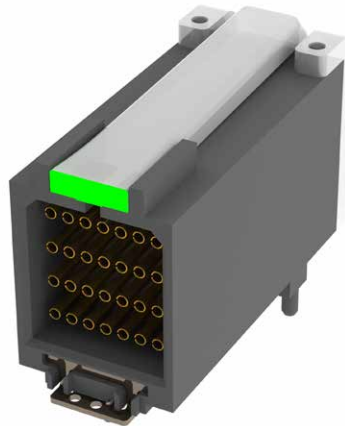


XOX HD4™

HD4™ expands on our verSI line adding high contact density in an open-pin field product. The requirements for high-speed, high-density, signal-integrity applications are assured while still delivering the reliability customers have come to expect from AirBorn.



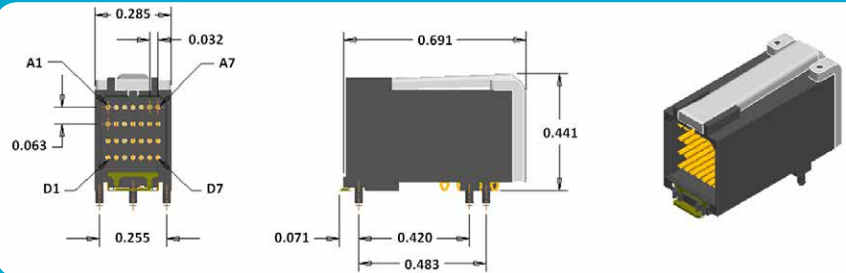


XHD4™

HD4 – Right Angle SI Connector

HD4™ high-density, signal-integrity connectors are used in right angle, PCB-mount applications where a female interface is required. HD4™ connectors allow for six 4x interfaces in the low-profile PCIe add-on card when used with part number V4001-06.

DIMENSIONS



Sample Part Number Format: HD4-04-07-50-20-LP



SERIES
Right Angle
SI Connector
(Female)



ROWS
04 – 4 Rows



COLUMNS
07 – 7 Columns



CONTACT PLATING
30 – 30 μ" Au
50 – 50 μ" Au



TERMINATION
01 – Paste-in-hole
20 – Surface-mount



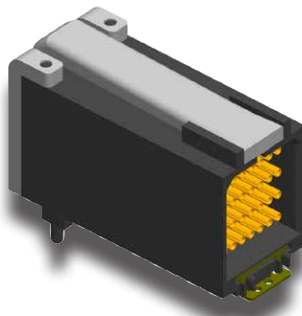
OPTIONS
LP – Light pipe
00 – Without light pipe



PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

FEATURES

HD4™ connectors feature low mating force/high-reliability contact system with four points of contact.



MATERIALS and FINISHES

Socket Contact: BeCu per UNS C17460
Contact Finish: Localized gold finish per MIL-G-45204 over nickel per
ASTM-B689 Type I
Molded Insulators: Glass-filled liquid crystal polymer (LCP) per ASTM-D5138

NOTE: AirBorn can manufacture other configurations to your exact specifications.

PERFORMANCE

Contact Rating 1 amperes maximum
Operating Temperature -55° to 125° C
Contact Wipe 1.5 mm (0.060")
Contact Normal Force 35-40 grams
Max Recommended Voltage 200 VDC
Insulation Resistance 1,000 megaohms @ 600 VDC
Durability 1000 connector mating cycles
Sinusoidal Vibration 15 g (EIA-364-28, condition IV)
Random Vibration TBD
Shock 100 g (EIA-364-27, condition G)

NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.

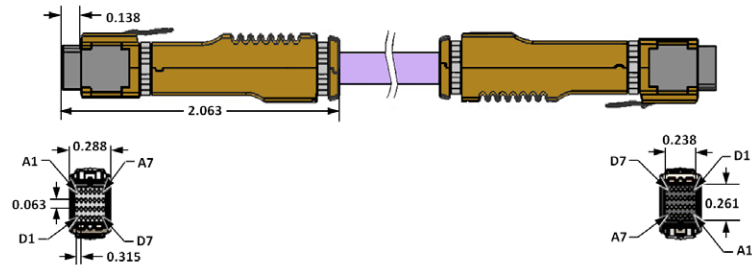


HD4™

HD4C – Differential Pair Twinax Copper Cable Assembly

HD4™ high-density cable assemblies are designed for differential pair, twinax applications. These cable assemblies come in two standard lengths but custom lengths and configurations can also be requested.

DIMENSIONS



Sample Part Number Format: HD4C-04-07-30-100-S08



HD4C
Differential Pair, Twinax Assembly, Copper

ROWS
04 – 4 Rows

COLUMNS
07 – 7 Columns

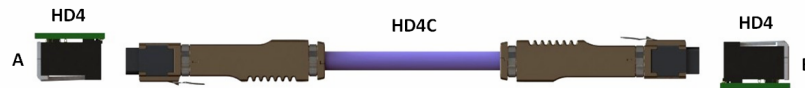
CONTACT PLATING
30 – 30 μ" Au
50 – 50 μ" Au

IMPEDANCE VALUE
085 – 85 Ω
100 – 100 Ω

WIRE TYPE
S – Solid conductor
C – Stranded wire

LENGTH*
03 – 0.3 M
04 – 0.4 M
05 – 0.5 M
06 – 0.6 M
07 – 0.7 M
08 – 0.8 M
09 – 0.9 M
10 – 1.0 M
15 – 1.5 M
20 – 2.0 M
30 – 3.0 M

Insertion Loss (Point A to Point B)



4.0 GHz = 8 Gb/s PCIe Gen III

	0.5 Meter	1 Meter	1.5 Meters	2 Meters	2.5 Meters	3.0 Meters
85 Ω	3.5 dB	7 dB	10.5 dB	14 dB	17.5 dB	21 dB
100 Ω	3 dB	6 dB	8.9 dB	11.9 dB	14.9 dB	17.9 dB

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

FEATURES

HD4™ connectors feature a low mating force/high-reliability contact system with four points of contact. HD4™ cables incorporate an integrated management interface accessed over I²C to query cable details such as unique device serial number, cable length, and cable nominal impedance.



		COLUMN						
		1	2	3	4	5	6	7
ROW	A	VDD	TX1p	TX1n	Gnd	TX3p	TX3n	SCL
	B	Gnd	TX2p	TX2n	Gnd	TX4p	TX4n	Gnd
	C	SS	Rx2p	Rx2n	Gnd	Rx4p	Rx4n	SDA
	D	Gnd	Rx1p	Rx1n	Gnd	Rx3p	Rx3n	Gnd

MATERIALS and FINISHES

Pin Contact: BeCu per ASTM-B194
Contact Finish: Localized gold finish per MIL-G-45204 over nickel per ASTM-B689 Type I
Molded Insulators: Glass-filled liquid crystal polymer (LCP) per ASTM-D5138

NOTE: AirBorn can manufacture other configurations to your exact specifications.

PERFORMANCE

Contact Rating 1 amperes maximum
Operating Temperature -55° to 125° C
Contact Wipe 1.5 mm (0.060")
Contact Normal Force 35-40 grams
Max Recommended Voltage 200 VDC
Insulation Resistance 1,000 megaohms @ 600 VDC
Durability 1000 connector mating cycles
Sinusoidal Vibration 15 g (EIA-364-28, condition IV)
Random Vibration TBD
Shock 100 g (EIA-364-27, condition G)

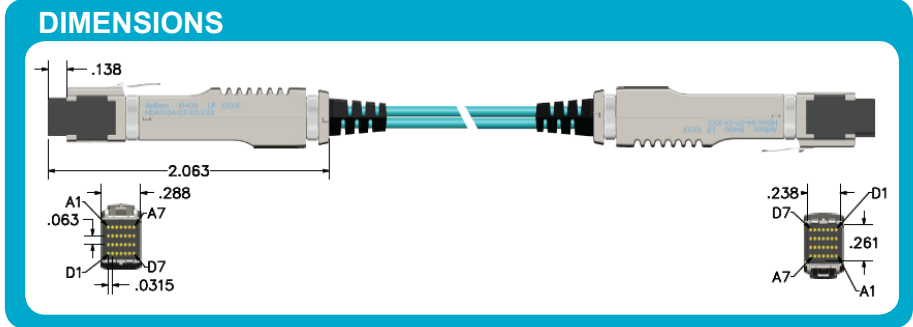
NOTE: Performance values are estimates at this time. Actual values will be determined when final product testing is complete.



HD4X

HD4X – Active Optical Cable Assembly

HD4™ high-density, active optical cable assemblies are capable of 10 Gb/s, full duplex over four independent transmit and receive channels. The HD4X AOC is interchangeable with our HD4C passive copper cable assembly having the same active electronics and board management interface.



Sample Part Number Format: HD4X-04-07-30-050



SERIES
Active Optical
Cable Assembly



ROWS
04 – 4 Rows



COLUMNS
07 – 7 Columns



CONTACT PLATING
30 – 30 μ" Au
50 – 50 μ" Au



LENGTH
005 – 5 M
010 – 10 M
015 – 15 M
025 – 25 M
050 – 50 M
075 – 75 M
100 – 100 M

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

FEATURES

HD4™ connectors feature a low mating force/high-reliability contact system with four points of contact. HD4™ cables incorporate an integrated management interface accessed over I²C to query cable details such as unique device serial number, cable length, and cable nominal impedance.



		COLUMN						
		1	2	3	4	5	6	7
ROW	A	VDD	TX1p	TX1n	Gnd	TX3p	TX3n	SCL
	B	Gnd	TX2p	TX2n	Gnd	TX4p	TX4n	Gnd
	C	SS	Rx2p	Rx2n	Gnd	Rx4p	Rx4n	SDA
	D	Gnd	Rx1p	Rx1n	Gnd	Rx3p	Rx3n	Gnd

MATERIALS and FINISHES

Pin Contact: BeCu per ASTM-B194
 Contact Finish: Localized gold finish per MIL-G-45204 over nickel per ASTM-B689 Type I
 Molded Insulators: Glass-filled liquid crystal polymer (LCP) per ASTM-D5138

NOTE: AirBorn can manufacture other configurations to your exact specifications.

PERFORMANCE

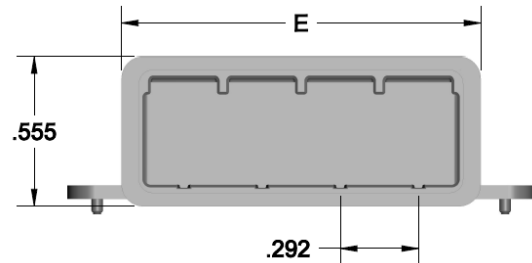
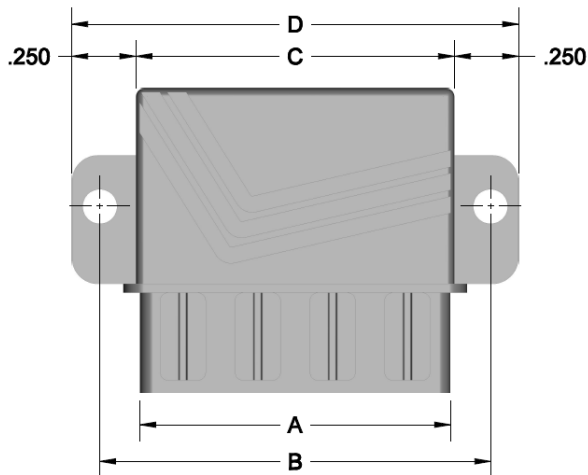
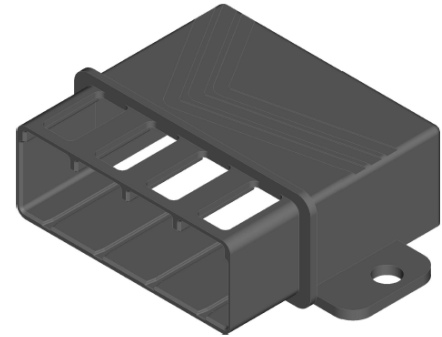
Contact Rating 1 amperes maximum
 Operating Temperature 0° to 70° C
 Operating Humidity 5 to 90%, non-condensing
 Storage Temperature -40° to 85° C
 Supply Voltage 3.05 to 3.47 V (3.3, typ.)
 Power Consumption 490 mW, typ. (2 x 200 mVpp)
 Power Supply Current 150 mA, typ.
 Contact Wipe 1.5 mm (0.060")
 Contact Normal Force 35-40 grams
 Durability 1000 connector mating cycles

NOTE: Please refer to ESL6007 for further information.

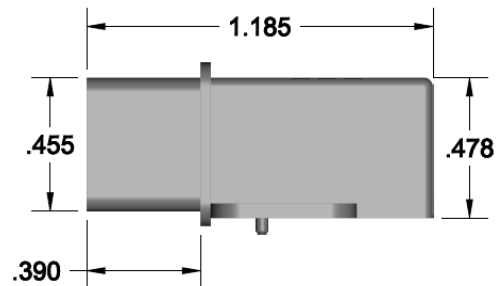


V4000-04 HOOD

XOXHD4™



Part Number	Positions	A	B	C	D	E
V4000-01	1	.335	.648	.365	.865	.465
V4000-02	2	.627	.940	.657	1.157	.757
V4000-04	4	1.211	1.524	1.241	1.741	1.341
V4000-08	8	2.379	2.692	2.409	2.909	2.509



MATERIALS and FINISHES

Material: Zinc alloy per ASTM-AG40A

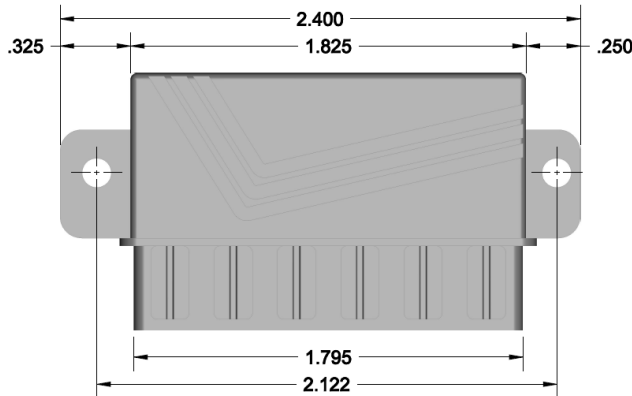
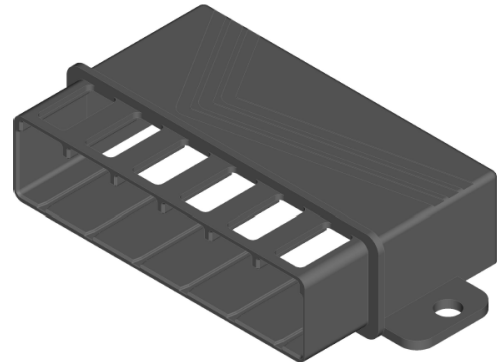
Finish: 50–100μ" nickel per AMS-QQ-N-290



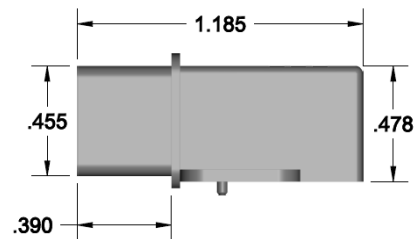
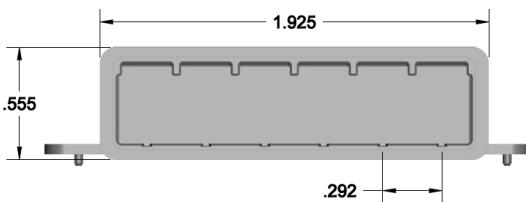
V4001-06 HOOD



Specifically designed for PCIe applications.



Part Number	Positions
V4001-06	6



MATERIALS and FINISHES

Material: Zinc alloy per ASTM-AG40A

Finish: 50–100µ" nickel per AMS-QQ-N-290