

Quick Reference Guide
SFP Solutions

TE Connectivity offers a complete SFP product line, including single port and higher density multi-port SFP cages in single row and stacked configurations. As the market's demand for increased functionality and higher data rates continued to grow, we introduced new options, including integrated lightpipes for port indicators, connectors with improved signal integrity, enhanced EMI springs for increased EMI suppression, and riding heat sink technology for thermal management.

As a founding member and innovator for the Small Form-factor Pluggable (SFP) Multi-Source Agreement (MSA), we support the market with a full range of SFP products. From the original 20 position pluggable transceiver (PT) connector and single port cage, the product line has expanded rapidly to include many other options to increase functionality.

Other options include integrated lightpipes for port indicators and riding heat sinks for improved thermal management.

FEATURES AND BENEFITS

- Supports applications up to 4 Gb/s
- Cages available in single port, ganged, and stacked configurations
- Stacked cages have integrated connectors, press-fit in one process step
- Uses 20 position PT (Pluggable Transceiver) connector
- Direct attach copper cable assemblies for lower cost with short reach
- Integrated lightpipes for port indicators
- Enhanced EMI springs for increased EMI suppression
- Riding heat sink technology for thermal management
- RoHS compliant

PRODUCT APPLICATIONS

- Switches
- Routers
- Servers
- Hubs
- Storage
- Controllers
- Network Interface Cards (NICs)

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20 Pin SMT Connector

PN	Description
1367073-1	15 µin Au
1367073-2	30 µin Au
1658197-1	30 µin Au w/ contact surface treatment
1888247-1	30 µin Au SFP+ Compliant
1888247-2	15 µin Au SFP+ Compliant

Dust Cap

PN	Description
1367147-1	Dust Cap w/ AMP logo
1367147-3	Dust Cap w/o AMP logo
1761394-1	Dust Cap (Narrow for Multiport cages)

Cages

PN	Ports	PCB Termination	Requires Connector	Lightpipes Included	Mating Dust Cap	Belly-to-Belly Applications	Other
6367034-1	1x1	Solder	Yes	No	1367147-x	Yes	Bottom
6367035-1	1x1	Solder	Yes	No	1367147-x	Yes	Top
1489669-1	1x1	Press Fit, 8 Pins	Yes	No	1367147-x	Yes	
1489779-1	1x1	Press Fit, 20 Pins	Yes	No	1367147-x	No	
1489962-1	1x1	Solder	Yes	No	1367147-x	No	
1489962-3	1x1	Solder	Yes	No	1367147-x	No	3.5mm Tail
1367629-1	1x1	Press Fit	Yes	Yes	1367147-x	No	1.8mm Tail
1932002-1	1x1	Solder	Yes	No	1367147-x	No	Preassembled Cages
1761014-1	1x2	Press Fit	Yes	No	1761394-1	Yes	
1761007-1	1x2	Press Fit	Yes	Yes	1761394-1	Yes	
1658744-1	1x4	Press Fit	Yes	No	1761394-1	Yes	
1658723-1	1x4	Solder	Yes	No	1761394-1	Yes	
1761008-1	1x4	Press Fit	Yes	Yes	1761394-1	Yes	
1761015-1	1x6	Press Fit	Yes	No	1761394-1	Yes	
1658939-1	1x6	Press Fit	Yes	Yes	1761394-1	Yes	
1658391-1	2x1	Press Fit	Integrated	No	1761394-1	No	Standard Profile
1658628-1	2x1	Press Fit	Integrated	No	1761394-1	No	Low Profile
1658859-1	2x1	Press Fit	Integrated	Yes	1761394-1	No	Low Profile
1658390-1	2x4	Press Fit	Integrated	No	1761394-1	No	Standard Profile
1658629-1	2x4	Press Fit	Integrated	No	1761394-1	No	Low Profile
1658758-1	2x4	Press Fit	Integrated	Yes	1761394-1	No	Low Profile
1761327-1	2x6	Press Fit	Integrated	No	1761394-1	No	Standard Profile
1658894-1	2x6	Press Fit	Integrated	No	1761394-1	No	Low Profile
1658895-1	2x6	Press Fit	Integrated	Yes	1761394-1	No	Low Profile
1932068-1	1x1	Press Fit	Integrated	No	1367147-x	No	
1932069-1	1x4	Press Fit	Integrated	No	1761394-1	No	
1761967-1	1x6	Press Fit	Integrated	No	1761394-1	No	
1761896-1	1x1	Press Fit, 8 Pins	Yes	No	1367147-x	No	
1761497-1	1x1	Press Fit, 20 Pins	Yes	No	1367147-x	No	
1888424-1	1x2	Press Fit	Yes	No	1761394-1	No	
1888425-1	1x4	Press Fit	Yes	No	1761394-1	No	
1367643-1	1x1	Press Fit	Yes	No	1367147-x	Yes	See Heatsink Options
1367645-1	1x1	Press Fit	Yes	No	1367147-x	Yes	PCI Heat Sink
1367645-2	1x1	Press Fit	Yes	No	1367147-x	Yes	SAN Heat Sink
1367645-3	1x1	Press Fit	Yes	No	1367147-x	Yes	Networking Heat Sink

Note : Cages that are equipped with with heat sinks also include clips.

Heatsinks

PN	Description
1367646-1	Heat Sink Clip
1829903-2	PCI Heat Sink (4.2mm)
1829903-2	SAN Heat Sink (6.5mm)
1829905-2	Networking Heat Sink (13.5mm)

Note : Only for use with cage PN 1367643-1

Direct Attach Copper Cable Assemblies

PN	Description	Dash to Length (meters)						
		0.5	1	2	3	4	5	6
1902495	2.5 Gbps Passive	-1	-2	-3	-4	-5	-6	-7
1948134	4.25 Gbps Passive	-1	-2	-3	-4	-5	-4	-5
1948135	4.25 Gbps Active	-1	-2	-3	-4	-5	-6	

Cable Assembly Features and Benefits

- 20 Position PCB interface
- Data rates from 2.5 to 4.25Gbps
- Robust pull to release latch mechanism
- Breakout cables to CX4 and HSSDC2 are available
- Compatible with MSA compliant SFP cages
- Uses MADISON CABLE brand TURBOTWIN copper cable

Frequently asked questions

What is belly-to-belly mounting?

- Belly-to-belly mounting allows a customer to install connectors and cages on both sides of a PCB. This design reduces board space and is an alternative solution to stacked connectors.

If I am currently using SFP cabling, can I use SFP+ host board configurations?

- Yes. SFP+ configurations support higher rates. You can design SFP+ products in the host board for future upgrades.

What data rate does SFP support?

- SFP supports up to 4Gb/s.

What are the PCB termination options?

- Cages are offered in press-fit and solder PCB termination styles.

Is TE's footprint compatible with other suppliers?

- It depends. The single port cages are designed to industry standards. The ganged versions are not compatible with all other sources.

Are heat sinks available?

- Yes. Riding heat sink technology is available for thermal management.

Is application tooling required?

- Single port assemblies do not require application tooling, yet ganged assemblies do require application tooling.

FOR MORE INFORMATION

TE Technical Support Center

USA:	+1 (800) 522-6752
Canada:	+1 (905) 475-6222
Mexico	+52 (0) 55-1106-0800
Latin/S. America:	+54 (0) 11-4733-2200
Germany:	+49 (0) 6251-133-1999
UK:	+44 (0) 800-267666
France:	+33 (0) 1-3420-8686
Netherlands:	+31 (0) 73-6246-999
China:	+86 (0) 400-820-6015

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