

NEBULA CONNECTOR SERIES

High Reliability SATA Connectors



FEATURES

- ▶ Utilises field proven Hypertac® contact technology
 - ▶ Wire basket design with 360° of contacts
 - ▶ 50% lower contact resistance than conventional contacts
- ▶ Meets mechanical footprint of standard COTS SATA device connectors
- ▶ Optional quarter-turn locking feature available
- ▶ Straddle, vertical PCB and right angle PCB production products currently available
- ▶ All materials pass NASA outgassing requirements
- ▶ Rugged mechanical design including 50 µin of gold plating on all mating surfaces

BENEFITS

- ▶ High speed design
 - ▶ Superior signal integrity beyond 6 Gbps which exceeds the data rate requirements for the SATA standard
 - ▶ Highly optimised connector design for high speed data rates, impedance matching and minimal losses
- ▶ Long contact life
 - ▶ Contacts perform up to 100,000 insertion/extraction cycles with minimal degradation in performance
- ▶ Extreme rugged performance
 - ▶ Immunity to shock and vibration fretting
 - ▶ 30 g of vibration (5 hrs. per axis)
 - ▶ 100 g of shock (6 shocks per axis)

TECHNICAL CHARACTERISTICS

Contact Diameter	0.016" (0.4 mm)
Pitch	0.05" (1.27 mm)

MECHANICAL & ENVIRONMENTAL

Contact Resistance	< 8 mΩ (per contact)
Insertion/Extraction Force	3 lbs. max./2.5 lbs. max
Connector Life Cycle	> 5,000
Temperature Rating	-55° C to 125° C
Shock	100 g, 11 ms, half sine, 6 shocks per axis
Vibration	EIA 364-28, condition V test letter A, 30 g (3 axis, 5 hrs per axis)

MATERIALS & FINISHES

Insulator	LCP
Pin	Beryllium copper 50 µin gold over nickel on mating surface, 5 µin gold over nickel on solder tails
Sockets	Brass bodies with beryllium copper contact wires 50 µin gold over nickel on mating surface, 5 µin gold over nickel on solder tails

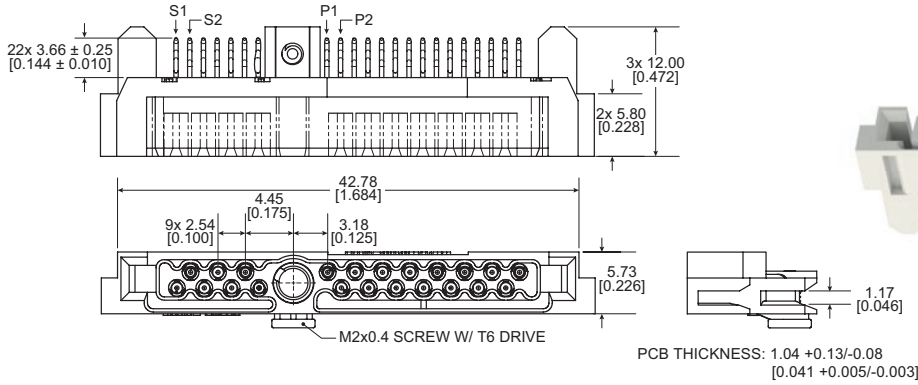
ELECTRICAL

Current Rating	1.5 A per contact
DWV	> 500V
Data Rate	> 6.0 Gbps

DIMENSIONS

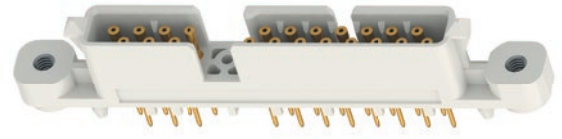
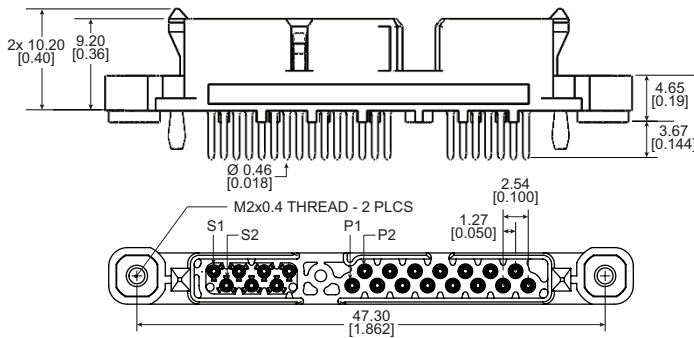
▶ STRADDLE MOUNT CONNECTOR (DEVICE)

Product P/N: KSD22-SMT00H1TAH



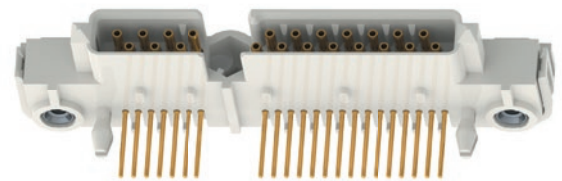
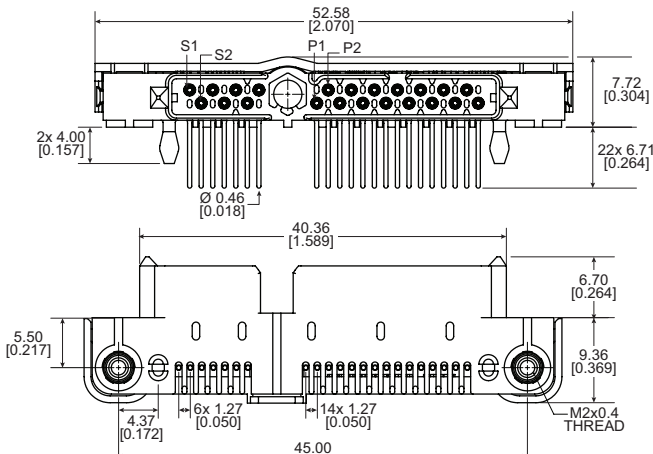
▶ VERTICAL CONNECTOR

Product P/N: KSD22-VFD04H0TAH



▶ RIGHT ANGLE CONNECTOR

Product P/N: KSD22-RFD08H0TAH



Notes:
1) Dimensions are in mm [inches]

HOW TO ORDER



1 ▶ CONNECTOR SERIES *(Fixed)*

KSD NEBULA CONNECTOR SERIES

2 ▶ NUMBER OF CONTACTS

22 CONTACTS

3 ▶ APPLICATION TYPE

S STRADDLE MOUNT **V** VERTICAL

R RIGHT ANGLE

4 ▶ INSULATOR

M PLUG *(male)* **F** RECEPTACLE *(female)*

5 ▶ TERMINATION STYLE

T00 STRADDLE MOUNT

D02 SOLDER TAIL 0.063" (1.60 mm) PCB THICKNESS⁽¹⁾

D03 SOLDER TAIL 0.096" (2.44 mm) PCB THICKNESS⁽¹⁾

D04 SOLDER TAIL 0.125" (3.18 mm) PCB

D08 SOLDER TAIL 0.250" (6.35 mm) PCB

6 ▶ LOCKING HARDWARE

H0 NO LOCKING HARDWARE

H1 QUARTER TURN FEMALE HARDWARE *(straddle)*

H2 QUARTER TURN MALE HARDWARE *(right angle)*

7 ▶ CONTACT PLATING

TAH 50 µin GOLD ON THE CONTACT MATING SURFACE

Notes:

1) Contact factory for availability