

# Amphenol High Density HDB<sup>3</sup>/HSB<sup>3</sup> Connectors



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### HDB<sup>3</sup> and HSB<sup>3</sup> Typical Markets:

- Transportation
- Medical Equipment
- Military & Commercial Avionics
- C4ISR
- UAVs
- Naval
- High Definition Cameras



## INTRODUCTION: FEATURES & OPTIONS

### New/Featured Product

#### Amphenol's HDB<sup>3</sup> High Density Brush Series with Tighter (.070 inch X .060 inch) Staggered Grid Spacing

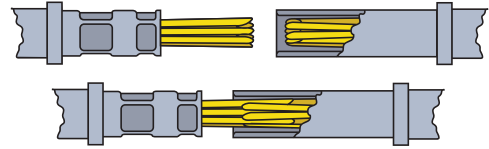
This new connector series of brush connectors incorporates a higher density contact pattern and lower mated height than Amphenol's standard low mating force rectangular connectors. HDB<sup>3</sup> connectors utilize the same durable and reliable B<sup>3</sup> brush contact in a tighter .070" X .060" staggered grid pattern.

#### HDB<sup>3</sup> Advantages over Competitive Connectors:

- Higher density contact pattern
- Uses less board space
- Allows for shorter mated height
- Provides the durability and performance of the Brush contact
- Low cost

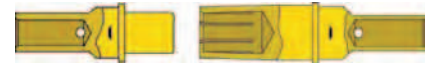
#### AMPHENOL'S BRUSH CONTACT - THE SUPERIOR CHOICE FOR BOARD LEVEL INTERCONNECTS

##### BRUSH CONTACT



Multiple strands of high tensile strength wire bundled together to form brush-like contacts. See Brush Contact Technology section of this catalog for further description.

##### CONVENTIONAL PIN AND SOCKET CRIMP CONTACT



AMPHENOL HDB <sup>3</sup> COMPARED TO COMPETITION			
Connector Features	Amphenol HDB <sup>3</sup>	Hypertronics HPH	Airborn RM4
Contact System	Brush	Hyperoloid	Pin & Socket
Durability, Mating Cycles	100,0000	2,000	500
Contact Mating Forces (ounces)	1.5	1.5	2.5
Mother Board	.070 X .060	.075 X .075	.075 X .070
Daughter Board	.070 X .060	.075 X .100	.075 X .100
Connector Width	.350	.443	.400
Mated Height, MB to 4th row of DB	.680	.986	.915



### HIGH DENSITY STYLES

#### HDB<sup>3</sup> Daughter Board/Mother Board

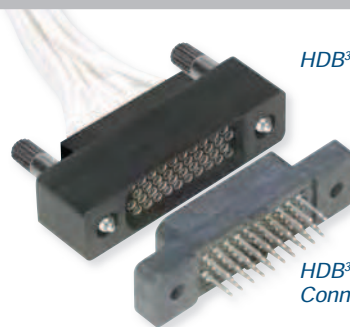
*HDB<sup>3</sup> Daughter Board Connector*



*HDB<sup>3</sup> Mother Board Connector*

#### HDB<sup>3</sup> I/O Connector

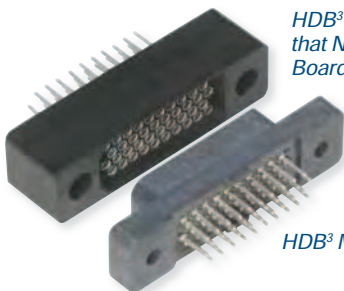
*HDB<sup>3</sup> I/O Connector*



*HDB<sup>3</sup> Mother Board Connector*

#### HDB<sup>3</sup> Stacker

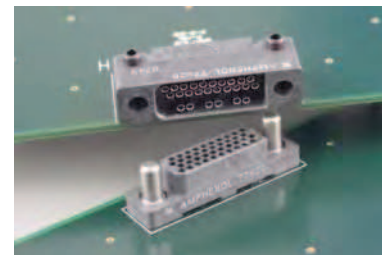
*HDB<sup>3</sup> Stacker for Applications that Need or Demand Parallel Boards*



*HDB<sup>3</sup> Mother Board Connector*

#### HSB<sup>3</sup> High Speed

*HSB<sup>3</sup> High Speed Connectors are Capable of 3.125 Gbps*



Introduction/  
Pkg. Solutions/  
Brush Contact

LRM (Line Replaceable Modules)

Other Options/Access./  
VME/VITA(VIPER)

Fiber Optics/  
Hi Speed/RF/Power

High Density  
HDB<sup>3</sup>  
HSB<sup>3</sup>  
Hi Speed

Low Mating Force MIL-DTL-55302  
Docking Conn./  
Accessories/Install.

Hybrids - Signal/Power/  
Coax/Fiber Optics

Rack & Panel  
Brush  
Ruggedized

LMD/LMS  
Rectangular  
Interconnects

Other  
Rectangular  
Interconnects

## INTRODUCTION: FEATURES & PERFORMANCE



HDB<sup>3</sup> 120 pin Mother Board and Daughter Board

### HDB<sup>3</sup> & HSB<sup>3</sup> HIGH DENSITY CONNECTOR PERFORMANCE:

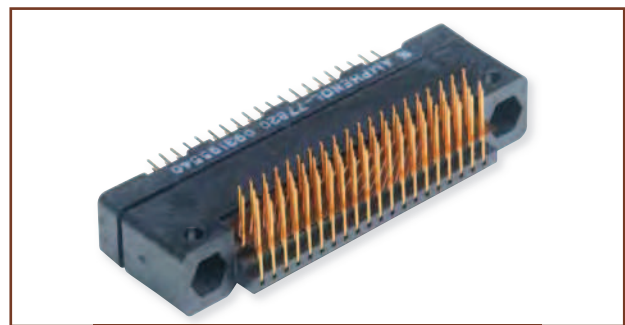
Durability	100,000 mating cycles
Insertion/Extraction Force:	1.5 ounce typical per contact
Operating Temperature:	-65° to 125°C
Current Rating:	2 amperes Hot swap 1 ampere maximum (load dependent)
Insulation Resistance:	5 gigaohms minimum
Dielectric Withstanding Voltage:	750 volts, 60 hertz, rms @ Sea Level, 250 volts, 60 hertz, rms @ 70,000 feet elevation
Solderability:	MIL-STD-202, Method 208
Salt Fog:	48 Hours IAW MIL-STD-1344, method 1001, test condition B
Humidity:	IAW MIL-STD-1344, method 1002, type II
Vibration:	4 hours in each of 3 mutually perpendicular axes IAW MIL STD-1344, method 2005, test condition V, letter H
Shock:	1 shock along each of three mutually perpendicular axes IAW MIL-STD-1344, method 2004, test condition G
Data Rate (HSB <sup>3</sup> ):	Capable of 3.125 Gbps (consult Amphenol for arrangement)

### CUSTOM DESIGN AVAILABILITY:



HSB<sup>3</sup> Hybrid Connector with Metal Shell and RF Contacts supplied by SV Microwave\*

\* See more information on SMPM RF contacts in Other Rectangular Interconnects Section, page 124. SMPM RF contacts can be supplied by Amphenol SV Microwave. Phone: 561-840-1800 Website: www.svmicrowave.com



HDB<sup>3</sup> Mother Board and Daughter Board Mated

### HDB<sup>3</sup> & HSB<sup>3</sup> HIGH DENSITY CONNECTOR FEATURES:

Polarization:	“D” shaped design
Keying:	Optional keys offer 36 unique keying combinations
Guide Pins	Optional guide pins provide additional alignment
Radial Misalignment:	Capable of correcting up to a 020° initial radial misalignment
Angular Misalignment:	Capable of mating with up to a 2° initial angular misalignment

### MATERIALS:

Insulator:	Liquid crystal polymer, 30% glass filled
Contact: Wire:	Beryllium copper per ASTM B197; finish is gold per ASTM B488 over nickel per AMS-QQ-N-290
Holder:	Brass similar to UNS C33500; available finishes include gold per MIL-G-45204, tin-lead per MIL-P-81728 or tin per MIL-T-10727 (RoHS Compliant)
Sleeve:	Stainless steel per AMS-5514, passivated IAW QQ-P-35 (Daughter-board, I/O and Stacker connector)

Introduction/  
Pig. Solutions/  
Brush Contact

Suggested/  
GEN-X

Fiber Optics/  
HiSpeed/RF/Power

Other Options/Access/  
VME/VITA(VIPER)

High Density  
HDB<sup>3</sup> | HSB<sup>3</sup>  
Hi Speed

Standard  
Brush

Hybrids - Signal/Power/  
Coax/Fiber Optics

Docking Conn./  
Accessories/Install.

Rack & Panel  
Brush  
Ruggedized

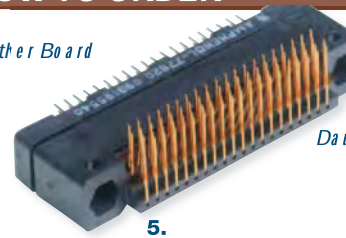
LMD/LMS  
Rectangular  
Interconnects

Other  
Rectangular  
Interconnects



## DIMENSIONAL DRAWING & HOW TO ORDER

Mother Board



Daughter Board

### HDB<sup>3</sup> MOTHER BOARD - HOW TO ORDER

Mates with:

- Daughter Board
- I/O
- Stacker

#### 1. Connector Type

##### HDB-M4

Designates HDB<sup>3</sup> Mother Board

	1.	2.	3.	4.	5.	6.
	Number of Contacts	Brush Wire Plating	Termination	Contact Termination Finish	Less Hardware	
<b>HDB-M4</b>	<b>-040</b>	<b>M</b>	<b>24</b>	<b>2</b>	<b>X</b>	(Purchased separately see pg XX for hardware options)

#### 2. Number of Contacts

	Number of Contacts	Dimension A	Dimension C
<b>040</b>	40	1.375	1.075
<b>060</b>	60	1.725	1.425
<b>080</b>	80	2.075	1.775
<b>120</b>	120	2.775	2.475
<b>160</b>	160	3.475	3.175

#### 3. Brush Wire Plating

<b>M</b>	0.000050 Au Min. thick over Nickel
<b>C</b>	0.000020 Au Min. thick over Nickel

#### 4. Termination

	Type	Stickout (Dim. E)
<b>22</b>	PCB, Straight, .016 Dia	0.120
<b>23</b>	PCB, Straight, .016 Dia	0.150
<b>24</b>	PCB, Straight, .016 Dia	0.180
<b>26</b>	PCB, Straight, .016 Dia	0.240
<b>28</b>	PCB, Straight, .016 Dia	0.300

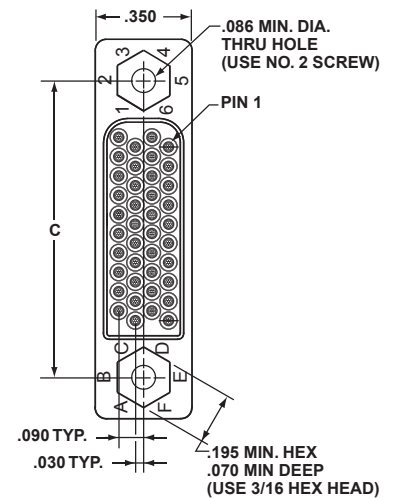
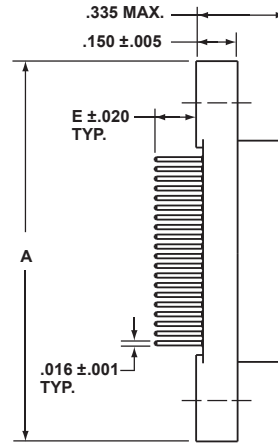
#### 5. Contact Termination Finish

<b>2</b>	Gold plated in accordance with MIL-G-45204, Type II, .000030 Min. thick Gold over .000050 Min. thick Nickel
<b>5</b>	Tin plated in accordance with ASTM B545, .00010 Min. thick Matte Tin over .00010 Min. thick Nickel
<b>6</b>	Tin-Lead plated in accordance with SAE-AMS-P-81728, .00010 Min. thick Tin-Lead over .00010 Min. thick Copper

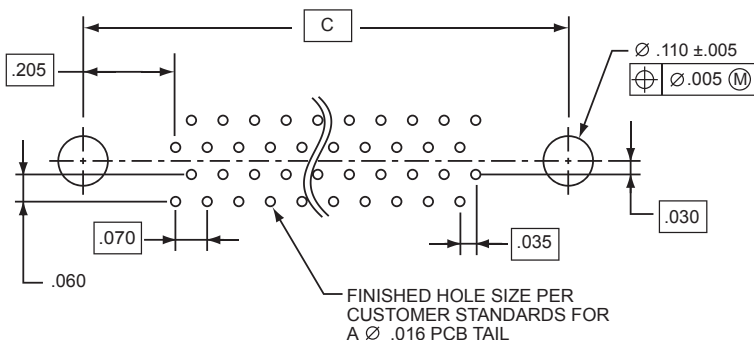
#### 6. Hardware

<b>X</b>	Less Hardware
----------	---------------

Hardware is purchased separately (see page 57 for hardware options).



### Mother Board Layout



Introduction/  
Pkg. Solutions/  
Brush Contact

LRM (Line Replaceable Modules)  
Staggered/  
GEN-X

Fiber Optics/  
Hi Speed/RF/Power

Other Options/Access./  
VME/VITA(VIPER)

High Density  
HDB<sup>3</sup>  
Hi Speed

Low Mating Force MIL-DTL-55302  
Standard  
Brush

Hybrids - Signal/Power/  
Coax/Fiber Optics

Docking Conn./  
Accessories/Install.

Rack & Panel  
Brush  
Ruggedized

LMD/LMS  
Rectangular  
Interconnects

Other  
Rectangular  
Interconnects

# Amphenol® High Density HDB<sup>3</sup> Daughter Board Connector



## DIMENSIONAL DRAWING & HOW TO ORDER

### HDB<sup>3</sup> DAUGHTER BOARD - HOW TO ORDER

Mates with:

- Mother Board

#### 1. Connector Type

**HDB-D4**

Designates HDB<sup>3</sup> Daughter Board

1.	2.	3.	4.	5.	
	Number of Contacts	Brush Wire Plating	Termination	Contact Termination Finish	Less Hardware (Purchased separately see pg X for hardware options)
<b>HDB-D4</b>	<b>040</b>	<b>M</b>	<b>01</b>	<b>2</b>	<b>X</b>

#### 2. Number of Contacts

	Number of Contacts	Dimension A	Dimension C
<b>040</b>	40	1.375	1.075
<b>060</b>	60	1.725	1.425
<b>080</b>	80	2.075	1.775
<b>120</b>	120	2.775	2.475
<b>160</b>	160	3.475	3.175

#### 3. Brush Wire Plating

<b>M</b>	0.000050 Au Min. thick over Nickel
<b>C</b>	0.000020 Au Min. thick over Nickel

#### 4. Termination

	Type	Stickout (Dim. E)
<b>01</b>	PCB, Right Angle, .016 Dia.	0.090
<b>02</b>	PCB, Right Angle, .016 Dia.	0.120
<b>03</b>	PCB, Right Angle, .016 Dia.	0.150
<b>04</b>	PCB, Right Angle, .016 Dia.	0.180
<b>06</b>	PCB, Right Angle, .016 Dia.	0.300

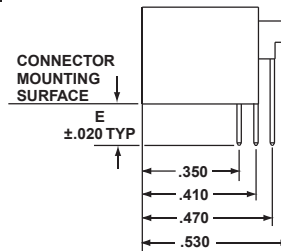
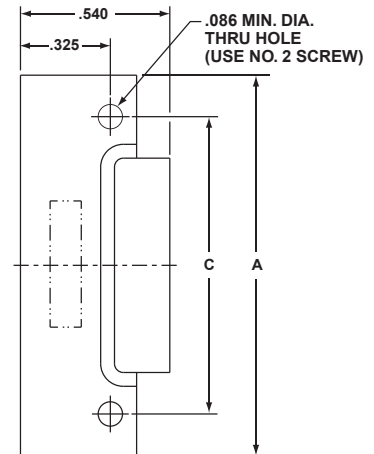
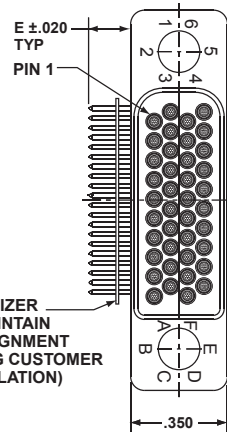
#### 5. Contact Termination Finish

<b>2</b>	Gold plated in accordance with MIL-G-45204, Type II, .000030 Min. thick Gold over .000050 Min. thick Nickel
<b>5</b>	Tin plated in accordance with ASTM B545, .00010 Min. thick Matte Tin over .00010 Min. thick Nickel
<b>6</b>	Tin-Lead plated in accordance with SAE-AMS-P-81728, .00010 Min. thick Tin-Lead over .00010 Min. thick Copper

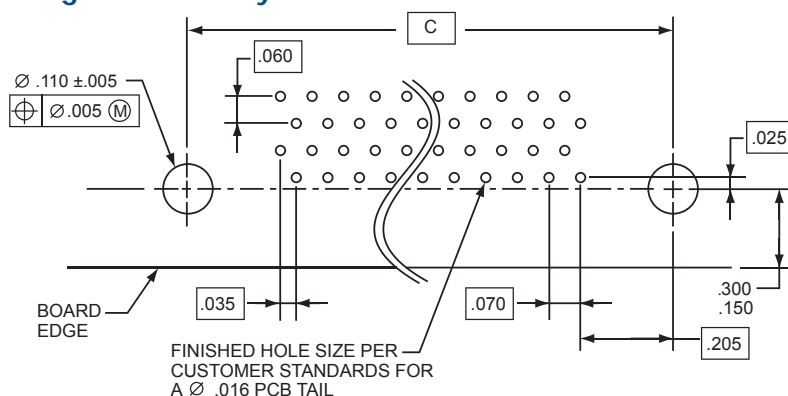
#### 6. Hardware

<b>X</b>	Less Hardware
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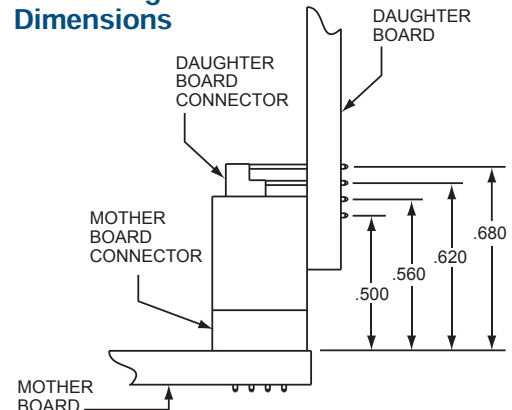
Hardware is purchased separately (see page 57 for hardware options).



#### Daughter Board Layout



#### Mated Height Dimensions



Introduction/  
Pkg. Solutions/  
Brush Contact

Suggested/  
GEN-X

Fiber Optics/  
HiSpeed/R/F/Power

Other Options/Access/  
VME/VITA(VIPER)

High Density  
HDB<sup>3</sup>  
Hi Speed

Low Mating Force MIL-DTL-55302  
Standard  
Brush

Hybrids - Signal/Power/  
Coax/Fiber Optics

Docking Conn./  
Accessories/Install.

Rack & Panel  
Brush  
Ruggedized

LMD/LMS  
Redangular  
Interconnects

Other  
Rectangular  
Interconnects

## DIMENSIONAL DRAWING & HOW TO ORDER

Introduction/  
Pkg. Solutions/  
Brush Contact

Staggered/  
GEN-X

Fiber Optics/  
Hi Speed/RF/Power

Other Options/Access./  
VME/VITA(VIPER)

High Density  
HDB<sup>3</sup>  
Hi Speed

Low Mating Force MIL-DTL-55302  
Coax/Fiber Optics

Hybrids - Signal/Power/  
Standard

Brush  
Ruggedized

LMD/LMS  
Rectangular  
Interconnects

Other  
Rectangular  
Interconnects

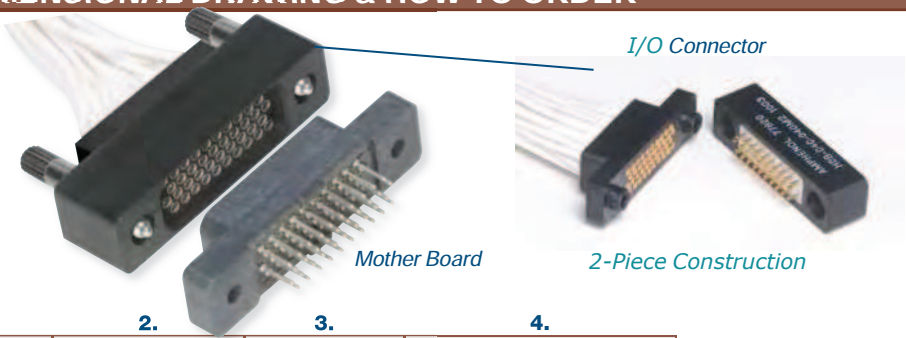
### HDB<sup>3</sup> I/O APPLICATIONS

- Cable to board applications
- Crimp termination
- Uses wire well size 22D

### HDB<sup>3</sup> I/O - HOW TO ORDER

Mates with:

- Standard Mother Board



#### 1. Connector Type

##### HDB-D4C

Designates HDB<sup>3</sup> I/O Connector

1.	2.	3.	4.
	Number of Contacts	Brush Wire Plating	Contact Termination Finish
<b>HDB-D4C</b>	<b>-120</b>	<b>C</b>	<b>2</b>

#### 2. Number of Contacts

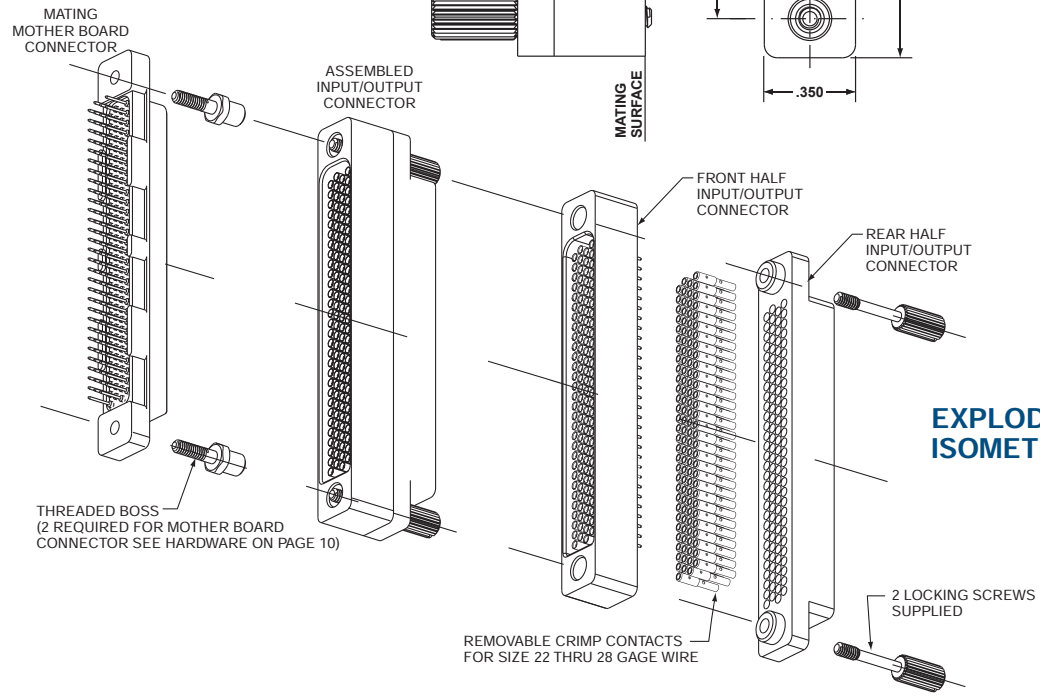
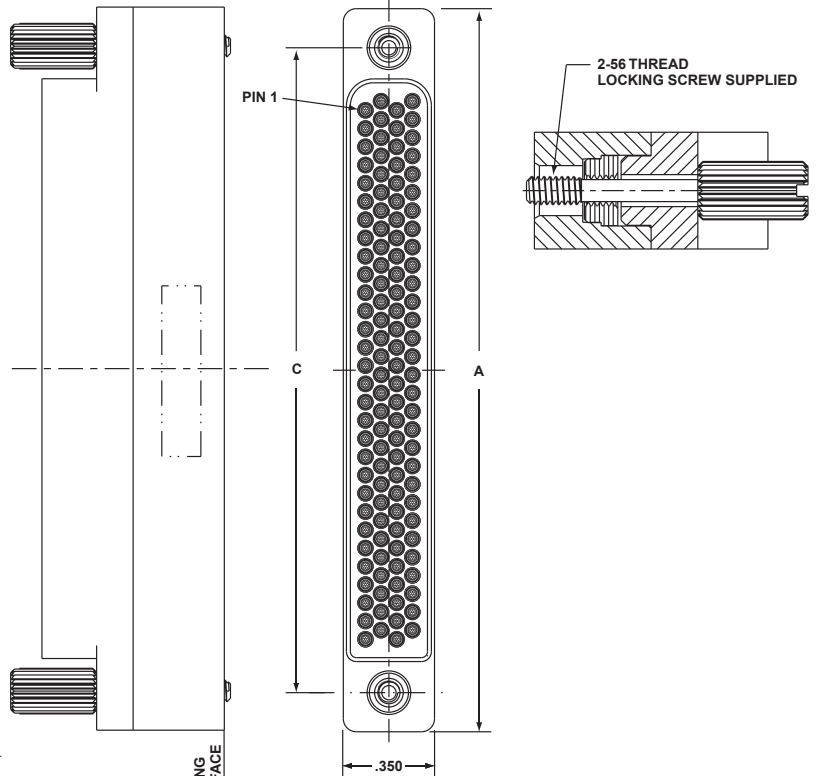
Number of Contacts	Dimension A	Dimension C
<b>040</b>	1.375	1.075
<b>060</b>	1.725	1.425
<b>080</b>	2.075	1.775
<b>120</b>	2.775	2.475
<b>160</b>	3.475	3.175

#### 3. Brush Wire Plating

<b>M</b>	0.000050 Au Min. thick over Nickel
<b>C</b>	0.000020 Au Min. thick over Nickel

#### 4. Contact Termination Finish

<b>2</b>	Gold plated in accordance with MIL-G-45204, Type II, .000030 Min. thick Gold over .000050 Min. thick Nickel
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**EXPLODED ISOMETRIC VIEW**

# Amphenol® High Density HDB<sup>3</sup> Stacker Connector



## DIMENSIONAL DRAWING & HOW TO ORDER

### HDB<sup>3</sup> STACKER APPLICATIONS

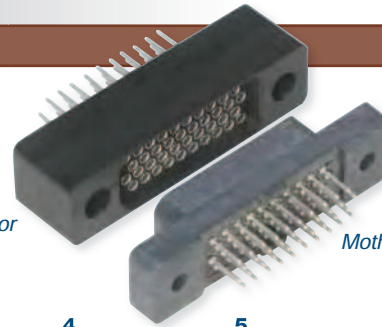
For applications that need or demand parallel boards

### HDB<sup>3</sup> STACKER - HOW TO ORDER

Mates with:

- Standard Mother Board

Stacker Connector



Mother Board

#### 1. Connector Type

##### HDB-D4S

Designates HDB<sup>3</sup> Stacker Connector

	1.	2.	3.	4.	5.	6.
	Number of Contacts	Brush Wire Plating	Termination	Contact Termination Finish	Less Hardware (Purchased separately see pg XX for hardware options)	
	HDB-D4S	120	C	22	2	X

#### 2. Number of Contacts

Number Diff Signals	Number of Contacts	Dimension A	Dimension C
040	40	1.375	1.075
060	60	1.725	1.425
080	80	2.075	1.775
120	120	2.775	2.475
160	160	3.475	3.175

#### 3. Brush Wire Plating

M	0.000050 Au Min. thick over Nickel
C	0.000020 Au Min. thick over Nickel

#### 4. Termination

	Type	Stickout (Dim. E)
22	PCB, Straight, .016 Dia	0.120
23	PCB, Straight, .016 Dia	0.150
24	PCB, Straight, .016 Dia	0.180
28	PCB, Straight, .016 Dia	0.300

#### 5. Contact Termination Finish

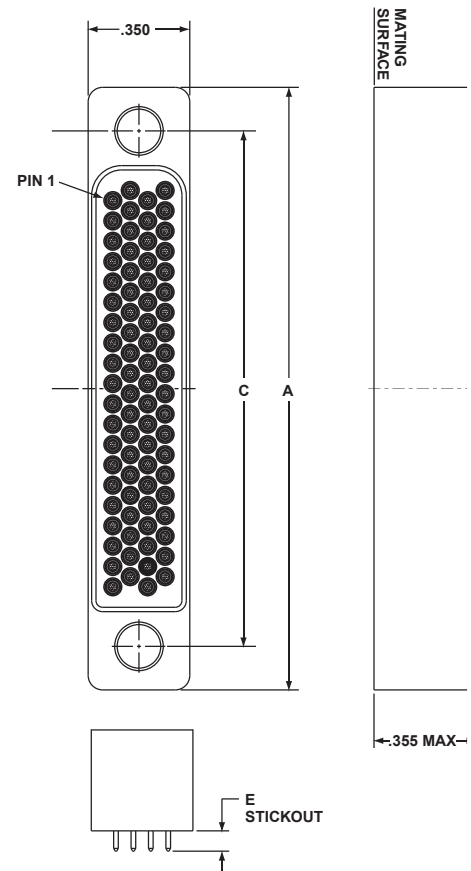
2	Gold plated in accordance with MIL-G-45204, Type II, .000030 Min. thick Gold over .000050 Min. thick Nickel
---	---



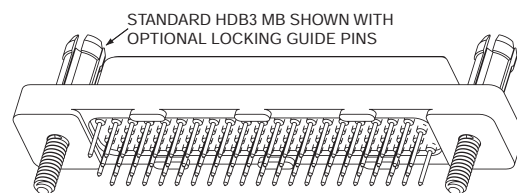
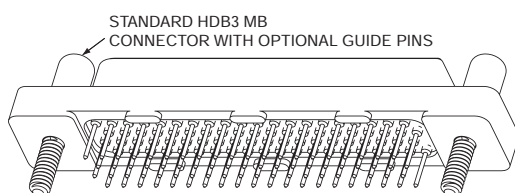
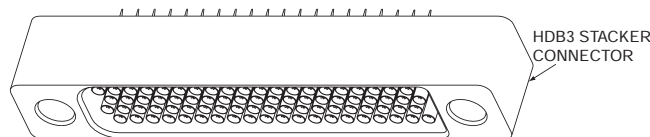
#### 6. Hardware

X	Less Hardware
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Hardware is purchased separately (see page 57 for hardware options).



### EXPLODED ISOMETRIC VIEW



Introduction/  
Pkg. Solutions/  
Brush Contact

LRM (Line Replaceable Modules)  
Suggested/  
GEN-X  
Fiber Optics/  
HiSpeed /RF/Power  
Other Options/ Access/  
VME/VITA(VIPER)

High Density  
HDB3  
Hi Speed  
HSB3

Low Mating Force MIL-DTL-55302  
Standard  
Brush  
Hybrids - Signal/Power/  
Coax/Fiber Optics  
Docking Conn./  
Accessories/Install.

Rack & Panel  
Brush  
Ruggedized

LMD/LMS  
Redangular  
Interconnects

Other  
Redangular  
Interconnects



Introduction/  
Pkg. Solutions/  
Brush Contact

LRM (Line Replaceable Modules)  
Other Options/Access./  
VME/VITA(VIPER)

High Density  
HSB<sup>3</sup>  
Hi Speed

Low Mating Force MIL-DTL-55302  
Docking Conn./ Hybrids - Signal/Power/  
Accessories/Install.

Rack & Panel  
Brush  
Ruggedized

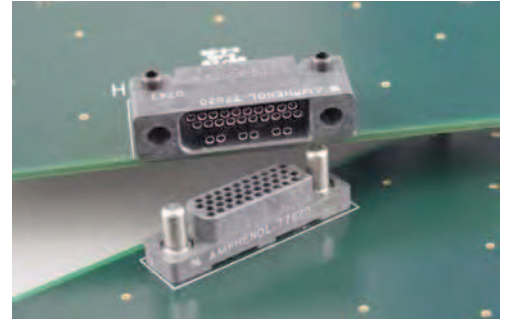
LMD/LMS  
Rectangular  
Interconnects

Other  
Rectangular  
Interconnects

### HSB<sup>3</sup> - HIGH SPEED SERIES 3.125 GBS

High speed configuration available that allows data rates up to 3.125 Gb/s via 100 ohm matched impedance differential pairs.

- Partially populated standard HDB<sup>3</sup> mother board and daughter board bodies
- Contact an Amphenol sales engineer for validation results



### HSB<sup>3</sup> HIGH SPEED MOTHER BOARD - HOW TO ORDER

Mates with:

- High Speed Daughter Board

#### 1. Connector Type

##### HSB-M4

Designates High Speed HDB<sup>3</sup> I/O Connector

	1.	2.	3.	4.	5.	6.	7.
		Number of Differential Pairs	Differential Signal	Brush Wire Plating	Termination	Contact Termination Finish	Less Hardware (Purchased separately see pg XX for hardware options)
<b>HSB-M4</b>	<b>HSB-M4</b>	<b>-03</b>	<b>D</b>	<b>M</b>	<b>24</b>	<b>2</b>	<b>X</b>

#### 2. Number of Contacts

Number Differential Pairs	No. Low Speed Signals	Dimension A	Dimension C
<b>03</b>	20	1.375	1.075
<b>05</b>	30	1.725	1.425
<b>07</b>	40	2.075	1.775
<b>10</b>	60	2.775	2.475
<b>13</b>	80	3.475	3.175

#### 3. Differential Signal

<b>D</b>	Standard
----------	----------

#### 4. Brush Wire Plating

<b>M</b>	0.000050 Au Min. thick over Nickel
<b>C</b>	0.000020 Au Min. thick over Nickel

#### 5. Termination

	Type	Stickout (Dim. E)
<b>22</b>	PCB, Straight, .016 Dia	0.120
<b>23</b>	PCB, Straight, .016 Dia	0.150
<b>24</b>	PCB, Straight, .016 Dia	0.180
<b>26</b>	PCB, Straight, .016 Dia	0.240
<b>28</b>	PCB, Straight, .016 Dia	0.300

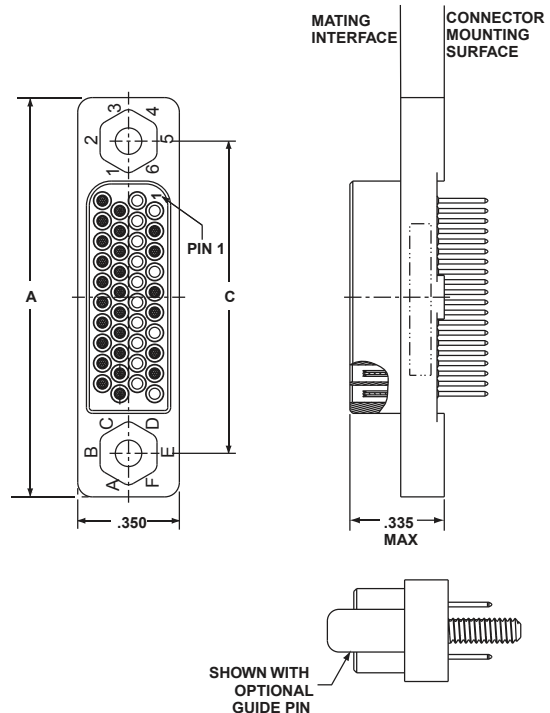
#### 6. Contact Termination Finish

<b>2</b>	Gold plated in accordance with MIL-G-45204, Type II, .000030 Min. thick Gold over .000050 Min. thick Nickel	
<b>5</b>	Tin plated in accordance with ASTM B545, .00010 Min. thick Matte Tin over .00010 Min. thick Nickel	
<b>6</b>	Tin-Lead plated in accordance with SAE-AMS-P-81728, .00010 Min. thick Tin-Lead over .00010 Min. thick Copper	

#### 7. Hardware

<b>X</b>	Less Hardware
----------	---------------

Hardware is purchased separately (see page 57 for hardware options).





# Amphenol® High Density & High Speed HSB<sup>3</sup> Daughter Board Connector



## DIMENSIONAL DRAWING & HOW TO ORDER

### HSB<sup>3</sup> HIGH SPEED DAUGHTER BOARD - HOW TO ORDER

Mates with:

- High Speed Mother Board

	1.	2.	3.	4.	5.	6.	7.
	Number of Differential Pairs	Differential Signals	Brush Wire Plating	Termination	Contact Termination Finish	Less Hardware (Purchased separately see pg 10 for hardware options)	
<b>HSB-D4</b>	<b>-03</b>	<b>D</b>	<b>M</b>	<b>02</b>	<b>2</b>	<b>X</b>	

#### 1. Connector Type

##### HSB-D4

Designates High Speed HSB<sup>3</sup> Daughter Board

#### 2. Number of Contacts

Number Diff Pairs	No. Low Speed Signals	Dimension A	Dimension D
<b>03</b>	20	1.375	1.075
<b>05</b>	30	1.725	1.425
<b>07</b>	40	2.075	1.775
<b>10</b>	60	2.775	2.475
<b>13</b>	80	3.475	3.175

#### 3. Differential Signals

<b>D</b>	Standard
----------	----------

#### 4. Brush Wire Plating

<b>M</b>	0.000050 Au Min. thick over Nickel
<b>C</b>	0.000020 Au Min. thick over Nickel

#### 5. Termination

	Type	Stickout (Dim. E)
<b>01</b>	PCB, Right Angle, .016 Dia	0.090
<b>02</b>	PCB, Right Angle, .016 Dia	0.120
<b>03</b>	PCB, Right Angle, .016 Dia	0.150
<b>04</b>	PCB, Right Angle, .016 Dia	0.180
<b>06</b>	PCB, Right Angle, .016 Dia	0.300

#### 6. Contact Termination Finish

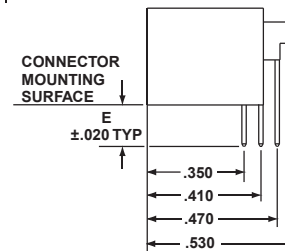
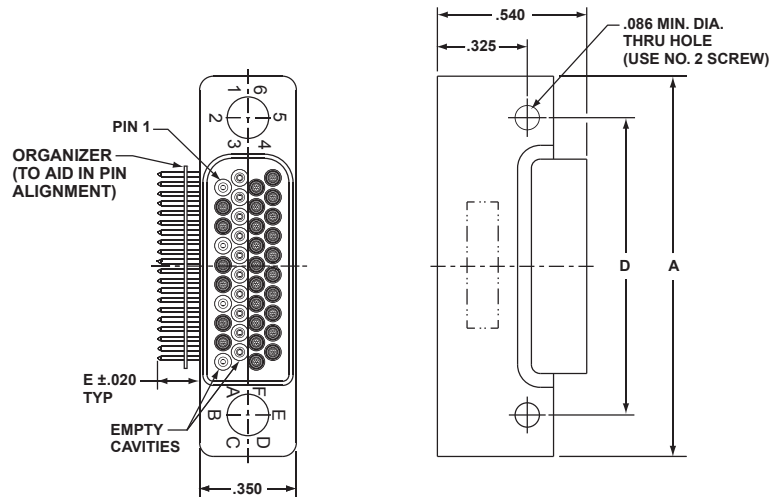
<b>2</b>	Gold plated in accordance with MIL-G-45204, Type II, .000030 Min. thick Gold over .000050 Min. thick Nickel
<b>5</b>	Tin plated in accordance with ASTM B545, .00010 Min. thick Matte Tin over .00010 Min. thick Nickel
<b>6</b>	Tin-Lead plated in accordance with SAE-AMS-P-81728, .00010 Min. thick Tin-Lead over .00010 Min. thick Copper



#### 7. Hardware

<b>X</b>	Less Hardware
----------	---------------

Hardware is purchased separately (see page 57 for hardware options).



Introduction/  
Pkg. Solutions/  
Brush Contact

Suggested/  
GEN-X

LRM (Line Replaceable Modules)  
Fiber Optics/  
HiSpeed/RF/Power

Other Options/Access/  
VME/VITA(VIPER)

High Density  
HD3  
HSB3  
Hi Speed

Standard  
Brush

Low Mating Force MIL-DTL-55302  
Hybrids - Signal/Power/  
Coax/Fiber Optics

Docking Conn./  
Accessories/Install.

Rack & Panel  
Brush  
Ruggedized

LMD/LMS  
Rectangular  
Interconnects

Other  
Rectangular  
Interconnects

**ARRANGEMENTS**

Introduction/  
Pkg. Solutions/  
Brush Contact

LRM (Line Replaceable Modules)  
Staggered/  
GEN-X

Fiber Optics/  
Hi Speed/RF/Power  
Other Options/Access./  
VME/VITA(VIPER)

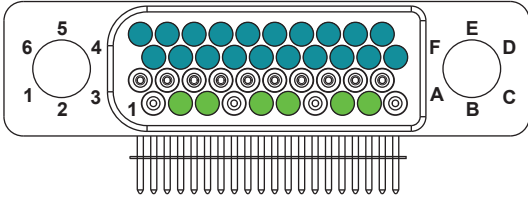
High Density  
HDB<sup>3</sup>  
HSB<sup>3</sup>  
Hi Speed

Low Mating Force MIL-DTL-55302  
Hybrids - Signal/Power/  
Coax/Fiber Optics  
Standard  
Brush

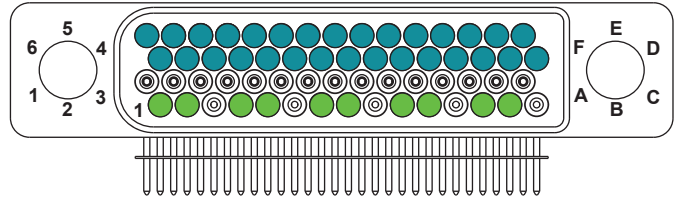
Rack & Panel  
Brush  
Ruggedized

LMD/LMS  
Rectangular  
Interconnects

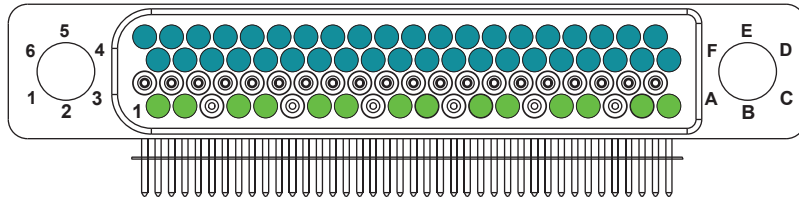
Other  
Rectangular  
Interconnects



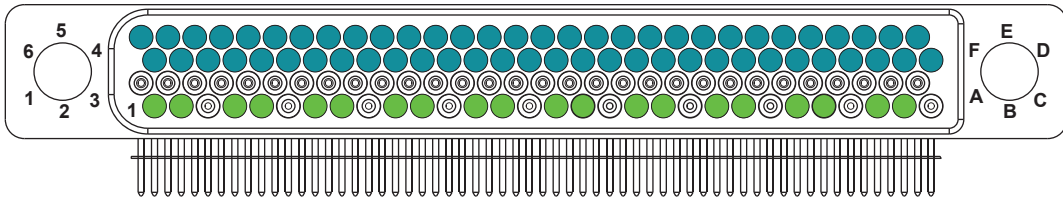
40 Pin Body with 3 Differential Pair, 20 Signal Contacts



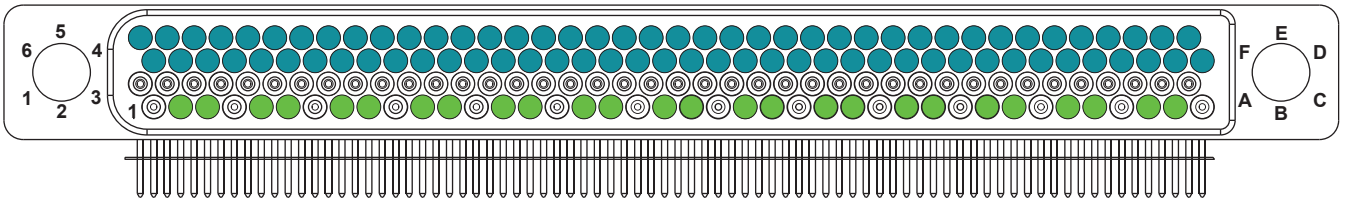
60 Pin Body with 5 Differential Pair, 30 Signal Contacts



80 Pin Body with 7 Differential Pair, 40 Signal Contacts






120 Pin Body with 10 Differential Pair, 60 Signal Contacts



160 Pin Body with 13 Differential Pair, 80 Signal Contacts

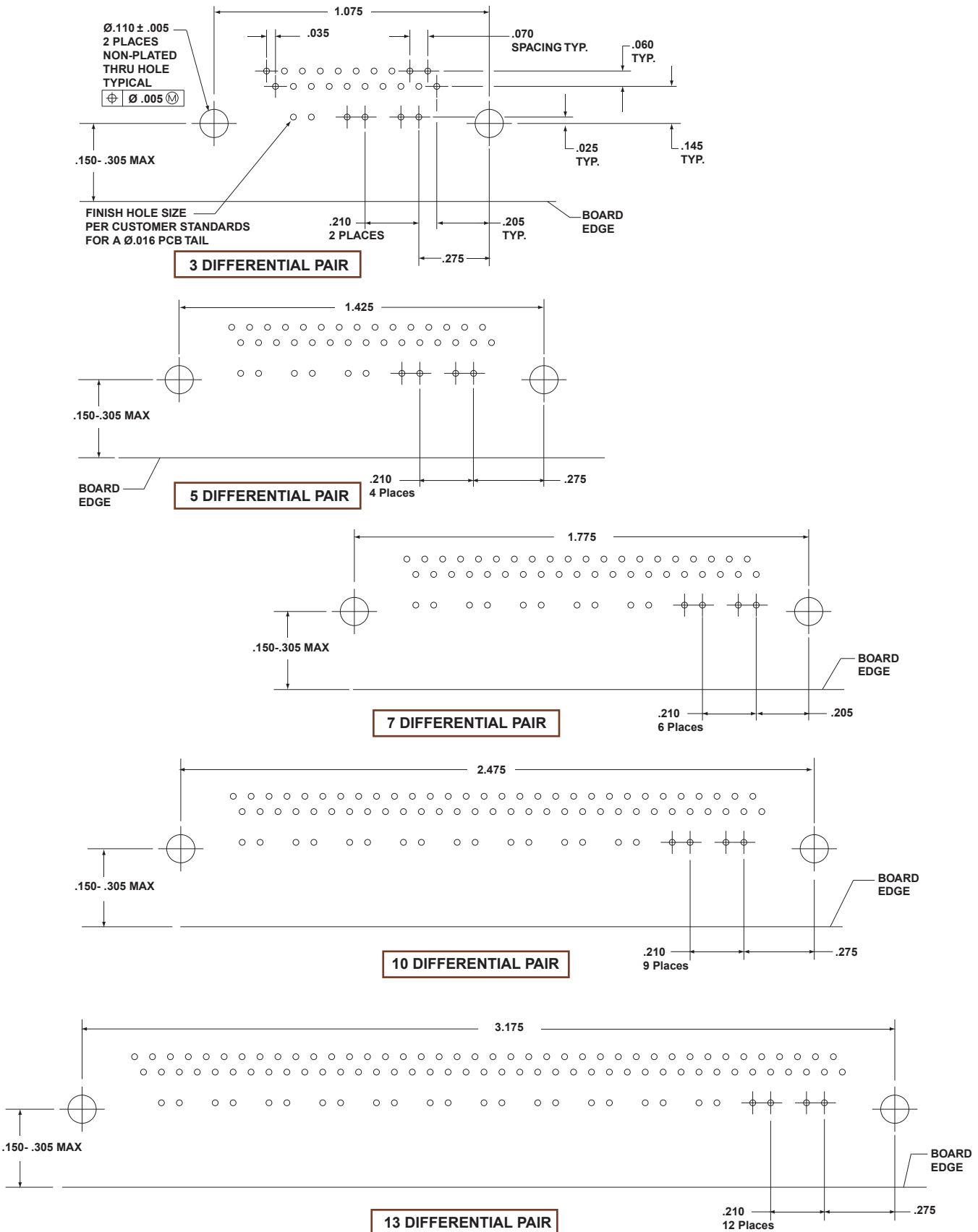
As viewed from front of daughter board connector

**KEY**

-  100 Ohm Differential Pair Contacts  
(100 Ohm Differential contact pairs capable of 3.125 Gb/s data rates)
-  Empty Contact Cavity
-  Standard Digital, Low Speed Signal Contacts

## RECOMMENDED BOARD LAYOUT - HSB<sup>3</sup> DAUGHTER BOARD

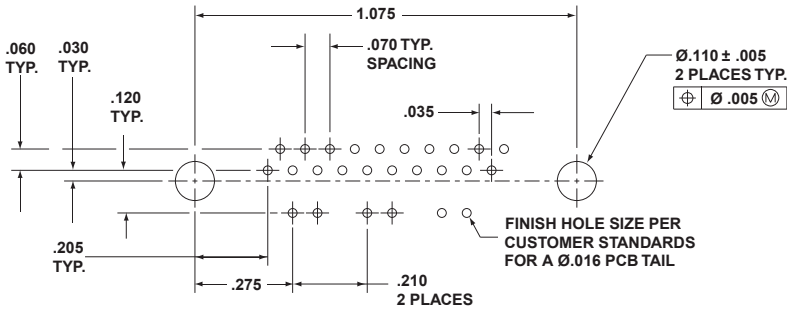
### HSB<sup>3</sup> DAUGHTER BOARD



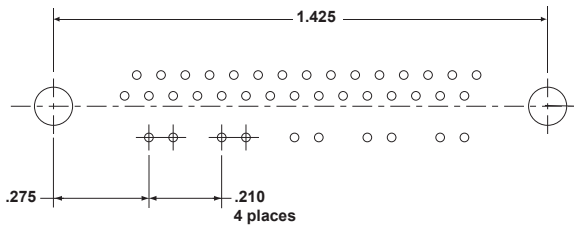
Introduction/ Pkg. Solutions/ Brush Contact	LRM (Line Replaceable Modules)	High Density	Low Mating Force MIL-DTL-55302	Rack & Panel	LMD/LMS	Other
Suggested/ GEN-X	Fiber Optics/ HiSpeed/Rf/Power	HD3 <sup>3</sup>   HSB <sup>3</sup>   Hi Speed	Standard   Hybrid - Signal/Power/ Brush   Coax/Fiber Optics	Brush	Rectangular Interconnects	Rectangular Interconnects
Other Options/Access/ VME/VITA(VIPER)			Docking Conn./ Accessories/Install.	Ruggedized		



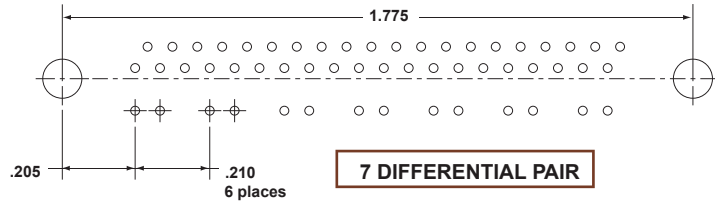
**HSB<sup>3</sup> MOTHER BOARD**



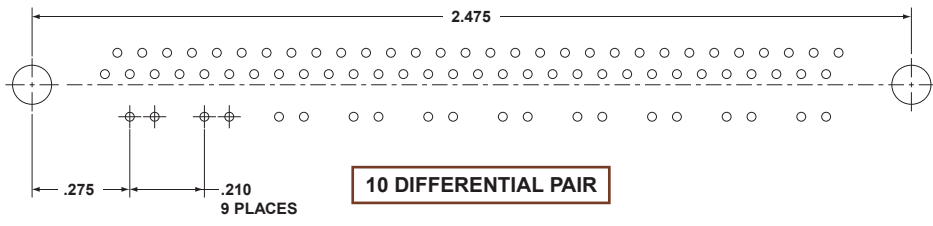
**3 DIFFERENTIAL PAIR**



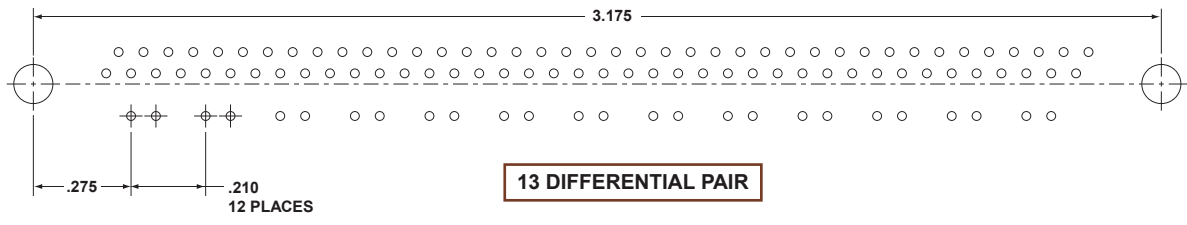
**5 DIFFERENTIAL PAIR**



**7 DIFFERENTIAL PAIR**



**10 DIFFERENTIAL PAIR**



**13 DIFFERENTIAL PAIR**

Introduction/  
Pkg. Solutions/  
Brush Contact

LRM (Line Replaceable Modules)  
Staggered/  
GEN-X  
Fiber Optics/  
Hi Speed/RF/Power  
Other Options/Access./  
VME/VITA(VIPER)

High Density  
HDB<sup>3</sup>  
HSB<sup>3</sup>  
Hi Speed

Low Mating Force MIL-DTL-55302  
Hybrids - Signal/Power/  
Standard  
Coax/Fiber Optics  
Brush  
Docking Conn./  
Accessories/Install.

Rack & Panel  
Brush  
Ruggedized

LMD/LMS  
Rectangular  
Interconnects

Other  
Rectangular  
Interconnects

## HARDWARE FOR BOTH HDB<sup>3</sup> AND HSB<sup>3</sup>

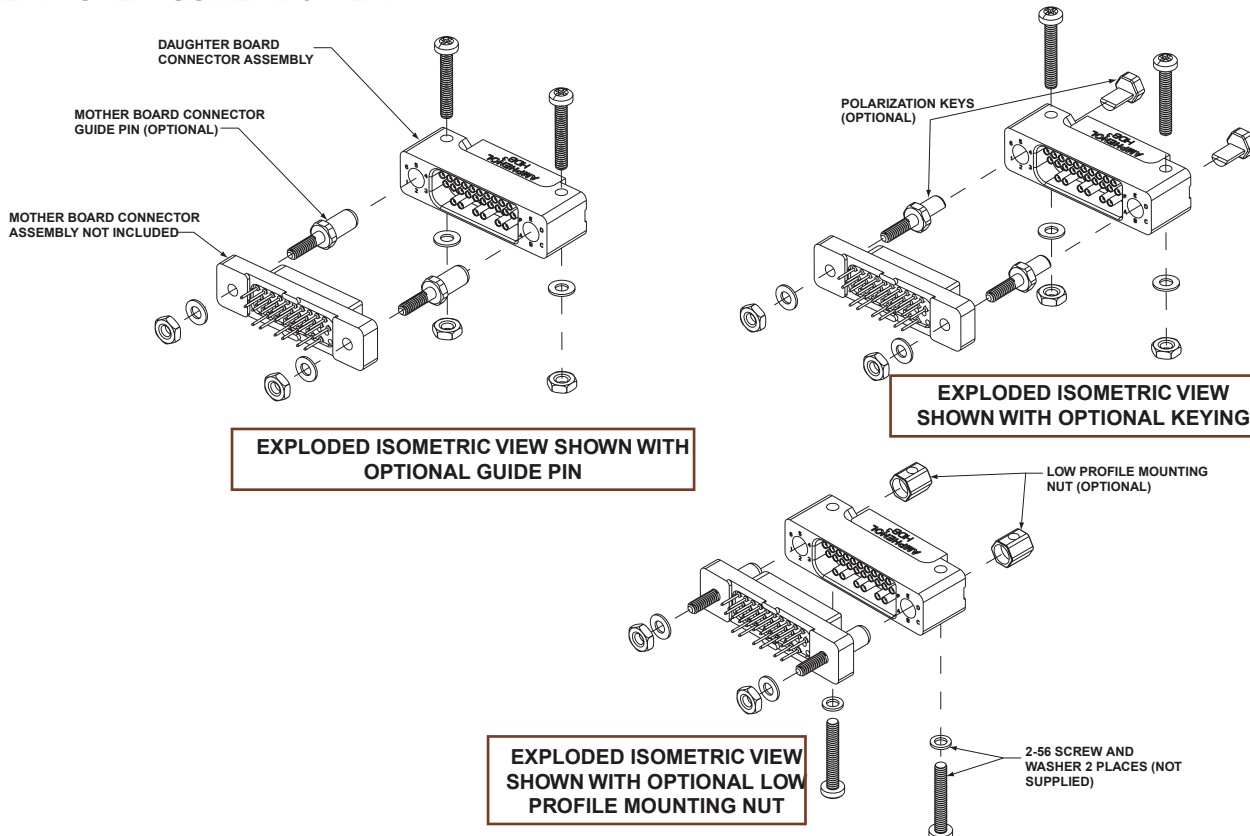
### HARDWARE FOR ALL CONFIGURATIONS (Sold Separately)

MOTHER BOARD		
PART NUMBER	TYPE	STICKOUT
HDB-508803-001	POLARIZATION KEY (QTY 2)	0.250
HDB-508803-002	POLARIZATION KEY (QTY 2)	0.500
HDB-508803-003	POLARIZATION KEY (QTY 2)	0.750
HDB-508802-001	GUIDE PIN (QTY 2)	0.250
HDB-508802-002	GUIDE PIN (QTY 2)	0.500
HDB-508802-003	GUIDE PIN (QTY 2)	0.750
HDB-508808-000	THREADED BOSS (QTY 2)*	0.250
HDB-508808-001	THREADED BOSS (QTY 2)*	0.500
HDB-508808-002	THREADED BOSS (QTY 2)*	0.750
HDB-508808-020	LOCKING GUIDE PIN (QTY 2)	0.250
HDB-508808-021	LOCKING GUIDE PIN (QTY 2)	0.500
HDB-508808-022	LOCKING GUIDE PIN (QTY 2)	0.750

\* Required with Mother Board only when mating to I/O Connector

DAUGHTER BOARD		
PART NUMBER	TYPE	
HDB-508804-000	POLARIZATION KEY (QTY 2)	
HDB-508804-001	LOW PROFILE MOUNTING NUT (QTY 2)	

### EXPLODED ISOMETRIC VIEW



Introduction/  
Pig. Solutions/  
Brush Contact

LRM (Line Replaceable Modules)

Suggested/  
GEN-X

Fiber Optics/  
HiSpeed/RF/Power

Other Options/Access/  
VME/VITA(VIPER)

High Density  
HDB<sup>3</sup> | HSB<sup>3</sup>  
Hi Speed

Low Mating Force MIL-DTL-55302  
Standard  
Brush

Hybrids - Signal/Power/  
Coax/Fiber Optics

Docking Conn./  
Accessories/Install.

Rack & Panel  
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Ruggedized

LMD/LMS  
Redangular  
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Rectangular  
Interconnects