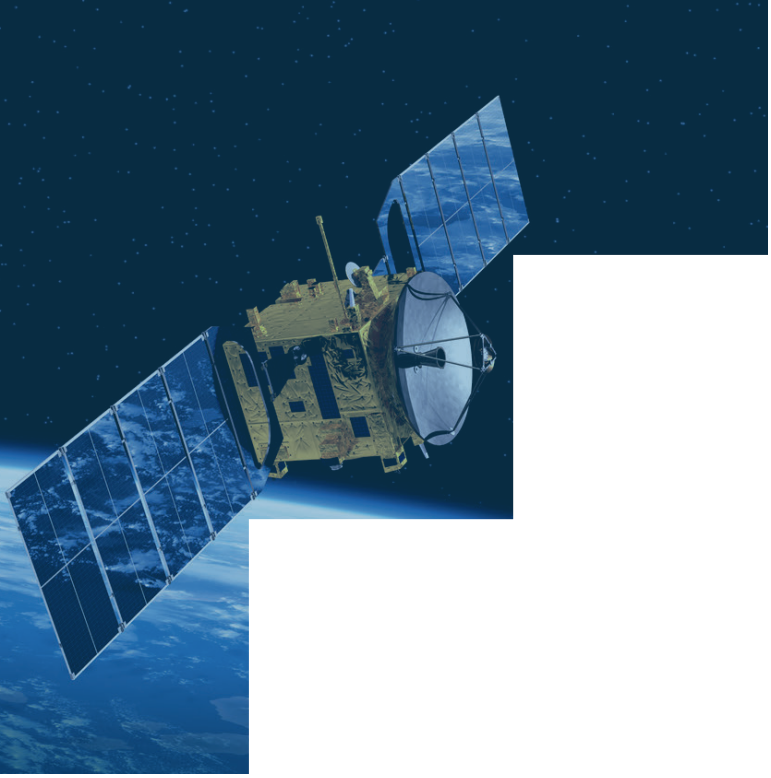


1382 West Jackson St.
Painesville, OH 44077

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Hercules™ High-Speed Micro-D

The Hercules High-Speed Micro D-Sub offers the same durable, high-bandwidth interconnect schemes for ruggedized applications as existing Hercules Interconnects, in a compact D-sub style shell. The Hercules Micro D-Sub has provisions for 360 degree EMI shielding and environmental seals to support IP67 performance. Micro D-Sub board-mount receptacles with SMT Tails come standard, and mated cable termination can support USB 3.2 Type C protocol.



Features & Benefits

- Rugged, lightweight, machined Micro D-Subminiature shellwork with gasketing for IP67 and EMI protection
- PCIe5 CEM Compliant (16 GHz, 32 Gb/s NRZ)
- Differential pairs aligned in G-S-S-G layout
- Plug-Cable Assemblies and Board-Mount Receptacles with SMT Tails standard
- Available in Shell Sizes uA-uD
- Available in positions 19, 51, 69, and 103
- Cable types available in 30 and 32 AWG
- Custom-length cable assemblies available
- Customized shells and alternative space grade versions available

Electrical Performance

- Impedance: 100 ±10Ω differential at 20ps rise time
- Cross talk: < –30 dB up to 16GHz from multiple aggressors
- Insertion Loss: < 1 dB up to 16 GHz
- Return Loss: < 10 dB up to 16 GHz
- Power Per Contact: 1 Amp
- Insulation Resistance: 300 VDC, >300 MΩ, 60s Soak
- Dielectric Withstand Voltage: 300 VDC, <1mA, 60s Soak (1000 VDC available with custom materials)

Mechanical Performance

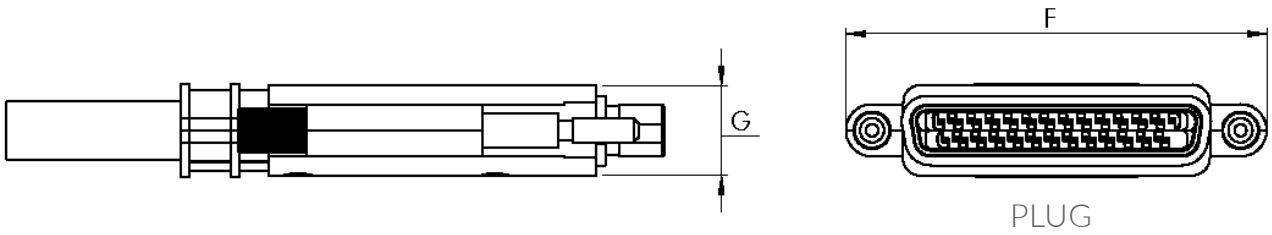
- Contact Material: Copper Alloy
- Standard Contact Finish: Nickel/Gold plating 50 µ-inch min AU
- Shell Mating Cycles: 500
- Shell Material: Aluminum Alloy
- Shell Plating: RoHS Compliant Electroless Nickel or Black Nickel Zinc (alternatives available upon request)

Environmental Performance

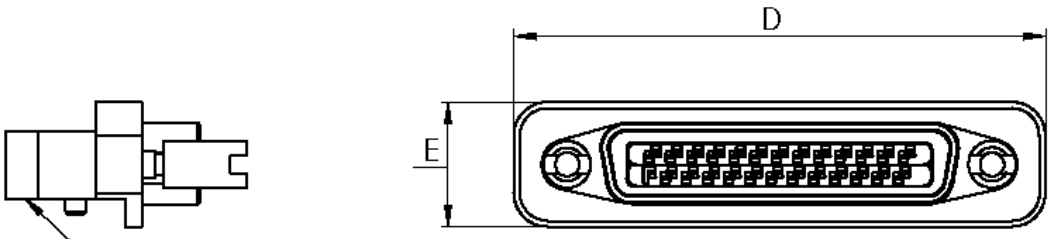
- -50 °C to +125 °C

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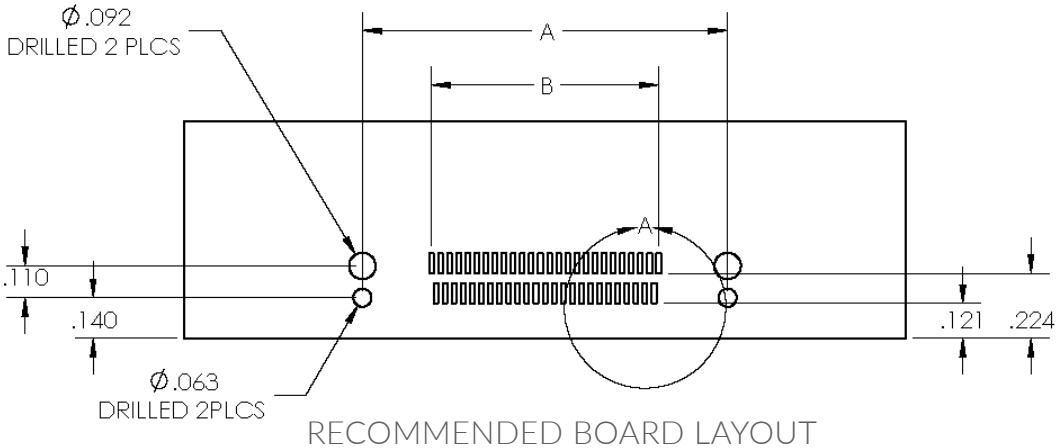
Hercules HS-MD delivers up to 32 Gb/s at a size +30% smaller than HS-D



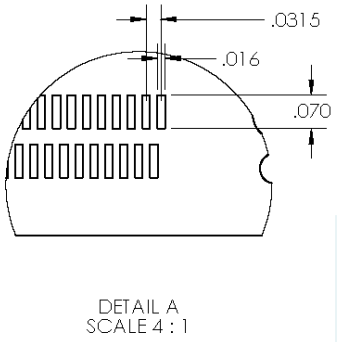
PLUG



RECEPTACLE



RECOMMENDED BOARD LAYOUT



DETAIL A
SCALE 4 : 1

Shell Size (Pin Count)	Contact Rows	Differential Pairs	Single Ended	A	B	C	D	E	F	G
uA (19)	2	4	1	0.754 [19.15]	0.284 [7.21]	0.260 [6.60]	1.070 [27.18]	0.370 [9.40]	0.934 [23.72]	0.310 [7.87]
uB (51)	2	12	1	1.265 [32.13]	0.788 [20.02]	0.260 [6.60]	1.581 [40.16]	0.370 [9.40]	1.445 [36.70]	0.310 [7.87]
uC (69)	2	16	3	1.689 [42.90]	1.071 [27.20]	0.260 [6.60]	2.005 [50.93]	0.370 [9.40]	1.869 [47.47]	0.310 [7.87]
uD (103)	2	25	2	2.225 [56.52]	1.607 [40.82]	0.260 [6.60]	2.541 [64.54]	0.370 [9.40]	2.405 [61.09]	0.310 [7.87]

All dimensions in inches with conversion to metric

Contact Us to Request a Quote!

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