SFP+ CONNECTOR AND CAGE

For 10Gigabit–Ethernet (10GbE), 8G Fiber Channel and 10G Fiber Channel over Ethernet applications

OVERVIEW

Small Form–Factor Pluggable Plus (SFP+) connector and cage I/O offering is designed to support high density cabling interconnect system. It supports data transmission capabilities up to 10Gb/s per channel.

The SFP+ board connector features a 20 position and 0.8mm contact centerline spacing. The Surface Mount (SMT) terminated card edge connector comes in tape and reel packaging for automated pick and place assembly.

SFP+ cage is designed with metal fingers in each cage port to protect against Electromagnetic Interference (EMI) and improve contact interface to the mating surface when inserted into the chassis opening.

The EMI metal cages are available in 1x1, 1x2, 1x3, 1x4 and 1x6 configurations. Light pipe option suitable for LED applications is also available for 1x1 and 1x4 versions. Heat sink option is applicable for all configurations.

Fully RoHS compliant, SFP+ connector and cage meets the signal integrity and EMI requirements defined by SFF–8431 specifications.



FEATURES

- Data transmission up to 10Gb/s and backward compatible with SFP
- Mates with SFP+ copper cables, SFP+ active optical cables or SFP+ optical transceivers
- Additional compliant pins options available for cages
- Insulation tape option available for cages
- EMI metal fingers are designed for each cage port with press–fit termination
- Heat sink and light pipe options available for cages
- “Belly–to–Belly” application available for 1x4 cages
- SFP+ board connectors available in gold or GXT™ plating

BENEFITS

- Supports present data rate bandwidth without system redesign
- Optimizes performance to cost
- Enables higher extraction forces if soldered
- Eliminates potential short circuits
- Protects from EMI and offers robust connection
- Provides heat dissipation to cool down devices and visual indication for safe and reliable operation
- Increases linear port density
- Optimizes performance to cost

TECHNICAL INFORMATION

MATERIALS

- Connector
  - Housing: High performance resin in black, UL94-V0
  - Contact: Copper Alloy
- Cage
  - Cage: Copper Alloy
  - EMI Metal Fingers: Stainless steel or Copper Alloy
  - Light Pipe: Clear polycarbonate
  - Heat Sink: Aluminium Alloy
  - Heat Sink Clip: Stainless Steel

ELECTRICAL PERFORMANCES

- Low Level Contact Resistance: 10mΩ

ENVIRONMENTAL

- Thermal Shock: EIA364-32
- Cycling Temperature: EIA 364-31
- High Temperature Life: EIA 364-17
- Mixed Flowing Gas corrosion (MFG): EIA 364-65
- RoHS Compliant: EU 2002/95/IEC
- Operating Temperature: -40°C to +85°C

MECHANICAL PERFORMANCE

- Durability: 250 mating cycles
- Mechanical Shock: 50G
- Random Vibration: 9.26g rms/120 minutes
- Extraction Force for Cage: 8N min. per pin

SPECIFICATIONS

- Product
  - Connector: GS-12-1141
  - Cage and Cage Assembly: GS-12-1165
- Application
  - Connector: GS-20-0385
  - Cage and Cage Assembly: GS-20-0384
- Packaging
  - Connector: GS-14-2372
  - Cage and Cage Assembly: GS-14-2344

SUPPORTED STANDARDS

- SFF-8083
- SFF-8074i
- SFF-8431
- SFF-8432
- IEEE802.3z

TARGET MARKETS/APPLICATIONS

- Data
  - Storage System
  - High-end Server
  - Networking Equipment
  - Data Center Networking
  - Fiber Channel and Gigabit Ethernet Servers
- Communications
  - Switch
  - Router

For more information,
please contact: Communications@fci.com
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Disclaimer
Please note that the above information is subject to change without notice.

PART NUMBERS

Description		Part Number
1x1 Cages	1x1 press-fit SFP+ cage with EMI fingers, 3 tails in top cage and compliant pins in bottom cage without hole	10122382-101LF
	1x1 press-fit SFP+ cage with EMI fingers, 3 tails in top cage and compliant pins in bottom cage with hole	10122382-102LF
	1x1 press-fit SFP+ cage with EMI fingers, 3 tails in top cage and no compliant pins in bottom cage	10122382-202LF
	1x1 press-fit SFP+ cage with EMI fingers, 2 tails in top cage and compliant pins in bottom cage	10122382-302LF
	1x1 press-fit SFP+ cage with EMI fingers, 2 tails in top cage and no compliant pins in bottom cage	10122382-402LF
	1x1 press-fit SFP+ cage with EMI fingers, 3 tails in top cage, compliant pins in bottom cage with hole, with insulation tape	10122382-502LF
	1x1 press-fit SFP+ cage with EMI fingers and light pipe	10126907-101LF
	1x1 press-fit SFP+ cage with EMI fingers and long distance light pipe	10126907-201LF
	1x1 press-fit SFP+ cage with EMI fingers and heat sink	10126908-101LF
1x2 Cages	1X2 press-fit SFP+ cage with EMI fingers	10127103-101LF
	1x2 press-fit SFP+ cage with EMI fingers and heat sink	10127105-101LF
	1x2 press-fit SFP+ cage with EMI fingers and compliant pins	10128841-001LF
	1x2 press-fit SFP+ cage with heat sink (low profile)	10128841-101LF
	1x2 press-fit SFP+ cage with flat heat sink	10128841-102LF
	1x2 press-fit SFP+ cage with heat sink and light pipe	10128841-201LF
	1x2 press-fit SFP+ cage with heat sink, light pipe and thermal pad	10128841-211LF
1x3 Cages	1x3 press-fit SFP+ cage with EMI fingers	10128559-001LF
	1x3 press-fit SFP+ cage with EMI fingers and heat sink	10128559-101LF
	1x3 press-fit SFP+ cage with EMI fingers, heat sink and light pipe	10128559-201LF
1x4 Cages	1x4 press-fit SFP+ cage with EMI fingers and chassis ground compliant pins	10122388-101LF
	1x4 press-fit SFP+ cage with EMI fingers and without chassis ground compliant pins	10122388-201LF
	1x4 press-fit SFP+ cage with EMI fingers and light pipe	10126909-101LF
	1x4 press-fit SFP+ cage with EMI fingers and heat sink	10126910-101LF
1x6 Cages	1x6 press-fit SFP+ cage with EMI fingers	10128842-001LF
	1x6 press-fit SFP+ cage with EMI fingers and heat sink	10128842-101LF
	1x6 press-fit SFP+ cage with EMI fingers and flat heat sink	10128842-102LF
	1x6 press-fit SFP+ cage with EMI fingers, heat sink and light pipe	10128842-201LF
SFP+ Board Connectors	SFP+ board connector with 0.76µm gold plating	10122424-101LF
	SFP+ board connector with 0.38µm GXT™ plating	10122424-901LF

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For more information,
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