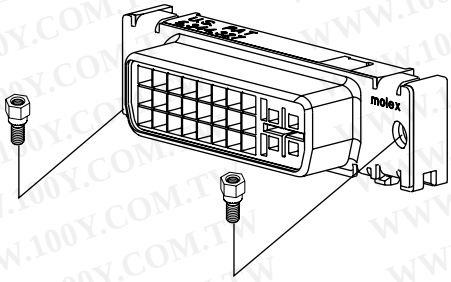
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact —30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI-I Digital/Analog Visual Interface Receptacle Header and Hardware

74320

Panel Mount Through Hole Vertical



Order No.	Plating	Lead-free
74320-3000	30µ" Gold	Yes
74320-3004	Gold Flash	

Please contact Molex for additional tail length options

Features and Benefits

- Supports both analog and digital signals
- Plug and play interface
- Excellent EMI/RFI performance
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface
- The digital section supports 4.95 Gbps over a single link and 9.9 Gbps over a dual link.
- The MicroCross coax section supports a high-bandwidth of up to 2.5 GHz analog signal

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates with: 88741, 74323 and other plug components
Designed In: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb. min.
Insertion Force to PCB: 10 lb. max.
Mating Force: 10 lb. max.
Unmating Force: 2.2 lb. min.
Durability: 100 cycles

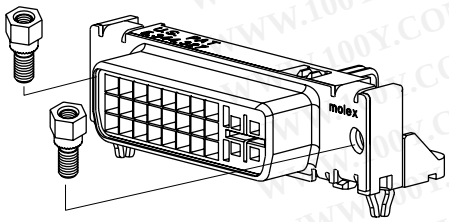
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact—30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI-I Digital/Analog Visual Interface Receptacle Header and Hardware

74320

Panel Mount Through Hole Right Angle with Forklocks



Order No.	Plating	Lead-free
74320-9010	30µ" Gold	Yes
74320-9014	Gold Flash	

Please contact Molex for additional tail length options

Features and Benefits

- Supports both analog and digital signals
- Excellent EMI/RFI performance
- Plug and play interface
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface
- The digital section supports 4.95 Gbps over a single link and 9.9 Gbps over a dual link
- The MicroCross coax section supports a high-bandwidth of up to 2.5 GHz analog signal

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates with: 88741, 74323 and other plug components
Designed In: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb. min.
Insertion Force to PCB: 10 lb. max.
Mating Force: 10 lb. max.
Unmating Force: 2.2 lb. min.
Durability: 100 cycles

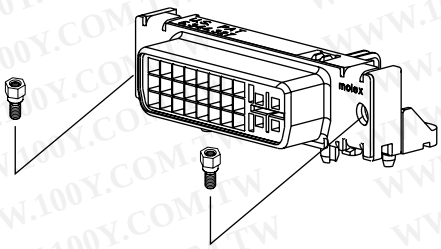
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact—30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI-I Digital/Analog Visual Interface Receptacle Header and Hardware

74320

Panel Mount Through Hole Right Angle



Order No.	Plating	Lead-free
74320-1000	30µ" Gold	Yes
74320-1004	Gold Flash	

Please contact Molex for additional tail length options

Features and Benefits

- Supports both analog and digital signals
- Plug and play interface
- Excellent EMI/RFI performance
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface
- The digital section supports 4.95 Gbps over a single link and 9.9 Gbps over a dual link.
- The MicroCross coax section supports a high-bandwidth of up to 2.5 GHz analog signal

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: 88741, 74323 and other plug components
Designed In: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb. min.
Insertion Force to PCB: 10 lb. max.
Mating Force: 10 lb. max.
Unmating Force: 2.2 lb. min.
Durability: 100 cycles

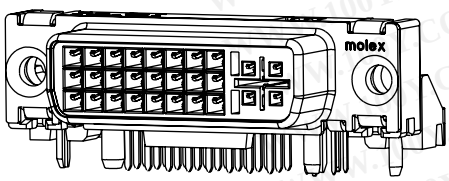
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact—30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI-I Digital/Analog Visual Interface Receptacle Header and Hardware

74320

Panel Mount, Through Hole, Extended Height Right Angle



Order No.	Plating	Lead-free
74320-2020	Gold Flash	Yes
74320-2021	30µ" Gold	

Contact Molex for additional tail length options.

Features and Benefits

- Supports both analog and digital signals
- Plug and play interface
- Excellent EMI/RFI performance
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface
- The digital section supports 4.95 Gbps over a single link and 9.9 Gbps over a dual link
- The MicroCross coax section supports a high-bandwidth of up to 2.5 GHz analog signal

Reference Information

Product Specification: PS-74320-001
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
Mates With: 88741, 74323 and other plug components
Designed In: Inches

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 1 lb min.
Insertion Force to PCB: 10 lb max.
Mating Force: 10 lb max.
Unmating Force: 2.2 lb min.
Durability: 100 cycles

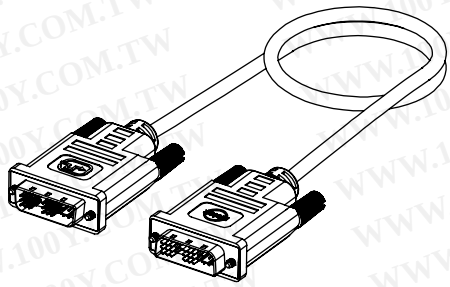
Physical

Housing: Glass-filled thermoplastic, UL 94V-0
Contact: Copper Alloy
Plating: Contact—30µ" Gold or Gold flash in contact area and 100µ" or 150µ" Tin in tail area over Nickel overall
Shields—100µ" bright Tin over Copper overall

MicroCross™ DVI Digital Visual Interface, Shielded I/O Cable Assembly

88741

DVI Cable Assembly and DVI Adapter



Features and Benefits

- Full shield provides EMI/RFI protection
- Transmits data at speeds up to 1.65 Gbps per differential pair
- LFH™ (Low Force Helix) rugged contacts offer increased life cycle durability, and mechanical and electrical reliability
- Detent feature provides grounding and secure mating retention
- Jackscrew provides positive lock to mating connector with thread 4-40 UNC-2A

Reference Information

Product Specification: PS-74320-001 and PS-88741-8800
Packaging: Bag
Mates With: 74320 receptacle
Designed In: Millimeters

Electrical

Voltage: 40V
Current: 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 1000 Megohms min.

Mechanical

Mating Force: 4.5kgf max.
Unmating Force: 1.0kgf min./4.0kgf max.
Durability: 100 cycles

Physical

Contact: Copper Alloy
Plating: Contact Area—0.75µm (30µ") min. Gold
Underplating: Nickel
Wire Gauge: 28 AWG

DVI Cable Assembly

Description	Order No.							
	DVI-Digital	P&D-Digital	DFP	Captive Cable	DVI-Digital/Analog	DVI-I-Analog	VGA	P&D-Analog
DVI-Digital To	88741-80XX Single Link (TMDS) 88741-81XX Dual Link (TMDS)	88741-85XX	88741-86XX	88741-96XX				
DVI-Digital/Analog To					88741-90XX Single Link (TMDS)			
DVI-Analog To						88741-82XX	88741-83XX	88741-84XX
Replace XX with order number code:								
	2m (6.56 ft.)		3m (9.84 ft.)			5m (16.40 ft.)		
Black	00		10			20		
White	01		11			21		

DVI Adapter

Description	Order No.			
	DVI-Digital to P&D-Digital	DVI-Digital to DFP	DVI-Analog to VGA	DVI-I-Analog/Digital to DVI-Digital
Plug to Receptacle	88741-8900	88741-8800	88741-8700	
Receptacle to Plug	88741-9200	88741-9300	88741-9100	88741-9400

1.27mm (.050") Pitch Commercial Micro-D Plug

83611/83612/83614 Vertical

Features and Benefits

- Economical solution for commercial and industrial applications requiring the density of a microminiature connector
- Rugged commercial design with a metal interface and grounding tabs for improved mechanical and electrical shield conditions

Reference Information

UL File No.: E34763

Electrical

Current: 1.0A
Contact Resistance: 8 milliohms max.

Mechanical

Contact Engagement Force: 0.5 oz. min. to 8.6 oz. max.
Unmating Force: 0.5 oz. min.

Physical

Housing: Shell—304 Stainless Steel
Insulator—LCP, UL 94V-0
Contact: Pin—Gold-plated Beryllium Copper
Jackpost: Stainless Steel

Circuits	Order No.			Lead-free
	With Jackpost	Without Jackpost	Jackpost	
9	83611-9023	83611-9206	83041-0005	Yes
15	83612-9024	83612-9205		
25	83614-9016	83612-9202		

1.27mm (.050") Pitch Commercial Micro-D Plug

83611/83612/83614 Right Angle

Features and Benefits

- Economical solution for commercial and industrial applications requiring the density of a microminiature connector
- Rugged commercial design with a metal interface and grounding tabs for improved mechanical and electrical shield conditions

Reference Information

UL File No.: E34763

Electrical

Current: 1.0A
Contact Resistance: 8 milliohms max.

Mechanical

Contact Engagement Force: 0.5 oz. min. to 8.6 oz. max.
Unmating Force: 0.5 oz. min.

Physical

Housing: Shell—304 Stainless Steel
Insulator—LCP, UL 94V-0
Contact: Pin—Gold-plated Beryllium Copper
Jackpost: Stainless Steel

Circuits	Order No.			Lead-free
	With Jackpost	Without Jackpost	Jackpost	
9	83611-9006	83611-9016	83041-0005	Yes
15	83612-9020	83612-9022		
25	83614-9012	83614-9014		

1.27mm (.050") Pitch Commercial Micro-D Plug

83619

Right Angle, Dual Stack

Features and Benefits

- Economical solution for commercial and industrial applications requiring the density of a microminiature connector
- Rugged commercial design with a metal interface and grounding tabs for improved mechanical and electrical shield conditions

Reference Information

UL File No.: E34763

Electrical

Current: 1.0A
Contact Resistance: 8 milliohms max.

Mechanical

Contact Engagement Force: 0.5 oz. min. to 8.6 oz. max.
Unmating Force: 0.5 oz. min.

Physical

Housing: Shell—304 Stainless Steel
Insulator—LCP, UL 94V-0
Contact: Pin—Gold-plated Beryllium Copper
Jackpost: Stainless Steel

Circuits	Order No.			Lead-free
	With Jackpost	Without Jackpost	Jackpost	
9	83619-9003	83619-9200	83041-0005	Yes
15	83619-9010	83619-9201		
25	83619-9011	83619-9202		

www.molex.com/product/commercial_micro_d.html

1.27mm (.050") Pitch Commercial Micro-D Cable Receptacle

83421/83422/83424

Assembled

Features and Benefits

- Economical solution for commercial applications requiring the density of a microminiature connector

Reference Information

UL File No.: E34763

Electrical

Current: 1.0A
Contact Resistance: 8 milliohms max.

Mechanical

Contact Engagement Force: 0.5 oz. min. to 8.6 oz. max.
Unmating Force: 0.5 oz. min.

Physical

Housing: Shell—Nickel-plated 1008LC Steel
Insulator—LCP, UL 94V-0
Contact: Socket—Gold-plated Copper alloy
Boot: Santoprene
Jackscrew: Stainless Steel

Circuits	Order No.			Description	Lead-free
	18"~1"	36"~1"	72"~1"		
9	83421-9042	83421-9043	83421-9044	9 Circuit CMD Single End Cable Assembly	Yes
15	83422-9007	83422-9013	83422-9018	15 Circuit CMD Single End Cable Assembly	
25	83424-9019	83424-9020	83424-9021	25 Circuit CMD Single End Cable Assembly	
9	83421-9049	83421-9050	83421-9051	9 Circuit CMD to 9 Circuit CMD Cable Assembly	
15	83422-9053	83422-9054	83422-9055	15 Circuit CMD to 15 Circuit CMD Cable Assembly	
25	83424-9057	83424-9058	83424-9059	25 Circuit CMD to 25 Circuit CMD Cable Assembly	
9	83421-9039	83421-9040	83421-9041	9 Circuit CMD to 9 Circuit Female Standard D-Sub Cable Assembly	
15	83422-9056	83422-9057	83422-9058	15 Circuit CMD to 15 Circuit Female Standard D-Sub Cable Assembly	
25	83424-9063	83424-9064	83424-9065	25 Circuit CMD to 25 Circuit Female Standard D-Sub Cable Assembly	
9	83421-9036	83421-9037	83421-9038	9 Circuit CMD to 9 Circuit Male Standard D-Sub Cable Assembly	
15	83422-9059	83422-9060	83422-9061	15 Circuit CMD to 15 Circuit Male Standard D-Sub Cable Assembly	
25	83424-9060	83424-9061	83424-9062	25 Circuit CMD to 25 Circuit Male Standard D-Sub Cable Assembly	

Cable = 28 AWG-PVC Jacket - shielded -80˚ - 300V - color coded per UL 2464 -Jacket Black

1.27mm (.050") Pitch Commercial Micro-D Cable Receptacle

83421/83422/83424

Kit

Features and Benefits

- Economical solution for commercial and industrial applications requiring the density of a microminiature connector
- "Crimp and poke" configuration designed for hand or semi-automatic crimping

Reference Information

UL File No.: E34763

Electrical

Current: 1.0A
Contact Resistance: 8 milliohms max.

Mechanical

Contact Engagement Force: 0.5 oz. min. to 8.6 oz. max.
Unmating Force: 0.5 oz. min.

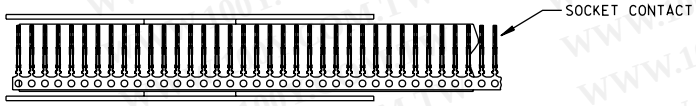
Physical

Housing: Shell—Nickel-plated 1008LC Steel
Insulator—LCP, UL 94V-0
Contact: Socket—Gold-plated Beryllium Copper
Boot: Santoprene
Jackscrew: Stainless Steel

Circuits	Order No.	Lead-free
9	83421-9014	Yes
15	83422-9014	
25	83423-9014	

Terminals

83000*



Order No.	Description
83000-9502	2,500 Piece Reel
83000-9503	50,000 Piece Reel
83000-0083	Loose

* Use with 83421/83422/83424

D-Subminiature Shielded I/O PCB Receptacle

48201

Female, Right Angle Through Hole

Features and Benefits

- Beveled metal pins provide positive PCB retention force
- Metal shell provides EMI/RFI shielding
- Intermateable with industry standard receptacles

Reference Information

Product Specification: PS-48201-001
Packaging: Tray
Mates With: 48202
Designed In: Millimeters

Electrical

Voltage: 300V DC
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention Force: 22.24N
Durability: Gold Flash—600 cycles
30µ" Gold—1000 cycles

Physical

Housing: Glass-filled polyester, UL 94V-0
Contact: Phosphor Bronze
Plating: Solder Tail Area—Tin
Underplating: 50µ" Nickel
PCB Thickness: 1.60mm (.062")

Circuits	Order No.	Lock to Mating Part	Plating Contact	Lead-free
9	48201-6041	4-40 Round Inner Thread Screws Included	30µ" Gold	Yes
	48201-6046	4-40 Hex Internal Thread Screws Included		
	48201-6043	4-40 Hex Internal Thread Screws Assemble		
	48201-6062	Screw Hole, Threaded	Gold Flash	
15	48201-6158	M3 Inner Thread Screws Included	15µ" Gold	
	48201-6157	M2.6 Inner Thread Screws Included		
	48201-6156	4-40 Hex Internal Thread Screws Included		
	48201-6155	M3 Inner Thread Screws Assemble		
	48201-6154	M2.6 Inner Thread Screws Assemble		
	48201-6153	4-40 Hex Internal Thread Screws Assemble		
	48201-6152	Screw Hole, Threaded		
	48201-6166	4-40 Hex Internal Thread Screws Included	Gold Flash	
25	48201-6367	M2.6 Inner Thread Screws Included	Gold Flash	
	48201-6366	4-40 Hex Internal Thread Screws Included		
	48201-6365	M3 Inner Thread Screws Assemble		
	48201-6364	M2.6 Inner Thread Screws Assemble		
	48201-6363	4-40 Hex Internal Thread Screws Assemble		
	48201-6362	Screw Hole, Thread		
	48201-6368	M3 Inner Thread Screws Included		

D-Subminiature Shielded I/O PCB Plug

48202

Male, Right Angle Through Hole

Features and Benefits
- Beveled metal pins provide positive PCB retention
- Indents in metal shell ensure reliable grounding
- Metal shell provides EMI/RFI shielding
- Intermateable with industry standard receptacles

Reference Information
Product Specification: PS-48201-001
Packaging: Tray
Mates With: 48201
Designed In: Millimeters

Electrical
Voltage: 300V DC
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical
Contact Insertion Force: 22.25N
Durability: Gold Flash—600 cycles
30µ" Gold —1000 cycles

Physical
Housing: Glass-filled polyester, UL 94V-0
Contact: Brass
Plating: Solder Tail Area—Tin
Underplating: 50µ" Nickel
PCB Thickness: 1.60mm (.062")

Circuits	Order No.	Lock to Mating Part	Plating Contact	Lead-free
9	48202-6041	4-40 Round Inner Thread Screws Included	30µ" Gold	Yes
	48202-6042	Screw Hole, Threaded		
	48202-6043	4-40 Hex Internal Thread Screws Assembled		
	48202-6044	M2.6 Inner Thread Screws Assembled		
	48202-6045	M3 Inner Thread Screws Assembled		
	48202-6046	4-40 Hex Internal Thread Screws Included		
	48202-6047	M2.6 Inner Thread Screws Included		
	48202-6048	M3 Inner Thread Screws Included		
	48202-6062	Screw Hole, Threaded	Gold Flash	
	48202-6063	4-40 Hex Internal Thread Screws Assembled		
15	48202-6152	Screw Hole, Threaded	15µ" Gold	
	48202-6153	4-40 Hex Internal Thread Screws Assembled		
	48202-6154	M2.6 Inner Thread Screws Assembled		
	48202-6155	M3 Inner Thread Screws Assembled		
	48202-6156	4-40 Hex Internal Thread Screws Included		
	48202-6157	M2.6 Inner Thread Screws Included		
	48202-6158	M3 Inner Thread Screws Included		
25	48202-6362	Screw Hole, Threaded	Gold Flash	
	48202-6363	4-40 Hex Internal Thread Screws Assembled		
	48202-6364	M2.6 Inner Thread Screws Assembled		
	48202-6365	M3 Inner Thread Screws Assembled		
	48202-6366	4-40 Hex Internal Thread Screws Included		
	48202-6367	M2.6 Inner Thread Screws Included		
	48202-6368	M3 Inner Thread Screws Included		

High Density, DDC Compatible D-Subminiature Shielded I/O PCB Receptacle

48203

Female, Right Angle Through Hole

Features and Benefits
- DDC Compatible D-subminiature
- Beveled metal pin provides positive PCB retention
- Metal shell provides EMI/RFI shielding
- Intermateable with industry-standard receptacles

Reference Information
Product Specification: PS-48203-001
Packaging: Tray
Designed in: Millimeters

Electrical
Voltage: 300V DC
Current: 1.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 1000 Megohms min.

Mechanical
Contact Retention Force: 22.49N
Durability: Gold Flash and 15µ" Gold—600 cycles
30µ" Gold—1000 cycles

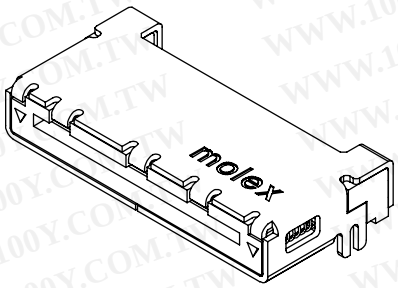
Physical
Housing: Glass-filled polyester, UL 94V-0
Contact: Phosphor Bronze
Plating: Solder Tail Area—100µ" Tin
Underplating: 50µ" Nickel
PCB Thickness: 1.60mm (.062")

Circuits	Order No.	Lock to Mating Part	Plating Contact	Lead-free
15	48203-6042	Screw Hole, Threaded	30µ" Gold	Yes
	48203-6043	4-40 Hex Internal Thread Screws Assembled	30µ" Gold	
	48203-6056	4-40 Hex Internal Thread Screws Included	15µ" Gold	
	48203-6062	Screw Hole, Threaded	Gold Flash	
	48203-6065	M3 Inner Thread Screws Assembled		
	48203-6763	4-40 Hex Internal Thread Screws Assembled		
	48203-6772	Screw Hole, Threaded		

0.50mm (.020") Pitch Shutter I/O

49045

Right Angle SMT, Shielded



Circuits	Order No.	Lead-free
24	49045-0011	Yes

Features and Benefits

- Diecast frame provides strain relief of cable to receptacle and isolates cable loads from SMT tails
- High level of pin-to-PCB compliancy aids coplanarity
- Shielded tab

Reference Information

Product Specification: PS-49045-001
Packaging: Embossed tape
Designed In: Millimeters

Electrical

Voltage: 30V max.
Current: 0.5A max.
Contact Resistance: 50 milliohms max., 100 milliohms max.
Dielectric Withstanding Voltage: 300V AC/1 min.
Insulation Resistance: 1000 Megohms min.

Mechanical

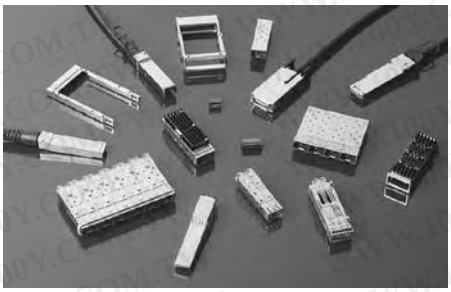
Mating Force: 19.6N max.
Unmating Force: 19.6N max.
Durability: 20,000 cycles

Physical

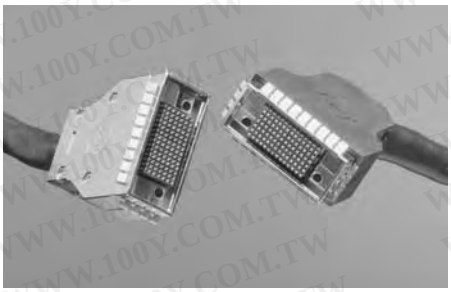
Housing: PA, UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—Gold

High-Performance Cable Assemblies

Introduction



10.0 Gbps Family



VHDM® High-Performance Cable Assembly

Small Form-factor Pluggable (SFP) Multi-port Cages

iPass™ Connnectors and Cable Assemblies for Mini-SAS and Mini-SATA

Note: VHDM is a registered trademark of Amphenol Corporation

HIGH LEVEL SUPPORT FOR HIGH-PERFORMANCE CABLE ASSEMBLIES

Developing quality, cost-effective high-performance cable assemblies requires innovation and responsiveness, which is why Molex organized our High-Performance Cable Assemblies Team.

Our interactive, person-to-person environment enables Molex to provide faster response to customer inquiries, as well as develop standard or custom solutions more cost-effectively. The centralized team structure also keeps sales and marketing personnel involved throughout the design and development process for more customer-focused solutions. We routinely conduct cross-functional, "real-life" analysis of designs prior to implementation, which results in more user-friendly products.

Molex Makes Designing High-Performance Cable Assemblies Simple

First we translate your critical design requirements like crosstalk, rise time, skew, impedance, propagation delay, capacitance and attenuation into electrical and mechanical specifications. Then we work with you to determine if one of Molex's standard interconnect products can be used "as is" or modified to meet your specifications.

If your application truly demands a custom solution, we can design and produce one cost-effectively. Our design engineers can construct computer models and test them with computer-aided electrical simulation (SPICE)—as if they were actual assemblies. Mechanical reliability and durability are calculated using Finite Element and Boundary Element Analysis. These computer programs also make it easy to create physical models and prototypes for testing purposes using Molex's in-house stereolithography, CNC and EDM systems. Once you approve the final design and prototype, Molex conducts a Process FMEA that eliminates potential failure modes from the proposed tooling design and manufacturing process.

Molex Also Provides Advanced Manufacturing for Your Cable Assemblies

Our production capabilities include computer-controlled laser wire preparation, thermo-resistance welding, ultra sonic welding, induction reflow soldering, hot bar soldering and insert molding. The finished products are subjected to Molex's stringent quality control processes, including digital/analog electrical testing.

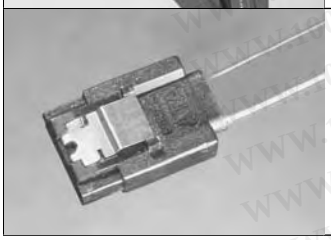
Whether you require only selected services or start-to-finish, turnkey assistance, Molex's High-Performance Cable Assemblies Team is the right choice. We have the resources and experience to meet your exact requirements and to minimize the time-to-market for your high-performance cable assemblies.

I/O Cable Assemblies

	Product	Features and Benefits
	**CradleCon™**	• Compact 3.85mm (.152") design to save space • Highly reliable: 10,000 mating cycles • Blind-mating guides to accommodate cradles
	**DMS-59™**	• Rugged LFH™ contact design provides 2 points of contact for optimal signal integrity and reduces insertion force to ensure high reliability • Keyed by voiding out pin 58 • Meets VESA standard
	**HandyLink™**	• Receptacles feature a high-temperature thermoplastic housing that withstands lead-free processing • Plugs are offered in both PCB and wire termination versions to provide design flexibility • Robust cradle design with parts offered in both perpendicular or parallel mounting to PCB, which provides optimal design flexibility for all docking applications
	**High Definition Multimedia Interface* (HDMI)**	• Carries uncompressed audio/video in a single cable at speeds up to 5.0 Gbps • Fully shielded for ESD protection • Mounting flange to protect solder joints and to provide additional grounding
	**IEEE 1394 IEEE 1394b**	• Hot-plugging capability • Peer-to-peer connection system which enables a dense multimedia data stream between products at a speed of 400 Mbps for IEEE 1394 and capable of S3200 for IEEE 1394b-2002 • Keyed to eliminate mismating
	**LFH™**	• Highly reliable: 5,000 mating cycles • Shielded to protect signal integrity • Low mating force
	**MicroCross™ DVI and Adapters**	• Single and dual-link digital signaling allows for high-speed digital transmission (4.95 or 9.9 Gbps) • Analog coaxial lines allow for high-speed analog transmission (2.5 GHz) • Fully shielded for excellent EMI/RFI performance

*High Definition Multimedia Interface and HDMI are trademarks of HDMI Licensing, LLC

I/O Cable Assemblies

	Product	Features and Benefits
	**Modular Plug Assemblies**	• Short and long body styles available to provide design flexibility for standard applications • Protective strain relief covers available to protect wiring • Variety of circuit sizes and plating options
	**Ultra+™ VHDCI**	• Interface dimensions conform to IEC-48B (SEC) 199 specifications • Blank tuning fork terminal for smooth contact and reliability • IDT plug terminates with discrete wire (28 AWG) or flat ribbon cable (.025 to 30 AWG)
	**TDP™**	• High-cycle LFH™ shrouded contact system provides two points of contact for optimal signal integrity • Fully shielded for excellent EMI/RFI performance • Triad contact configuration optimizes bandwidth
	**USB OTG (On-the-Go)**	• Highly reliable: 5,000 mating cycles • Fully shielded for excellent EMI/RFI performance • Up to 127 different peripherals can be connected to this common interface standard
	**SAS Internal**	• Disk/Backplane Interoperability with SATA—to give flexibility to specify best drive for intended use: SAS for transaction/online performance and reliability, Serial ATA for near line and backup/restore storage • 3.0 Gbps transfer rate—to set new standards for enterprise-class performance, second generation on track for 6.0 Gbps throughput • Compact cabling and connectors—to simplify cable routing, saves space and improves airflow/cooling in system cabinets, connectors easily fit on small form factor devices
	**Serial ATA* Internal**	• Backward compatibility, which means it's compatible with existing ATA software drivers and runs on standard operating systems without modification • Scalability, which provides significant headroom for future enhancements to the computing platform as well as improvements in bandwidth performance and data transmission reliability • Cost effectiveness for greater performance improvement potential with 10 year roadmap; allows performance of internal storage devices to continue to increase unabated for years to come

*Serial ATA is a trademark of the Serial ATA℠ Trade Association