

Mini-SAS (FS Series)



FS2-SF2-16C1

The Mini-SAS external I/O connector system consists of a die-cast metal cage and a Compact MultiLane SMT Connector, featuring proven “cut edge” style contacts. Providing four serial send/receive channels per port, this connector system is designed to satisfy the needs for gigabit serial data transmission applications with signal speeds across the connector interface of 6 Gbps per channel.

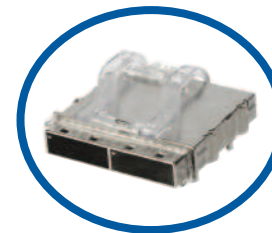
The cage is mounted separately to the body so that the stress imposed by insertion and removal of the cable plug does not affect the signal/body solder joints. The connector is available with unique solder hold-down tabs designed to provide additional mechanical robustness in demanding applications.



FS1-SF4-14E1



FS2-S02-14F1



FS1-S02-14E2-LP

Specification Highlights

The Mini-SAS interconnect system is comprised of a cage assembly which is used with 26-position, 0.8mm pitch connectors complying with SFF-8086 and SFF-8088.

Mechanical Characteristics

- Co-Planarity Specification: 0.1 mm
- Connector Insertion Force: 55.5 N max
- Connector Withdrawal Force: 49.0 N max
- Durability: 250 Mating Cycles min
- Reverse Keying for Active Copper Cables per SAS 2.0

Electrical Characteristics

- Operating Voltage: 30 V
- Operating Current: 0.5 A
- Differential Impedance: 100 Ω +/- 10 Ω
- DWV: 300 V AC
- Insulation Resistance: 1000 M Ω min
- Contact Resistance: 80 m Ω max
- Near-End Isolation: -40 dB (frequencies up to 3 GHz)
- Insertion Loss: 1.0 dB max (frequencies up to 1.6 GHz)
- Rise Time for Impedance Measurement: 50 ps
- Within Pair Skew: 5 ps

Packaging

- Tape and Reel Packaging: Connector
- Tray Packaging: Cage
- Bulk Packaging: Mounting Screw or Dust Cover

Materials

- Cage
 - Base Material: Zinc Alloy
 - Plating: Nickel
 - Mounting Screw: AISI 1010 Steel
 - Light Pipe: Optical Grade Polycarbonate
 - Dust Cover: Thermoplastic
- Connector
 - Contact Base Material: Copper Alloy
 - Contact Plating: Gold on Mating Area, Matte Tin on Termination
 - Housings: Glass Reinforced, Lead-Free Solder Reflow Process Compatible Thermoplastic, UL94V-0 Rated

Temperature Rating

- Operating Temperature: -55°C to +85°C
- Storage Temperature: -55°C to +85°C

Configurations (Rows x Ports per Row)

- 1x1
- 1x2
- 1x4

Options

- Dust Cover
- Light Pipe
- EMI Shielding
 - Conductive Elastomeric Gasket
 - Soft Shield Foam Gasket
 - Stainless Steel Gasket
- Cage Inclination from Printed Circuit Board
 - 0 degree Angle
 - 1 degree Angle (PCI Applications)
- Keying



FS1-R26-2000



FS2-SF1-12C1

Ordering Information

Mini-SAS Connector

FS1 - R26 - X 0 0 X

FS1 SERIES DESIGNATION (RoHS)

R26 STYLE
R26 - 26 position connector

X PLATING
2 - 30 μ" Gold in Mating Area; 100 μ" Matte Tin on Tails over Nickel Underplate
3 - 15 μ" Gold in Mating Area; 100 μ" Matte Tin on Tails over Nickel Underplate

OPTIONS

0 - Standard Connector
1 - Connector with Hold Down Tabs

0 - Standard

0 - Standard

X

0

0

Mini-SAS Cage

FSX - S XX - 1 X XX - XX

FSX SERIES DESIGNATION
FS1 - Standard
FS2 - With SAS 2.0 Guide Keyway
FSA - With SAS 2.1 Guide Keyway

S S - Shell

XX SIZE
01 - 1x, 1 degree
F1 - 1x, 0 degree
02 - 2x, 1 degree
F2 - 2x, 0 degree
F4 - 4x, 0 degree

1 PLATING
1 - Nickel (RoHS)

X KEYING
0 - No Key
1 - Key #1
4 - Key #4 Universal SAS Port
7 - Key #7
24 - Key #2 and #4 (SAS Out)
46 - Key #4 and #6 (SAS In)
D22 - Left Port Key #2 & #4 / Right Port Key #2 & #4
D66 - Left Port Key #4 & #6 / Right Port Key #4 & #6
D26 - Left Port Key #2 & #4 / Right Port Key #4 & #6
D62 - Left Port Key #4 & #6 / Right Port Key #2 & #4

LIGHT PIPE OPTION

Blank - No Light Pipe
LP - 2 Barrel Light Pipes (1 Light Pipe per Port)

OPTIONS

C1 - Conductive Elastomer Gasket, 8 mm Long Mounting Screw, No Lock Washer
C2 - Conductive Elastomer Gasket, No Mounting Screw
C3 - Conductive Elastomer Gasket, 10 mm Long Mounting Screw with Lock Washer
E1 - Stainless Steel Gasket, 8 mm Long Mounting Screw, No Lock Washer
E2 - Stainless Steel Gasket, No Mounting Screw
E3 - Stainless Steel Gasket, 10 mm Long Mounting Screw with Lock Washer
F1 - Foam Gasket, 8 mm Long Mounting Screw, No Lock Washer
F2 - Foam Gasket, No Mounting Screw
F3 - Foam Gasket, 10 mm Long Mounting Screw with Lock Washer

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