



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Achieve rates up to 120 Gbps of pluggable data over 12 lanes in one assembly with Molex's first-to-market iPass+ HSC CXP Copper and Optical System; enhanced-footprint connectors transmit signals over 10 lanes for up to 100 Gbps, meeting the new industry-leading 100 Gigabit Ethernet specification and providing a path to future terabit networks

Molex's iPass+ (HSC) CXP copper and optical system enables twelve channels of 10 Gbps data and the enhanced-footprint integrated connectors enable ten channels of 10 Gbps data, for up to 120 Gbps of total bandwidth. This new technology results in one of the fastest and highest-density I/O's on the market today. The iPass+ HSC CXP system enables pluggable copper or optical options, thereby increasing the flexibility of system-level hardware for end users. This dual-paddle-card system was adopted as the InfiniBand* CXP 12X QDR standard in July, 2008.

By leveraging high-speed wafer technology and compliant-pin tails, Molex has developed two integrated-connector offerings. The enhanced-footprint version is a high-density, 10-channel connector, conforming to IEEE 802.3ba requirements for the 10-channel 100 Gigabit Ethernet interface. The standard version is a high-density, 12-channel connector capable of achieving Quad Data Rates (QDR) of 10 Gbps. The one-piece press-fit connector and cage assembly provides one-step placement to the board and is offered in both single and stacked dual-port configurations.

Molex CXP 12X copper cables are designed to accommodate single, ganged or stacked connector configurations in extremely high-density requirements. CXP passive copper cables are available in a variety of lengths. Contact Molex for active copper-cable options and transition cables (CXP-to-QSFP and CXP-to-12x LaneLink).

The low-profile CXP optical 4.50mm round cable assemblies offer improved fiber management over traditional flat cables for connecting CXP transceivers. The CXP optical cable assemblies utilize 24 fibers using industry-standard MTP/MPO connectors, 12 transmit (TX) and 12 receive (RX), and 10 Gbps high-bandwidth (OM3) fiber. This design meets the InfiniBand bandwidth requirements for CXP modules spaced up to 300.00m (984.25'). Molex provides a complete optical CXP solution with cable assemblies and loopbacks. Products include MTP/MPO-to-LC cable assemblies for connections to Small Form-factor Pluggable (SFP) or LC patch panels. Loopback assemblies feature a compact housing that loops optical TX to RX ports for testing, burn-in and field troubleshooting.

The iPass+ Interconnect System offers connectors and cables that enable flexible-speed compatibility for applications ranging from 1 to 10 Gbps and is an ideal solution for the growing server-storage market. For additional information, visit: www.molex.com/link/cxp.html.

iPass+™ High-Speed Channel (HSC) CXP Copper and Optical System

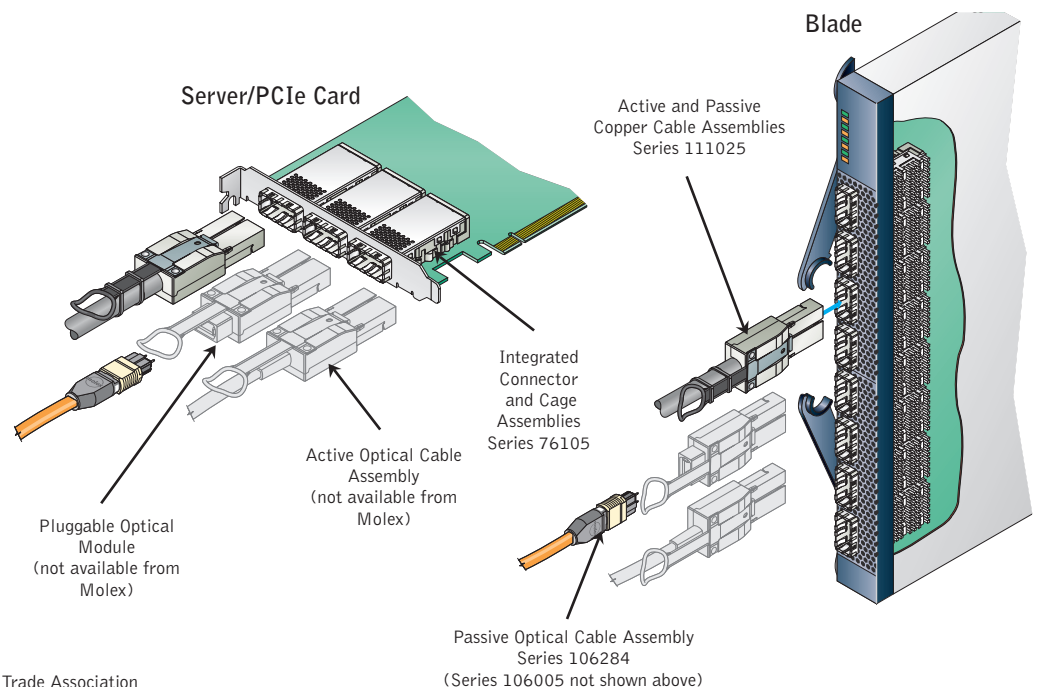
- 76105 Standard Integrated Connector
- 170465, 170501, 170502 Enhanced-Footprint Integrated Connectors
- 76024 Stacked Dual-Port Integrated Connector
- 111025 Copper Cable Assemblies
- 106284 Optical Cable Assemblies



A: CXP Optical Cable Assembly
 B: iPass+ HSC CXP Standard and Enhanced-Footprint Integrated Connectors
 C: iPass+ HSC CXP Stacked Dual-Port Integrated Connector
 D: iPass+ HSC CXP Copper Cable Assembly

MARKETS AND APPLICATIONS

- High-Performance Computing
 - Controller cards and servers
 - Switches
 - Direct Attached Storage (DAS)
- Data Centers
 - Controller cards and servers
 - Switches
 - Blades
 - Storage Attached Networks (SAN)
- Networking
 - NIC cards and servers
 - Switches
 - Routers
 - Network Attached Storage (NAS)



*InfiniBand is a registered trademark of the InfiniBand Trade Association

FEATURES AND BENEFITS

All Integrated Connectors (Series 76105, 170465, 160501, 170502)

- One-piece integrated press-fit connector and cage provides one-step placement to PCB, lowering board processing time
- Four integral screw-mount hold downs applied from the bottom of the PCB provide optimal retention of the die-cast assembly to PCB
- Two robust guide pins located on each side of the assembly ensures compliant-pin integrity during alignment to PCB
- Ground-pad alleys are located at the rear of the die-cast assembly providing ease of routing off the top layers of the PCB

Integrated Connectors, Standard and Enhanced Footprints (Series 76105, 170465)

- Series 76105 and 170465: Front elastomeric gasket provides optimized EMI protection to face plate
- Series 76105 and 170465: Profile height of 11.88mm (.468") complies with IEEE 802.3ba requirements and low-profile PCIe add-in card component height
- Series 170465: Increased signal spacing reduces cross-talk noise by 6.9mV versus standard-length CXP integrated connectors

Integrated Connectors, Enhanced Footprint, Short and Extended Profiles (Series 170501, 170502)

- Metal gasket provides optimized EMI protection to the faceplate
- Profile height of 11.30mm (.445") improves airflow over higher-profile connectors
- Belly-to-belly design allows heat-sink placement on either side of the PCB for more efficient cooling
- Increased signal spacing reduces cross-talk noise by 6.9mV versus standard-profile CXP integrated connectors

iPass+™ High-Speed Channel (HSC) CXP Copper and Optical System

- 76105 Integrated Connector, 12X
- 170465 Integrated Connector, Enhanced - Footprint, 10X
- 170501 Integrated Connector, Enhanced-Footprint, Short-Profile, 10X
- 170502 Integrated Connector, Enhanced-Footprint, Extended-Profile, 10X



iPass+ HSC CXP Standard and Enhanced-Footprint Integrated Connectors

SPECIFICATIONS

Reference Information

Packaging: PK-76105-001
 UL File No.: Pending
 CSA File No.: Pending
 Mates With: 111025
 Designed In: Millimeters

Electrical

Voltage (max.): 30V
 Current (max.): 0.5A
 Dielectric Withstanding Voltage: 500V DC
 Insulation Resistance: 1000 Megohms

Physical

Housing: High Temperature Glass-filled Thermoplastic
 Contact: Copper (Cu) Alloy
 Plating:
 Contact Area — 0.76µm min. Gold (Au)
 Solder Tail Area — 0.76µm min. Tin/Lead (Sn/Pb)
 Underplating — 2.54µm min. Nickel (Ni)
 PCB Thickness: 1.57mm (.062") min.
 Operating Temperature: -40 to +80°C

Mechanical

Insertion Force to PCB: 25N (5.62 lbf) per pin max.
 Mating Force: 210N (47.21 lb) min.
 Unmating Force: 42N (9.44 lb) min.
 Durability (min.): 250 cycles

ORDERING INFORMATION

Order No.	Footprint	Connector Length	Profile Height	Specification Requirement	Cover	EMI Gasket	Lanes	Circuit Size
76105-0584	Standard	Standard	11.88mm	InfiniBand	Yes	Front elastomeric	12	84
170465-0002	Enhanced	Standard	11.88mm	100 Gigabit Ethernet	Yes	Front elastomeric	10	84
170465-0102	Enhanced	Standard	11.30mm	100 Gigabit Ethernet	No	Front elastomeric	10	84
170501-0001*	Enhanced	Standard	11.30mm	100 Gigabit Ethernet	No	Metal finger	10	84
170502-0001*	Enhanced	Extended	11.30mm	100 Gigabit Ethernet	No	Metal finger	10	84

Note: All connectors have 84 circuits; enhanced-footprint connectors do not use all terminals
 *Contact Molex Customer Service to order parts.

FEATURES AND BENEFITS

- Two 12x ports in a stacked configuration accepts industry-standard cabling while providing optimal bandwidth in the same PCB beach front as the single port; height fits within a 1U Rack-mount enclosure
- One-piece integrated press-fit connector and cage provides one-step placement to PCB, lowering board processing time
- Four integral screw-mount hold downs applied from the bottom of the PCB provide optimal retention of the die-cast assembly to PCB without taking up additional board real estate
- Two robust guide pins located on each side of the assembly ensures compliant-pin integrity during alignment to PCB
- Front elastomeric gasket and electro magnetic interference (EMI) fingers provide optimized EMI protection to face plate
- Ground-pad alleys located at the rear of the diecast assembly provide ease of routing off the top layers of the PCB

molex

iPass+™ High-Speed Channel (HSC) CXP Copper and Optical System

76024 Stacked Dual-Port Integrated Connector

SPECIFICATIONS

Reference Information

Packaging: PK-76024-001
UL File No.: Pending
CSA File No.: Pending
Mates With: 111025
Designed In: Millimeters

Electrical

Voltage (max.): 30V
Current (max.): 0.5A
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 1000 Megohms

Mechanical

Insertion Force to PCB: 25N (5.62 lbf) per pin max.
Mating Force: 210N (47.21 lb) min.
Unmating Force: 42N (9.44 lb) min.
Durability (min.): 250 cycles

Physical

Housing: High Temperature Glass-filled Thermoplastic
Contact: Copper (Cu) Alloy
Plating:
Contact Area — 0.76µm min. Gold (Au)
Solder Tail Area — 0.76µm min. Tin/Lead (Sn/Pb)
Underplating — 2.54µm min. Nickel (Ni)
PCB Thickness: 1.57mm (.062") min.
Operating Temperature: -40 to +80°C



ORDERING INFORMATION

Order No.	Plating	Circuit Size	Plant No. for Samples
76024-0568	0.76µm Min. Gold	168	3109

FEATURES AND BENEFITS



- Built to CXP specifications to be compliant up to QDR speeds per InfiniBand Architecture Specification Volume 2, 1.2.1
- Dual paddle-card design provides cost-effective, high-density solution; each cable port is capable of up to 120 Gbps
- Zinc die-cast back shells on cable plug provides 360° electro magnetic interference (EMI) signal shielding
- Ergonomic “pull-to-release” latching system enables low-impact cable disengagement
- Supports serial ID functionality allows individual cable identification
- Hot pluggable cable allows insertion and removal of plug without powering down the system

iPass+™ High-Speed Channel (HSC) CXP Copper and Optical System

106284 Optical Cable Assemblies

SPECIFICATIONS

Reference Information

Packaging: Bag and Box
Mates With: 76105
Designed In: Millimeters

Mechanical

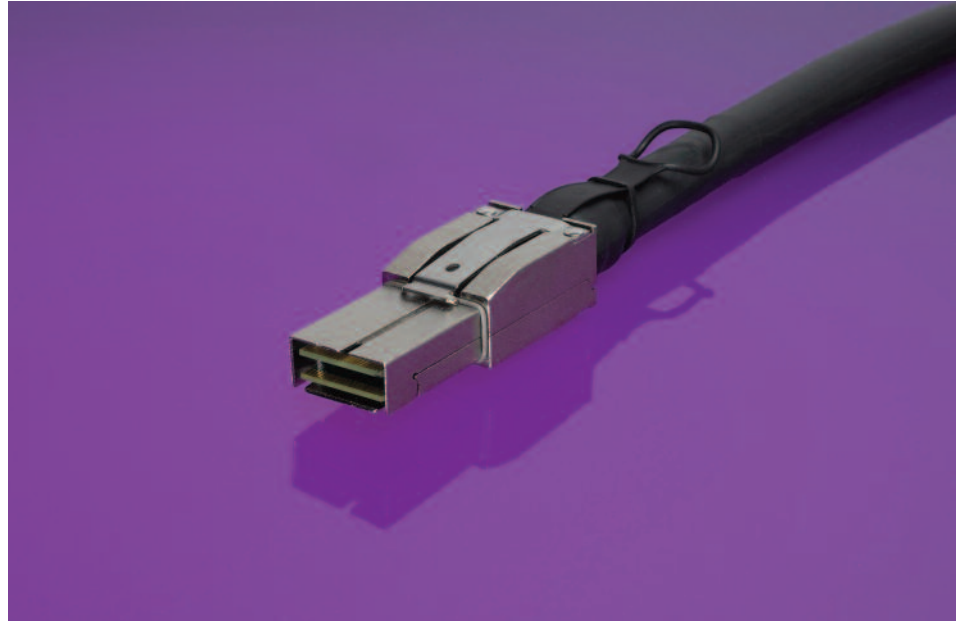
Mating Force: 210N (47.21 lb)min.
Unmating Force: 42N (9.44 lb) min.
Durability (min.): 250 cycles

Electrical

Voltage (max.): 30V AC
Current (max.): 0.5A

Physical

Housing: Zinc diecast
Contact Area: Gold (Au) over Nickel (Ni)
Plating: Nickel (Ni)
Operating Temperature: -40 to +80°C



ORDERING INFORMATION

Order No.	Length	Order No.	Length
111025-1200	0.50m (1.64ft)	111025-1205	5.00m (16.40ft)
111025-1201	1.00m (3.28ft)	111025-1206	6.00m (19.69ft)
111025-1202	2.00m (6.56ft)	111025-1207	7.00m (22.97ft)
111025-1203	3.00m (9.84ft)	111025-1208	8.00m (26.25ft)
111025-1204	4.00m (13.12ft)	111025-1210	10.00m (32.81ft)

FEATURES AND BENEFITS

- MTP/MPO CXP connector interface meets CXP interface specifications
- Low-profile, round cable design for improved cable management over flat cable, with 360° cable-routing capability
- Up to 10 Gbps data rate capability provides optimized bandwidth by application
- RoHS compliant to meet environmental requirements for electronic equipment and accessories

iPass+™ High-Speed Channel (HSC) CXP Copper and Optical System

106284 Optical Cable Assemblies

SPECIFICATIONS

Reference Information

Packaging: Individual pack in a bag
Mates With: CXP Optical Transceivers

Optical

Fiber Specifications:
Fiber Count: 24 fibers (12 TX / 12 RX)
Multi Mode: 50/125µm
Insertion Loss at Test:
Multi Mode: 0.22dB Typical; ≤0.75dB max.
Connector to Connector: MTP to MTP
Bandwidth: See table below

Mechanical

Bend Radius: 50.8mm (2.00") min.
long-term

Physical

Jacket Dimensions:
Interconnect Cables – 1 to 20 meters:
4.50mm (.177")
Distribution Cables – 21 to 300 meters:
5.40mm (.213")
Fire Rating:
OFNR (Riser): Lengths less than or equal to 20 meters
OFNP (Plenum): Lengths over 20 meters
Operating Temperature: 0 to +70°C
Storage Temperature: -40 to +70°C



BANDWIDTH SPEEDS

	Overfilled Launch Bandwidth, Min. (MHz-km)		1 Gigabit Ethernet Link Distance, Min. (m)		10 Gigabit Ethernet Link Distance, Min. (m)	
	850nm	1300nm	850nm	1300nm	850nm	1300nm
Standard Bandwidth	500	500	600	600	86	-
High Bandwidth	1500	500	900	550	300	-

ORDERING INFORMATION

Order No.	Bandwidth	Fire Rating	Cable Diameter	Length
106284-1001	High (10 Gbps)	OFNR (Riser)	4.50mm (.177")	1.00m (3.28')
106284-1005				5.00m (16.40')
106284-1010				10.00m (32.81')
106284-1015				15.00m (49.21')
106284-1020				20.00m (65.62')
106284-1025		OFNP (Plenum)	5.40mm (.213")	25.00m (82.02')
106284-1030				30.00m (98.43')
106284-1050				50.00m (164.04')
106284-1100				100.00m (328.08')