



# SFP+ 10 Gbps Interconnect System

- 74441** 20-Circuit Host Connector
- 74754** Single and Ganged Cages
- 74752** Passive Cable Assembly
- 76044, 76045, 76046, 76047, 76048, 76090, 76091, 76092, 76093, 76094, 76100, 76101, 76102, 76103, 76104, 76064, 76065, 76066, 76067, 76068,**
- 76352** Stacked Connectors

**SFP+ (Small Form-factor Pluggable Plus) 10 Gbps Interconnect System from Molex supports next generation speeds of standard SFP applications, with a greater range of options for increased port density.**

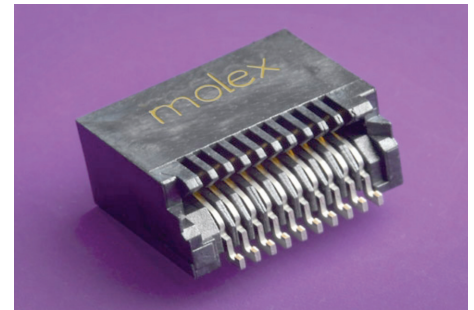
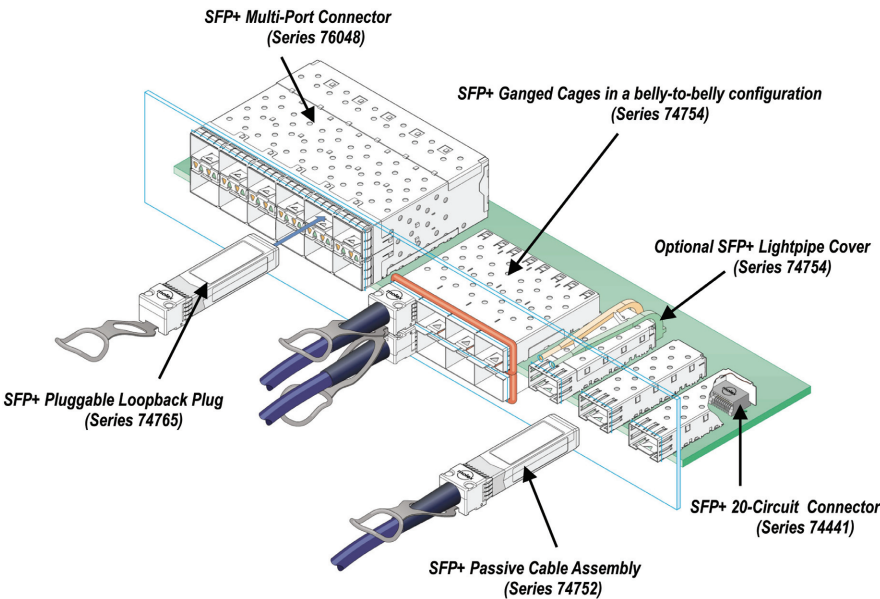
The SFP+ stacked multi-port connectors with and without light pipes are the latest additions to Molex's extensive SFP product line of connectors, cages and patch cables. SFP+ takes SFP to the next level. SFP+ interconnects are designed to support applications for 8 Gbps Fibre Channel and 10 Gbps Gigabit Ethernet, as compared to SFP, which is designed to support 1.125 Gbps Fibre Channel and 2.5 Gbps Gigabit Ethernet applications. SFP+ interconnects use the same space-per-port as standard SFP interconnects, therefore providing 11.1 Gbps capability in a space that is 30% smaller than XFP.

The SFP+ interconnect system supports the SFP+ specifications covering 6 different standards, which define data rates ranging from 8.5 to 11.1 Gbps. The SFP+ system is commonly referred to as 10 Gbps system although the specification is rated up to 11.1 Gbps. (See page 7 of product release for SFP+ standards and associated speeds).

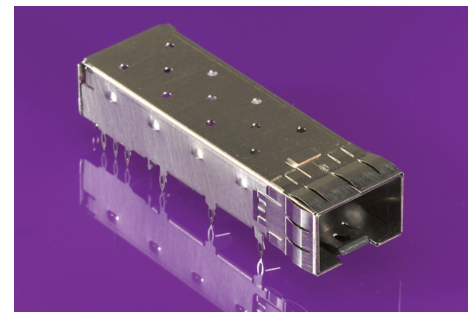
SFP+ (SFF-8431 specification) was developed under a Multi-Source Agreement (MSA) by a group of diverse companies to ensure industry-wide compatibility. The SFP+ specification addresses requirements for greater power, reduced cost and smaller footprints than existing 10 Gbps MSA's (XENPAK, XPAK, X2 and XFP).

## APPLICATIONS

- Fibre Channel and Gigabit Ethernet
- Networking
- Storage
- Telecommunications
- Hubs, Switches, Routers, Servers, Network Interface Cards (NICs)



20-Circuit Connector, Series 74441



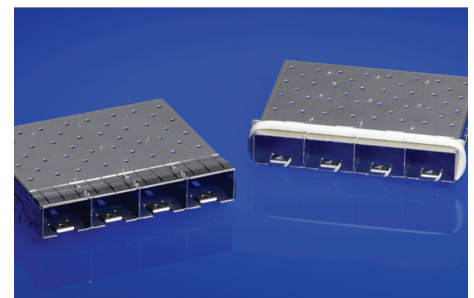
Single Cages, Series 74754



Patch Cables, Series 74752



Stacked Connector, Series 76092 (other series numbers available)



Ganged Cages, Series 74754

## FEATURES AND SPECIFICATIONS



# SFP+ 10 Gbps Interconnect System

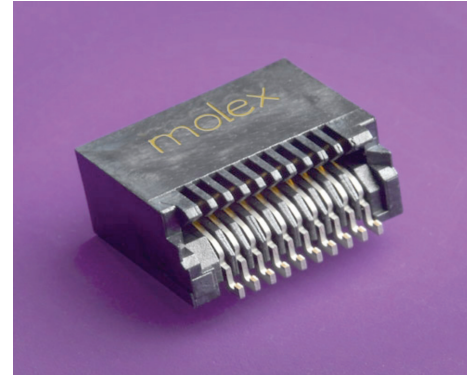
### Features and Benefits

#### SFP+ 20 Circuit Host Connector (Series 74441)

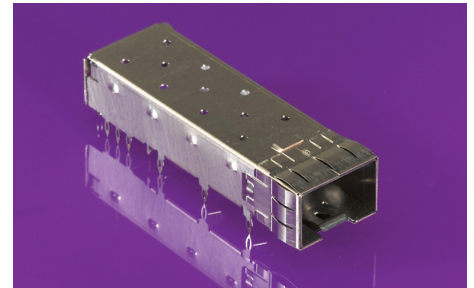
- High-speed contact design provides excellent electrical performance
- Capable of handling 10 Gbps data rates to meet SFP+ industry standard requirements
- SMT design packaged in tape and reel to ensure easy pick-and-place to the PCB
- Available in 0.38 or 0.76µm (15 or 30µ") Gold (Au) plating, accommodating cost and performance preferences
- Lubricated contacts available which are ideal for extended life and harsh environment applications, or applications that require telecom reliability levels

#### SFP+ Single and Ganged Cages (Series 74754)

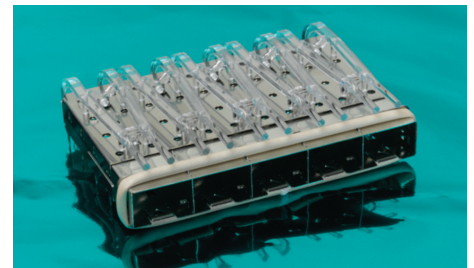
- Available in press-fit, solder-post and PCI (1°) versions to enable use with various board thicknesses and assembly processes
- Optional rear and side-mounted lightpipe cover assemblies allow for flexibility of PCB signal routing of LED's
- Newly designed spring-finger gasket for single cages provide optimal EMI grounding
- Ganged cages have 360° elastomeric gaskets, spring fingers and multiple ground-pin locations for advanced EMI shielding to the bezel
- Press-fit tails accommodate belly-to-belly applications for single and ganged cages to ensure best use of PCB real estate
- Ganged cages available with up to 6 ports provide multiple design options



20-Circuit Connector, Series 74441



Single Cages, Series 74754



Ganged Cages, Series 74754

## ORDERING INFORMATION

Order No.	Plating Gold (Au)	Comment
74441-0001	0.38µm (15µ")	-
74441-0010	0.76µm (30µ")	-
74441-0021	0.76µm (30µ")	With Lubricated Contacts
74441-5001	0.38µm (15µ")	With Modified Housing
74441-5010	0.76µm (30µ")	With Modified Housing

### Single Cages

Order No.	PCB Mounting	Pin Length
74754-0101	Press Fit	3.05mm (0.120")
74754-0102	Press Fit, Belly to Belly	2.28mm (0.090")
74754-0103	Solder Post	3.38mm (0.133")
74754-0104	Press-fit, PCI	3.05mm (0.120")
74754-0105	Press Fit, No Belly EMI Pins	3.05mm (0.120")
74754-0106	Solder Post, PCI	3.57mm (0.141")

### Ganged Cages

Order No.	PCB Mounting	Pin Length	EMI Protection	Port Size
74754-0210	Press Fit, Belly-to-Belly	3.05mm (0.120")	Elastomeric gasket	1-by-2
74754-0220	Press Fit	3.05mm (0.120")	Spring Finger gasket	1-by-2
74754-0410	Press Fit, Belly-to-Belly	3.05mm (0.120")	Elastomeric gasket	1-by-4
74754-0420	Press Fit	3.05mm (0.120")	Spring Finger gasket	1-by-4
74754-0610	Press Fit, Belly-to-Belly	3.05mm (0.120")	Elastomeric gasket	1-by-6

### Single Cages

Order No.	Port Size
74754-0011	1-by-1
74754-0021	1-by-2
74754-0041	1-by-4



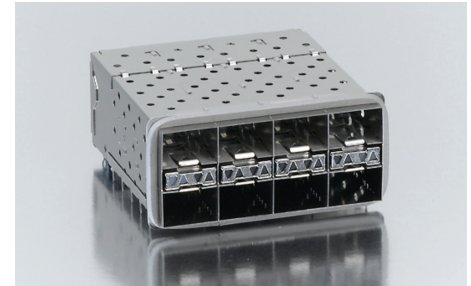
# SFP+ 10 Gbps Interconnect System

## Features and Benefits

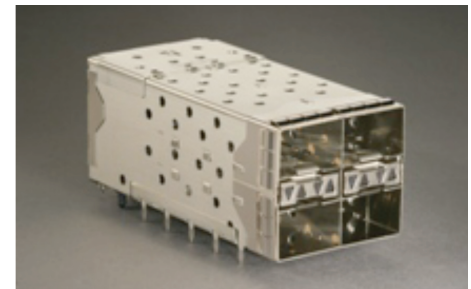
### SFP+ Stacked Multi-Port Connectors:

- Metal Gasket With Light Pipes (Series 76044, 76045, 76046, 76047, 76048, 76352)**
- Elastomeric Gasket With Light Pipes (Series 76090, 76091, 76092, 76093, 76094)**
- Elastomeric Gasket No Light Pipes (Series 76100, 76101, 76102, 76103, 76104)**
- Metal Gasket No Light Pipes (Series 76064, 76065, 76066, 76067, 76068)**

- High-speed contact wafer design supports data transmission speeds up to 10 Gbps
- Elastomeric or metal gasket provide two options for superior EMI protection
- Capable of handling 10 Gbps data rates to meet SFP+ industry requirements
- Integrated lightpipes for use with SMT Light Emitting Diode's (LEDs) provide port status and activity feedback to the user
- Design integrates 2 (2-by-1), 4 (2-by-2), 8 (2-by-4), 10 (2-by-5), 12 (2-by-6) or 16 (2-by-8) SFP+ ports and lightpipes into one assembly to increase port density and reduces assembly labor
- Press-fit termination to PCB eliminates soldering, lowering the applied cost and avoiding solder-related issues
- Modules oriented "belly-to-belly" when inserted provides ease of removal of the module from the port



2-by-4 Connector with Elastomeric Gasket, Series 76092



2-by-2 Connector with Metal Gasket, Series 76045

## ORDERING INFORMATION

Type	Elastomeric Gasket- With Light Pipes		Metal Gasket- With Light Pipes	
	Tin/Lead Plating Order No.	Tin Plating Order No.	Tin/Lead Plating Order No.	Tin Plating Order No.
2-by-1	76090-0001	76090-5001	76044-0001	76044-5001
2-by-2	76091-0001	76091-5001	76045-0001	76045-5001
2-by-4	76092-0001	76092-5001	76046-0001	76046-5001
2-by-5	76093-0001	76093-5001	76047-0001	76047-5001
2-by-6	76094-0001	76094-5001	76048-0001	76048-5001
2-by-8			76352-0001	76352-5001

Type	Elastomeric Gasket- Without Light Pipes		Metal Gasket-Without Light Pipes	
	Tin/Lead Plating Order No.	Tin Plating Order No.	Tin/Lead Plating Order No.	Tin Plating Order No.
2-by-1	76100-0001	76100-5001	76064-0001	76064-5001
2-by-2	76101-0001	76101-5001	76065-0001	76065-5001
2-by-4	76102-0001	76102-5001	76066-0001	76066-5001
2-by-5	76103-0001	76103-5001	76067-0001	76067-5001
2-by-6	76104-0001	76104-5001	76068-0001	76068-5001



# SFP+ 10 Gbps Interconnect System

## Features and Benefits

### SFP+ Passive Cable Assembly (Series 74752)

- Copper cable data transmission to meet customer requirements for speeds up to 10 Gbps and up to 25 meters
- Re-designed pull latch enables belly-to-belly cable use and ensures highest possible port density
- Improved backshell design conforms to Small Form Factor (SFF)-8431 specifications and provides the highest quality design features to ensure trouble-free operation
- Identical mechanical dimensions as standard SFP, enables backwards compatibility
- Available in passive and active designs to provide system design flexibility, minimize design requirements in the host, enables “optical module” performance, provides extended reach to 25 meters and ensures an inexpensive 10 Gbps interconnect
- EMI girdle provides superior EMI performance for up to 10 Gbps transmission



SFP+ Passive Cable Assembly, Series 74752

## ORDERING INFORMATION

Order No.	Length	Cable Gauge (AWG)
74752-1051	0.50m (1.640')	30
74752-1101	1.00m (3.280')	30
74752-2101	1.00m (3.280')	28
74752-2301	3.00m (9.843')	28
74752-3301	3.00m (9.843')	26
74752-3501	5.00m (16.404')	26
74752-4701	7.00m (22.966')	24
74752-9007	15.00m (49.213')	24

Note: Multiple lengths and cable gauges available. Contact Molex Customer Service for ordering.

[www.molex.com/product/sfp-plus.html](http://www.molex.com/product/sfp-plus.html)

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